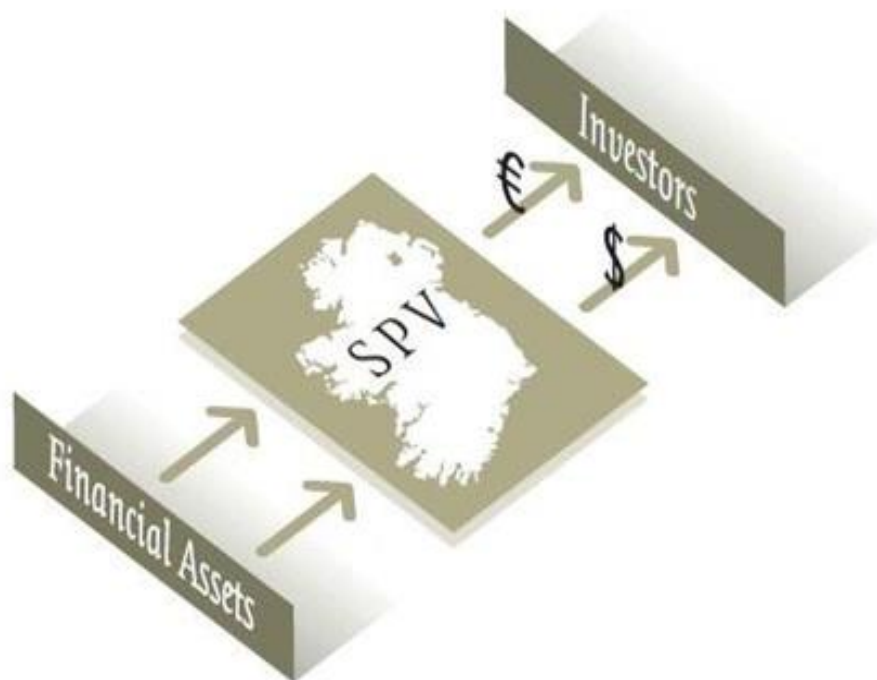


Front Cover

Ireland and Shadow Banking (non-bank financial intermediaries):

A critical analysis of the *Section 110* tax regime



Author: Cillian Doyle

Image: *Arthur Cox brochure*

Ireland and Shadow banking (Non-Bank Financial Intermediaries):
A critical analysis of the *Section 110* tax regime

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Year completed: 2026

Declaration

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Abstract

Ireland's tax driven industrial policy rests on two pillars. Attracting and fostering FDI and encouraging activities within the International Financial Services Centre (IFSC). This thesis concerns the latter. It focuses on an important but controversial tax incentive – *Section 110* (TCA 1997) – applicable to a subset of Irish Special Purpose Vehicles (SPVs). These SPVs are engaged in shadow banking activities and are generally established by foreign sponsors.

Section 110 was introduced in 1997 to promote the IFSC as a hub for securitisation SPVs, but it has been expanded to encompass a broader range of financing activities and asset classes. Although firms are nominally subject to the 25% tax rate on passive income, they are in effect '*tax neutral*'. This outcome arises primarily from the tax deductibility of interest on their issued financial instruments, a feature described as '*unique*' within Irish tax legislation.

Within a corporate group structure, these firms are highly attractive because profits generated from underlying assets can be efficiently extracted as deductible interest payments. This minimises taxable income to near zero whilst maintaining control over cash flows. In addition, outbound interest payments made by firms are frequently not taxed in the recipient jurisdiction, giving rise to situations of '*double non-taxation*'.

As a result, the regime incentivises high levels of debt issuance and creates opportunities for aggressive tax planning and profit shifting, leading to base erosion for other jurisdictions. The scale of the tax benefit is directly linked to the volume of debt issued, with the primary constraint being the firm's pre-interest cost profitability.

This thesis is motivated by two principal concerns. Firstly, the growth of shadow banking activities heightens systemic risks, with the expansion of Ireland's sector posing possible threats to financial stability. Secondly, aggressive tax practices associated with the regime have attracted scrutiny at the EU level, particularly in the context of compliance with measures such as the Anti-Tax Avoidance Directive (ATAD) and interest limitation rule (ILR).

Section 110 has attracted little academic research either in terms of its upside benefits and/or downside risks. This is likely attributable to the absence of any publicly available

dataset of qualifying firms. Nevertheless, policymakers describe it as '*very successful*'. Industry sources state that it has made Ireland the global '*jurisdiction of choice*' for SPVs.

This thesis adopts an empirical approach to critically evaluating the regime. Its central objective is to assess whether the substantial fiscal cost of this tax expenditure is justified by its relatively narrow and concentrated domestic benefits, primarily professional service fees accruing to a small number of firms. These benefits are weighed against a range of potential risks, including financial instability, regulatory challenges, revenue losses (both domestically and internationally), and any associated reputational damage arising from this.

To address this question, the thesis constructs a novel dataset capturing the population of firms over the period 1997 to 2020. Three important subpopulations were then identified from this with corresponding datasets constructed from statutory filings, including financial statements, annual returns, and prospectuses submitted to the Company Registration Office (CRO). This allowed for an interdisciplinary undertaking of various financial/tax, economic and legal analyses. The three subpopulations analysed as part of this thesis are as follows;

- *Section 110* firms used for the purposes of securitisation (**Chapter 3**).
- *Section 110* firms used nominally for credit provision for Russian MNEs/state owned enterprises (**Chapter 4**).
- *Section 110* firms used by Ireland's aircraft leasing sector (**Chapter 5**).

Financial risks posed by the regime were identified via banks and aircraft lessors which encountered difficulties during the *Great Financial Crash*, the Russian Financial Crisis (2014-16) and Covid19 pandemic. Reputational/regulatory risks were identified via potential illicit financial flows to Russian MNEs and other governance issues. Revenue risks posed to other countries are highlighted throughout.

Overall, the analysis of this thesis suggests the regime delivers limited direct economic benefits to Ireland in terms of employment or tax revenue. Instead, its primary domestic gains accrue to a relatively small group of influential Dublin based professional service firms.

Key words

Shadow banking, SPVs, financial and regulatory risk, tax avoidance

Word count: 57,754 (Excl. appendix, footnotes and bibliography)

List of Acronyms

ATAD = Anti-Tax Avoidance Directive
BEPS = Base Erosion and Profit Shifting
BIS = Bank for International Settlements
CB = Central Bank
CBA = Cost Benefit Analysis
CMBS = Commercial Mortgage-Backed Security
CRO = Companies Registration Office
CSO = Central Statistics Office
CSP = Corporate Service Provider
DTT = Double Tax Treaty
EBITDA = Earnings before interest, tax, depreciation and amortisation
ECB = European Central Bank
EU = European Union
FATF = Financial Action Task Force
FCIC = Financial Crisis Inquiry Commission
FDI = Foreign Direct Investment
FPI = Foreign Portfolio Investment
FSB = Financial Stability Board
FSF = Financial Stability Forum
FATF = Financial Action Task Force
FVC = Financial Vehicle Corporation
GFC = Great Financial Crash
GDP = Gross Domestic Product
GNI* = Modified Gross National Income
IDA = Industrial Development Authority
IDSA = Irish Debt Securities Association
IFAC = Irish Fiscal Advisory Council
IFFs = Illicit Financial Flows
IFSC = International Financial Services Centre
ILR = Interest Rate Limitation Rule
IMF = International Monetary Fund
IRNR = Irish Registered Non-Resident Company
ISE = Irish Stock Exchange
ISIN = International Securities Identification Number
LPNs = Loan Participation Notes
LSE = London Stock Exchange
MBS = Mortgage-Backed Security
MNE = Multinational Enterprise
NAMA = National Asset Management Agency

OECD = Organisation for Economic and Co-operation and Development
OFC = Offshore Financial Centre
PPL/N = Profit Participating Loan/Note
PQ = Parliamentary Question
RCB = Russian Central Bank
SEC = Securities and Exchange Commission
SOE = State Owned Enterprise
SPE = Special Purpose Entity
SPV = Special Purpose Vehicle
TCA = Taxes Consolidation Act
VAT = Value Added Tax

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Chapter 1

1.0 Introduction to research area

This thesis presents an empirical study which critically evaluates a key pillar of Ireland's industrial policy in relation to international financial services provision. Specifically, it examines the tax/regulatory incentives provided under the *Section 110* regime. This is a key piece of IFSC legal architecture available to Special Purpose Vehicles (SPVs) engaged in securitisation, corporate financing, and other asset-based (e.g., aircraft) financing activities.

Chapter 1 situates the thesis within its broader research context. It outlines the motivation for the study, defines its core research objectives and introduces some of its principal findings. It also reviews the existing academic literature on SPVs which is somewhat fragmented and spread across several disciplines, each with corresponding strengths and weakness. This thesis takes a holistic approach, one which tries to incorporate different research strands in order to arrive at a more rounded understanding of *Section 110* SPVs.

Despite their significance to the IFSC as a centre for shadow banking activities, these SPVs form a significant part of Ireland's largely under researched NBFIs sector (non-bank financial intermediation). A likely explanation for this gap is the limited availability and quality of data. Consequently, much of the existing commentary and analysis is found in industry and regulatory publications, such as those produced by the Central Bank.

This thesis seeks to narrow that gap via quantitative and qualitative analyses of the three important *Section 110* subpopulations identified above. It integrates research insights from academic, regulatory and industry literature across finance, taxation, accounting, law and Irish business history.

It offers a critical evaluation of their associated risks, alongside an assessment of their relatively minor and concentrated benefits. Although the regime has been characterised as strategically important to the IFSC, its application has proven controversial.

Nonetheless, it is likely to remain a central component of Ireland's industrial policy, albeit one that may face increasing international scrutiny in the future.

(1.1) Ireland's industrial policy

Industrial policy refers to an effort by the state to intervene in the economy to promote and support specific sectors and industries (OECD 2025).¹ This is done for reasons such as creating employment, encouraging economic development and promoting growth. States have various industrial policy tools at their disposal.

These include public procurement policies, the establishment of state-owned enterprises (SOEs), regulatory measures, subsidies, grants and importantly for the purposes of this thesis, the use of tax incentives (tax expenditures).² Ireland's industrial policy has historically focused on offering an attractive low tax export platform for foreign investment. This strategy has for several decades rested on two main pillars, which are briefly discussed below.

Pillar 1

The first, and perhaps more widely recognised of these two pillars, is the attraction and fostering of foreign direct investment (FDI).³ Since the 1950s Ireland has sought to attract

¹ OECD (2025), 'Industrial Policy', accessed <https://www.oecd.org/en/topics/industrial-policy.html#:~:text=Industrial%20policy%20refers%20to%20government,for%20critical%20products%20and%20services>.

² Under Irish tax law, a tax expenditure is defined as 'as a transfer of public resources that are achieved either (a) by reducing tax obligations with respect to a benchmark tax rather than by direct expenditure or (b) by provisions that reduce or postpone revenue for a comparatively narrow population of taxpayers relative to the tax base'. Cited in Department of Finance (2024), 'Tax Expenditures Evaluation – Updated Guidelines', accessed https://assets.gov.ie/static/documents/Budget_2025_-_Tax_Expenditures_Evaluation_-_Updated_Guidelines.pdf

³ Eurostat defines FDI as 'an international investment within the balance of payment accounts' where 'a resident entity in one economy seeks to obtain a lasting interest in an enterprise resident in another economy' via the ownership of '10 % or more of the ordinary shares or voting rights', accessed [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Foreign_direct_investment_\(FDI\)#:~:text=Foreign%20direct%20investment%2C%20abbreviated%20as,Categories](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Foreign_direct_investment_(FDI)#:~:text=Foreign%20direct%20investment%2C%20abbreviated%20as,Categories):

FDI through various means. These have included a low nominal and even lower effective rate of corporation tax,⁴ in addition to other types of fiscal and regulatory concessions.⁵

Today Ireland is one of foremost recipients of global FDI and a location for some of the world's largest tech, medical devices and pharmaceutical MNEs.⁶ Ireland's total stock of FDI was over €1.2tn in Q4 2023.⁷ These MNEs are a major and highly concentrated source of revenue for the Exchequer.⁸ In addition to significant contributors to Ireland's headline GDP growth and employment.⁹

However, there is a well-documented relationship between FDI and international tax avoidance (IMF 2019).¹⁰ Certain MNE international tax avoidance schemes involving Ireland have attracted adverse international attention. These include the '*Double Irish*' (Google), '*Stateless Income*' (Apple), and HQ corporate '*inversions*' (Pfizer/Allergan).¹¹

⁴ In 1956 Ireland introduced the exports profits relief tax for manufactures designed to make Ireland an attractive export platform. This allowed a 0% rate on manufacturing profits. In 1981 a 10% rate of manufacturing exports was introduced after its predecessor was required to be phased out. In 2003 Ireland introduced its 12.5% rate for all trading income.

⁵ Other types of concession have included the provision of greenfield sites by the IDA, the availability of various capital grants, rent waiver for IFSC buildings in its formative years, etc.

⁶ For example, the likes of Google, Facebook, Medtronic and Pfizer have significant operations in Ireland.

⁷ The total FDI stock for Q4 2023 was €1,276bn, source: CSO (2024), '*International Accounts Q4 2023*', accessed <https://www.cso.ie/en/releasesandpublications/ep/p-ia/internationalaccountsq42023/foreigndirectinvestment/>

⁸ In 2024 corporation tax was Ireland's largest tax head (€39bn net receipts) comprising '36% of total tax receipts'. Three foreign MNEs alone accounted for 38% of total corporate tax receipts in 2023 (Irish Fiscal Advisory Council 2025). See Revenue (2024), '*Corporation tax 2024 payments and returns 2023*', and accessed <https://www.revenue.ie/en/corporate/documents/research/ct-analysis-2025.pdf>; Irish Fiscal Advisory Council (2025), '*More revenue and more concentration*', accessed <https://www.fiscalcouncil.ie/wp-content/uploads/2025/04/More-Revenue-and-More-Concentration-Ireland-Corporation-Tax-Paper-Brian-Cronin-2025.pdf>

⁹ FDI enterprises are also major Irish employers. Foreign MNEs accounted for 27.2% of total employment in 2022. See CSO (2024), '*Foreign-Owned Multinationals In Ireland: Business in Ireland Series*', accessed <https://www.cso.ie/en/releasesandpublications/ep/p-biiim/businessinireland2022-insightsonmultinationals/foreign-ownedmultinationalsinireland/>

¹⁰ IMF (2019), '*The Rise of Phantom Investments*', accessed <https://www.imf.org/en/Publications/fandd/issues/2019/09/the-rise-of-phantom-FDI-in-tax-havens-damgaard>

¹¹ Pfizer abandoned its proposed merger with Ireland's Allergan after the US Treasury announced it was changing the law to prevent US MNEs merging with companies in low tax countries to lower their tax bill. Cited in BBC (06/04/2016), '*Pfizer abandons \$160bn Allergan deal*', accessed <https://www.bbc.com/news/business-35974998#:~:text=US%20drugs%20giant%20Pfizer%20has%20scrapped%20a,a%20country%20with%20a%20lower%20tax%20rate.>

According one estimate, approximately 40-45% of the global stock of FDI is located in offshore havens (European Parliament Committee on Tax Matters 2023).¹² The overwhelming majority of this (90%) is held by Ireland, Luxembourg, Hong Kong, the Netherlands and Switzerland. These jurisdictions comprise a very small share of the global economy.

Hence, these abnormally large FDI patterns, both in terms of inflows and outflows, indicate that rather than being the sole destination of this investment, they partly operate as '*pass through*' economies.¹³ Table 1.1 identifies such abnormal FDI patterns by examining a range of key investment stock/flow indicators for various Offshore financial centres (OFCs).

Pillar 2

The second and arguably lesser-known pillar of Ireland's industrial policy was the establishment of the IFSC in 1987. Foreign portfolio investment (FPI) is one of the key activities of IFSC companies, with the ongoing expansion of service-based activities a key government priority.¹⁴

In 2024 the IFSC ranked 14th in the Global Financial Centres Index. It serves as one of the foremost global locations for funds administration, securitisation, intergroup lending and aircraft leasing, amongst other activities. Irish policymakers attribute this success to several key factors;

- A favourable tax regime and wider supporting double tax treaty network (DTTN),
- A flexible and pro-business domestic regulatory framework,
- The presence of key professional networks in legal, tax, auditing, and finance,

¹² European Parliament Committee on Tax Matters (2023), '*Good tax practices in the fight against tax avoidance: The signalling role of FDI data*', accessed [https://www.europarl.europa.eu/RegData/etudes/IDAN/2023/754198/IPOL_IDA\(2023\)754198_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/IDAN/2023/754198/IPOL_IDA(2023)754198_EN.pdf)

¹³ The IMF (2019) describes this as phenomenon as '*phantom*' investment. That is, investment being channelled through these jurisdictions '*to minimize multinationals' global tax bill*'. Around two thirds of Ireland's GDP is estimated to be comprised of such '*phantom*' investment. Source IMF (2019), '*The Rise of Phantom Investments*', accessed <https://www.imf.org/en/Publications/fandd/issues/2019/09/the-rise-of-phantom-FDI-in-tax-havens-damgaard>

¹⁴ For instance, regular IFSC strategy documents are published with a specific Minister of State (Department of Finance) having responsibility for this. The current strategy is laid out in '*Ireland for Finance*' (2025), accessed <https://www.gov.ie/en/department-of-finance/publications/international-financial-services-strategy/>

- Ireland's experience as a 'cross border' hub for capital flows,
- The close relationship between government, regulatory authorities, and industry.

FPI like FDI is also closely tied to international tax avoidance. Offshore financial centres (OFCs) serve as key global locations for the administration of cross border financial assets (Table 1.1). Ireland, like other small OFCs, has an outsized level of financial assets under administration relative to its share of the global economy.

Ireland's stock of total financial assets (TFA) is significantly larger than its FDI stock, valued at over \$8tn in 2023. Table 1.1 provides a range of various investment stock/flow indicators for OFCs. As we can see, Ireland along with Luxembourg and the Cayman Islands are distinct from other OFCs identified below, in terms of the size of their respective NBFIs sectors. Shadow banking involves non-bank financial institutions (NBFIs) engaging in bank like activities (e.g., lending), but operating outside of the regulated banking sector.

Today the global NBFIs sector is very large at over \$239tn in assets (FSB 2024).¹⁵ The size of the sector declined in the wake of the *Great Financial Crash* (ECB 2013), but it has rebounded sharply.¹⁶ The Financial Stability Board (FSB) estimates that NBFIs assets are now 49.1% of total global financial assets (TFA). Ireland has the 5th largest NBFIs sector in the world (Central Bank 2022).¹⁷

¹⁵ There are various explanations for the drivers of this growth. These include tighter bank regulations and the demand for higher yield by large institutional investors (Arora and Kashiramka 2023), the role of monetary policy impacting different components of the shadow banking sector, with loose monetary policy intensifying asset managers search for yield, with tighter conditions seeing more traditional institutions seeking lower funding costs (Hodula and Libich 2023).

¹⁶ There are various explanations for the drivers of this growth. These include tighter bank regulations and the demand for higher yield by large institutional investors (Arora and Kashiramka 2023), the role of monetary policy impacting different components of the shadow banking sector, with loose monetary policy intensifying asset managers search for yield, with tighter conditions seeing more traditional institutions seeking lower funding costs (Hodula and Libich 2023).

¹⁷ For example, in terms of assets under administration, Ireland is the largest centre for hedge fund administration in the world, it is the largest domicile for UK investors in EU Money Market Funds (MMFs), and Irish domiciled exchange traded funds (ETFs) now exceed €1tn. Figures cited (Funds Sector 2030), accessed <https://www.gov.ie/en/department-of-finance/publications/funds-sector-2030-a-framework-for-open-resilient-and-developing-markets-final-report/>

Table 1.1: Sample of OFCs by various investment stock/flow indicators (2023)

Offshore financial centre	Population (nominal)	Corporate Tax Haven index ¹⁸ (rank)	GDP per capita (rank) ¹⁹	Global GDP (share) ²⁰	Global FDI-stock (share) ¹⁸	FDI stock-GDP (ratio) ¹⁸	Total Financial Assets (nominal) ¹⁹	Size of NBFI sector (nominal) ²¹	NBFI stock-GDP (ratio) ²²
<i>BVI</i>	39k	1 st	39 th	0.01%	3.5%	26,754%	-	-	-
<i>Cayman Islands</i>	73k	2 nd	10 th	0.01%	2.61%	18,440%	\$13.7tn	\$7.8tn	109,258%
<i>Bermuda</i>	65k	3 rd	5 th	0.01%	2.34%	13,072%	-	-	-
<i>Jersey</i>	104k	8 th	-	0.01%	1.01%	8,005%	-	-	-
<i>Luxembourg</i>	600k	6 th	1 st	0.09%	7.09%	3,241%	\$19.4tn	\$4.8tn	5,481%
<i>Mauritius</i>	1.2m	15 th	-	0.01%	0.6%	2,137%	-	-	-
<i>Cyprus</i>	1.3m	14 th	35 th	0.03%	0.89%	1,271%	-	-	-
<i>Hong Kong</i>	7.5m	7 th	17 th	0.38%	6%	646%	\$5.16tn	\$0.14tn	36%
<i>Netherlands</i>	17.8m	4 th	13 th	1.06%	8.98%	350%	\$13.36tn	\$0.5tn	43%
<i>Singapore</i>	5.9m	9 th	2 nd	0.41%	2.27%	227%	\$4.23tn	\$0.06tn	11%
<i>Ireland</i>	5.3m	11th	3rd	0.52%	2.42%	192%	\$8.6tn	\$4.2tn	1,563%
<i>Switzerland</i>	8.8m	5 th	7 th	0.85%	3.57%	174%	\$10tn	\$1.01tn	111%
<i>Belgium</i>	11.7m	16 th	23 rd	0.63%	1.83%	121%	\$3.13tn	\$0.19tn	28%
<i>UK</i>	68.3m	13 th	32 nd	3.33%	7.45%	93%	\$34.3tn	\$1.06tn	31%

Note: (1) Blank spaces indicate missing data. For example, certain data on TFA/size of NBFI was not compiled for certain jurisdictions by the FSB/World Bank.

(2) Prior to 1993 for the purposes of compiling GDP, the contribution of 'financial intermediation' to economic output was 'considered to have a negligible or even negative' effect. In 1993 revisions (UN system) saw it recognised as 'an explicitly productive activity'. A further revision in 2008 saw the inclusion of 'exotic financial products', the kind associated with shadow banking. Jacob Assa (2017) *The Financialisation of GDP*, Routledge, New York.

¹⁸ Tax Justice Network, 'Corporate tax haven index', accessed <https://cthi.taxjustice.net/>

¹⁹ Data on GDP per capita (Purchasing Power Parity) is from the World Bank, accessed <https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD>

²⁰ Report (2023) of European Parliament Committee on tax matters (FISC), 'Good tax practices in the fight against tax avoidance World Bank', accessed [https://www.europarl.europa.eu/RegData/etudes/IDAN/2023/754198/IPOL_IDA\(2023\)754198_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/IDAN/2023/754198/IPOL_IDA(2023)754198_EN.pdf)

²¹ Data on TFA/Size of Non-bank financial institutions (NBFI) sector derived from FSB 'Global Monitoring Report on Non-Bank Financial Intermediation: Data', accessed <https://www.fsb.org/work-of-the-fsb/financial-innovation-and-structural-change/non-bank-financial-intermediation/global-nbfi-monitoring-report-data/>

²² Data on GDP (current \$) is from the World Bank, accessed <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>

Despite the size of NBFI and other assets under administration, the IFSC has a relatively low contribution to total employment (1.6% in 2024). It also has a low tax take, relative to the size of assets.²³ It is however an important source of fee income for certain professional firms in the fields of tax/accountancy and law.²⁴ The ‘*Big Four*’ accounting firms have been key beneficiaries, were influential in the IFSC’s early development and remain key influencers of sectoral tax and regulatory policy.

The ‘*Big Four*’ were also key architects of major MNE international tax avoidance schemes which have involved Ireland.²⁵ Alongside major Irish law firms (e.g., Arthur Cox), and a small number of internationally organised corporate service providers (CSPs), they are central to the functioning of the tax regime which is focus of this thesis.

1.1 Research topic

This thesis critically evaluates three key SPV subpopulations availing of *Section 110*. More specifically, it examines SPVs that issued *Section 110* loans for the purposes of (1) financing securitisation vehicles, (2) raising finance for Russian based MNEs/financial groups and (3) for the purchase and leasing of real assets (aircraft).

The principal attraction of *Section 110* arises from its ability to deliver what Irish Revenue term ‘*tax neutrality*’.²⁶ Although qualifying firms are nominally subject to the standard 25% corporation tax rate applicable to non-trading (passive) income, their effective tax

²³ Neither the CSO nor Revenue provide a breakdown of corporate tax receipts in terms of the domestic vs international financial services sector. Revenue previously maintained a list of IFSC certified companies and in 2015 (final year of reporting) they stated net CT receipts of €621m related to IFSC companies. In the same year the IFSC was estimated to administer €2.8tn in NBFI assets. Other industry sources (IBEC) have stated a corporation tax take related to the IFSC of €2.1bn annually, source: Irish Independent (19/11/2010), ‘*IFSC firms pay third of corpo tax*’, accessed <https://www.independent.ie/business/irish/ifsc-firms-pay-third-of-corporo-tax/26700933.html> Government sources cited a €1bn figure of corporation and payroll taxes for 2012. Dáil Éireann Debate, Tuesday - 13 March 2012 Accessed <https://www.oireachtas.ie/en/debates/question/2012-03-13/19/>

²⁴ In 2024 EY and PWC reported fee income of €772m and €470m. In 2023 KPMG and Deloitte reported €579m and €478m.

²⁵ For example, Feargal O’Rourke head of tax for PWC was described as the ‘*grand architect*’ of schemes like the ‘*Double Irish*’. Cited in Irish Independent (03/11/2013), ‘*Controversial tax strategies brainchild of O’Rourke’s son*’, accessed <https://www.independent.ie/business/irish/controversial-tax-strategies-brainchild-of-orourkes-son/29721835.html>

²⁶ The Revenue Commissioner’s use of the term ‘*tax neutrality*’ is somewhat idiosyncratic, and does not align with the two well established normative interpretations of ‘*tax neutrality*’. This is dealt with this further in Chapter 1.

liability is typically reduced to zero or near zero. This outcome is achieved through a combination of provisions embedded within the regime.

Qualifying firms benefit from a wide range of tax exemptions that, in practice, result in the effective elimination of tax on profits. This is irrespective of whether those profits are distributed or not.²⁷ In addition to the variety of deductions against taxable income which firms can claim, they are also exempt from certain anti avoidance rules. Table 1.2 identifies these deductions/exemptions in comparison to trading firms and other passive income vehicles.

The central feature of the regime, which is often described as ‘*unique*’ within Irish tax legislation, is the deductibility of interest on *Section 110* loans.²⁸ This provision enables firms, through appropriate group structuring and the strategic management of income flows, to eliminate taxable profits by offsetting them against interest payments and other allowable deductions, such as professional service fees.

At the same time, interest payments made to non-resident sponsors are unlikely to be taxed in the recipient jurisdiction, giving rise to what is commonly termed ‘*double non-taxation*’. This arises due to the *potential* variability of the interest payments on these loans, which leads foreign tax authorities to treat them as after-tax distributions akin to dividends. This occurs even where little or no tax has been levied in Ireland.

With a large share of global trade (including trade in services) being intrafirm, this makes *Section 110* highly attractive as a financing mechanism within banking, financial and multinational group structures, due to its ability to create tax and regulatory arbitrage opportunities.²⁹ *Section 110* loans can take a variety of forms, including asset-backed securities, debt instruments and leasing arrangements.³⁰

²⁷ For example, they are not subject to capital gains tax, withholding tax, VAT, etc.

²⁸ Such interest would not generally be tax deductible for a trading company by virtue of the deemed distribution rules set out in Section 130 (TCA 1997).

²⁹ OECD (2011), ‘*Intrafirm Trade: Patterns, Determinants and Policy Implications*’, accessed https://www.oecd.org/en/publications/intra-firm-trade_5kg9p39lrwnn-en.html?utm_source=chatgpt.com

³⁰ Other types of instruments include commercial paper, bills of exchange, insurance/reinsurance contracts.

Table 1.2: Key tax features of trading firms, non-trading firms, and *Section 110* firms

	Trading firm	Passive income firm	Passive income firm (<i>Section 110</i> status)
<i>Industrial policy pillar</i>	Pillar 1 ¹	Pillar 2	Pillar 2
Corporation Tax			
<i>Nominal corp. tax rate</i>	12.5%	25%	25%
<i>Effective corp. tax rate</i>	2.2%-10.6% ³¹	?	Circa 0-1%
Allowable deductions from taxable profits			
<i>Revenue expenses</i>	Deductible	Certain restrictions apply ³²	N/A ³³
<i>Professional fees</i>	Deductible	Certain restrictions apply ³⁴	Deductible
<i>Losses from trade</i>	Carried forward against trading income	Certain restrictions apply ³⁵	Carried forward against income
<i>Interest deductibility</i>	Deductible for borrowings used in the course of a trade	Certain restrictions apply ³⁶	Deductible for <i>Section 110</i> loan interest
Anti-tax avoidance rules			
<i>Transfer pricing (interest charges/payments)</i>	Applicable	Applicable	Not applicable to <i>Section 110</i> loans
<i>Interest limitation rule</i>	Applicable	Applicable	In practice, no
<i>Hybrid rules</i>	Applicable	Applicable	In practice, no

Note: (1) This is the context of MNEs established as trading firms, rather than all (domestic) trading firms. (2) Some trading firms will also have passive income (non-trading income) charged at the 25%. This is cited as one reason that Revenue's estimates for the top 10 foreign MNE payers (trading firms) had an effective rate of tax of 11.2% in 2023, whereas other sources have estimated a much lower effective rate of tax.

Nevertheless, the corollary of this, is the regime also creates strong incentives for increased debt issuance and high levels of leverage within corporate groups, while

³¹ Stewart (2011) estimated that US MNEs had an effective rate of 2.2%, cited in 'PwC/World Bank Report *Paying Taxes 2014*', IIS Discussion Paper No. 442. Accessed <https://www.tcd.ie/triss/assets/PDFs/iis/iisdp442.pdf> Revenue estimates that the effective rate is around 10% for trading firms, and 11.6% for the top 10 large MNE taxpayers. Revenue (2025), *Corporation Tax 2024 Payments and 2023 Returns*, accessed

<https://www.revenue.ie/en/corporate/documents/research/ct-analysis-2025.pdf>

³² Such deductions are only permissible if they are incurred '*wholly and exclusively*' for the generation of passive income and are still subject to certain restrictions.

³³ *Section 110* firms generally have no employees or premises, so they do not incur revenue expenses like salaries or rental expenses.

³⁴ For example, it allows deductions if this is '*wholly and exclusively*' for the purposes of generating passive income. So, a passive income vehicle established to earn rental income would be allowed to deduct letting and management fees.

³⁵ In general, it is not permissible to offset trading losses against passive income. For passive income losses (e.g., rent related), this could be offset against future profits, provided its for the same income category (e.g., rental income). Such losses in general could not be offset against other income such as dividend income.

³⁶ Again, similar restrictions apply in that deductibility is restricted to borrowing carried out '*wholly and exclusively*' for the purposes of generating passive income. So for example borrowing used to purchase property to rent.

facilitating profit shifting and other aggressive tax practices.³⁷ The value of the tax concession rises with the scale of debt issued, as interest payments can be used to offset taxable income. In practice, the primary constraint on debt issuance by qualifying firms is the level of profits before interest and tax.

This research is motivated by several interrelated concerns. Firstly, the growth of shadow banking presents systemic risks. Although largely unregulated, the sector maintains close financial and ownership linkages with the regulated banking system through borrowing, lending and group structures. This interconnectedness raises the possibility of hidden vulnerabilities within the regulated banking sector, as well as the potential for financial contagion.

Secondly, the NBFIs sector relies heavily on SPVs located in OFCs, where effective tax rates on corporate income and capital transfers are minimal or zero. *Section 110* facilitates such outcomes by enabling ‘*tax neutrality*’, exempting qualifying firms from withholding tax, capital gains tax and stamp duty, while foreign distributions also likely remain untaxed. These features create scope for aggressive tax planning, base erosion and raises broader compliance concerns around Ireland’s tax code and its alignment with EU law.

Thirdly, the regime is characterised by a relatively ‘*light-touch*’ regulatory framework, combined with the widespread use of non-transparent ownership arrangements. Qualifying firms are often structured as ‘*orphan*’ entities, in which shares are held by trusts or charitable trusts rather than direct owners. This reduces transparency around beneficial ownership and increases the risk that such vehicles could be used for purposes beyond their stated function, including illicit financial flows or sanctions evasion.

Despite the importance of these issues, *Section 110* and Ireland’s NBFIs sector more broadly remains under researched. A key reason for this is the restricted availability of high-quality data. This thesis seeks to address that limitation through the construction of a novel dataset covering the population of firms availing of *Section 110* status between 1997 and 2020, identifying approximately 3,580 unique entities over this period (as detailed in **Chapter 2**).

³⁷ According to the Tax Justice Network (2017), ‘*The extraction of profits via related party loans is one of the simplest ways to avoid taxation*’. Source: ‘Shifting profits and dodging taxes using debt’, accessed <https://www.taxjustice.net/wp-content/uploads/2017/11/Dodging-taxes-with-debt-TJN-Briefing.pdf>

From this broader population, the three analytically significant subpopulations outlined above were identified. The statutory filings submitted to the Company Registration Office (CRO) by firms within these subpopulations were used to extract detailed financial, tax, and organisational data. This data underpins the empirical analysis undertaken in this thesis, in particular that found in **Chapters 3, 4 and 5**.

The interdisciplinary approach taken combines financial, economic and legal analysis which is designed to assess the associated risks within each subpopulation, and the arising domestic benefits. The scope of the research on each of the three subpopulations and the specific methodologies employed therein, are outlined in **Chapter 2** (Data and Methodology).

The thesis' research objectives are addressed next.

1.2 Research Objectives

Section 110 is a generous fiscal incentive for qualifying firms and the corporate groups which they operate in. However, its mirror image is that of a costly tax expenditure for the Exchequer, in addition to a significant drain on the tax base of other jurisdictions.³⁸ As this is government spending via the tax code, best practice dictates that tax expenditures be subject to both an *ex-poste* and *ex ante* cost-benefit analysis (CBA) (World Bank 2020).³⁹

There is no publicly available evidence that *Section 110* has ever been subject to a CBA. It is generally the case that once a tax expenditure of this nature is introduced, it is not subject to ongoing parliamentary scrutiny.⁴⁰ As a result, doubts can often arise as to

³⁸ According one estimate, tax expenditures cost the state €7.1bn in revenue forgone (Committee on Budgetary Oversight: Report (2022) on Tax Expenditures), accessed https://data.oireachtas.ie/ie/oireachtas/committee/dail/33/committee_on_budgetary_oversight/reports/2022/2022-09-22_report-on-tax-expenditures-research-and-development_en.pdf

³⁹ World Bank (2020), '*Evaluating the Costs and Benefits of Corporate Tax Incentives*', accessed <https://documents1.worldbank.org/curated/en/180341583476704729/pdf/Evaluating-the-Costs-and-Benefits-of-Corporate-Tax-Incentives-Methodological-Approaches-and-Policy-Considerations.pdf>

⁴⁰ This is in contrast to direct voted expenditure which receives ongoing evaluation via the budgetary process (e.g., the Estimates Process) and scrutiny by Oireachtas committees.

whether they ‘*remain fit for purpose, are cost effective, and do not outlive their usefulness*’ (Parliamentary Budget Office 2018).⁴¹

There are also risks that due to lobbying and the influence of special interests, a tax expenditure may be expanded beyond its original purpose with unintended consequences arising. Since its introduction in 1997, *Section 110* has continuously been expanded, meaning a broad ranging of asset and financing arrangements are now available, beyond the original purpose of facilitating securitisation.

This research **aims** to serve in part as a CBA. It does not employ a standard CBA methodology and the associated work that this entails. Rather, it assesses the associated costs of this expenditure primarily through three main categories of risk identified previously. These are financial, regulatory and revenue risks.

Such risks have been realised the form of large firm failures, bank insolvencies, losses for investors, instances of improper financial conduct, potential illicit financial flows and aggressive tax practices. These are expanded upon as part of the literature review, and detailed in later chapters.

The benefits of this tax expenditure are assessed in terms of firms directly observable economic contribution to the Irish economy. This is via their contribution to indirect employment via expenditures on domestic professional services. The beneficiaries are demonstrated to be Dublin based firms in accountancy, legal and corporate service provision (CSP). These are quantified for each subpopulation over the relevant time period.

As such, one core research **objective** is to make a contribution to public policy by providing certain elements of a CBA. It is believed that the research findings demonstrated hereafter should provide support for a full CBA of *Section 110* to be undertaken by the Department of Finance, in line with their own best practice guidelines.

It was previously noted that there are currently significant data gaps for Ireland’s *Section 110* SPV sector. For example, there is no publicly available list of qualifying firms which

⁴¹ PBO (2018), ‘*Tax Expenditures in Ireland: Key Issues for Consideration*’, accessed https://data.oireachtas.ie/ie/oireachtas/parliamentaryBudgetOffice/2018/2018-09-21_tax-expenditures-in-ireland-key-issues-for-consideration_en.pdf

poses challenges for transparency and analysis. It is also the case, as demonstrated later, that there are also significant limitations and shortcomings in the limited data which exists, in terms of identified deficiencies and other anomalies.

Given the systemic risks posed by shadow banking and the relatively modest efforts made to improve data collection and oversight in the wake of the GFC, narrowing such gaps is the second core research **objective**. Through the construction of the first publicly available dataset of the population of qualifying firms (1997-2020), in addition to the development of three granular level subpopulation datasets, a significant data contribution has been made.

The third research **objective** is to contribute to the critical literature on *Section 110* SPVs. As noted previously, there is an observable lack of academic research on the *Section 110* regime. The existing literature comes largely from industry sources (e.g., those professional firms which service these SPVs) and regulatory sources (e.g., the Central Bank)

The former often consists largely of marketing literature for tax services, with occasional industry commentary on any implications for the regime arising from changes made to the Finance Act. The latter deals more with regulatory and legal considerations. Although it acknowledges financial risks, it does not sufficiently interrogate them by identifying potential cross border contagion effects and the likely transmission mechanisms.

It could be argued, that a failure to engage sufficiently with these concerns, could be to downplay such risks and the potential externalities posed to foreign jurisdictions *vis-à-vis Section 110*. Equally, it could be argued that the Central Bank accepts many of the industry assumptions for these firms. For instance, it often appears to equate ‘*tax neutrality*’ with policy desirability, despite such an assumption being contested in academic tax theory.

Neither strand of literature offers strong explanations for the behaviour of these SPVs at the level of the firm, their specific subpopulations or the entire population in the aggregate. This research attempts to redress this by making a contribution to critical literature and theory, that provides explanations for certain subpopulation behaviour. In

addition to identifying the arising risks that are grounded in an understanding of the institutional environment in which firms operate in.

The next section reviews the broader literature on SPVs and the limited existing literature on *Section 110* SPVs.

1.3 Literature review

This section reviews and examines the academic literature on SPVs with a particular focus on *Section 110* vehicles. The literature review first introduces the different research frameworks used to analyse SPVs, their areas of emphasis and corresponding strengths and weaknesses.

The review then turns to the development of the IFSC as a key global hub for non-bank financial intermediaries (NBFIs). It assesses the scale of Ireland's shadow banking sector, drawing on estimates from regulatory sources and statistical bodies such as the Central Statistics Office (CSO), and considers the share accounted for by *Section 110* SPVs.

Thereafter it discusses the operational characteristics of these firms. It traces their origin in Irish legislation and the subsequent expansion of the regime over time. Lastly, it discusses the three primary risk categories associated with these firms (financial, regulatory and revenue) and relates this to various regulatory literature on *Section 110*.

Today SPVs, referred to also as Special Purpose Companies (SPCs) or Special Purpose Entities (SPEs), are a central component of contemporary financial markets.⁴² They are widely used in corporate groups structures for various types of transactions. Generally, they are used to hold assets, isolate financial risks from a sponsoring institution (Fabozzi and Kothari 2007), engage in tax/regulatory arbitrage (Feng et al 2015) and/or facilitate various structured financial arrangements.

They are most commonly associated with securitisation transactions, but they are also commonly used for the purposes of company/asset financing, project finance structures, and for structured investment vehicles. They can enable the conversion of illiquid assets

⁴² This thesis uses the SPV nomenclature.

into tradable securities and facilitate the distribution of financial risks across global investors.

Three core characteristics distinguish SPVs from ordinary corporate entities. Firstly, they are often designed to achieve '*bankruptcy remoteness*', meaning that their assets are legally separated from their sponsoring institution. It is often stated that this ensures that investors' claims on those assets remain protected in the event of sponsor insolvency (Schwarz 2002). The *assumption* is that the assets held by the SPV remain protected from claims against the sponsor.

Secondly, SPVs operate with restricted operational mandates which limit their activities to the specific purpose for which they were created. Although they may take different legal forms depending on the jurisdiction where they are registered, and the form they take in Ireland will be dealt with below, a defining feature is their restricted operational scope.

This is often mandated in their company constitution, articles of association or trust documentation. The intention being to reduce the risk that the vehicle will engage in unrelated business activities that could jeopardise its financial stability or investor returns. For instance, they can have rules that any cashflows generated can only be distributed to investors.⁴³

Thirdly, SPVs typically maintain independent management structures and financial records. This independence is generally created through the use of trust or charitable trust ownership structures, in addition to the appointment of independent directors. This creates a legal separation between the SPV and sponsor. Nevertheless, the sponsor generally retains significant influence.

From an accounting perspective, the off-balance sheet vs on balance sheet treatment of SPVs has been a subject of considerable debate (Hartgraves and Benston 2002).⁴⁴

Historically, firms were able to exclude SPVs from consolidated financial statements if they did not hold a majority equity interest in the entity. This practice allowed sponsors

⁴³ In practice, contractual arrangements are frequently used to restrict their activities to limit their exposure to risks unrelated to their main objective.

⁴⁴ Hartgraves and Benston (2002), '*The Evolving Accounting Standards for Special Purpose Entities and Consolidations*', in *Accounting Horizons*, Vol 16, No. 3

to transfer liabilities to off-balance-sheet vehicles, thereby improving their reported financial ratios.

In response to concerns about transparency, accounting standards have increasingly adopted a control-based approach to consolidation. This requires a sponsor to include their SPVs in their consolidated financial statements if they exercise effective control over the firm (Arsoy 2016). However, how successful this has been remains an open question.

It is still the case that many financial institutions, banking and corporate groups have large off-balance sheet exposures, with poor visibility due to the use of SPVs, particularly those located in more opaque jurisdictions (e.g., OFCs). As a result, the systemic risk posed by the shadow banking sector remain a pervasive concern of top regulators like the IMF.

A fourth distinguishing feature of SPVs, although not characteristic of their structure as corporate entities *per se*, is where they are generally located. As indicated in this chapter's introduction, these types of vehicles are overwhelmingly concentrated in OFCs and tax haven locations (IMF 2000; Garcia-Bernardo et al 2017).

They are also more typically found in common law, as opposed to civil law, countries. This can be attributed to the use of legal trusts being a more standard feature of common law jurisdictions.⁴⁵ Many jurisdictions which inherited their legal tradition from English common law are key locations for SPVs (e.g., Bermuda, Cayman Islands and Ireland).

Different strands of literature

The academic literature on SPVs is somewhat fragmented, spans multiple disciplines and has often developed in response to crisis events. The various disciplines include corporate finance, financial economics, accounting, law, corporate governance/financial regulation and international political economy (IPE)/tax scholarship.

The various literature strands each bring a different focus to the study of SPVs with related strengths and weaknesses. For instance, the corporate finance and financial

⁴⁵ Civil law countries can also make statutory provisions for SPVs and trust structures in law.

economics literature tends to assess these vehicles as tools for increasing efficiency, for value creation and risk allocation (Gorton and Souleles 2005).

As such, they are seen to help corporate groups lower transaction costs, engage in risk reduction strategies and facilitate the raising of finance. A strong focus in this literature is placed on financial and economic modelling, one which contributes to an understanding of asset backed securities markets. However, such modelling can often rely on assumptions of rational choice theory and efficient markets. Theories which have come in for strong criticism since the GFC.

The shortcomings of this strand of literature are that it tends to underplay the opacity that these vehicles create from an accounting perspective, and by extension the systemic risks they pose. It also tends to neglect regulatory and legal considerations. Or at least treats them as secondary considerations. This is despite such institutional factors being central to an understanding of the environment in which they operate and how they function.

Another strand of literature based more within accounting and financial reporting research has a different focus, one which places consideration of consolidation rules, financial reporting and transparency to the fore (Hartgraves and Benston 2002). As a result, SPVs are often examined in terms of how they are used for off balance sheet financing, the implications of this for parent/sponsor's financial statement reporting, the potential for hidden risks, etc.

This literature has value in understanding the motivating financial relationship between parents/sponsors and their SPVs, in addition to detailing rules around when/where consolidation should take place. However, it is also the case that it can be significantly technical in nature, highly rules based and geared toward those working as accounting professionals and academics.

This literature provides important insights when it comes to understanding the technicalities of the relationships between SPVs and their sponsors. However, it has less to say about their strategic use within a corporate group or their wider macro effects. It is also the case that this strand of literature is backward looking, often responding to changes in international accounting standards which can arise from crisis situations.

The scholarship based within the legal tradition approaches SPVs in terms of their legal structure, how they achieve '*bankruptcy remoteness*' and the role they can play in regulatory arbitrage (Muñoz 2014). It focuses on things like contract design, trust usage, independence of management, etc. In other words, how to create legal '*separateness*' from the parent/sponsor.

This literature highlights the importance of legal considerations when it comes to understanding SPVs. In order to achieve certain tax/regulatory benefits for the corporate groups they operate within, an '*arm's length*' separation for the sponsor (parent) must be achieved. This often amounts to little more than a legal fiction, but it is one that must be created for the corporate group to satisfy tax authorities and thus derive certain tax/regulatory benefits.

This strand shares certain shortcomings that overlap with previous ones discussed. It can be quite technical in nature and jurisdiction specific, meaning that a certain lack of generalisation can be made. In addition, there can be a neglect of the wider economic implications of SPVs and the risks they pose having wider spill over effects for the financial/economic system.

The IPE/tax scholarship is itself quite diverse. It focuses variously on the role of OFCs/tax havens as key jurisdictions for SPVs (Palan et al 2010), their use for cross border tax/regulatory avoidance, their use as tool of tax/regulatory competition amongst jurisdictions challenging for capital flows (Rixen 2013), treaty shopping and implications of recent international tax reforms.

This research tends to emphasise the institutional, legal and political dimensions of these financial structures, as opposed to focusing solely on their technical financial functions (Braun 2016; Gabor 2020). It can be more normative in outlook with a focus on the societal implications of base erosion, income/wealth inequality and economic/financial stability.

A shortcoming of this literature can be a lack good quality data on SPVs. There can be a tendency to rely instead on large publicly available databases like Orbis for example, which may not capture off balance sheet vehicles. There can also be the use of innovative methods involving global balance of payments (BOP) and international investment data

(Zucman 2013), but which are not well suited to capturing tax avoidance strategies reliant on SPVs.⁴⁶

As we can see from the above, each of these different strands of literature have their own key areas of focus, with different insights and blind spots. This thesis has endeavoured to avoid treating SPVs as purely technical objects. Rather it conceives of them as sitting at the intersection of finance, law, accounting, and public policy.

Therefore, a significant attempt has been made to integrate the perspectives from these different literature strands, in order to arrive at a more holistic understanding of *Section 110* SPVs. **Chapter 2** (Data and Methodology) details how this has been borne out in the research methods, which have relied on quantitative analysis, case studies and legal/institutional analysis.

There is consensus amongst the various disciplines and supporting empirical evidence that there has been a rapid growth in the use of SPVs over recent decades. This is generally understood as reflecting broader structural transformations within the global financial system. Scholars across disciplines have identified a range of interrelated drivers behind this expansion.

A central explanation focuses on regulatory change in international banking. In particular, the introduction of capital adequacy requirements under Basel I in 1988. This required banks to maintain a minimum capital ratio of 8% relative to their risk-weighted assets (Penn and Papadogiannis 2021). This created strong incentives for banks to reduce the size of their balance sheets.

Securitisation, facilitated through off-balance-sheet SPVs, emerged as a key mechanism to achieve this by transferring assets and the associated risks away from the regulated banks. As a result, jurisdictions with low cost and flexible SPV regimes became major beneficiaries of this new regulatory environment (Financial Crisis Inquiry Commission 2011). This dynamic was widely understood as a form of regulatory arbitrage, whereby

⁴⁶ For instance, Zucman (2015) uses ‘*net errors and omissions*’ from countries balance of payments data as a key means of measuring hidden offshore wealth. Although a novel approach it has been criticised on the basis of how it interacts with the use of SPVs. SPVs with large cross-border positions can create statistical mismatches. It is also the case the wealth held by SPVs can be mis recorded. For example, assets held on trust by an Irish SPV could be recorded as Irish wealth, even though its beneficial owner is a non resident.

financial institutions restructure activities to minimise regulatory capital (Wolf and Papanikolaou 2015).⁴⁷

Beyond banking, accounting considerations have also played a significant role in the proliferation of SPVs. Healy and Palepu (2003) argue that corporate groups have used SPVs to achieve favourable accounting treatment via non-consolidation of certain assets and liabilities. This allowed corporate groups and not just banks to manage leverage ratios and present stronger balance sheets.

From an IPE and critical finance perspective, the growth of SPVs is also linked to deeper systemic changes. These include the increasing complexity of global capital markets (Krippner 2005), the expansion of tax and regulatory avoidance strategies through OFCs (Palan et al. 2011), and the broader process of financialisation, whereby financial motives and logics become more dominant across the economy (Epstein 2005).

The growing reliance on SPVs has thus generated substantial academic debate regarding their economic rationale, their governance implications and their appropriate regulatory treatment. A significant body of early research emphasised their efficiency enhancing properties. In particular, early studies of securitisation highlighted their role in facilitating asset-backed securities markets, improving liquidity and enabling more efficient risk distribution (Allen and Gale 1988; Gorton and Souleles 2005).

Prior to the GFC, there was a relatively strong consensus that such structures contributed positively to financial stability by allowing for the better dispersion of risk across market participants. However, this optimistic view was increasingly challenged in the early 2000s following high-profile corporate scandals such as Enron and WorldCom.

These cases revealed how SPVs could be used to obscure liabilities and circumvent oversight, prompting greater scrutiny of their implications for corporate governance, transparency, and accountability (Healy and Palepu 2003). They also gave an early indication of the implications such large firm failures could have in terms of costly taxpayer rescues.

⁴⁷ Christian Wolff and Nikolaos Papanikolaou (2015), '*The global crisis beyond banks' balance sheets*', in Centre for Economic Policy Research (CEPR), accessed <https://cepr.org/voxeu/columns/global-crisis-beyond-banks-balance-sheets>

Following the GFC, a more critical strand of literature emerged which focused on the role of SPVs within the shadow banking system. Scholars such as Pozsar et al. (2010, 2012) highlighted how SPVs could facilitate regulatory and tax arbitrage while contributing to systemic risk and financial instability. This work forms part of a broader effort to understand the expansion of shadow banking activities outside the traditional regulatory perimeter.

Despite these advances, significant gaps in knowledge remain. Policymakers and multilateral organisations, including the IMF (2014), acknowledge the NBFIs sector is still only partially understood. As Pozsar et al. (2010) note, much SPV related activity has historically been poorly captured in official statistics. This lack of high quality, comprehensive data has constrained empirical research and limited assessments of their systemic importance.

A related issue concerns the geographical concentration of SPVs in OFCs. Some OFCs have been characterised as '*secrecy jurisdictions*' (Tax Justice Network). This means these states intentionally design legal and financial frameworks to limit transparency and restrict access to information by foreign regulators and tax authorities on NBFIs activities. This can leave such jurisdictions open to financial abuse.

However, others, particularly those within the EU such as Ireland, Luxembourg and the Netherlands comply with many international transparency and reform standards and are not formally classified as secrecy jurisdictions. Nevertheless, they can contribute to opacity and heighten risks.⁴⁸ They have become adepts at what Marian (2016) calls '*arbitrage manufacturing*'.

That is, although subscribing to international reforms, large and influential professional networks can assist them in effectively preserve opacity and opportunities for tax/regulatory arbitrage, via mechanisms such as complex ownership structures (including trusts), complex hybrid financial instruments and limited availability of detailed publicly accessible data on SPVs.⁴⁹

⁴⁸ For instance, see the *Financial Secrecy Index* (FSI), accessed https://fsi.taxjustice.net/#scoring_id=268

⁴⁹ For example, they cooperate in automatic exchange of information and tax information sharing agreements, have publicly accessible company registries and somewhat restricted access to registers of beneficial ownership.

Ireland: the IFSC as an OFC

Ireland's emergence as a major global hub for SPVs is closely tied to its development of the IFSC low tax, '*light touch*' regulatory model.⁵⁰ This shift marked a significant departure from Ireland's earlier financial model. Prior to the IFSC's establishment, Ireland's financial system was widely regarded as one of the most tightly regulated amongst advanced economies (O'Sullivan and Kinsella 2011).

The creation of the IFSC thus reflected the wider policy shift toward liberalisation that had taken place in previous decades, under Ireland's first industrial policy pillar. Today the IFSC dominates foreign investment within the Irish economy, far outstripping the level of investment received under industrial policy pillar one as can be seen in Table 1.3.

In 2024 IFSC investment as a percentage of total foreign investment was 75.9%. It was over 20 times the size of the economy as measured by GNI* and over 11 times as measured by GDP in 2023.⁵¹ It has the largest euro area securitisation sector (Department of Finance 2024). It has been a leading financing hub for Russian SOEs/MNEs (Doyle and Stewart 2021), and 65% of all global commercial aircraft are now leased from Ireland (Department of Finance 2024).

Ireland's IFSC strategy must be understood within the context of the global rise of OFCs. From the late twentieth century onwards, many countries established OFCs as part of economic development strategies (see Figure 1.1). These jurisdictions sought to attract foreign direct and portfolio investment (FDI/FPI) by offering favourable tax regimes, regulatory flexibility and specialised financial infrastructure that was often tailored to industry demands.⁵²

⁵⁰ The IFSC was established in 1987 with the intention of making Ireland an important location for global finance and to create 7,500 jobs in five years. A special rate (10%) of corporation tax was set for financial services (then charged at 40%), with a relaxed approach to financial regulation.

⁵¹ In 2023 total IFSC investment (direct, portfolio and other) was €6,021bn with GNI* €290bn and GDP €520bn in current prices.

⁵² The IMF (2000) identifies three primary characteristics of an OFC: (1) having large numbers of financial institutions engaged primarily with non-residents; (2) having financial systems with assets/liabilities out of proportion with the kind of financial intermediation required to finance domestic economies; (3) providing low/no levels of tax, light touch regulation, and opacity through banking secrecy or trust ownership structures.

Table 1.3: Total Foreign Investment in Ireland (2014 – 2024): IFSC vs non IFSC, €bn

	Q4 2014	Q4 2015	Q4 2016	Q4 2017	Q4 2018	Q4 2019	Q4 2020	Q4 2021	Q4 2022	Q4 2023	Q4 2024
Direct (Total)	383.9	845.3	815.2	927.8	944.2	1,132.1	1,159.8	1,257.9	1,350.2	1,299.9	1,126.5
<i>Direct, IFSC</i>	<i>111.7</i>	<i>208.5</i>	<i>203</i>	<i>203.6</i>	<i>208.7</i>	<i>239.2</i>	<i>240.2</i>	<i>292.6</i>	<i>309.1</i>	<i>322.6</i>	<i>327.9</i>
Direct, non IFSC	272.2	636.8	612.1	724.2	735.5	892.8	919.6	965.3	1,041	977.2	798.6
Portfolio (Total)	2,370.9	2,802.4	2,918.1	3,155.5	3,186.7	3,973.6	4,285.2	5,300.7	4,703.6	5,247.9	6,368.2
<i>Portfolio, IFSC</i>	<i>1,887</i>	<i>2,143.7</i>	<i>2,276.8</i>	<i>2,551.8</i>	<i>2,570.6</i>	<i>3,240.9</i>	<i>3,553.6</i>	<i>4,307.6</i>	<i>3,938.2</i>	<i>4,373.4</i>	<i>5,268</i>
Portfolio, non IFSC	483.8	658.7	641.3	603.7	616.1	732.7	731.5	993.1	765.4	874.5	1,100.1
Other (Total)	1,297.1	1,278.9	1,261.9	1,189.8	1,344.3	1,465.2	1,531.9	1,640.9	1,667	1,682.6	1,891.7
<i>Other, IFSC</i>	<i>996.5</i>	<i>1,004.8</i>	<i>967.8</i>	<i>907</i>	<i>1,042.8</i>	<i>1,159.7</i>	<i>1,224.7</i>	<i>1,312</i>	<i>1,323.7</i>	<i>1,325.7</i>	<i>1,530.7</i>
Other, non IFSC	300.6	274.1	294.1	282.7	301.4	305.4	307.2	328.9	343.3	356.9	360.9
Total (All investment) ¹	4,052	4,926.8	4,995.3	5,273.2	5,475.3	6,571	6,977.1	8,199.6	7,720.9	8,230.5	9,386.5
IFSC as % of Total	73.92%	68.1%	69.01%	69.4%	69.8%	70.6%	71.9%	72.1%	72.1%	73.1%	75.9%

Source: CSO, International Investment Position (IIP), foreign liabilities, accessed <https://www.cso.ie/en/releasesandpublications/ep/p-ia/internationalaccountsq42024/internationalinvestmentposition/>

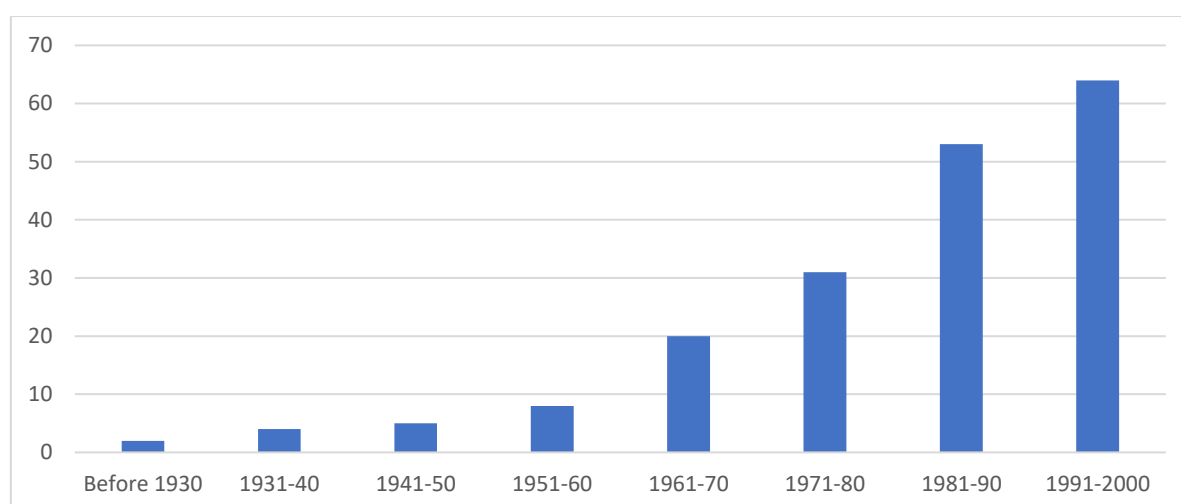
Notes:

1. This includes direct, portfolio and other investment
2. The Central Bank (2006) noted that SPVs can create classification difficulties between FDI/FPI via '*capital in transit*'. This is where direct investment is channelled through a conduit-OFC like Ireland destined for another jurisdiction, but which may nevertheless be reported in Irish FDI statistics

Policymakers and multilateral organisations initially viewed OFCs as facilitators of growth, which could be used to generate domestic employment, increase tax revenues and stimulate broader economic activity (IMF 2000). This expansion of OFCs coincided with a period of rapid financial innovation beginning in the 1970s (see Figure 1.2).

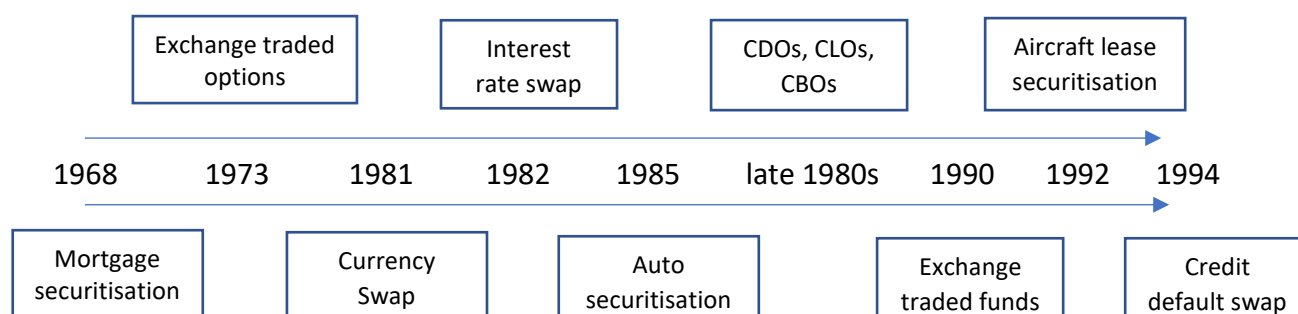
Developments such as securitisation, derivatives markets and advances in cross border capital mobility would fundamentally reshape global finance. As a result, there was a marked increase both in the number of OFCs and in their role within the international financial system. Over time, they began to intermediate a growing share of global financial flows that had previously been concentrated in traditional financial centres such as New York and London (Lane and Milesi-Ferretti 2018).

Figure 1.1: No. Offshore Financial Centers in existence (1930-2000)⁵³



Source: IMF 'Offshore Financial Centres IMF Background Paper' (2000). Authors calculations.

Figure 1.2: Timeline of financial innovation



⁵³ Note: A small number of OFCs predate the 1950s, including Tangier, recognised as an international zone in 1925, the Bahamas established by British and Canadian investors in 1936, and Switzerland (1934) which introduced the Swiss Banking Law applying strict secrecy for offshore banking.

By the mid-1990s the scale of this shift was apparent. The IMF (1994) estimated that OFCs were already intermediating more than half of global cross border lending, highlighting their systemic importance. In this context, Ireland via the IFSC positioned itself as a key European node within this expanding offshore network, particularly for SPV related activities.

One of the earliest and most comprehensive efforts to identify and classify individual OFCs estimated that approximately 63 jurisdictions met the criteria (IMF 2000). While acknowledging that a precise and universally accepted definition was difficult to establish, the study identified three core characteristics.

Firstly, OFCs tended to host a disproportionately large number of financial institutions engaged primarily in transactions with non-residents. Secondly, their financial systems were notable outsized relative to the needs of their domestic economies, with assets and liabilities far exceeding what would be required for domestic credit provision.⁵⁴ Thirdly, they offered low or zero taxation, light-touch regulation and varying degrees of financial opacity, often facilitated through banking secrecy or trust ownership structures.

Importantly, the IMF (2000) study also highlighted OFCs as locations displaying a '*rapidly growing*' concentration of SPVs. This expansion, alongside the '*rapid accumulation of short-term debt*', was identified as a potential source of financial instability.⁵⁵ This study followed in the wake of a series of financial crises and firm failures in which OFCs and SPV structures played prominent roles, reinforcing their perceived systemic risks.⁵⁶

Over time, a degree of specialisation developed among OFCs, with different jurisdictions targeting distinct financial activities and niches (Garcia-Bernardo et al. 2017).⁵⁷ Despite

⁵⁴ In theory a country's financial system should be commensurate with the size of the economy in services. Nevertheless, most OFCs have financial sectors whose size far exceeds that of their domestic economy.

⁵⁵ A later study (IMF 2004) noted that SPVs go by various names: Special purpose entities (SPEs), Financial Vehicle Corporations (FVCs), shell companies, International Business Companies (IBCs), brass plate companies, Special Financial Institutions (SFIs), letter box companies, financial conduits, etc.

⁵⁶ For example, during the Asian financial crisis (1997-98); the Russian financial crisis (1998), the Argentine financial crisis (1998-02), the failures of Long-Term Capital Management (1998), Enron (2001) and Parmalat (2003).

⁵⁷ For example, some authors distinguish between what are described as sink-OFCs and conduit-OFCs. Countries such as Bermuda, Cayman Islands and Jersey are identified as sink-OFCs with the likes of Ireland, the Netherlands and Singapore characterised as conduit-OFCs. The former seeks to attract and retain foreign capital with strict banking secrecy and less company information disclosure. The latter serve as intermediate jurisdictions rerouting international flows of funds, whilst applying low/no taxes on the transfer of capital via dividends, royalties, interest repayments and other profit distributions.

this variation, a common feature has been their focus on highly mobile (*'footloose'*) entities such as SPVs that maintain limited substantive links to the domestic economy. This characteristic has long attracted adverse scrutiny.

Writing in the 1980s, Irish (1982) critically argued that such financial activities often amounted to little more than a *'set of ledgers managed and kept by an agent'*, often negotiated elsewhere, further noting *'the funds may never actually be present in the shells'*.⁵⁸ More recent empirical research reinforces this longer standing critique.

Studies by Zucman (2015) and Tørsløv et al. (2018) demonstrate that a substantial share of global corporate profits are reported in OFC type jurisdictions without corresponding levels of real economic activity. Similarly, Damgaard et al. (2019) show that a significant proportion of global FDI consists of so-called *'phantom'* flows. Or rather financial capital routed through *'empty corporate shells'* with minimal domestic economic impact.

In parallel, the Bank for International Settlements (2022) highlights the outsized scale of NBFI sectors in OFCs relative to their domestic economies, underscoring the clear disconnect between this form of financing and real economic output. It is true that significant fee income can be earned by domestic professional firms servicing such activities. Yet this likely remains highly concentrated amongst a small number of firms and must be weighed against the associated risks.

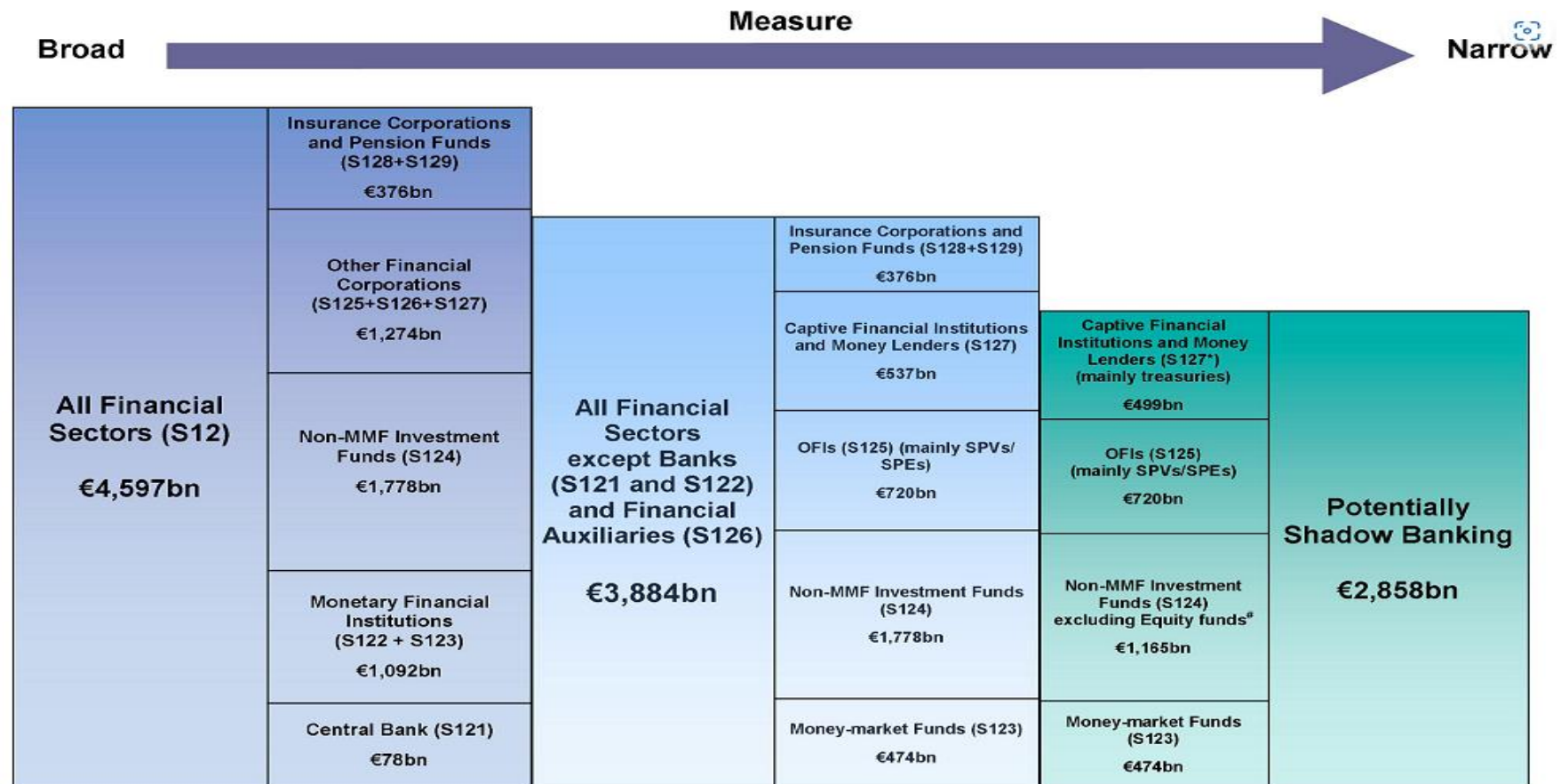
The IFSC and Shadow banking

The Financial Stability Board (FSB) is the main multilateral organisation concerned with promoting global financial stability and the risks posed by shadow banking.⁵⁹ It produces a broad and narrow definition for measuring the size of a country's sector. Figure 1.3 shows the CSO's attempt to illustrate the size of Ireland's sector (2015) by its component parts, and according to each definition.

⁵⁸ Charles Irish (1982), *Tax Havens*, in Vanderbilt Journal of Transnational Law

⁵⁹ The FSB - <https://www.fsb.org/work-of-the-fsb/>

Figure 1.3: CSO's measurement of Ireland's shadow banking sector by component parts (2015)



Source: CSO (2017), Information note carried out to comply with the OECD's request for evidence of shadow banking in the Irish National Accounts. Year of estimation 2015.⁶⁰

Note: *Excluding Brass plate companies and Holding companies (€39bn). #Excludes Equity funds (€612bn). Those remaining are Bond/fixed income/Hedge/other funds.

⁶⁰ CSO (2017) 'Measuring Shadow Banking in the Irish National Accounts', accessed https://www.cso.ie/en/media/csoie/methods/internationalaccounts/Measuring_Shadow_Banking_in_the_Irish_National_Accounts_2017.pdf

According to the CSO, Ireland's sector under the narrow measure held €2,8tn in assets in 2015. This was a significant increase from an estimated €1.5tn in assets held in 2008.⁶¹ This thesis concerns only one aspect of Ireland's NBFI sector, namely securitisation and non-securitisation *Section 110* SPVs. They are represented by the box titled '*mainly SPV/SPEs*' which CSO estimated to hold €720bn in assets in 2015. *Section 110* firms' total assets have further grown over €1tn by 2024.⁶²

More recent estimates for the total size of Ireland's NBFI sector show it reached €3.6tn in assets in 2023.⁶³ PWC describes *Section 110* as '*at the heart*' of the IFSC's success as a location for shadow banking. Since its introduction in 1997 for the purpose of financing securitisation SPVs, the IFSC has become the foremost European centre for the administration of securitised assets.

Ireland's share of total euro area securitised asset over period 2010-2015 varied between 21% to 24% (Stewart and Doyle 2017). Its share had further increased to 26% by the end of the 2024 with *Section 110* securitisation SPVs (also referred to as Financial Vehicle Corporations - FVCs), holding €665.8bn in assets.⁶⁴

⁶¹ Central Bank (2023), '*Central Bank invites feedback on discussion paper for macroprudential policy for investment funds*', accessed <https://www.centralbank.ie/news/article/central-bank-invites-feedback-on-discussion-paper-for-macroprudential-policy-for-investment-funds-18-july-2023>

⁶² Central Bank (2023), '*Central Bank invites feedback on discussion paper for macroprudential policy for investment funds*', accessed <https://www.centralbank.ie/news/article/central-bank-invites-feedback-on-discussion-paper-for-macroprudential-policy-for-investment-funds-18-july-2023>, Central Bank (2021), '*Special Purpose Entities Statistical Release*', accessed https://www.centralbank.ie/docs/default-source/statistics/data-and-analysis/other-financial-sector-statistics/financial-vehicle-corporations/2021q3-irish-special-purpose-entities.pdf?sfvrsn=f9e7921d_6

⁶³ Figure taken from FSB (2023) estimate for size of Irish NBFI sector (\$4.2tn), converted to euros at exchange rate on 31st of December 2023, accessed https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/euro_fxref-graph-usd.en.html

⁶⁴ Irish securitisation SPVs held €665.8bn in Q4 2024. Source: Central Bank (2025), '*Statistical Release: Special Purpose Entities Statistics Q4 2024*', accessed <https://www.centralbank.ie/docs/default-source/statistics/data-and-analysis/other-financial-sector-statistics/financial-vehicle-corporations/2024q4-irish-special-purpose-entities.pdf> Total euro area securitisation assets for this period were €2,526bn. Source ECB, '*Total assets/liabilities reported by all FVCs (stocks), Euro area (changing composition), Quarterly*', accessed <https://data.ecb.europa.eu/data/datasets/FVC/FVC.Q.U2.N.F.T00.A.1.A1.0000.ZZ.Z01.E>

Non-securitisation SPVs such as those engaged in intergroup lending, aircraft leasing and other activities, held total assets of €482bn in the end of 2024.⁶⁵ According to Irish law firm Arthur Cox, *‘Given the extensive range of assets, most structured finance vehicles can qualify as Section 110 companies in such a way that the transaction should be tax neutral.’*⁶⁶

Table 1.4 provides Central Bank estimates for the breakdown of the total number of *Section 110* securitisation SPVs and non-securitisation SPVs, and their gross assets under administration. Taken together these securitisation and non-securitisation *Section 110* SPVs, represented 22% of Ireland total NBFIs sector in 2023 (Central Bank 2024).⁶⁷ These estimates however are subject to certain limitations and caveats, as is later outlined in **Chapters 2 and 3**.

Table 1.4: Assets of SPEs (€bn) and number of firms⁶⁸

Year	Q4 2020	Q4 2021	Q4 2022	Q4 2023
No. FVCs	1,396	1,558	1,640	1,620
Size of FVC total assets	€479.7bn	€551.2bn	€604.9bn	€623.9bn
No. non FVCs	1,456	1,489	1,653	1,771
Size of non FVC total assets	€416.2bn	€445.1bn	€421.4bn	€479.7bn
Total no. FVCs/non FVCs	2,852	3,047	3,293	3,391
Total size of assets	€895.9bn	€1,002.3bn	€1,025.4bn	€1,103.6bn

Source: Central Bank/ECB data.

Evolution of Section 110

Following the IFSC’s establishment policymakers had quickly identified securitisation as a key means of attracting investment. Initial tax and legislative provisions for SPVs were

⁶⁵ Central Bank (2025), *‘Statistical Release: Special Purpose Entities Statistics’*, accessed <https://www.centralbank.ie/docs/default-source/statistics/data-and-analysis/other-financial-sector-statistics/financial-vehicle-corporations/2024q4-irish-special-purpose-entities.pdf>

⁶⁶ <https://www.arthurcox.com/wp-content/uploads/2021/10/Appendix-1.pdf>

⁶⁷ Central Bank (2024), *‘The Central Bank of Ireland’s response to the Department of Finance Funds Sector 2030 Review’*, accessed <https://assets.gov.ie/static/documents/central-bank-of-ireland-submission.pdf>

⁶⁸ Central Bank *‘Special Purpose Entity’* Statistics, they use the term SPEs to encompass both FVCs/SPVs.

introduced in the Finance Act 1991.⁶⁹ Contemporaneous industry literature indicated that Irish policymakers showed considerable regulatory openness to new and innovative financial products. However, this first legislative effort failed to achieve its intended effect.⁷⁰

Despite the availability of considerable tax concessions and the openness of policymakers, the existing legislative framework posed material constraints.⁷¹ Deloitte (1995) observed that if the IFSC was to develop as a centre for asset-backed securities issuance, debt listings on the Irish Stock Exchange (ISE) and other off-balance-sheet transactions, substantial reform was required to provide legal and tax certainty.⁷²

Such concerns were partially addressed with the enactment of the Finance Act 1997 and the Taxes Consolidation Act 1997. The TCA consolidated three decades of income, corporation and capital gains tax legislation into a single reference code, intended to enhance clarity and usability for tax practitioners.⁷³

These legislative acts did more than consolidate existing tax provisions; they introduced substantive securitisation reforms and established the *Section 110* regime on a statutory footing. This represented a material step towards the legal certainty sought by market

⁶⁹The Minister for Finance described this as providing a '*new investment outlet*' and signalling the potential expansion to other instruments Dáil Éireann debate – Finance bill - Tuesday, 23 Apr 1991. Accessed <https://www.oireachtas.ie/en/debates/debate/dail/1991-04-23/26/>; Dáil Éireann debate – Finance bill - Wednesday, 22 May 1991. Accessed <https://www.oireachtas.ie/en/debates/debate/dail/1991-05-22/4/>

⁷⁰ This research identified the first instance of an Irish SPV's use in a securitisation transaction as taking place in 1994. This involved a firm connected to the UK's Bristol and West Building Society issuing £154.2m worth of commercial mortgage-backed securities (CMBS). This SPV was named Commercial Loans on Investment Property Securitisation (No.1) PLC. Beyond this, securitisation activity remained relatively muted.

⁷¹ For instance, KPMG (1995) noted that income arising to IFSC-managed entities was often tax-free and that interest payments to over 75% foreign parents were typically treated as distributions akin to dividends. *The Finance Directory of Ireland's International Finance Services Centre*, Year Book 1995, sponsored by the Bank of Bermuda, Bank of Ireland and KPMG.

⁷² The 1991 provisions were limited to IFSC-certified firms licensed to conduct '*designated*' activities within the IFSC's original 11-hectare site. The scope of permitted activities under the Finance Act 1987 was broad and imprecise, encompassing areas such as '*global money management*', '*accounting*' and '*international dealings*', reflecting early policy uncertainty. See Finance Act (1987) accessed <https://www.irishstatutebook.ie/eli/1987/act/10/enacted/en/html>;

⁷³ Irish Times (03/10/1997), '*User-friendly Bill makes life easier for tax advisers: The Taxes Consolidation Bill 1997 published this week has been hailed as a testament to the enormous benefits that can be unlocked...*', accessed <https://www.irishtimes.com/business/user-friendly-bill-makes-life-easier-for-tax-advisers-1.112481>

participants. The requirement for SPVs to operate within the IFSC and to hold a licence were repealed, along with certain anti-avoidance measures introduced in 1991.

As confirmed by the Minister, interest paid to non-residents would not be subject to withholding tax.⁷⁴ In addition, an exemption from tax on interest and other profits or gains, previously applicable to specified public securities, was extended to mortgage securities held by persons neither domiciled nor ordinarily resident in the State.⁷⁵

These nascent *Section 110* SPVs would now be charged at a newly established nominal rate of 25% (passive income), rather than the existing 10% rate (trading income) for IFSC licenced firms. The ‘*unique*’ aspect of the legislation was established whereby for a non-trading (passive income) firm;

*‘activities carried out in the course of a business carried on by a qualifying company shall be deemed to be activities carried out in the course of a trade, the profits or gains of which are chargeable to tax under Case I of Schedule D [trading income]’.*⁷⁶

This meant that expenses such as professional expenditures, and most importantly interest on their issued *Section 110* loans, would be tax deductible *as if* this were a trading company. Qualifying firms were also exempted from capital gains tax, stamp duty and VAT.⁷⁷ As previously discussed, the tax authorities where the foreign based noteholder resides treat these interest payments as akin to an after-tax distribution (e.g., a dividend).

Hence ‘*tax neutral*’ status is achieved in an Irish context, by the tax deductibility of interest payments in Ireland, coupled with the non-taxation of this income by the foreign tax authorities, resulting in likely ‘*double non taxation*’. A very attractive prospect within a corporate group structure.

⁷⁴ Finance Act (1997) debate accessed <https://www.oireachtas.ie/en/bills/bill/1997/25/?tab=bill-text>

⁷⁵ Finance Act (1997) debate accessed <https://www.oireachtas.ie/en/bills/bill/1997/25/?tab=bill-text>
Although not stated by the Minister, this likely referred to an extension of the concessionary tax provisions that first applied to purchasers of MBS issued by the NTMA via an SPV Ulysses PLC in 1995. This was the first securitisation of Irish mortgages and was listed on the ISE.

⁷⁶ Author’s emphasis.

⁷⁷ From March 1st 2023 recently some *Section 110* firms engaged in aircraft leasing can no longer avail of the VAT exemption in certain circumstances (Grant Thornton 2023).

Further material amendments to the regime were introduced in 2003 and 2006. The 2003 amendments specified that equities, bonds, receivables and derivatives now constituted qualifying assets. Contemporaneous industry literature stated that this facilitated a significant expansion in transactional activity, although little empirical data was available at the time to confirm this.⁷⁸ **Chapter 3** provides empirical evidence to substantiate those industry claims.

The year 2003 saw the first aircraft securitisation and collateralised debt obligation (CDO) issue. This was described as a '*landmark*' year for the IFSC (Finance Magazine 2004).⁷⁹ Major European banks increasingly utilised *Section 110* firms for securitisation, with mortgage-backed securities (MBS), both residential and commercial, representing the largest class of European issuances between 2000 and 2008. Issuances by German banks DEPFA and WestLB were cited in industry literature as evidence of growing confidence in the IFSC among international financial institutions.⁸⁰

The 2006 amendments further supported growth by permitting qualifying firms to be structured as private limited companies, rather than exclusively as public limited companies as had been the case previously. This reduced minimum share capital requirements from €25,000 to €1. Hence most *Section 110* firms are now structured as private companies rather than PLCs.

The year 2006 also saw increased use of bearer bonds, further obscuring beneficial ownership. In addition, some issuers avoided listing on recognised exchanges, thereby circumventing prospectus disclosure requirements. IDA literature characterised this development favourably at the time, describing Ireland as '*fast becoming the Bermuda of Europe*'.⁸¹ This period coincided with a marked expansion of Russian-connected conduits used for non-securitisation purposes (**Chapter 4**).

⁷⁸ Finance Magazine (2004), '*Securitisation: a great year for the industry*', accessed https://www.finance-magazine.com/display_article.php?i=4293&pi=175

⁷⁹ It was said that this occurred off the back of significant efforts to promote the IFSC at '*most European roadshows*', and through the combined effort of industry lobby groups and government.

⁸⁰ Finance Magazine (2004), '*Securitisation: a great year for the industry*', accessed https://www.finance-magazine.com/display_article.php?i=4293&pi=175

⁸¹ IDA quoted in Fintan O'Toole, *Ship of Fools: How Stupidity and Corruption Sank the Celtic Tiger*, p.129

A further significant amendment was introduced by the Finance Act 2011, which expanded the list of qualifying assets to include aircraft leasing, commodities and carbon offsets. In practice, leasing was the principal, if not sole, beneficiary (see **Chapter 5**).⁸² The inclusion of leased assets within the *Section 110* regime helped offset the post-GFC decline in IFSC securitisation activity.

Preparatory work began in 2009 under the IFSC Banking and Treasury Group, a subgroup of the now-defunct IFSC Clearing House Group.⁸³ This work informed the State's *Strategy for the International Financial Services Industry in Ireland 2011–2016*. The Minister stated that the expansion of *Section 110* would benefit Ireland's international aircraft leasing industry and support the development of a green financial services centre.⁸⁴ While the latter impact is still unclear, the former resulted in substantial growth, as discussed later.

Lastly, another key supporting factor for the *Section 110* regime was the significant expansion in the number of Ireland's double tax treaties (DTTs). The systematic expansion of the treaty network has long been an industrial policy priority, repeatedly emphasised in IFSC strategy documents. The DTT network in conjunction with *Section 110* enhanced the IFSC's attractiveness as a conduit jurisdiction.

When Ireland first introduced its (non-*Section 110*) SPV legislation in 1991, only 18 DTTs were in force; this figure has since increased fourfold.⁸⁵ With treaties in force with 75 countries, Ireland's network has been characterised in industry literature as having a competitive advantage due to its strong tax-reducing effects.⁸⁶ In the leasing sector, for

⁸² The amendment to the Finance Act (2011) allowed for '*plant and machinery*' to be considered qualifying assets, with aircraft and aircraft engines deemed to meet the criteria of plant and machinery (see Chapter 5).

⁸³ The feasibility study was slated to examine "*green investment vehicles, the administration of funds managed under green principles, and carbon trading and associated professional services.*" Source: ⁸³ Dáil Éireann debate - Wednesday, 17 Nov 2010, accessed <https://www.oireachtas.ie/en/debates/debate/dail/2010-11-17/3/?highlight%5B0%5D=leasing&highlight%5B1%5D=aircraft&highlight%5B2%5D=leasing#s4>

⁸⁴ Seanad Éireann debate - Friday, 28 Jan 2011, accessed <https://www.oireachtas.ie/en/debates/debate/seanad/2011-01-28/8/?highlight%5B0%5D=finance&highlight%5B1%5D=2011&highlight%5B2%5D=finance&highlight%5B3%5D=2011&highlight%5B4%5D=finance&highlight%5B5%5D=acts&highlight%5B6%5D=acts&highlight%5B7%5D=finances>

⁸⁵ Ireland has currently signed DTTs with 78 countries, 75 of which are in effect.

⁸⁶ Irish Funds accessed <https://www.irishfunds.ie/set-up-distribution/taxation/>

example, most Irish DTTs reduce domestic withholding taxes on aircraft rental payments to zero.⁸⁷

Over the last three decades *Section 110* has been continuously expanded. This means qualifying SPVs can engage in the financing of a range of other non-securitisation activities. Table 1.5 provides a sample of qualifying activities for this concessionary tax/regulatory treatment, but others include the financing of commodities, plant and machinery and the purchase of distressed residential and commercial property.

Table 1.5: Qualifying activities for *Section 110* status

Activity	Qualifies for <i>Section 110</i> ?	Date of qualification	Focus of this thesis	AUA as % of <i>Section 110</i> population ²
<i>Securitisation</i>	Yes	1997 ¹	Yes	50-60%
<i>Holding vehicle (regulated funds)</i>	Yes	2006	No	40-50%
<i>Structured/intra-group financing</i>	Yes	2003	Yes	
<i>Collateralised loan obligations</i>	Yes	2000	No	
<i>Aircraft leasing</i>	Yes	2011	Yes	
<i>Insurance/reinsurance</i>	Yes	2008	No	

Note: (1) Provisions for SPVs were first introduced in Finance Act (1991), but related solely to firms certified to operate within the IFSC. What are commonly known as *Section 110* firms today trace their origins to 1997.

(2) Assets under administration

The next section considers the regulatory literature which deals with the various characteristics of *Section 110* firms' organisational structure.

Organisational Structure of firms

At the outset of this literature review it was noted that SPVs generally try to achieve three organisational characteristics, which distinguish them from other corporate entities. This section details how this is achieved in the context of *Section 110*.

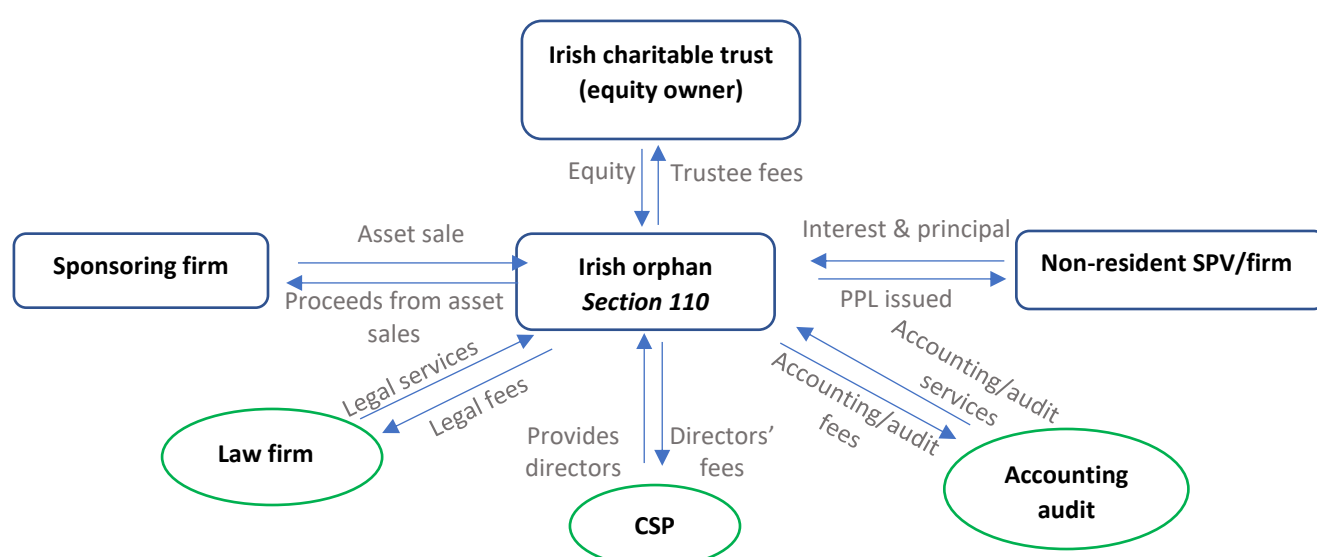
For these firms the characterisation of '*bankruptcy remoteness*' is achieved via the use of what industry and other literature refer to as an '*orphan*' structure. This means the firm

⁸⁷ Aviation Finance, Vol.7, Issue 23 '*Taxation of aircraft assets - Ireland, Singapore, Hong Kong and other jurisdictions compared*' accessed <https://www.aviationfinance.aero/articles/17164/Taxation-of-aircraft-assets---Ireland%2C-Singapore%2C-Hong-Kong-and-other-jurisdictions-compared>

has no legal parent company nor subsidiaries (see Figure 1.4). Under this arrangement a firm may have as little as \$1/€1 in equity with one issued share, which sometimes remains unpaid. This share is then held by a trust/charitable trust.

This arrangement creates the legal separation between the SPV, the performance of its underlying assets, and the sponsor company which has established it. This practice is often described in certain literature as giving the vehicle ‘*low risk*’ features. The Central Bank (2024) correctly observes that under this legal arrangement the trustee technically owns the equity, but generally the sponsor is ‘*the beneficiary and controls the decision making*’. As a result, it ‘*more closely fulfils the “parent” role in this group structure*’.⁸⁸

Figure 1.4: Illustrative example of an ‘orphan’ structure



Source: Author's illustration

This indicates that the firm's independence is something of a legal fiction and it is still subject to strong external control. The stated motivation for using an ‘orphan’ structure is that it reduces bankruptcy risks for the sponsor, and/or the providers of finance which may or may not be related.

As discussed below and detailed in later chapters, this view is debatable as risk is not reduced but often rather transferred to other firms within the corporate group. The

⁸⁸ Central Bank (2024), ‘*Behind the data: How choice of definition alters the role of SPEs in Ireland*’, accessed <https://www.centralbank.ie/statistics/statistical-publications/behind-the-data/how-choice-of-definition-alters-the-role-of-spes-in-ireland>

practice of establishing charitable trusts for the purposes of creating an ‘orphan’ structure has also been criticised by the Irish Charities Regulator.⁸⁹

Despite the use of an ‘orphan’ structure a firm can still be consolidated within an MNE/banking group. It is also the case that some *Section 110* firms (e.g., aircraft leasing firms) may not use an ‘orphan’ structure. They can operate as a direct subsidiary of a parent company which may be a large international lessor, and may have borrowing relationships with other subsidiaries within the group structure (see **Chapter 5**).

Although these firms can form key parts of complex cross jurisdictional corporate structures, they themselves often have restricted operational mandates. This limits the scope of their activities. For instances, the type of assets that it may hold and/or how its cashflow is to be distributed. It can also have other restrictions such as legal covenants preventing the hiring of employees or the owning of fixed assets.

Hence *Section 110* SPVs have no employees or a standalone business premises. Their business address may be the location of a professional service firm, for example the one providing corporate services (CSP). Previously large numbers of *Section 110* firms were registered at a select number of IFSC locations (e.g., 5 Harbourmaster Place). However, this practice changed following adverse media commentary.⁹⁰

As such business decisions are rarely taken at the level of the firm. Hence these types of structures have been variously referred to as ‘braindead’ or firms that are on ‘autopilot’ (Bratton & Levitin 2013). Nevertheless, they must demonstrate an independent management structure in order to adhere to certain ‘arm’s length’ requirements.

For almost all *Section 110* firms their directors will be appointed by a CSP. This CSP will generally also provide administrative, secretarial and trust services. This helps to create the fiction that they are legally and operationally independent. A common feature of *Section 110* firms is a note in their financial statements which state;

⁸⁹ The Charities Regulator (2017) has stated a *Section 110* firm ‘should not be the motivation and reason for a charity’s existence’. Source: Irish Charities Regulator (2017), ‘Review of registered charities holding shares in section 110 companies on trust’, accessed <https://www.charitiesregulator.ie/media/1542/review-of-registered-charities-holding-shares-in-section-110-companies.pdf>

⁹⁰ For instance, the Irish Times noted critically that 250 companies with billions in assets were located at a ‘modest-sized building’ that had no desks or employees. Source: Irish Times (11/05/2013), ‘No desks. No staff. No tax. Ireland’s shadow banks’, accessed <https://www.irishtimes.com/business/financial-services/no-desks-no-staff-no-tax-ireland-s-shadow-banks-1.1388923>

*‘The trustee has appointed a Board of Directors to run the day-to-day affairs of the Company. The Board have considered who is the ultimate controlling party of the Company. It has been determined that the control of the day-to-day activities lies with the board’.*⁹¹

A small number of internationally orientated CSPs service the wider sector (see Table 1.6). They have operations in various other OFCs, and some are connected to the ‘*offshore magic circle*’.⁹² It is the directors of the CSP which are tasked with the main filing requirements that a *Section 110* firm must make.

Table 1.6: Top 15 CSPs and number of director/total directorships

Corporate Service Provider	Parent Co. location	No. directors	Total directorships ¹
<i>Citco Corporate Services</i>	Netherlands	2	676
<i>Wilmington Trust SP Services</i>	US (NY)	3	493
<i>Walkers Corporate Services</i>	Cayman Islands	4	986
<i>Cafico International</i>	Isle of Man	5	835
<i>TMF Management Ireland</i>	Netherlands	4	1,041
<i>Alter domus (Ireland)</i>	Luxembourg	3	224
<i>Apex IFS (Ireland)</i>	Cyprus	3	457
<i>CSC Finance Holdings</i>	US (Delaware)	3	666
<i>Ogier Global (Ireland)</i>	Cayman Islands	4	315
<i>JTC Corporate Services</i>	BVI	4	452
<i>Maples Fund Services</i>	Netherlands	3	28
<i>Marsh Management Services</i>	US (Delaware)	4	84
<i>Ocorian (Ireland)</i>	Guernsey	3	1,374
<i>TrustMoore</i>	Netherlands	2	78
<i>Vistra Corporate Service</i>	Cayman Islands	3	312
Total		50	8,021

Note: (1) This relates to the number of present and past directorships held by the CSPs current directors. These include past/present directorships of *Section 110* and non-*Section 110* firms.

These include the filing of accounts and other required documents with the Company Registration Office (CRO) and certain quarterly data reports that must be submitted to the Central Bank on behalf of the ECB, for the purposes of monitoring financial stability (see **Chapter 2**).

⁹¹ For example, see the financial statements of Mermaid Secured Finance (2007).

⁹² According to the Organised Crime and Corruption Reporting Project (OCCRP) this is ‘*an informal collection of the world’s biggest offshore law firms*’ which cater to wealthy clients and have been found to facilitate illicit financial flows. <https://www.occrp.org/en/project/paradise-papers/offshore-magic-circle-law-firm-has-record-of-compliance-failures>

Given the large number of SPVs that a CSP appointed director can be serving simultaneously, it raises questions about how much meaningful attention certain filing requirements attract (e.g., Central Bank quarterly reports). This can have implications for sectoral measurement and oversight (see **Chapter 3**). It also raises questions about the application of corporate governance rules, and where responsibility lies, when regulatory issues arise (see **Chapter 4**).

Profit Participating Loans/Notes

The key financing instrument for *Section 110* firms are ‘*profit participating loans/notes*’ or PPLs/PPNs. A PPL/PPN is a form of hybrid financial instrument. This is an instrument which blurs the lines between debt and equity. This makes them attractive for the purposes of cross border financing, due to their ability to create what are called ‘*hybrid mismatches*’.

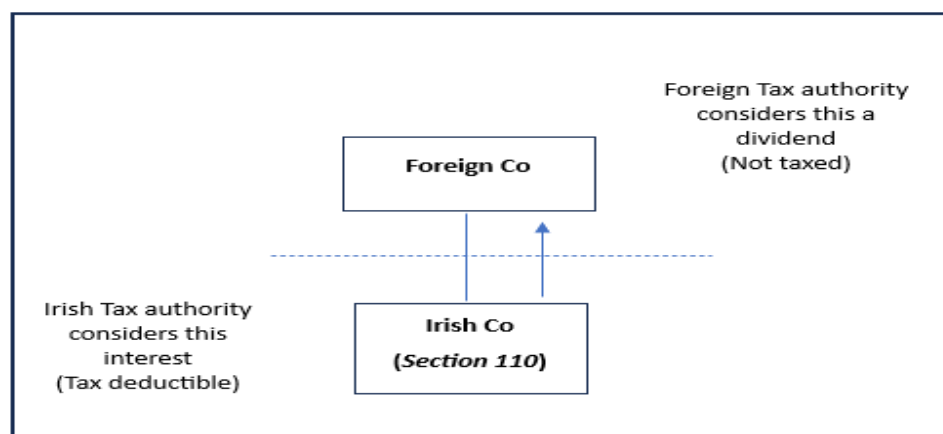
A ‘*hybrid mismatch*’ occurs where cross border income within a corporate group is not taxed in either the source or residence jurisdiction (see Figure 1.5). This arises due to tax authorities differing treatment of cross border income (debt vs equity returns). In one jurisdiction (e.g., Ireland) interest costs are tax deductible and can be used to write down taxable profits to zero, in the foreign jurisdiction they are deemed to be an after-tax distribution.

Hence, within a corporate group this divergence in treatment allows profits to be declared in one jurisdiction and extracted in the form of high interest costs (payments) which are then received in another jurisdiction tax free.

Hybrid mismatches can also occur where both parties claim deductions on the same (real) asset. For example, an aircraft lessor and lessee may each claim depreciation on the same asset under divergent national rules, a phenomenon known as ‘*double dip*’ depreciation

(see **Chapter 5**).⁹³ It is particularly significant for aircraft lessors, for whom capital gains from asset sales constitute a key component of trade (see **Chapter 5**).⁹⁴

Figure 1.5: Illustration of cross border hybrid mismatch



Source: Author's illustration

The EU has long concerned itself with harmful tax measures taken by EU member states. The European Commission scrutinises harmful tax competition through the lens of EU State aid law, viewing tax measures as potential instruments by which Member States influence the location of mobile business activities (Rossi-Maccanico 2007).⁹⁵

The Commission states that the Single Market is '*not compatible*' with '*double non taxation*'.⁹⁶ Google and Apple's '*double non taxation*' structures resulted in reputational damage to Ireland, and in the case of the latter, a successful illegal state aid challenge. '*Harmful tax regimes*' fall firmly within the scope of EU State Aid rules (EU Court of Auditors 2024).⁹⁷

⁹³ Tax depreciation has been described as a '*relatively simple, yet often under-utilised*' mechanism for sheltering trading or rental profits. Deloitte (2016) '*Tax depreciation: How to reduce your bill*' accessed <https://www.deloitte.com/ie/en/services/deloitte-private/research/tax-depreciation-how-to-reduce-your-tax-bill.html>

⁹⁴ The Irish Tax Institute (2023) notes that lessors exploit depreciation both through leasing and the subsequent sale of assets. This is because accelerated depreciation can reduce the book value of the asset, which may be less than the economic value of the assets, allowing for a gain on sale. Irish Tax Institute (2023), '*Letter to the Finance Minister: Leasing and leasing related matters*', accessed <https://taxinstitute.ie/wp-content/uploads/2023/06/2023-03-31-ITI-Submission-to-Department-of-Finance-re-Leasing-FINAL.pdf>

⁹⁵ They were first referred to as preferential tax regimes (PTRs) but are more commonly referred to as tax incentives/expenditures today.

⁹⁶ Taxation in the European Union, SEC (96) 487 final (20th March 1996).

⁹⁷ EU Court of Auditors (2024), '*EU fight against systemically harmful tax practices still not watertight*', accessed <https://www.eca.europa.eu/en/news/news-sr-2024-27>

However, *Section 110* firms fall outside the scope of State Aid investigations due to the manner in which they are organised and the qualifying process for this tax status. They do not require certification from Revenue nor do they require an advanced tax agreement (ATA). However, more recent measures could impact on *Section 110* financing via PPLs/PPNs.

The EU Hybrid Directive, implemented in Ireland through the Finance Act 2019 (effective 1 January 2020), aims to address such hybrid mismatches. Under the legislation, Irish corporate tax deductions may be denied in respect of foreign payments where a mismatch arises. The Interest Limitation Rule (ILR) (effective 1 January 2022) is another key anti base erosion measure designed to prevent tax avoidance through excessive interest cost deductions.⁹⁸

Public consultations were held by government in response to significant industry concerns about the potential impact these directives could have on the tax treatment of *Section 110* firms. Industry bodies, including the Irish Tax Institute, cautioned that the Hybrid Directive could adversely affect NBFIs.

They stated that *‘Ireland should not deny a tax deduction if a payment is not taxed in the immediate recipient company’* on the basis *‘it might ultimately be taxed in another’* related company.⁹⁹ Considering that the Hybrid Directive’s intention is to decrease the cross-border uncertainty that gives rise to double non taxation, assuming another company *‘might’* incur tax to offset this, is contrary to the Directive’s intention to close gaps in international tax rules.

The Department of Finance initially sought a delay to the imposition of ILR arguing that Ireland’s existing rules were *‘equally effective’*.¹⁰⁰ Maples law firm said this represented

⁹⁸ The ILR restricts the deductibility of net interest expense to 30% of EBITDA for intra-group financing, thereby capping a firm’s ability to deduct ‘exceeding borrowing costs’, defined as net interest and interest-equivalent expenses after offsetting interest income.

⁹⁹ Irish Tax Institute (2019), *‘Response to the Consultation on ATAD Implementation – Hybrids and Interest Limitation’*, accessed <https://taxinstitute.ie/wp-content/uploads/2019/06/ITI-Submission-18-January-2019.pdf>

¹⁰⁰ The Commission did not share this view and sent Ireland a further legal opinion restating its position. See here: <https://www.forvismazars.com/ie/en/insights/news-opinions/interest-limitation-rules-in-ireland>

'the increasing influence of the EU over Ireland's tax affairs'.¹⁰¹ Chartered Accountants Ireland contended that Ireland already had *'extensive anti-avoidance provisions relating to connected party transactions'*.¹⁰²

Under Ireland's transposition of the Hybrid Directive, a *Section 110* firm is generally entitled to a deduction where the holder of a PPN/PPL is not an associated enterprise of the counterpart, reflecting the statutory definition of association. Non-consolidated *Section 110* firms without board representation from related sponsors typically fall outside this definition, and appropriate structuring ensures the *'arm's length'* nature of transactions is satisfied from a legal perspective.¹⁰³

Under the ILR, as legislated for in Ireland, all income of a *Section 110* firm is likely treated as *'deductible interest equivalent'*, ensuring that exceeding borrowing costs do not arise. Simmons & Simmons (2022) observed that most *Section 110* firms fall outside the scope of the ILR, either as standalone entities or as part of a single company worldwide group.¹⁰⁴ For subsidiaries, such as those in aircraft leasing, this initially posed potential challenges.

As detailed in **Chapter 5**, intercompany *Section 110* loans have frequently carried interest rates exceeding 10%, with some as high as 18%. These rates suggest both a mechanism for profit extraction within corporate groups and the preservation of opportunities for profit shifting and tax arbitrage under the ILR framework as it was transposed in Irish legislation.

In 2024 the Department of Finance stated as part of its review into *Section 110* and the wider funds sector, that ongoing instances of *'double non taxation'* have promoted it to

¹⁰¹ Irish Times (30/07/2019) *'EU serves notice on Ireland over tax-avoidance rule delay'* accessed <https://www.irishtimes.com/business/economy/eu-serves-notice-on-ireland-over-tax-avoidance-rule-delay-1.3971144>

¹⁰² Chartered Accountants Ireland (2020), *'European Commission requests that Ireland transpose interest limitation rules'*, accessed <https://www.charteredaccountants.ie/taxsourcetotal/taxpoint/newdev/2020/01/international/2020-01-international-6.html>

¹⁰³ Arthur Cox, *'Section 110 Companies in Private Capital Context'*, accessed <https://publications.arthurcox.com/private-capital/typical-fund-structures/section-110-companies>

¹⁰⁴ Simmons and Simmons (2021), *'Irish Interest Limitation Rule'*, accessed <https://www.simmons-simmons.com/en/publications/ckyvotwfx1fbf0b2044hcla70/irish-interest-limitation-rule>

commence a review of *'the taxation, and deductibility, of interest by businesses in Ireland'*.¹⁰⁵ At the time of writing this review is still ongoing.

The last section of the literature review considers the associated risks of these firms.

Risks associated with Section 110

The *Section 110* subsector is widely characterised by a high degree of opacity. As the Central Bank of Ireland (2018) observes, these firms typically operate as *'part of complex cross-border corporate structures, of which limited information is available'*.¹⁰⁶ This structural complexity is not unique to Ireland but reflects broader dynamics within global shadow banking.

Quaglia (2022), for instance, describes shadow banking as *'a quintessential case for demonstrating the perils of international regime complexity'*, noting how such complexity exacerbates already entrenched challenges in the governance of global finance.¹⁰⁷ At the core of these challenges lies a collective action problem within the international regulatory architecture. As shadow banking activities span multiple jurisdictions, effective oversight depends on coordination among states and regulatory bodies that often have divergent interests and priorities.

Interjurisdictional competition, particularly in tax and regulatory regimes, creates incentives for states to attract mobile capital by offering favourable conditions, sometimes at the expense of transparency or prudential standards. At the same time, differences between technocratic and regulatory institutions, combined with the financial sector's capacity for innovation and influence, further fragment the governance landscape.

¹⁰⁵ Department of Finance (2024) *Funds Sector 2030*, accessed <https://www.gov.ie/en/department-of-finance/publications/funds-sector-2030-a-framework-for-open-resilient-and-developing-markets-final-report/>

¹⁰⁶ Central Bank (2018), *'Shadow banking risks in non-securitisation SPEs'*, accessed [https://www.centralbank.ie/docs/default-source/publications/economic-letters/vol-2018-no-12-risks-in-non-securitisation-spes-\(golden-and-maqui\).pdf?sfvrsn=4](https://www.centralbank.ie/docs/default-source/publications/economic-letters/vol-2018-no-12-risks-in-non-securitisation-spes-(golden-and-maqui).pdf?sfvrsn=4)

¹⁰⁷ Lucas Quaglia (2022), *'The Perils of International Regime Complexity in Shadow Banking: The Case of Securitisation'*, accessed https://www.lawfin.uni-frankfurt.de/fileadmin/user_upload/LQuaglia_The_Perils_of_International_Regime_Complexity_in_Shadow_Banking_Chapters_1_7.pdf

The cross-border nature of shadow banking amplifies these issues. Firms routinely operate across multiple legal and regulatory environments, navigating differences in tax systems, legal traditions (such as common law versus civil law), company law frameworks and accounting standards.

While this complexity creates opportunities MNEs and financial groups to engage in regulatory and tax arbitrage, it also generates significant risks for economies and societies. These include challenges to effective regulation and oversight, potential losses in public revenue, threats to financial stability and the risks of enforced taxpayer bailouts with resulting fiscal retrenchment (austerity).

The remainder of this subsection examines these risks in greater detail, grouping them into the three broad categories identified previously: financial, regulatory, and revenue related risks. It also situates these risks within the existing regulatory literature and introduces key findings from this thesis, which are developed more fully in the chapters that follow.

Financial risks (securitisation SPVs)

Section 110 SPVs are associated with a range of well-documented financial risks, most notably leverage, maturity transformation and liquidity mismatches. In extreme cases, these vulnerabilities can translate into systemic risk as observed with the GFC (see **Chapter 3**).

A key difficulty for regulators and policymakers, as identified above, is that such risks are often obscured by the cross-border nature of these structures and the opacity of their underlying transactions, making timely identification and intervention more challenging. This concern is not merely a theoretical one.

In 2024, the heads of both the ECB and the FSB warned that many of the ‘*underlying vulnerabilities*’ within global NBFIs sector that contributed to the GFC remain largely unresolved.¹⁰⁸ As a result, the global financial system continues to be exposed to

¹⁰⁸ Financial Times (09/07/2024) ‘*Top ECB official sounds alarm on rising risks from shadow banking*’, accessed <https://www.ft.com/content/3adfcfe4-b4fd-4247-bb8c-1af675369a98> and Financial Times (22/07/2024) ‘*Top financial watchdog says shadow bank vulnerabilities yet to be fixed*’, accessed <https://www.ft.com/content/82fa6805-aa6c-461a-8874-11883a7d906a>

potential shocks, particularly those originating in less-regulated or lightly supervised segments of the financial system.

From a comparative perspective, exposure to these risks is especially pronounced in certain OFCs. According to the FSB (2024), Luxembourg, Ireland, and the Cayman Islands exhibit the highest levels of shadow banking activity relative to the size of their domestic economies (as measured by GDP) and traditional banking sectors. In other words, these jurisdictions are key locations of financial fragility within the global financial system.

While *Section 110* firms represent only one component of Ireland's broader financial ecosystem, their structural features particularly their reliance on debt-based financing and their integration into complex corporate group structures create conditions conducive to the amplification of risk. As noted by the Central Bank (2018), these firms have the potential to '*intensify interconnectedness risks*', thereby increasing the likelihood of contagion in periods of financial stress.

The historical evidence of the GFC reinforces these concerns. As detailed in **Chapter 3**, there were clear connections between *Section 110* vehicles and a range of international banking institutions that encountered solvency and liquidity crises during the crisis. In total, 41 troubled banks across 14 jurisdictions (including Ireland) were identified as having connections to such *Section 110* SPVs. Many of these connected banks ultimately failed or required substantial taxpayer funded bailouts.

As this chapter details, these *Section 110* vehicles were highly significant in terms of the size of their holdings of financial assets. However, the onset of the crisis triggered substantial losses, asset write downs and contagion effects for their sponsoring banks. A clear example of this is Ormond Quay, the largest securitisation vehicle identified during the GFC period.

In 2006, its last year of accounts, it reported assets of approximately €15bn. It was linked to the German lender Sachsen LB, which subsequently failed. Ormond Quay itself was liquidated in 2008 following a major rescue attempt by the German government.¹⁰⁹ This

¹⁰⁹ The bank, through its *Section 110* vehicles, had become heavily involved in the US subprime markets financing this with short term credit. The New York Times noted that the parent had received emergency funding of €17.3bn following the difficulties encountered by its Dublin based conduits. It further noted that the board member of the parent bank with responsibility for its Dublin operations had resigned. Source:

case illustrates how the rapid expansion and subsequent collapse of such off-balance sheet firms can exacerbate broader financial instability at the level of the sponsor/parent and at the state level.

Chapter 3 challenges a core assumption underpinning the use of *Section 110* SPVs, namely that the use of an ‘*orphan*’ structure results in ‘*bankruptcy remoteness*’. The evidence presented in this chapter suggests otherwise. Despite these supposed legal and organisational safeguards, many associated lenders either failed or required substantial bailouts. Investors also experienced significant losses, particularly where troubled SPVs were ultimately brought back onto the balance sheets of originating banks.

This tension between their formal structure and economic reality remains evident in contemporary literature. Both industry literature and the Central Bank (2025) continue to characterise these vehicles as ‘*bankruptcy remote*’. Yet, as highlighted in **Chapter 3** and in inquiries such as those conducted by the *Financial Crisis Inquiry Commission* (2011), bankruptcy risk is ultimately determined not by legal form alone.

Rather the risk of bankruptcy in this regard is a function of the performance and valuation of the underlying assets. Where those assets experience sharp declines in value, the protective features of SPV structures can quickly prove insufficient. The presence or absence of a trust structure is not the determining factor.

This helps explain why, despite appearing well-capitalised prior to the crisis, as noted by the IMF (2018), many banks were far more vulnerable than their balance sheets suggested. Extensive use of off-balance-sheet SPVs allowed institutions to accumulate high levels of leverage that were not fully captured in conventional regulatory metrics. When asset prices collapsed, these hidden exposures materialised, forcing losses back onto bank balance sheets. In this sense, rather than dispersing or isolating risk, *Section 110* structures thus acted as conduits through which risk was amplified (as opposed to reduced) and transmitted across the financial system.

New York Times (26/08/2007), ‘*German state-run bank, caught in subprime mess, is sold*’, accessed [German state-run bank, caught in subprime mess, is sold - The New York Times](#)

Financial risks (non-securitisation SPVs)

The risks associated with non-securitisation *Section 110* vehicles, particularly those involved in intragroup financing or aircraft leasing, are not well-documented, as the Central Bank (2018) has pointed out. This lack of research is especially evident in the case of *Section 110* firms connected to multiple Russian banks that faced financial distress during the Russian Financial Crisis (2014-16).

Chapter 4 explores the role of Russian connected non-securitisation firms engaged in intragroup financing, which nonetheless still exhibited significant vulnerabilities and contagion effects for banks. These firms all had a common business model. This involved raising capital by issuing bonds on the Irish Stock Exchange (ISE) and subsequently on-lending these funds to Russian banks.

As detailed later, many of these banks similarly collapsed or required emergency support from the Russian Central Bank (RCB), apparently exposing investors to considerable losses. The link between these firms and the failed Russian banks raised important questions about risk disclosure and regulatory oversight.

A notable example is TFB Finance, a firm connected to the now defunct lender Tatfondbank. In 2016 TFB Finance issued a \$60m bond despite the fact that it had been in negotiations with the RCB for six months concerning the bank's uncertain solvency. The bond prospectus failed to disclose these ongoing negotiations as a significant risk factor.

This incident highlighted a significant shortcoming in transparency and oversight. The disclosure of such risks would become mandatory under the EU Prospectus Regulation, introduced the following year.¹¹⁰ Nevertheless, it also raised important questions about the level of scrutiny applied to these prospectuses by the Irish regulator, which has often prided itself on the fast turnaround time for reviews of such prospectuses.

Tatfondbank's licence was revoked in 2017 following a fraud investigation and the discovery of a \$2bn hole in its balance sheet. The bonds issued by TFB Finance were subsequently deemed worthless, highlighting the potential for substantial losses when adequate risk disclosure is absent. Moreover, the incident prompts further investigation

¹¹⁰ EU Prospectus Regulation (2017), accessed <https://eur-lex.europa.eu/eli/reg/2017/1129/oj/eng>

into the identity and due diligence practices of the purchasers of these bonds (discussed in next subsection).

Chapter 5 examines financial risks posed by *Section 110* firms operating in the aircraft leasing sector. The leasing sector is often presented in industry literature as playing a countercyclical role for airlines, which are vulnerable to cyclical downturns in demand for air travel. Leasing allows airlines greater flexibility in fleet management, which is understood as helping to mitigate the impact of downturns and changes in demand for air travel.

However, as **Chapter 5** demonstrates, the leasing sector, particularly when reliant on NBFIs, is susceptible to financial shocks that extend beyond the typical business cycle. A prime example of this vulnerability emerged during the Covid19 pandemic, when the leasing industry faced significant financial difficulties. Asset values declined sharply and many leasing firms reported considerable negative equity. This had severe repercussions not only for the firms themselves but also for their providers of finance, insurance and investors.

For instance, Nordic Aviation Capital (NAC), once one of the largest aircraft lessors globally, entered a U.S. Chapter 11 restructuring process in 2022. Despite a major debt-for-equity swap with creditors, NAC reported a \$1.2bn loss in 2024, leading to its eventual acquisition by Dubai Aerospace Enterprise (DAE).¹¹¹ Similarly, rival AerCap took over GECAS, marking a trend of considerable consolidation within the sector.

The leasing sector also faced new geopolitical risks, particularly with the imposition of financial sanctions on Russia. The seizure of leased aircraft by the Russian Federation in response to the imposition of sanctions led to substantial insurance claims and legal disputes. Estimates of the total cost of these claims vary, but one estimate placed the value of Irish registered aircraft seized by Russia at around \$4bn.¹¹²

These incidents further underscore the broader risks faced by *Section 110* firms in the leasing sector, where both financial and geopolitical factors can have considerable

¹¹¹ Irish Independent (20/12/2021), 'Limerick-based Nordic Aviation Capital seals US Chapter 11 deal with lenders', accessed <https://www.independent.ie/business/limerick-based-nordic-aviation-capital-seals-us-chapter-11-deal-with-lenders/41166411.html>

¹¹² William Fry (2022), 'M&A Review: Half-Year 2022', accessed https://www.williamfry.com/docs/default-source/reports/m-a-hy-report-2022-final.pdf?sfvrsn=474be05f_0

adverse effects. The events described highlight how NBFIs in the aircraft leasing industry are exposed not only to economic cycles but also to unexpected shocks, such as pandemics and geopolitical crises, which can lead to massive losses and significant market disruption.

Regulatory risks

As indicated previously, *Section 110* firms operate in something of a regulatory grey area. As the Central Bank (2018) notes, they are neither authorised nor subject to prudential oversight. Nor are they required to meet the same regulatory requirements that apply to traditional banks.¹¹³

More specifically, they do not need certification from the Irish Revenue or other regulatory bodies. Instead, firms are only required to ‘*notify*’ Revenue of their status as qualifying firms, a process which is essentially self-declared. Firms must comply with certain minimal operational requirements (see **Chapter 3**), but they are largely free from meaningful oversight.¹¹⁴

Unlike traditional deposit-taking institutions, they are not bound by the type of capital adequacy regulations applicable to traditional banks and enforced by the European Central Bank (ECB).¹¹⁵ For instance, Irish banks are required to maintain an equity-to-risk-weighted-assets ratio between 14% and 18%, a measure designed to ensure that they hold sufficient capital to absorb potential losses in the event of adverse conditions.

Furthermore, Ireland does not have rules on thin capitalisation more broadly, which would otherwise limit the extent to which firms can finance themselves with debt in

¹¹³ [https://www.centralbank.ie/docs/default-source/publications/economic-letters/vol-2018-no-11-shining-a-light-on-special-purpose-entities-in-ireland-\(golden-and-hughes\).pdf?sfvrsn=8](https://www.centralbank.ie/docs/default-source/publications/economic-letters/vol-2018-no-11-shining-a-light-on-special-purpose-entities-in-ireland-(golden-and-hughes).pdf?sfvrsn=8)

¹¹⁴ For instance, they must hold at least €10m in assets on day one (the day one test) but are not obligated to ensure the value of assets meet this threshold at any time thereafter. They must also hold qualifying assets (see Table 1.4 for examples). They must also be registered in Ireland.

¹¹⁵ The Irish Central Bank describes them as firms established to fulfil a narrow purpose, availing of tax concessions with “*little or no physical presence, such as an office or full-time employees. They are also often part of complex chains of companies across a number of different countries.*”
<https://www.centralbank.ie/consumer-hub/explainers/what-is-a-special-purpose-entity>

relation to equity.¹¹⁶ This regulatory gap allows them to be highly leveraged, often with significant amounts of debt relative to equity.

For example, as detailed in Table 1.7, one firm (Mermaid Secured Finance) connected to Danske Bank in 2007 had issued over €6bn in asset-backed and other debt securities across several tranches. Yet it only has €3 in unpaid equity. This resulted in a debt-to-equity ratio of 0.00000004%. The firm's capital structure was also notably opaque, with its three shares held by charitable trusts named BADB, Eurydice, and MEDB. Notably, these trusts were operated by the law firm Matheson, which also acted as Mermaid's legal advisor.¹¹⁷

Table 1.7: Example of *Section 110* firm's debt/equity structure

Mermaid Secured Finance (2007)				
Class	Value	Rating (S&P)	Category	CDS agreement in place per tranche
A1	€1.25bn	AAA	Investment grade	Yes
A2	€4.28bn	AAA		Yes
B	€222.5m	AA		Yes
C	€69.1m	A+		Yes
D	€93.2m	BBB		Yes
E	€45.1m	BBB		Yes
F	€48.1m	BB	Non-investment grade	Yes

Source: CRO/*Section 110* dataset

Note: The underlying assets for the issuance of these ABS contained residential and commercial mortgages, and loans to SMEs. Each tranche varied in terms of the breakdown of these assets. Each with a separate credit default swap (CDS) agreement in place per tranche. Under the Basel II rules, the use of a CDS as part of a securitisation would allow connected banks to further lower their capital requirements.

The year 2008 was the final year of accounts and the company was liquidated shortly thereafter.

This structure, marked by minimal equity and high leverage, illustrates the significant risks posed. The lack of stringent regulation over their capitalisation allows them to take on considerable debt while operating with almost no equity buffer. This case underscores

¹¹⁶ Companies with low levels of equity capital compared to their levels of debt are described as thinly capitalised. Many countries 'have rules to ensure that companies have a fair proportion of equity capital so that taxable profits cannot be minimised in this way'. Source: Thomson Reuters Practical Law, accessed [https://uk.practicallaw.thomsonreuters.com/7-107-7387?transitionType=Default&contextData=\(sc.Default\)&firstPage=true#:~:text=A%20company%20that%20has%20a,be%20minimised%20in%20this%20way.](https://uk.practicallaw.thomsonreuters.com/7-107-7387?transitionType=Default&contextData=(sc.Default)&firstPage=true#:~:text=A%20company%20that%20has%20a,be%20minimised%20in%20this%20way.)

¹¹⁷ Irish Times (27/08/2015), 'Law firm defends use of charities to help hedge funds cut tax bills', accessed <https://www.irishtimes.com/business/financial-services/law-firm-defends-use-of-charities-to-help-hedge-funds-cut-tax-bills-1.2329919>

the fundamental risk that arises from the regulatory framework, or lack thereof, governing *Section 110* SPVs.

Chapter 4 delves into key regulatory risks associated with Russian connected subpopulation in terms of potential illicit financial flows. The Central Bank (2018) characterises these firms as being used for the purposes of '*external financing*'. It notes that cross-border debt flows via *Section 110* firms are highly concentrated within a small number of jurisdictions, with Russia being one of the most significant sources of activity.

The outsized role played by Russia raises questions about the attraction of these firms for the Russian economy. Data from EU based custodians on securities holdings further indicates a substantial overlap between the sponsors of the company issuing this ISE listed debt and the bond investors themselves.

According to the Central Bank (2018), nearly half of the underlying investors in these securities are Russian. This suggests that funds flow from Russian investors to Russian sponsors through 3rd party jurisdictions like Ireland, effectively linking the country to the broader patterns of capital movement originating from Russia.¹¹⁸

Chapter 4 advances the hypothesis that these bond issuances and the associated capital flows may in part constitute '*round-tripped*' investment. Round tripping refers to the practice of channelling domestic capital abroad, via an intermediary jurisdiction, only to have it return disguised as foreign investment. This practice can be motivated by tax, regulatory or strategic considerations, but it can also have illicit motives.

Russia as a jurisdiction is widely recognised as a hotspot for round tripping activities (Borga, 2016). Although other OFCs have been identified as key conduits for such practices, Ireland's role has not previously been recognised in academic or regulatory literature.¹¹⁹ This chapter aims narrow that literature gap by providing evidence and analysis in support of this hypothesis.¹²⁰

¹¹⁸ Central Bank (2018), '*Shadow banking risks in non-securitisation SPEs*', accessed [https://www.centralbank.ie/docs/default-source/publications/economic-letters/vol-2018-no-12-risks-in-non-securitisation-spes-\(golden-and-maqui\).pdf?sfvrsn=4](https://www.centralbank.ie/docs/default-source/publications/economic-letters/vol-2018-no-12-risks-in-non-securitisation-spes-(golden-and-maqui).pdf?sfvrsn=4)

¹¹⁹ As one of the countries with the largest stock of offshore wealth it has also identified as one most pervasive users of offshore vehicles.

¹²⁰ The CSO (2025) recently provided some estimates for Irish firms engaging in '*round tripping*'. That is firms that are ultimately controlled from Ireland channelling this investment back into Ireland via a foreign jurisdiction. They estimated that 8% of Ireland FDI was ultimately '*round tripped*' investment. However,

Several indicative features of round tripping behaviour are highlighted, including unusually high interest rates between connected parties, significant risk factors disclosed in bond prospectuses, adverse changes made to the terms and conditions of issued bonds and a noticeable absence of investor litigation. These characteristics likely indicate that transactions are not occurring on an ‘*arm’s length*’ basis, which is common in round tripping schemes.

The debt issuances listed on the ISE frequently involved leading UK law firms (e.g., Linklaters) acting as international legal advisers, many of which maintained offices in Russia. Some of these firms were subsequently examined by the UK House of Commons Foreign Affairs Committee in connection with alleged facilitation of illicit financial flows.¹²¹ As the chapter details, these financial arrangements appear to have been designed to obscure their true nature and the identities of the parties involved.¹²²

Doyle (2018) also documented the use of Russian-connected firms for other potentially illicit purposes (see Figure 1.6). During the Russian financial crisis (2014–16), a distressed Russian bank (MDM) used a Maltese SPV and two *Section 110* SPVs to conceal non-performing loans and create fictitious balance sheet assets. Steps 1 to 4 below outline the process of transactions.

These transactions occurred just before MDM’s merger with another bank (B&N), suggesting they may have been part of a strategy to obscure the bank’s true financial position during merger negotiations. The Irish firms involved were subsequently liquidated, further raising suspicions about the role these vehicles played in manipulating financial statements. Of particular note is the CSP between the Irish and Maltese SPVs.¹²³

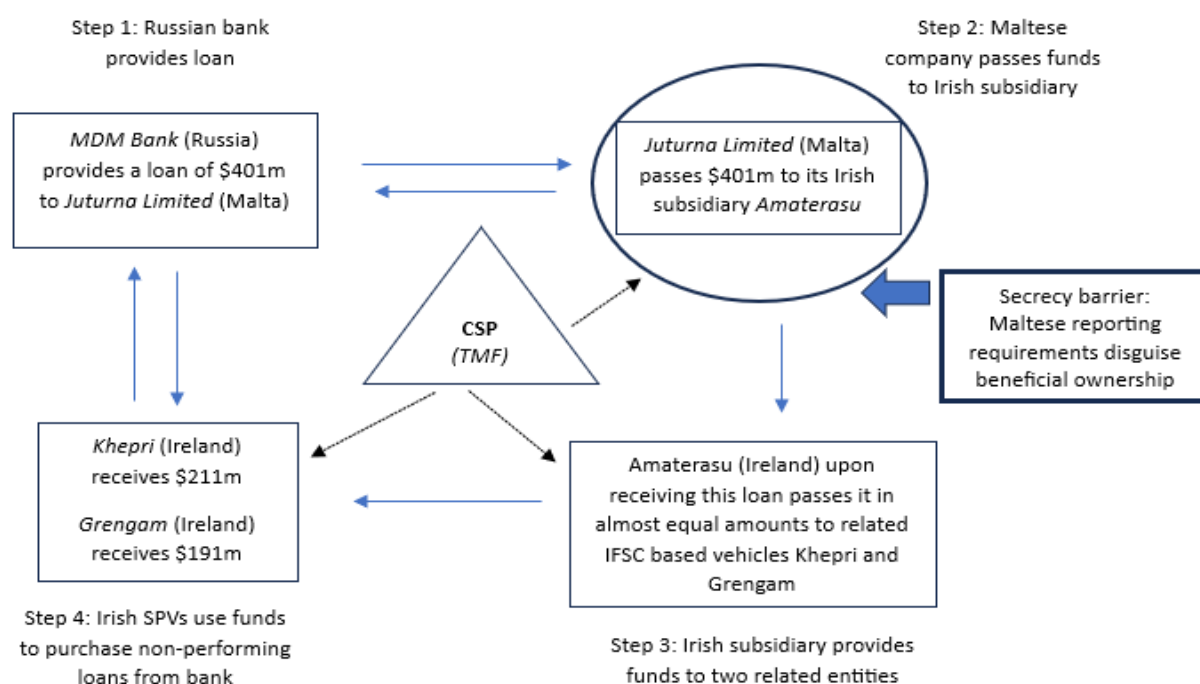
they did not provide an estimate for Irish firms’ contribution to ‘*round tripped*’ investment in other jurisdictions. Source: CSO (2025), ‘*Foreign Direct Investment in Ireland 2023*’, accessed <https://www.cso.ie/en/releasesandpublications/ep/p-fdi/foreigndirectinvestmentinireland2023/keyfindings/>

¹²¹ Law Society Gazette (21/05/2018), ‘*Linklaters named in Russia money probe*’, accessed <https://www.lawgazette.co.uk/news/linklaters-named-in-russia-money-probe/5066212.article>; UK House of Commons Foreign Affairs Committee, accessed <https://publications.parliament.uk/pa/cm201719/cmselect/cmfaaff/932/93202.htm>

¹²² For instance, the ultimate beneficial owners of the bonds not being recorded in Clearstream.

¹²³ Despite the potentially illicit nature of these transactions, there was no evidence of regulatory intervention by Irish authorities.

Figure 1.6: Structure of transactions to hide losses/create assets (MDM Bank Russia)



Source: Cillian Doyle (2018) 'Russian bank collapse: Fictitious assets, hidden losses and the role of the IFSC', Journal.ie <https://www.thejournal.ie/readme/russian-bank-collapse-fictitious-assets-hidden-losses-and-the-ifsc-4339432-Nov2018/>

Note: This involved the provision of a loan (€401m) by MDM to a connected Maltese SPV. This transaction would have increased the value of the bank's loan book. The funds from this loan were then provided to Irish *Section 110* firms which used the proceeds to purchase non-performing loans from the bank. Thus, removing impaired assets from its balance sheet

Regulatory risks relating to sanctions evasion were also identified, leading to an Oireachtas hearing and a limited review of the *Section 110* regime under the *Funds Sector 2030* framework.¹²⁴ Following this review, the Central Bank acknowledged that such firms were 'vulnerable to exploitation for money laundering purposes', with approximately 10% cent meeting the threshold for counter-terrorist financing risk.¹²⁵ This concern is reinforced by evidence that other *Section 110* structures have previously been used to finance terrorist or paramilitary activity.¹²⁶

¹²⁴ Oireachtas Joint Committee on Finance, Public Expenditure and Reform, and Taoiseach debate - Wednesday, 1 Jun 2022, accessed https://www.oireachtas.ie/en/debates/debate/joint_committee_on_finance_public_expenditure_and_reform_and_taoiseach/2022-06-01/2/

¹²⁵ Funds Sector 2030, it further noted around 10% of these vehicles 'meet the criteria for supervision for anti-money laundering and counter terrorist financing (CTF)'.

¹²⁶ One *Section 110* firm Oilflow SPV 1, raised \$500m in 'secured amortising notes' which were listed on the Cayman Islands stock exchange. These high yielding notes (12%) were used to provide finance to a Kurdish separatist movement in Iraq. The *Section 110* firm was controlled by Glencore. For further information see

Chapter 5 identifies a novel form of regulatory risk affecting the aircraft leasing sector, arising from breaches of two foundational international aviation conventions. This risk materialised following the seizure of Irish registered aircraft leased within the Russian Federation and their subsequent unlawful re-registration as Russian aircraft.

As such, a new form of geopolitical risk has been introduced into the global industry. More specifically, the erosion of confidence in the enforceability of the *Chicago* and *Cape Town Conventions* which govern the registration and leasing of aircraft, and upon which the global leasing industry depends. The repercussions of this breach are significant in terms of new cost pressures for the global industry.

These conventions provide a legal framework that ensures the protection of aircraft leasing rights, making them essential for the smooth operation of international aircraft leasing. If such actions were replicated by other sanctioned or non-compliant states, it could undermine the stability of the global aviation leasing market and, by extension, the broader international ‘rules-based’ trading and investment order.

This risk is further amplified by current U.S. administration policies, which have placed increased scrutiny on jurisdictions involved in the breach of international agreements and the potential for sanctions evasion. Yet has also shown a disregard for international law, conventions and agreements in its own right.

In sum, the risks identified in **Chapter 5** highlight a critical intersection between regulatory oversight, geopolitical stability and the financial systems that underpin global industries like aviation leasing. The implications of these breaches extend far beyond aircraft leasing via *Section 110* SPVs.

The affect the broader regulatory framework that governs international trade and investment. If similar breaches become more widespread, they could have far-reaching consequences for the stability and predictability of global markets. Such breaches are likely to attract increased attention in academic literature in the coming years.

Javier Blas & Jack Farchy, *The World for Sale: Money, Power and the Traders who Barter the Earth's Resources*, Penguin Books, London, 2022.

Revenue risks

The revenue risk posed by *Section 110* is the facilitation of ‘*double non taxation*’. This results in taxes losses to the Irish Exchequer but potentially greater losses for other jurisdictions. In relation to *Section 110* securitisation firms, **Chapter 3** examines a selection of vehicles reporting zero profits for most of period 2009-2015.

It demonstrates that despite the group being large in terms of the size of assets, with gross income for the period amounting €9.5bn (interest income €3.2bn), the return to the Exchequer was zero/near zero. The group also paid interest of €1.4bn which was unlikely to have been taxed in the foreign recipient jurisdictions.

A comparison is made between the tax strategies observed in the *Luxleaks* case and that observed with *Section 110*. Similarities and differences are highlighted between the approach witnessed in Luxembourg and Ireland. Yet the conclusion remains that both can be considered examples of state sanctioned arbitrage.

With regard to Russian connected firms, **Chapter 4** demonstrates that a group of 52 Russian connected firms with reported gross assets of €46.2bn and gross interest income of €27.3m, had a median value tax charge of just €180 in 2017. These conduit firms also made significant interest payments to bond investors. Given the indicated overlap between the sponsors and the investors themselves, this may have represented a major tax-free distribution to the owners of the borrowing Russian firms.

For the leasing sector, **Chapter 5** demonstrates that 233 *Section 110* firms had gross assets of €21bn in 2019. The reported pre-tax losses for the group in that year was €636m. Interest paid was €1.1bn with a median rate of interest of 10.9%. Tax deductible *Section 110* loan interest was around half of this.

Given that many of these loans were to related parties, these high rates of interest coupled with pre-tax losses could reflect profit shifting/extraction, with associated tax losses for other jurisdictions. It also raises questions about the effectiveness of recent European international tax reforms, and the manner in which they were transposed.

Ireland’s Minister for Finance stated that Ireland is committed to ‘*tackling aggressive international tax planning*’ through the OECD BEPS (Base Erosion and Profit Shifting)

process.¹²⁷ In implementing EU tax directives, it was stated that the government seeks ‘to improve the single market and implement agreed international best practices in a consistent manner across the EU’.¹²⁸

In practice, the way these reforms were legislated for reflected substantial lobbying by industry participants, which focused on preserving the ‘tax neutrality’ of the *Section 110* regime.¹²⁹ The concept of ‘tax neutrality’ as used by the Irish government and Revenue appears to diverge from its normative economic understanding.

Typically, tax neutrality is framed in two ways: first, as ensuring that economic decisions are made based on merit rather than tax considerations (Furman, 2008), and second, as avoiding double taxation by ensuring that tax is paid on the same income stream only once (Invest Europe, 2023).¹³⁰

However, Revenue’s framing of *Section 110* arguably permits a form of cross-border tax arbitrage, which facilitates double non-taxation. When criticised about this, Revenue has defended this approach, asserting that *Section 110* firms ‘constructed not to have a tax liability... are working as intended’.

Similarly, Ireland's Minister for Finance has endorsed this position. Yet significant problems arise when tax policy is assessed solely within a domestic framework. It is essential that Ireland’s tax laws also align with international standards, including those

¹²⁷ Comments by Minister for Finance, accessed <https://paschaldonohoe.ie/government-signs-oecd-beps-multilateral-order-to-tackle-aggressive-tax-planning-by-multinationals/>

¹²⁸ Dáil Éireann Debate, Tuesday - 21 May 2024, accessed <https://www.oireachtas.ie/en/debates/question/2024-05-21/232/>

¹²⁹ For instance, Ireland’s implementation of new OECD rules on transfer pricing for financial services explicitly excluded transactions undertaken by *Section 110* firms. The Finance Act 2019 carved out interest and similar distributions paid by such entities, a position subsequently confirmed by Revenue (2023), which stated that transfer pricing rules do not apply to the issuance of profit-participating loans or notes. This is set out in Section 130 (2)(d)(iii) of the Taxes Consolidation Act (1997) under ‘Meaning of distribution’. Accessed <https://www.irishstatutebook.ie/eli/1997/act/39/section/130/enacted/en/html> The OECD also recommended the inclusion of Limitations of Benefits (LOB) clauses in DTTs to protect against ‘treaty abuse’. Ireland subsequently exercised its right to opt out of LOB provisions, and none of its DTTs currently contain operative LOB clauses.

¹³⁰ Jason Furman (2008), ‘The Concept of Neutrality in Tax Policy’, Brookings Institute, accessed <https://www.brookings.edu/articles/the-concept-of-neutrality-in-tax-policy/>

set by the OECD and the EU, to ensure that tax neutrality is not misused as a shield for facilitating aggressive tax avoidance practices.¹³¹

While *Section 110* may provide legal ‘tax neutrality’ for qualifying firms under Irish law, broader considerations require alignment with international norms and obligations. Matheson has argued that Ireland must preserve its policy of tax competition to protect national sovereignty, yet such sovereignty must be balanced against obligations within the European single market.¹³²

Regimes like *Section 110*, which facilitate tax and regulatory arbitrage and support highly leveraged NBFIs, remain susceptible to EU scrutiny, particularly if systemic risks re-emerge in the shadow banking sector, similar to the GFC. The significant risks involved with these firms has led to significant critical media, industry, public and political commentary.¹³³

However, as detailed in subsequent chapters, closing regulatory and data gaps would require a greater level of disclosure. For example, disclosing the list of companies availing of this tax relief, and requiring ‘external’ companies with *Section 110* status to lodge full

¹³¹ For instance, Apple’s ‘*Stateless income*’ structure was legal in a narrow Irish sense, but illegal in an international sense, as it exploited differences between the Irish/US tax codes resulting in double non taxation.

¹³² The European Court of Justice (ECJ) which was once seen as a protector of the taxation as a national competency, has nevertheless increasingly taken an assertive approach to member states facilitating aggressive tax avoidance. The first landmark judgement came in 2005 (Hallifax case) which was then reaffirmed in 2006 (Cadbury Schweppes case). The former case found that EU law forbids transactions which have the sole purpose of creating a tax advantage, with the latter case condemning the use of ‘*wholly artificial*’ subsidiaries. The subsidiaries in this case were IFSC based [non-*Section 110*] firms used for financing purposes. It also upheld the tax case taken by the Commission against Ireland in the case of Apple.

¹³³ For examples of adverse media coverage see: Irish Independent (25/07/2016), ‘*The “tax neutral” quandary: just because it is legal does not mean that it is right*’, accessed <https://www.independent.ie/opinion/analysis/the-tax-neutral-quandary-just-because-it-is-legal-does-not-mean-that-it-is-right/34908783.html>; Irish Times (02/07/2017) ‘*State-backed funds using Section 110 to slash tax bill*’, The Times (27/05/2018) ‘*Revenue plans crackdown on section 110 companies*’, accessed <https://www.thetimes.com/world/ireland-world/article/revenue-plans-crackdown-on-section-110-companies-d7wq8rpqb>; Business Post (18/12/2018) ‘*Ireland’s large shadow banking system a magnet for dirty money*’, accessed <https://www.businesspost.ie/more-business/irelands-large-shadow-banking-system-a-magnet-for-dirty-money/#:~:text=Ireland%27s%20large%20shadow%20banking%20sector,criminal%20activities%2C%20experts%20have%20warned>.

accounts. It would also require greater financial regulation and more stringent taxation, which is strongly opposed by influential industry participants.¹³⁴

1.4 Chapter Conclusion

This introductory chapter has set out the research topic and situated it within the context of Irish industrial policy for the IFSC. It has identified the underlying motivations for this research and the research objectives that have been set. It has reviewed the academic literature on SPVs, and reviewed some of the industry and regulatory literature concerning *Section 110* SPVs. It has addressed the literature on the three key risks related to these firms, and introduced some of the principal research findings.

The remainder of this thesis is structured as follows;

Chapter 2 (Data/Methodology) provides an overview of the current approach to data collection on these firms and their financial transactions by official sources such as the Central Bank, CSO and Revenue. and highlights existing shortcomings and deficiencies.

It then details the construction of *Section 110* population dataset, and the three related subpopulation datasets, which were relied upon for the empirical analysis in the subsequent chapters.

Lastly, it deals with the methodological approaches taken for the empirical analysis found in subsequent chapters. As previously set out, the research follows an interdisciplinary approach which tries to incorporate best practice from the different existing research strands.

Chapter 4 analyses the securitisation subpopulation, not in the aggregate but through targeted samples across different periods and themes. It focuses on three main areas: the growth of mortgage-backed securities (MBS) issuance (1997–2008), links between securitisation firms and banks that failed during the GFC, and firms' profit distribution and tax practices (2009–2015).

¹³⁴ For example, see Arthur Cox 'Submission to Funds Sector 2030 review', accessed <https://assets.gov.ie/static/documents/arthur-cox-submission-bcbe3607-3cd0-446e-8af3-c0cc10c487fc.pdf>

It begins by outlining the development of the sector and presents data showing the expansion of MBS issuance by *Section 110* firms' pre-crisis. Given securitisation's role in the GFC, the chapter highlights financial stability concerns, showing that many highly leveraged *Section 110* firms were connected to banks that later suffered major losses or collapsed. This challenges the idea that these firms are low-risk due to their '*orphan structure*', which is supposed to insulate them from bankruptcy risk.

The chapter then critiques the regulatory environment, arguing that supervision has been insufficient despite securitisation being recognised as a source of systemic risk. It also evaluates post-2008 ECB data collection reforms, identifying inconsistencies, data gaps and classification issues in official data. Fragmented reporting across multiple authorities (CRO, Revenue, Central Bank) further limits oversight, with conflicting data across institutions.

Finally, the chapter examines tax practices, showing how securitisation structures may facilitate tax arbitrage. Many firms report zero profits despite large financial flows, suggesting tightly managed accounting and possible profit shifting within corporate groups. A comparison with Luxembourg's tax strategies (e.g., *LuxLeaks*) reveals similar patterns, where corporate groups and professional service providers benefit from these arrangements. The chapter then concludes with some reflections on these findings.

Chapter 4 (Russian subpopulation) analyses 106 Russian connected firms operating through Ireland's IFSC between 2005 to 2017. These firms raised €118bn by issuing loan participation notes (LPNs) on the ISE and channelled the funds to Russian companies via PPLs. As a result, Ireland has played a significant but underexamined role in financing the Russian economy, alongside other OFCs.

The chapter explores why these financial flows occur, suggesting that many may be 'round-tripped' investments. It situates this within the broader context of Russian capital flight and offshore wealth practices, noting historical links to money laundering with IFSC firms during the 1990s.

Using data from the Central Bank of Russia, the chapter shows Ireland was a major source of debt flows to Russia. It also identifies unusual bond features such as changing

terms/conditions, but without arising litigation. This raises questions about investor identity and potential overlap with issuers, supporting the round-tripping hypothesis.

Empirical analysis reveals that while these firms raised large sums, they were sometimes net recipients of funds rather than providers, suggesting possible market manipulation. Governance concerns are also highlighted, including links to sanctioned entities, insider trading, defaults, and regulatory breaches.

Finally, the chapter finds that although these firms have a limited direct economic footprint in Ireland, their financial activities can distort macroeconomic indicators overstating Ireland's level of investment into Russia.

Chapter 5 examines Ireland's aircraft leasing sector, often described as a global success story but relatively under-researched despite its scale (with around 65% of global commercial aircraft leased from Ireland). It focuses predominantly on *Section 110* leasing firms, which make up 15–20% of the sector, and provides empirical analysis of 527 firms over the period 2010 to 2020.

The chapter challenges conventional explanations for Ireland's dominance in the global industry, such as '*first mover advantage*' through the success of Guinness Peat Aviation (GPA). It argues instead that tax policy, evidenced by incentives like *Section 110*, has been a key driver.

While the sector is often seen as economically beneficial, the chapter offers a more cautious assessment, highlighting limited contributions to employment and tax revenue, as well as weak domestic economic linkages. It also situates aircraft leasing within the shadow banking (NBFI) system, noting similar risks and data gaps. It demonstrates how highly leveraged firms can create contagion risks, drawing on lessons from the GFC and Covid19.

It also identifies emerging geopolitical risks, particularly the seizure of leased aircraft by Russia following sanctions related to the Ukraine war, which raises concerns about the enforceability of key international leasing treaties and may increase insurance and financing costs.

Further risks arise from EU tax reforms (e.g., Interest Limitation Rule) which target profit shifting via high intercompany interest payments. Empirical analysis reveals

vulnerabilities such as losses, negative equity, declining asset values during Covid19 and unusually high intercompany interest rates (up to 18%), suggesting potential base erosion strategies. Despite adverse conditions, firms continued to generate positive cash flows to parent companies. The chapter concludes by reflecting on these findings and their implications.

Chapter 2

This chapter is comprised of three sections. The first section gives an overview of the Central Bank, CSO and Revenue's current approach to data collection on *Section 110* firms and their financial transactions. It identifies certain shortcomings in terms of existing data gaps and other issues, which are further expanded upon in **Chapter 3** in the context of the securitisation subpopulation.

The second section details the two primary data sources that have been used by this research (CRO and ECB). The former used predominantly for extracting firm year level financial and organisational data. The latter used primarily to aid firm identification. It then describes the population dataset of qualifying firms that was developed (1997-2020), along with the three relevant subpopulation datasets, each of which covers a specific time period.

The approach to data collection, cleaning, construction, processing and validation is then set out. In addition to identifying some data limitations and other issues. Lastly, summary statistics are provided which detail the scope and size of the subpopulations which have been analysed, along with any sampling/subsampling that was used.

The final section deals with the methodological approaches taken in in **Chapters 3, 4** and **5**. It also introduces and summarises the type of financial and economic analyses applied to those subpopulations later examined.

2.0 Existing data gaps

The Financial Stability Board (FSB 2024) has emphasised that the NBFi sector has '*traditionally been characterised by a lack of transparency*'. This has resulted in persistent data gaps which are recognised as impeding effective regulatory oversight.¹³⁵ As a

¹³⁵ FSB (2024) '*Building bridges: the case for better data and coordination for the non-bank sector*', accessed <https://www.fsb.org/2024/09/building-bridges-the-case-for-better-data-and-coordination-for-the-non-bank-sector/>

consequence, vulnerabilities often remain undetected until periods of market stress expose them, leading to severe economic and financial consequences.

The Irish experience with *Section 110* securitisation and non-securitisation SPVs provides a clear illustration of these concerns. Prior to the GFC, statistical data on Irish-registered SPVs was extremely limited. Little systematic information existed before the year 2009 (Central Bank 2011).¹³⁶

The Central Bank collected some data on residential mortgage securitisations undertaken by domestic lenders, but these figures were not disaggregated or published separately from broader statistics on household lending or credit growth.¹³⁷ Moreover, there is no identifiable evidence that data was collected on non-securitisation SPVs. Indeed, the Central Bank (2006) explicitly stated that such data collection was '*not possible*', citing the heterogeneity of the SPV population.¹³⁸

By contrast, the Revenue Commissioners have long maintained a comprehensive dataset of *Section 110* firms for tax administration purposes. However, this dataset is not publicly available and, crucially, has not been shared with the Central Bank. The Central Bank has noted the absence of legislative authority to permit the '*Section 110 list maintained by the Revenue Commissioners to be shared with the Central Bank*'.¹³⁹

As discussed in **Chapter 2**, unlike other tax expenditures Revenue does not publish data on the annual Exchequer cost (tax forgone) of *Section 110*.¹⁴⁰ In response to one parliamentary query (2016) as to why this was the Minister for Finance stated that; '*For information to be analysed by Revenue, it must first be provided separately on a tax*

¹³⁶ Clive A Jackson, 2011. '*The development of securitisation statistics in Ireland*', IFC Bulletins chapters, in: Bank for International Settlements (ed.), Proceedings of the IFC Conference on '*Initiatives to address data gaps revealed by the financial crisis*', Basel, 25-26 August 2010, volume 34, pages 627-637, Bank for International Settlements. Accessed <https://www.bis.org/ifc/publ/ifcb34.pdf>

¹³⁷ This was '*incorporated into the statistics on lending to the household sector and credit growth rates*'. Clive Jackson '*The development of securitisation statistics in Ireland*' <https://www.bis.org/ifc/publ/ifcb34.pdf>

¹³⁸ Central Bank (2006), '*Foreign Direct Investment: An Analysis of its Significance*', accessed <https://www.centralbank.ie/docs/default-source/publications/quarterly-bulletins/quarterly-bulletin-signed-articles/foreign-direct-investment.pdf?sfvrsn=6>

¹³⁹ Bank for International Settlements (ed.), Proceedings of the IFC Conference on '*Initiatives to address data gaps revealed by the financial crisis*', Basel, 25-26 August 2010, volume 34, pages 627-637, Bank for International Settlements. Paper by Central Bank official. Accessed <https://www.bis.org/ifc/publ/ifcb34.pdf>

¹⁴⁰ Revenue (2025), '*Cost of Tax Expenditures*' accessed <https://www.revenue.ie/en/corporate/information-about-revenue/statistics/tax-expenditures/cost/index.aspx>

*return form. This is not currently the case with section 110 companies and therefore tax costings cannot be provided’.*¹⁴¹

To receive *Section 110* status firms must first submit a ‘*S.110 Form*’.¹⁴² Given the Minister’s comments, it is not clear why such information is not sufficient for Revenue to calculate the cost.¹⁴³ Nor is there any publicly available evidence it has ever been subject to a cost-benefit-analysis (CBA). The Department of Finance’s own guidelines (2014) on best practice dictates that they should be subject to both *ex-poste* and *ex ante* evaluation.¹⁴⁴

In response to sustained criticism and concerns regarding transparency, financial stability risks and aggressive tax practices, policy reviews have recommended legislative reform to enable Revenue to publish a complete list of qualifying *Section 110* firms (Funds Sector 2030).¹⁴⁵ At the time of writing, these recommendations have not been implemented.

Meaningful improvements in data collection began only after the onset of the GFC. In 2009 the Central Bank initiated its own data collection on securitisation vehicles in response to an ECB initiative aimed at strengthening post-crisis oversight (ECB Regulation 2008/30). This data was on securitisation SPVs (now termed Financial Vehicle Corporations) was first published in 2011. The ECB defines an FVC as;

¹⁴¹Dáil Éireann Debate, Friday - 16 September 2016, accessed <https://www.oireachtas.ie/en/debates/question/2016-09-16/223/?highlight%5B0%5D=section&highlight%5B1%5D=110&highlight%5B2%5D=section&highlight%5B3%5D=section&highlight%5B4%5D=110>

¹⁴² Details that must be provided include a description of its qualifying assets, their value and counterparty information. It also requires details on their funding, the amount, and the source from where it was received. Source: Revenue, ‘*S.110 Form*’, accessed <https://www.revenue.ie/en/companies-and-charities/documents/form-s.110.pdf>

¹⁴³ For example, the details sought by Revenue for another tax expenditure (The R&D Tax Credit) are arguably less onerous sought via a S.110 form, but are deemed sufficient to calculate its cost. Revenue ‘*Research and Development Corporation Tax Credit Form*’, accessed <https://www.revenue.ie/en/companies-and-charities/documents/rd-form-766c.pdf>

¹⁴⁴ The Parliamentary Budget Office (2018) states that they should also be subject to cost benefit analyses (CBAs).

¹⁴⁵ For instance, the Irish Times (27/06/2023) ‘*Funds sector urges €1 trillion SPV business be protected in McGrath review*’, noted ‘*Section 110 special purpose vehicles (SPVs) have drawn criticism in the past because of their unregulated, uber-tax-efficient nature, their use to house loans bought after the property crash, and fact they were popular conduits for Russian entities to raise funding in the past*’. Accessed <https://www.irishtimes.com/business/2023/06/27/funds-sector-urges-1-trillion-spv-business-be-protected-in-mcgrath-review/>

‘An undertaking whose principal activity is to carry out one or more securitisation transactions and that is insulated from the risk of bankruptcy or any other default of the originator’.

Reporting requirements were subsequently extended in 2015 to encompass non-securitisation SPVs, with publication then commencing in 2016. Notwithstanding these developments, significant transparency deficits remain. The FSB (2024) observes that in some jurisdictions data are collected but are *‘not used effectively or are not shared with those who need them for financial stability purposes’*. In an Irish context, this is evident in the Central Bank’s treatment of *Section 110* firms.

While the Central Bank collects data on most firms, it does not publish firm-level information, and the identities of qualifying companies are thus not publicly disclosed. This stands in contrast to practices in other EU member states, such as Spain, where their central bank publishes a list of domestically registered securitisation vehicles.

Furthermore, unlike Revenue, neither the Central Bank nor the CSO can be assumed to hold a complete and continuously updated register of *Section 110* firms (see **Chapter 3**). Their datasets are derived primarily from surveys and other reporting mechanisms, which can be ill-suited to capturing a population characterised by frequent firm formations, liquidations, and frequent changes in tax status.

In addition, the reporting requirements which firms are obliged to undertake to the Central Bank are performed by CSP appointed directors. As previously mentioned, these individuals can hold large number of directorships simultaneously. Given the low levels of fees paid for such positions, it is possible that this reporting exercise does not attract significant attention.

These limitations complicate effective monitoring of the sector. As a result, despite ECB led initiatives to enhance data availability and supervisory oversight, material data gaps relating to Ireland’s NBFIs sector, and the *Section 110* SPV subsector in particular, remain pervasive (BIS, 2012; IMF, 2016; Central Bank, 2012, 2015, 2018, 2021).

Additional shortcomings include the general absence of bilateral counterparty data for transactions involving *Section 110* firms. Published Central Bank statistics are largely aggregated at regional or sectoral levels. For example, while data indicate that 76.5% of

securitised loans held by *Section 110* firms were originated within the euro area, they provide little insight into the underlying institutional linkages or risk concentrations.¹⁴⁶

The available data is generally not disaggregated on a country-by-country basis. Bilateral information is provided only in respect of exposures involving the US and UK. As a result, it is difficult if not impossible to identify specific inter-jurisdictional linkages, or to assess the risks posed to individual countries, on the basis of this data alone.

Similarly, the data is not disaggregated by the nationality of the EU-based sponsor which originated the underlying loans.¹⁴⁷ Consequently, Central Bank and ECB statistics do not permit a distinction to be drawn between originators that are euro area based European banks and those that are non-European institutions, such as US banks, operating through subsidiaries within the euro area. This limitation further constrains the capacity of regulators and researchers to assess the true geographic distribution of risk.

These deficiencies also preclude the identification of direct counterparty linkages between individual firms, MNEs or financial institutions. In addition, there are important sectoral blind spots. For instance, non-financial institutions which are recipients of funds are classified using the broad residual category of '*non-financial corporations*'. This obscures the allocation of funds between different segments of the real economy.

Securitisation data is likewise not disaggregated by asset class, such as whether the underlying assets are residential or commercial mortgages, auto loans, corporate loans (such as those in the tech sector) or lending to small and medium-sized enterprises (SMEs). This similarly leads to opacity.

Taken together, these limitations render Central Bank and ECB data poorly suited to the identification of risk at the geographical, sectoral or firm-specific level. This problem is compounded by the absence of published data on non-securitisation SPVs. While the Central Bank has made occasional reference to cross border linkages for these SPV (e.g., quarterly bulletins), these disclosures remain partial and non-systematic.

¹⁴⁶ This includes origination by Euro area based financial institutions, pension funds, insurance companies, governments, and other financial intermediaries. Central Bank, Non-Bank Financial Sector Statistics, <https://www.centralbank.ie/statistics/data-and-analysis/other-financial-sector-statistics/special-purpose-entities> accessed 02/04/2025

¹⁴⁷ Central Bank, '*Open Data Portal*', accessed https://opendata.centralbank.ie/en_GB/dataset/?tags=Financial+Vehicle+Corporations

For example, it has noted that in the case of *Section 110* firms engaged in company financing, debt flows were primarily directed to Russia, Luxembourg and the UK. However, in the absence of a systematic and disaggregated publication with related publicly available data, such references do not provide a robust basis for comprehensive risk assessment.

A further data deficiency relates to the financing structures used by these firms and the associated '*tax-neutral*' routing of cross border capital flows. In particular, there is a general absence of bilateral data on capital transfers in the form of interest payments and receipts. Although Ireland is not unique in this respect.

A recent report prepared for the European Parliament's Committee on Tax Matters (2023) noted that such bilateral information is not readily available across EU member states.¹⁴⁸ In Ireland's case, the CSO does not publish bilateral statistics specifically on foreign interest payments or receipts.

Instead, interest flows are embedded within the broader investment income component of the balance of payments, which aggregates multiple categories of cross-border income.¹⁴⁹ Thus, the absence of disaggregated bilateral data significantly constrains the analysis of cross-border financial linkages, profit-shifting mechanisms and the potential transmission of financial risks via *Section 110* structures.

The FSB (2024) also observes that in some jurisdictions there are '*no legal requirements for some non-bank financial entities to report data that are critical for financial stability assessments*'. A salient example of this in the Irish context is provided by *Section 110* firms which are structured as '*external*' companies.¹⁵⁰

The majority of such external firms are not required to publish audited financial statements. As a result, the total number of external firms availing of *Section 110* cannot

¹⁴⁸ It did note that the OECD is currently engaged in work improving oversight of royalty payments between jurisdictions, but for interest and dividends challenges remain.

¹⁴⁹ CSO (2025), '*International Accounts Q2 2023: Background notes*', accessed <https://www.cso.ie/en/releasesandpublications/ep/p-ia/internationalaccountsq22023/backgroundnotes/>

¹⁵⁰ An external company is one that is incorporated in Ireland as a branch of a foreign company, whose location is where its tax residency lies. The CRO identifies the total number of '*external*' companies but does not identify the names of these firms, and as such the number availing of *Section 110* cannot be identified. See here for list of external companies <https://cro.ie/wp-content/uploads/2025/07/CRO-Annual-Report-2024-Final-ENG.pdf>

be reliably identified, notwithstanding the fact that they may be substantial in terms of asset size and, by extension, potential systemic risk.

The total number of external firms is available via the CRO (Annual report). From initial investigations some, but not all of these appear to be aircraft leasing firms. This data is used in **Chapter 5**. The identify of such external *Section 110* firms is important as they benefit from all tax concessions that available to Irish incorporated entities. Evidence of the materiality of this gap is illustrated in this chapter, which identifies several external aircraft leasing firms that availed of *Section 110* status and also filed accounts.

These entities were exceptionally large in asset terms. However, it remains unclear whether the CSO in its recent statistical series on the leasing sector captures data relating to external leasing firms. This uncertainty further limits the ability to assess the scale and structure of *Section 110* activity within the leasing industry.

The EU Commission (2015) has noted that good policy analysis requires access to good data.¹⁵¹ The next section discusses in detail how this thesis has attempted to narrow certain data gaps highlighted above, first through the construction of a novel population data set of qualifying firms (1997 to 2020), and then the related subpopulation datasets.

2.1 Population data set

Data sources,

The two primary data sources used for constructing this dataset were the CRO and the European Central Bank's (ECB) statistical data warehouse. Secondary sources included the Oireachtas Parliamentary Question system.¹⁵² Bloomberg, the Financial Times and other business media sources were used to obtain firm level data on governance, ownership and other issues. The US Securities and Exchange Commission (SEC) filings

¹⁵¹ European Commission (2015), '*Quality of Public Administration: A Tool Box for Practitioners*', accessed <https://digital-strategy.ec.europa.eu/en/library/quality-public-administration-toolbox-practitioners>

¹⁵² For instance, PQ answers were used in relation to the number of active *Section 110* firms according to Revenue, and the number that were active according to the Central Bank. This highlighted discrepancies between these two official sources. PQs answers were also used to ascertain the number/frequency of audits of *Section 110* firms carried out by Revenue. They were also used to ascertain whether and any regulatory action was taken by the Central Bank in response to perceived improper conduct. This helped to gauge the level of regulatory scrutiny these firms attract.

were also used to identify *Section 110* leasing firms which were subsidiaries of large parent lessors.

These two primary data sources are dealt with in turn.

CRO data source

The CRO serves as Ireland's official central repository for public statutory filings required by companies.¹⁵³ The CRO operates under the aegis of the Department of Enterprise and Trade. Filing financial statements and annual returns with the CRO, amongst other required documentation, is a requirement of Irish registration. Failing to file correctly and/or on time can result in companies receiving fines, and at an extreme level, an involuntary strike-off (dissolution).¹⁵⁴

Its database is available online and searchable via company name and/or company number (CRO identifier). It can be accessed here: <https://cro.ie/>. The kind of documents available through the CRO include incorporation documents (form A1), financial statements, prospectuses for listing on the ISE, and annual returns (form B1). It also provides online information on current director's names and the name of the company secretary.¹⁵⁵

These primary documents allowed for detailed financial and organisational data extraction for the three selected subpopulations. In relation to the former this included the size of assets, gross/net debt flows, gross income (and interest income), financing costs (interest and other charges), pre-tax profits, tax charge, expenditures on professional services, etc. For the latter this included ownership details such as identity of

¹⁵³ Various legal entities are required to submit to the CRO, including limited partnerships, sole traders, along with the registration of business names.

¹⁵⁴ This results in the loss of limited liability, the transfer of its assets to the state, and potential disqualification for directors.

¹⁵⁵ The CRO also maintains Ireland's Register of Beneficial Ownership (RBO) which identifies natural persons who exercise ownership (above a certain level) and control of legal entities. Since 2023 access to the RBO has been restricted to 'designated persons' which includes regulators, auditors, banks, and insurance companies. This was due to two ECJ cases (C-37/20 and C-601/20) in November 2022. The ECJ ruled that public access to such information 'constitutes a serious interference with the fundamental rights to respect for private life and to the protection of personal data'.

the sponsor/parent, their industry sector, the use of trust structures, etc. This is discussed in greater detail later.

As a matter of company law (Companies Act 2014) these audited statements should give a ‘*true and fair view*’ of the financial position and performance of firms over a given reporting period. However, it is worth noting that whilst they may accurately reflect the balance sheet and income statement of an individual SPV, they may nonetheless obscure the broader economic reality of risk concentration, ultimate beneficial ownership or the geographic distribution of underlying exposures.

It should also be noted that the CRO does not have a regulatory role when it comes to verifying the accuracy of the information provided.¹⁵⁶ As the Minister for Enterprise has stated; ‘*The long-standing policy in respect of company incorporation has been [for the CRO] to accept the bona fides of those filing documentation*’.¹⁵⁷

As such the CRO records information that has been submitted by companies or their agents, but it does not independently verify all details for accuracy beyond statutory filing requirements. There were instances where companies filed incorrect statements (e.g., a previous year submitted as the current year’s statements). There were also instances where the accounts that had been submitted related to another firm entirely. In such instances the CRO can (when prompted) contact the company seeking a resubmission.

Section 110 firms can often be late filing their accounts. Sometimes by up to two or three years. Such instances of late filings with the CRO have implications for Central Bank quarterly reporting to the ECB (discussed next) and for the compilation of Euro area macro financial statistics. As the data it is providing to the ECB may not always be up to date, with arising consequences for the measurement of the size of Ireland’s FVC/SPV sector.

¹⁵⁶ It is company law which is used to tackle issues like false accounting. For example, it is a criminal offence (Section 876 of the Companies Acts) to provide such false information and the CRO can refer such matters to the Director of Corporate Enforcement.

¹⁵⁷ Dáil Éireann Debate, Tuesday - 2 November 2021, accessed <https://www.oireachtas.ie/en/debates/question/2021-11-02/3/>

ECB data source

As noted earlier, there is no publicly available list of qualifying *Section 110* firms. Hence an investigative approach to company identification was required. The ECB data source was used primarily for this purpose. The ECB through its statistical data warehouse publishes a quarterly list of all securitisation issuances within the Euro area.

It is important to note that Euro area Central Banks serve as the collection and reporting agents for the ECB. That is, rather than the ECB collecting this data and publishing it via its website, it is the member states Central Banks which are obliged to collate this data and then provide it to the ECB. In an Irish context, in '*around 90% of cases*' (Central Bank 2011) it is the corporate service providers (CSP) which report to the Central Bank on firm's behalf.

The ECB states that '*This helps us monitor the impact of securitisation, in particular regarding interactions between FVCs and monetary financial institutions (MFIs) [e.g., banks]*'. Although financial stability reasons are another key motivating factor. This data can be accessed publicly here:

https://www.ecb.europa.eu/stats/financial_corporations/financial_vehicle_corporations/html/index.en.html

Each securitisation issuance is given its own unique identification number (ISIN code).¹⁵⁸ Isolating issuances with an Irish prefix within the ECB list allowed for the names of firms to be identified and then cross referenced with the CRO to confirm they were availing of *Section 110* status. This data source allowed for the identification of *Section 110* securitisation vehicles (FVCs).

In the process of cross referencing this data source with the CRO certain data anomalies were identified. These related to classification issues wherein the Central Bank/ECB source contained the presence of non-securitisation firms which fell outside the grounds for inclusion, whilst also omitting other securitisation firms which met the grounds for

¹⁵⁸ Operated by the International Securities Identification Numbers Organization '*The ISIN code acts an identifier for the securities and as such is the only common denominator securities identification number that is universally recognized*'. Source: ISIN, accessed <https://www.isin.org/isin/>

inclusion. Such classification and measurement issues have implications for the oversight and regulation of the sector (see **Chapter 3**).

A majority of *Section 110* firms were identified via the ECB source, owing to the fact that securitisation vehicles comprise the largest of subpopulation within the *Section 110* regime. However, this data source only begins 2009 meaning firms liquidated prior to this are not reported. These pre-2009 securitisation firms had to be identified via other means.

Similarly, the ECB data source does not generally provide information on non-securitisation firms, e.g., those within the Russian connected and aircraft leasing subpopulations. These also had to be identified via other means. This are discussed next.

2.2 Data collection

As discussed above, data collection began by relying on the ECB source to identify *Section 110* securitisation firms and then cross referencing this with CRO. Every unique firm that was identified was recorded along with its corresponding CRO identification number. This was to ensure consistency across years and to avoid duplication arising from minor variations in the names of these firms.

The information used to determine whether these vehicles were availing of *Section 110* status were as follows:

1. Their financial statements stated they were availing of *Section 110* status and/or;
2. Their financial statements stated they issued a variable interest PPL or loan (sometimes called a '*junior note*' or '*subordinated loan*') and were charged at the 25% rate.

To ascertain whether a loan was a PPL required close examination of the notes of financial statements. Where it could not clearly be identified that the vehicle had issued a *Section 110* loan (PPL), it was omitted from the relevant analysis.

This process of identification and cross referencing was first done by selecting the ECB list of securitisation issuances for the final quarter of each year for the period 2009 to 2016. This covered the period when ECB reporting first began up to the year in which this research first commenced.

Beginning with the list of issuances for the fourth quarter of 2009, and having isolated those issuances related to Ireland, these firms were added to a spreadsheet and then checked to confirm if they were availing of *Section 110* status. As mentioned, where it could not be confirmed that these were *Section 110* firms, they were removed from the spreadsheet.

The final quarter of the subsequent year (2010) was then downloaded. This was then used to cross-reference with the previous year to identify firms that had not previously appeared.¹⁵⁹ Duplicate firms which had appeared in 2009 were then removed leaving only unique firms, which were then added to the population spreadsheet.

This process was then repeated for all subsequent years up to 2016. It would then be repeated up to 2020 as the research progressed and the ECB continued to produce this quarterly list year after year.

As mentioned previously, the ECB data sources was limited in that it is not intended to capture the identify of securitisation firms liquidated prior to the 2009, nor does it generally include Russian connected or aircraft leasing firms, or other sectors which issue *Section 110* loans. These firms had to be identified via other avenues, with a key means of doing so being the use of directorship lists.

Part of the requirement for *Section 110* firms to satisfy registration is the submission of an annual return form (form B1). The annual return of an identified *Section 110* firm would provide a list of other (previous/current) directorships held by its current directors. These directors in turn had been appointed by a CSP.

By identifying these CSPs along with the directors they appoint to firms, it was possible to identify additional qualifying *Section 110* firms. As previously indicated, this was due to the directors/CSPs often servicing large numbers of companies with similar profiles simultaneously. The Irish Debt Securities Association (IDSA) provides a list of its member professional service firms which offer CSP services (see Table 1.6).

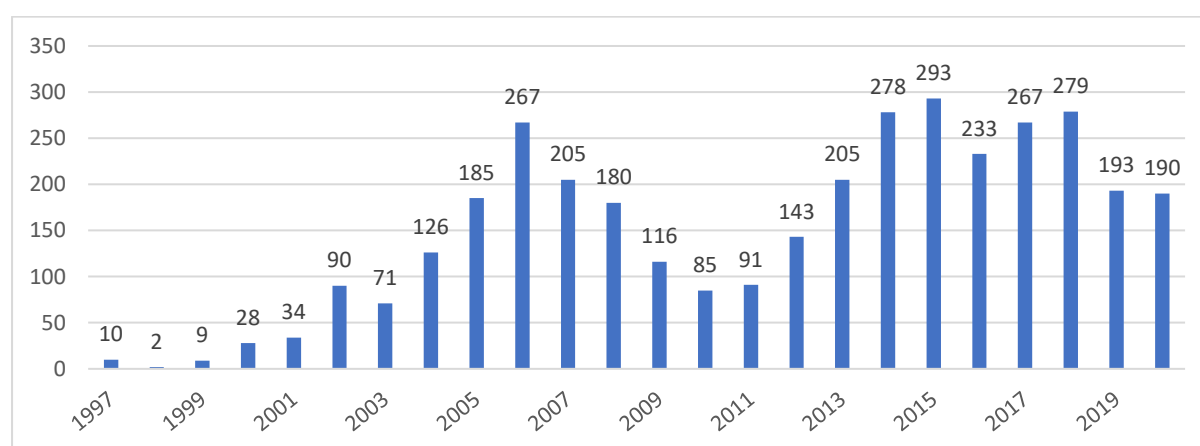
¹⁵⁹ It should be noted that the appearance of a *Section 110* firm within the ECB did not always correspond to the period of its registration. In other words, a firm which had registered in Ireland and issued securities could display a significant lag before it appeared in the ECB's list.

A related *Section 110* director dataset was constructed from these annual returns. This could then be cross referenced to further aid the identification of firms not included in the ECB list. This helped to identify securitisation firms liquidated during the GFC. It was also the case that for the Russian subpopulation, one CSP was identified as playing an outsized role in servicing Russian connected firms, thus aiding the identification of this subpopulation.¹⁶⁰

Other means used to identify leasing firms included the US Securities and Exchange Commission (SEC). The form 10k that is submitted here by large aircraft lessors lists their subsidiaries based on their location. For those subsidiaries referenced as located in Ireland, their CRO filings were then checked to see if they were *Section 110* firms, and included in the population dataset if so.

A total of 3,580 unique firms were identified over the period 1997-2020 and are contained in this population dataset. Figure 2.1 identifies the number of unique *Section 110* firms identified by this research based on their year of incorporation. This dataset allowed for the identification of firms operating within the three particular subpopulations of interest, and the development of corresponding subpopulation datasets.

Figure 2.1: New *Section 110* incorporations (1997-2020)



Source: Author's *Section 110* population dataset

Note: Each calendar year notes the number of firms incorporated which demonstrated *Section 110* status for all or some of the years of their lifespan.

¹⁶⁰ Bloomberg (18/05/2022), 'On Dublin Backstreet, Hub of Russian Finance Quietly falls apart', accessed <https://www.bloomberg.com/news/articles/2022-05-19/on-dublin-backstreet-hub-of-russian-finance-quietly-falls-apart> ; Irish Independent (20/05/2022), 'A low-profile Dublin firm had a key role plugging Russia into global finance', accessed <https://www.independent.ie/business/irish/a-low-profile-dublin-firm-had-a-key-role-plugging-russia-into-global-finance/41668357.html>

The terms '*population*' and '*subpopulation*' are used throughout this research. As such, their definitions and how they are applied throughout this thesis are identified in Table 2.1. It is acknowledged that there may be uncertainty as to whether all members of the population and the corresponding subpopulations have been identified, and hence the justification for their use could be contested.

This research offers several responses in support of the justification of their use. Firstly, even if all members of the *Section 110* population have not been identified for the relevant period of study, the concepts of population and subpopulation were required as important reference points for the research.

These included the research design which specified the grounds for inclusion or exclusion based on a firm's tax status and the category of qualifying activity it was engaged in. By setting such boundaries different subpopulations were then identified. Different characteristics were observed and recorded with regard to their organisational structure, behaviour, risk profiles and financing activities.

The use of these terms was also important for the purposes of making inferences from subpopulation data about the wider population as a whole. This was especially the case for making inferences about firms' pre-tax profits or professional expenditures (and hence domestic economic contribution), where the recording of such data for the entire population of firms was beyond the scope of this research.

Secondly, and as noted previously, there is no publicly available data on the identities of qualifying firms. An extensive number of *Section 110* firms were identified for the period of study. As **Chapter 3** demonstrates, for two years (2012 and 2015) in which the Central Bank provided estimates for what they assumed to be the total size of the population, this research identified a total number of firms in excess of their figures.¹⁶¹

Thirdly, although this research has acknowledged the possibility that there may be instances where qualifying firms have been omitted, this is assumed to be unsystematic and thus unlikely to bias the research's empirical results materially. Nevertheless, it may

¹⁶¹ These Central Bank estimates were provided via their Quarterly Bulletins.

be the case that the estimates for certain subpopulation aggregate variables (gross assets, interest paid, etc), are likely to err on the conservative side.

Table 2.1: Definitions of key terms and their application

Term	Definition	Applied to this research	Relevant time period
<i>Population</i>	Defined as consisting of all members of a specific group sharing specific characteristics relevant to a research question	This means all firms availing of <i>Section 110</i> status in the relevant period of study	Total population (1997-2020)
<i>Subpopulation</i>	Defined as a distinct subgroup within the larger population that shares specific characteristics	Firms with <i>Section 110</i> tax status that can be subdivided based on the type of qualifying activity they are engaged in	Subpopulation 1 (2009-2016) Subpopulation 2 (2005-2017) Subpopulation 3 (2010-2020)

2.3 Data cleaning and preparation

From the population dataset discussed above, the three granular level subpopulation datasets used as part of the analyses in **Chapters 3, 4 and 5**, were developed over time. Before significant raw data could be extracted from their financial statements, certain data cleaning and preparation was required for several reasons.

Firstly, *Section 110* firms are permitted significant reporting discretion in terms of the presentation of their statements, using one of four different accounting standards. They are permitted to choose between; IFRS, US GAAP, current Irish GAAP standards, or importantly, 2004 Irish GAAP standards.¹⁶²

The fact that they can use Irish GAAP standards from 2004 arose from an amendment to the Finance Act (2005), after industry concerns that the adoption of the other standards could lead to '*timing mismatches between taxable profits and losses and ultimately a loss of tax neutrality*'.¹⁶³ As a result, certain balance sheet and income statement terminology

¹⁶² Chartered Accountants Ireland, accessed

<https://www.charteredaccountants.ie/taxsourcetotal/1997/en/act/pub/0039/nfg/sec0110-nfg.html>

¹⁶³ PWC (2005) stated that the adoption of IFRS, or the current Irish GAAP standards, could mean '*that income/expenses previously recognised in the profit and loss account under Irish GAAP will again be recognised in a later profit and loss account under IFRS. Similarly, income/expenses that had not been recognised in an earlier profit and loss account under Irish GAAP may never be recognised*', quoted in Finance Magazine (2005), '*Finance Bill 2005 introduces tax measures to deal with the move to IFRS*', accessed https://www.finance-magazine.com/display_article.php?i=5402&pi=142

can vary between firms. Table 2.2 provides a sample of the difference in terminology and disclosure based on accounting standard.

Table 2.2: Different accounting standard terminology and disclosure

Balance sheet concept	IFRS	US GAAP	Irish GAAP	Irish GAAP (2004)
<i>Assets (Investments)</i>	Loans and receivables	Notes receivable	Investments	Fixed asset investments
<i>Receivables/debtors</i>	Trade and other receivables	Accounts receivable	Debtors	Debtors due within one year
<i>Payables/creditors</i>	Trade and other payables	Accounts payable	Creditors	Creditors due within one year
Income statement concept	IFRS	US GAAP	Irish GAAP	Irish GAAP (2004)
<i>Revenue/turnover</i>	Revenue	Revenue	Turnover	Turnover
<i>Finance income</i>	Finance income	Interest income	Interest receivable	Interest receivable and similar income
<i>Pre-tax profit/loss</i>	Profit/loss before tax	Income before tax	Profit/loss before tax	Profit on ordinary activities before taxation
Cashflow statement required?	Yes	Yes	Exemptions available	Exemptions available

Secondly, and related to this, it was also the case that the level of detail and disclosure in firms' statements could vary. For example, some firms' financial statements contained a cashflow, whereas others did not. This is due to the fact that *Section 110* firms can avail of a small company's exemption under certain accounting standards and in certain circumstances. It was also the case that some firms reported legal expenditures whereas other did not.

Firms which published abridged accounts which did not provide a sufficient level of data for extraction were excluded.¹⁶⁴ Similarly, the quality of some financial statements could be poor in terms of legibility due to being in scanned PDF format. Over the period of study, such filings were generally not machine readable or PDF searchable.

It is also the case that *Section 110* firms have considerable discretion in how individual transactions are reported. For interest payments, a key consideration for *Section 110* firms, some statements provided a gross figure for interest expense. Others disaggregated interest costs based on different borrowings, instruments and tranche

¹⁶⁴ This exemption applies to small firms, for example those with balance sheet values less than €450,000

structures. This meant there was certain variance in the level of disclosure for this key variable.

Thirdly, there was also the fact that firms' statements could be denominated in different currencies. Most firms had their accounts denominated in US Dollars. Although a subset of firms reported accounts which were denominated in other currencies such as the Euro or British pound.

Fourthly, firms often had different financial year ends for their accounting periods. It was also the case that despite a majority of firms reporting on a 12-month financial year basis, some could have shorter or longer periods. Particularly in their first or final years of existence.

As a result, before any of the subpopulation datasets were constructed certain preparation was undertaken. This involved standardising variable names, units of measurement and a standardised approach to accounting periods to ensure cross-firm comparability. This relied on certain conventions (discussed next). It was also the case that certain rules were established to deal with the processing of missing or incomplete data (see next section).

The raw financial statement data was first subject to a harmonisation process before it was recorded in any of the three subpopulation spreadsheets. This involved mapping functionally equivalent terms from the balance sheet, income statement and cash flow statement (where available) which varied based on the accounting standard in use.

Individual line items were thus mapped onto standardised categories with this process guided by accounting standards, notes to the financial statements and, where necessary, the economic substance of the described transactions.¹⁶⁵ Standardising different terminology was a relatively straightforward process, more so than would have been the case for certain operating companies.

These firms tended to have fewer balance sheet/income statement items than may have been the case in standard operating firms on equivalent size, due to the limited scope of

¹⁶⁵ For example, '*gross assets*' were defined as fixed assets plus current assets. Except for the leasing subpopulation, most Section 110 firms have no fixed assets. Revenues were defined as including interest income.

their activity. As a result, there were less line items required for cross-standardisation than might otherwise have been the case.

Given the particular organisational structure of these firms, they tended to hold one or two assets, with costs largely related to interest payments and professional fees, and having relatively predictable cashflows due to their status as contractual entities rather than behavioural ones. Thus, less accounting judgement was required when defining and harmonising these variables.

For instances where an identified *Section 110* firm had filed statements with the CRO but had not commenced trading (dormant firms) or its statements were in the form of abridged accounts, these firms were excluded from the relevant analysis. For instances where there was insufficient disclosure at the level of a specific variable (e.g., interest rate/expense on PPL), it was omitted from the relevant firm year level observation.

For certain older firms' financial statements which could be of poor quality in terms of legibility, careful manual extraction was required. This involved significant cross checking to minimise potential transcription errors. Where statements were insufficiently legible, data was taken from the subsequent financial year's statements.¹⁶⁶

In relation to the standardisation of units of measurement, Euro denominations were used as the common standard. This meant that statements denominated in other currencies had to be converted to allow for cross comparison. The conversion rate at the 31st of December for the relevant year as per the Bank of England was generally used for this. This conversion practice was applied uniformly to preserve cross-sectional comparability.¹⁶⁷

In terms of harmonising accounting periods to ensure cross-firm comparability, the research applied a standard accounting convention. As some *Section 110* firms had a

¹⁶⁶ By reporting the value of balance sheet and income statement items for the previous year, issues of legibility could be circumvented. Although it is the case that if there was a significant re-evaluation of certain values from period to period, this may not have been captured.

¹⁶⁷ It can be the case that using an end of year conversion convention in certain analyses means that volatility can be introduced due to exchange rate fluctuations, which might reduce comparability. However, for *Section 110* firms such concerns do not pose a significant challenge. Firstly, and again related to the limited scope of their operations, they generally have no treasury function and cannot speculate on FX. Their contractual framework is intended to reduce such exposure rather than engage in its management. Their assets and liabilities also tend to be denominated in the same currency meaning exchange rate movements would affect both sides of the balance sheet similarly, limiting any net effects.

different financial year end to the 31st of December, accounts submitted prior to the end of June in a calendar year were applied to the previous financial year.¹⁶⁸

2.4 Data processing

General

Following the process of data cleaning, the establishment of inclusion/exclusion criteria and spreadsheet preparation, the raw financial statement information was then processed. The unit of measurement for each subpopulation observation was set. This corresponds to a single firm level year.¹⁶⁹ All variables were constructed consistently at this level.

Firm names were recorded in the columns with their corresponding variable information by year recorded in the rows of the relevant subpopulation spreadsheet. For firms with multiple reporting periods available (most firms), each year was treated as a distinct observation, allowing for the various empirical and longitudinal analyses presented in **Chapters 3, 4 and 5**. A breakdown of the number of observations per subpopulation is dealt with in the succeeding section on summary statistics.

As each observation corresponds to a single *Section 110* firm-year, a careful approach to processing was required for several reasons. Firstly, a firm could have a lifespan of 10 years but not have held *Section 110* tax status for all years. For example, it may have commenced life as a *Section 110* firm (passive income), operated with this tax status for 5 years before changing to a trading status (12.5%) for three years, before changing back for the final two years of existence

In such instances, these firms were omitted from the relevant year's analysis where they did not demonstrate *Section 110* tax status. In other words, only those years in which a firm's *Section 110* status could be confirmed would see it included in the relevant

¹⁶⁸ It is acknowledged that such harmonisation can create timing issues. It is possible that using such a convention means that timing issues can arise when comparing the empirical findings set out in Chapters 1, 3, 4 and 5, with estimates of certain variables provided by other sources. However, any material differences likely arise from differences in number of firms identified by this research vs official sources. It is also the case that some official sources (e.g., the CSO) do not include 'external' firms with *Section 110* status,

¹⁶⁹ In other words, Firm X across Years 1, 2, 3, etc.

analysis. This was done by using a column in each subpopulation spreadsheet indicating '0' or '1' for each observation. The former indicated that a firm year observation was to be excluded, with the latter indication it was to be included.

Secondly, there was the issue of consolidation which had to be addressed. There were instances in the leasing subpopulation where a *Section 110* firm acted as a holding company for other *Section 110* firms. In a small number of instances there were *Section 110* leasing firms which acted as holding companies which consolidated other non-*Section 110* leasing firms (12.5%). As a result of such consolidation practices, there were risks of overestimating the size of certain variables due to double counting.

In relation to how this was addressed; for the purposes of quantifying the size of the subpopulation in terms of the number of firms operating within it, subsidiaries and holding companies were both reported. However, for the purpose of aggregating certain variables in a given year (e.g., size of assets), only the size of the holding company's assets was counted.

This avoided the risk of overestimating the size of the subpopulation's asset and other values. Similar to the previous issue of firms not having the required tax status in a given year, this was addressed through the use of a spreadsheet column which used '0' or '1' to indicate it should be included in a firm year observation.

In a small number of cases (see **Chapter 5**) a *Section 110* holding company consolidated non-*Section 110* leasing firms (12.5%) which could not be disaggregated. This difficulty arose as the combined underlying asset values for the aircraft held by the various firms were presented as a single balance sheet item. Hence disaggregation was not possible. This is acknowledged in the notes of the relevant tables of data.

Following this an array of numerical, ordinal and categorical variables tied to each observation were then constructed (see Table 2.3). In general, each of the subpopulation datasets include details on the size of gross assets/liabilities, gross income (and interest income), financing costs (interest and other charges), pre-tax profits, tax charge, expenditures on professional services, ownership and the use of trust ownership structures.

Table 2.3: Examples of standard subpopulation variables

Types of variables	Examples
<i>Numerical</i>	Gross assets/liabilities, gross income, interest income, interest expense, interest paid on PPL, professional expenditures, tax paid, etc
<i>Ordinal</i>	Firms reporting profits > 1k, firms reporting profits < 1k, firms reporting profits = 0. Firms reporting negative equity > 2% of assets, firms reporting negative equity > 5% of assets, firms reporting negative equity > 10%, etc
<i>Categorical</i>	Industry sector of sponsor/parent, use of trust or charitable trust structure, consolidated vs non-consolidated, identities of professional service firms, identity of charitable trust, etc

These variables were largely derived from the balance sheet/income statement/cash flow statement data following the mapping exercise discussed earlier. Some other variables we constructed from information provided in the notes to financial statements or from their annual return form (A1 form).

For other variables which were constructed for specific subpopulations, these were created using various standard financial accounting conventions. These variables included certain profitability ratios (profit rate), measures of gearing (leverage ratios) and mean/median tax payments.

For example, the profit rate (return on assets) was calculated using the standard accounting convention of profits/assets. Measures of gearing (leverage measures) were calculated as total debt/total equity. Mean/median tax payments were derived from reported current tax expense and cash taxes paid (where available), and then summarising the distribution of these firms' tax contributions across years.

Certain numerical, categorical and ordinal variables were also constructed which were specific to the relevant subpopulation. These were designed to capture certain contextual factors, subpopulation characteristics and to assess a given hypothesis. These are addressed in turn below.

Chapter 3 (Securitisation subpopulation)

Chapter 3 focused in the first instance on attempting to identify the total subpopulation of *Section 110* securitisation firms over the period 2009-2016. This period covered the

year that the Central Bank/ECB's data collection began up to the point this research commenced. A comparison is made across two years (2012; 2015) between the size of the population according to the Central Bank versus that estimated by this research (Tables 3.3; 3.4).

The chapter highlights data anomalies/deficiencies within official data. In addition to assessing the taxation and regulation of these vehicles and the financial risks they pose. This chapter did not seek to analyse this subpopulation in the aggregate, beyond comparing its total size based on the estimates produced by this research and official sources (Central Bank).

Securitisation firms comprise the largest subpopulation of *Section 110* firms meaning the level of data entry, processing and verification required was beyond the scope of this research. Nevertheless, empirical work was carried out on several samples of this subpopulation, which explored different aspects of this research.

For example, given the role that mortgage related securitisation played in the GFC and the frequent media and industry commentary on the growth of the IFSC as a hub for securitisation activities, it was of interest to quantify the level of MBS issuance. This was done for the period 1997-2008, which covers the year of *Section 110*'s introduction to the year prior to Central Bank data collection.

The identity and nationality of sponsoring banks were of interest due to financial stability concerns and from *Section 110* firms' connections to troubled lenders which failed or required large tax payer bailouts during this period. Hence, the identities of these firms and their sponsoring banks, the size of assets being held off balance sheet, and cost of taxpayer support were recorded.

Many of these firms were not present in the Central Bank/ECB list due to having been liquidated prior to the period that their reporting began. These firms were identified via the methods that were explained earlier in this chapter. From the sponsor/ownership categorical variable, two related variables were then constructed.

Firstly, a binary variable which specified a yes/no condition for whether the connected bank had failed/received a bailout. Secondly, a numerical variable which quantified the cost of this taxpayer financial support. These findings are displayed in (Table 3.2).

Although regulatory arbitrage is often cited as a motivating factor behind securitisation activities, as this chapter demonstrates, tax arbitrage can also be an important consideration. Given the attraction of '*tax neutrality*' offered by the *Section 110* regime, and the means by which it allows profits to be extracted by a corporate group, the distribution of the pre-tax profits of these firms was of interest.

According to the Central Bank/ECB data there were 714 of these *Section 110* securitisation vehicles in Q4 2011. From that year 82 firms were chosen via random selection to examine the distribution of their pre-tax profits for the financial years 2009 and 2010. This random sample represented just over 10% of the nominal size of securitisation subpopulation in that year. A spreadsheet function was used for this randomised selection.

Of this 82, there were six firms which were reported in the Central Bank/ECB list whose 2009 accounts stated they had not yet begun trading. These firms were then excluded reducing the number of firms for that year to 76. An ordinal variable was then created which examined this distribution of their pre-tax profits in terms of:

- Firms reporting a loss,
- Firms reporting profits = 0,
- Firms with profits < 1k,
- Firms with profits = 1k,
- Firms with profits > 1k,
- Firms with profits > 1k but < 10k,
- Firms with profits > 10k.

Almost 40% of firms in the sample (29) reported profits of exactly zero in 2009. Although certain regulatory and industry literature refers to these as independent firms, an early hypothesis was that these firms were subject to strict management and careful control of their inflows and outflows. Hence reporting profits equal to exactly zero, and hence with no tax liability, was assumed to be indicative of this.

These 29 firms were then selected for further analysis. This involved further data extraction to construct several numerical variables. More specifically, data was extracted on this subsample's gross assets, gross income, interest income and tax paid over the

period 2009 to 2015.¹⁷⁰ These variables were examined in terms of their mean and median values for each year of study.

The intention being to analyse the variability of these indicators across time and to relate this to their pre-tax profits, and hence revenue contribution. This was to assess the hypothesis that these firms were subject to tight control of their inflows/outflows. Hence, despite the variability in the subsample's asset size/income over the period, firms were reporting profits equal to zero over consecutive periods.¹⁷¹

Chapter 4 (Russian connected subpopulation)

According to the Irish Central Bank (2022), the Russian connected subpopulation is primarily involved in '*external financing*' for Russian multinational enterprises (MNEs) and state-owned enterprises (SOEs).¹⁷² This subpopulation was of particular analytical interest due to the elevated regulatory and governance risks commonly associated with Russian based firms.

As **Chapter 4** documents, 106 Russian-connected *Section 110* firms were identified as active for some or all of the period 2005-2017. That is firms whose financing structure typically involved the issuance of debt securities listed on the ISE, with the proceeds subsequently on-lent to Russian-based sponsor firms. Russian connected firms identified as being involved in other activities, such as securitisation or aircraft leasing, were excluded from the analysis presented in **Chapter 4**.¹⁷³

To facilitate this analysis, several categorical variables were first constructed. These captured (1) the identity of each firm's owner/sponsor, (2) the industry sector in which

¹⁷⁰ As some firms were late submitting accounts, the year 2015 rather than 2016 marked the final year of analysis for this subsample.

¹⁷¹ As detailed later on, for firms with no employees and part time directors serving multiple other firms simultaneously, reporting profits of exactly zero over successive period indicated that were not independent standalone firms.

¹⁷² For example, the Central Bank (2022), states that Russian connected SPVs and the large flows to their sponsors '*predominantly*' reflect '*external financing activity*'. Source: Central Bank '*Direct Financial Links to Russia by Economic Sector*', accessed <https://www.centralbank.ie/docs/default-source/statistics/statistical-publications/direct-financial-links-to-russia-by-economic-sector-4-march-2022.pdf>

¹⁷³ Only a very small number were engaged in ABS issuance. Those engaged in AB/aircraft leasing were excluded from the analysis in Chapter 4.

the sponsor operated (including banking, extractive industries, and infrastructure), and (3) whether the sponsor was privately owned or state-owned.

As these were vehicles nominally used for raising funds, several numerical variables were constructed in order to quantify their gross funds raised over the period of study (€118bn). Extracted from the balance sheet of firms under their reported liabilities, were funds raised from market sources (e.g., debt securities/notes issued) and funds raised from other firms/banks (loan notes/PPLs).

The subpopulation was then divided into two groups according to whether the sponsors ownership was private (MNE) or public (SOE). This distinction revealed that firms sponsored by SOEs accounted for a slight majority of total funds raised, as well as a majority of funds raised through bond issuances. This classification also enabled the identification of certain trends over time, which are discussed **Chapter 4**.

The magnitude of these debt flows led to the application of a flow-of-funds analysis to this subpopulation. With gross debt flows having been calculated, an additional numerical variable for net debt flows was then constructed to facilitate this analysis (discussed later). Net debt flows were calculated as gross inflows minus debt redemptions.

Identifying redeemed funds was done via changes in the level of outstanding liabilities in a firms balance sheet, or in the notes to the financial statements which could report figures for funds which had been redeemed during the financial year. This demonstrated that whilst gross debt flows over the period amounted to €118bn, net debt flows (debt minus redemptions) was substantially lower (€55bn).

In several sub-periods, the analysis identified net outflows of funds from Russia to *Section 110* vehicles. This indicates that these firms did not function solely as conduits for external financing, but also as destinations for capital outflows from the Russian sponsor firms. In other words, they did not serve merely as a *source* of funds, but also as a *use* of funds. Interest income for these firms was a key numerical variable. When factoring in interest payments received over the period of study, net flows declined further to approximately €28bn.¹⁷⁴

¹⁷⁴ From a data and policy perspective, this finding underscores the need for caution when interpreting official bilateral direct investment statistics that include flows routed through conduit entities such as

During the course of extracting data on firms financing activities, adverse changes to the terms and conditions of issued debt (see Table 4.3) were systematically recorded. Such changes were typically disclosed in the notes to the financial statements and required detailed examination. A categorical variable was constructed to record such atypical modifications which raised questions about whether certain transactions were occurring on an *arm's length* basis.¹⁷⁵

Finally, a content analysis was conducted of bond prospectuses issued by these firms in connection with listings on the ISE. This involved the systematic coding of qualitative legal and regulatory disclosures into structured data. These disclosures related to certain restrictions placed on the purchasers of these ISE bonds, and further supported the hypothesis that an overlap existed between the owners of sponsor firms and the purchasers of the bonds.

Key variables included whether the bonds were subject to restrictions on sale to U.S. persons under Rule 144A, or offered exclusively outside the US under Regulation S of the Securities Act of 1933. These legal and regulatory characteristics were subsequently incorporated as categorical variables in the empirical analysis.

The magnitude of these gross flows from Ireland to Russia, and the large amounts of interest sent from Russia to Ireland, in addition to the narrowness of the potential pool of bond investors, led to the hypothesis that, in addition to external borrowing, a portion of the observed activity may be attributable to the type of '*round-tripping*' practices introduced in **Chapter 1**.

Chapter 5 (Aircraft leasing subpopulation)

The aircraft leasing subpopulation was of particular interest due to Ireland's outsized market share of the global leasing sector. It was also of interest due to considerable

Section 110 vehicles. Russian Central Bank data identified Ireland as the second-largest source of foreign direct investment (FDI) into Russia over the period 2006–2017, after Luxembourg. However, these statistics include debt instruments within FDI measures, thereby amplifying the role of conduit jurisdictions like Ireland.

¹⁷⁵ These included medium-term debt being reclassified as having an indefinite maturity, or interest rates being reduced abruptly from positive levels (e.g., 6.2%) to zero.

sectoral financial stability issues arising from the impact of Covid19. **Chapter 5** examines 527 firms engaged in aircraft leasing and closely related financing activities over the period 2010-2020. The analysis quantified the scale of this subpopulation by measuring gross asset values reported on balance sheets, which peaked at over €20bn in 2018.

In order to measure firm level performance, reported pre-tax profits were extracted from the firms' income statements and used to create a numerical variable. Aggregate results for the study group indicated that, when consolidated across firms, pre-tax losses were recorded in nine of the eleven years under examination.

These loss-making outcomes were persistent across the study group, suggesting that negative accounting profitability was not confined to isolated firms or short time periods. Nevertheless, despite this loss making there was a general growth in the size of the subpopulation over time, both in terms of the number of *Section 110* leasing firms and the size of assets under administration.

As demonstrated later, there was a significant increase in pre-tax losses and a decline in asset values for the period coinciding with the onset of the Covid19 pandemic. However, in order to distinguish between accounting losses and underlying cash-generating capacity, an additional measure of internal cash flow was constructed.

Gross internal cash flow was defined as profit before tax plus depreciation, consistent with standard cash flow approximations used in corporate finance and accounting research. Despite the prevalence of reported accounting losses, the study group exhibited positive gross internal cash flows in each year of the study period. Interestingly, this was even the case during the period of Covid19.

Depreciation expenses were treated as a key variable in the analysis, both as a driver of accounting losses and as a mechanism affecting taxable income. Where disclosed, capital gains and losses arising from the disposal or revaluation of aircraft assets were also recorded separately, in order to isolate their impact from recurring operating performance. **Chapter 5** highlights the importance of these in offsetting losses,

Balance sheet data further revealed that a significant proportion of firms experienced substantial asset write-downs, particularly during the latter years of the study period. These write-downs contributed to negative equity positions in a number of cases and

were closely associated with the operational and market disruptions caused by the Covid19 pandemic.

Reductions in aircraft utilisation rates, lease renegotiations and declines in secondary market aircraft values were reflected in impairment charges and valuation adjustments. Notwithstanding these adverse financial conditions, interest payments on intra-group *Section 110* loans continued to be made throughout the period, including during years in which firms reported negative equity and substantial losses.

This is taken as a likely indication of profit extraction occurring within large leasing groups. To examine the cost of debt financing, **Chapter 5** analyses both the interest rates applied to overall debt financing and the specific interest rates charged on *Section 110* loans, commonly disclosed as profit participating loans (PPLs). For the study period, the average interest rate on total debt financing was estimated at approximately 6%.

In contrast, the average interest rate applied to *Section 110* loans, where such data was disclosed, was substantially higher, averaging approximately 10% over the period 2012–2020. Given that *Section 110* loans are typically provided by related parties within the same corporate group, these differential rates were recorded as a distinct variable for further analysis. The difference in average borrowing on PPLs and total balance sheet borrowing are presented in Table 5.7 in **Chapter 5**.

The resulting variables described above form the basis for the subsequent analysis of financing structures, profit allocation and the relationship between accounting performance, cash flows and debt servicing capacity within the aircraft leasing subpopulation.

2.5 Data validation

Given the large volume of data entry, treatment and processing required across these three subpopulation datasets, a rigorous process of data verification was used.

Observations displaying material inconsistencies or implausible values were manually reviewed with reference to the underlying financial statements.

This process involved a collaborative effort with author's PhD supervisor, involving the cross checking of each other's works to ensure data accuracy and consistency, and to identify any potential human error. Outliers, errors and omissions were not only identified via manual review, but also through descriptive statistical analysis with the statistical software package SPSS.

This software was particularly well suited for such a task. It has an in-built visual diagnostics tool which provides a report on the number of missing observations per variable, in addition to highlighting outliers and extreme outliers. Given the scale of some *Section 110* firms in terms of the size of their assets/liabilities, large absolute values were not automatically treated as errors or outliers. Rather they were rechecked against the financial statement of the related firm from which they were derived.

Another benefit of SPSS for this research was that it also has ability to exclude firms with missing variables. This was helpful due to the late publication of financial statements for certain years or insufficient levels of disclosure. SPSS also allows for the selecting of firms using various criteria such a loss making or those reporting negative equity.

Despite these data verification and processing procedures, certain limitations remain. Owing to potential issues of firm omission, consolidation/aggregation, timing issues and non-disclosure of certain information, it is possible that measurement error may have been introduced. Although this is unlikely to be of a material nature. These are considered where relevant in the interpretation of the empirical findings of later chapters.

Nevertheless, the approach this research has taken is systematic and transparent. It also relies on the best data which is available for these firms. As such, it provides a robust foundation for the empirical analysis presented hereafter. The methodology of which is discussed in a succeeding section, with findings allowing for replication and meaningful scrutiny.

2.6 General overview of firms within the dataset

This short subsection provides an overview of the general features of *Section 110* firms contained within these subpopulation datasets:

- A. They can be very large in terms of asset size, but there is considerably variability across firms;
- B. They have no employees, fixed assets and minimal amounts of cash;
- C. Administrative functions are performed by a CSP which provides nominee Irish directors and trust services;
- D. Tax payments are generally zero, with tax losses often carried forward as an asset;
- E. The use of an ‘*orphan structure*’ are common, but firms can be consolidated with the corporate group;
- F. They are often connected through ties of ownership/control to other OFC/tax haven type jurisdiction such as Bermuda, the Cayman Islands and Luxembourg;
- G. They are described as ‘*bankruptcy remote*’. However, as seen in later chapters, significant declines in asset values can result in negative equity, resulting in debt write downs, and losses resulting in firm failures for debt providers;
- H. Their use in the shadow banking sector has been identified as a source of financial fragility, yet they are not subject to the same regulatory requirements as normal banks;¹⁷⁶
- I. The use of *Section 110* finance has been controversial, for example in the purchase of distressed assets in the GFC and in financing activities for connected Russian sponsors.
- J. The Central Bank has acknowledged that SPVs issuing *Section 110* loans pose a ‘*high degree of risk*’ via their potential use for money laundering and sanctions evasion, and as shown in **chapter 4** such risks were realised.

2.7 Summary statistics

Next key summary statistics are provided on the population dataset and the related subpopulation datasets, along with measures of central tendency for the latter. The summary statistics provides an overview of the characteristics of these four related datasets in terms of the time periods they cover, the unit of analysis, the number of firms

¹⁷⁶ For instance, *Section 110* companies are not subject to prudential regulation by the Central Bank, nor do they have capital reserve requirements. Only a small minority (circa 10%) are subject to anti-money laundering (AML) supervision. As a result, *Section 110* companies are frequently described as ‘*not regulated*’ in different professional service firm marketing literature <https://boldergroup.com/insights/blogs/understanding-section-110-formation-in-ireland/>

included/excluded, the number of firms within a subpopulation or sample that were subject to analyses, in addition to providing some commentary on the foregoing.

As denoted in Table 2.4 (Summary Statistics), the population dataset covers the period 1997 to 2020. The population dataset contains 3,580 unique firms which were active for some of this period. Firms were recorded and classified in terms of whether they appeared in the Central Bank/ECB list (FVCs), or not (other SPVs).

This dataset was in the first instance an attempt to quantify the size of the *Section 110* population, when there were few official estimates for its total size. In the second instance, it was used to identify the relevant subpopulations which were subject to empirical analysis. Hence firm level observations were used for this dataset, rather than firm year level observations as in the subpopulation datasets. The number of observations thus match the number of firms.

The total population of firms was not analysed in the aggregate as the level of data extraction required would have been beyond the scope of this research. Identifying the total population from the CRO data source would require significant resources to create firm year level observations, which would run to the tens of thousands. Hence there are no figures reported for the measure of central tendency for the total population.

The securitisation subpopulation dataset encompasses the period 1997-2016. There are a total of 1,762 firm level observations in this dataset. As discussed previously, this subpopulation was not analysed in the aggregate. Rather discrete periods are analysed via the use of sampling and subsampling. This is done for several reasons, including the scale of required data extraction being beyond the scope of this research.

The first study sample in **Chapter 3** (Figure 3.1 and Table 3.1) quantified the level of MBS issuance over the period 1997-2008. There were 192 firm year level observations for this study sample. The second sample identifies *Section 110* connections to banks which failed or required significant taxpayer bailouts (various years) during the GFC. It has 41 firm level observations.

Table 2.4: Summary Statistics:

Classification		Time period covered	Unit of analysis	N firms identified	N firms removed ³	N firms subject to analysis	Total no. observations	Mean value (Gross Assets)	Median (Gross Assets)	Comment
<i>Total Population</i>	Thesis	1997-2020	Firm level ²	3,580	n/a	n/a	3,580	n/a	n/a	The population dataset that was constructed was used primarily for quantification and identification of three subpopulations.
<i>Subpopulation 1 (Securitisation firms)</i>	Chapter 3	1997-2016 ¹	Firm level & Firm year level	1,762	9	3 samples - 169 (S.1) - 41 (S.2) - 82 (S.3) ⁴ - 29 (S.4) ⁴	591 (Total) - 192 (S.1) ⁵ - 41 (S.2) - 155 (S.3) - 203 (S.4)	€348m	€224m	Subpopulation was not analysed in the aggregate due to the scale of data entry that would have been required. Several samples explore different aspects of the subpopulation.
<i>Subpopulation 2 (Russian connected firms)</i>	Chapter 4	2005-2017	Firm year level	121	15	106	671	€77.1m	\$30m	This subpopulation is analysed in the aggregate at the firm year level.
<i>Subpopulation 3 (Aircraft leasing firms)</i>	Chapter 5	2010-2020	Firm year level	548	21	527	2030	€99m	€46m	This subpopulation is analysed in the aggregate at the firm year level.

Notes:

(1) Sampled analyses cover different time periods, which encompass the years 1997-2016.

(2) Unique firms were recorded in the population dataset by the year of incorporation/CRO number. For those engaged in securitisation (FVCs), the first year they appeared in the Central Bank/ECB list was also recorded.

(3) Firms removed due to dormancy, absence of accounts, and/or consolidation

(4) A total of 82 firms were selected at random. Six of which had not produced accounts in 2009 and three of which had not produced accounts in 2010. This left 76 and 79 companies. A subsample of 29 firms were then selected from those which had reported profits equal to exactly zero in 2009.

(5) Most firms in sample 1 issued a single prospectus, but there were a small minority which issue two or more.

The third sample examined the distribution of the pre-tax profits of a random sample of 82 firms in 2009 and 2010 (see Table 3.7). This resulted in 76 which had financial statements in 2009 and could be analysed. This led to 155 firm year level observations. From this third sample, a fourth subsample was derived.

This resulted in further analysis of 29 firms which met a certain criterion (reported pre-tax profits = 0 in 2009). This subsample was analysed over the period 2009-2015.¹⁷⁷ This resulted in 203 firm year level observations (see Table 3.8). The key variables constructed for this subsample were their gross assets, gross income and interest income, each of which were reported in terms of their mean and median values for each year of study. Hence certain measures of central tendency are presented in **Chapter 3** (Table 3.8).

The Russian subpopulation dataset encompasses the period 2005-2020. There was a total of 121 firms that were identified, 15 of which were excluded for reasons of dormancy. This left 106 firms that were subject to analysis. These 106 firms yielded a total of 671 observations. Measuring pre-tax profits and taxes paid are largely meaningless from the perspective of measuring the central tendency, as pre-tax profits are frequently equal to zero or near zero, meaning low/no tax paid.

Figure 2.2 shows the mean, standard error, median, mode, standard deviation and standard variance for the Russian connected subpopulation's gross assets and interest income. As can be seen, the standard deviation for gross assets is very large. This highlighting significant variability within the subpopulation. This spread indicates the presence of both relatively small and very large firms by size of assets. The mode is represented by '1' which reflected instances where a firm only had \$1/ €1 in equity, and had not yet provide a PPL to a Russian sponsor (assets). Hence, this also had an impact and reduced the mean value of assets. (€77m).

¹⁷⁷ There were insufficient numbers of accounts available for the year 2016.

Figure 2.2 Measures of Central Tendency for Russian subpopulation (Gross assets and interest income)

<i>Russian Subpopulation (Gross assets)</i>		<i>Russian Subpopulation (Interest income)</i>	
Mean	7714160.73	Mean	199552.8918
Standard Error	5030696.791	Standard Error	36659.62957
Median	300650.34	Median	22361.139
Mode ¹	1	Mode	0
Standard Deviation	120841483.7	Standard Deviation	879067.0357
Sample Variance	1.46027E+16	Sample Variance	7.72759E+11

Note: (1). The most common number (mode) appears as '1' due to the instances of Russian firms which had issued one 1 share (assets), but had not yet made a loan to a Russian connected firm. Once this loan is made it is recorded as an asset in the *Section 110* firm's statements. For leasing firms (gross assets) a '1' for the mode similarly indicates that a leasing transaction has not been undertaken. '0' for the mode (Interest on PPL) indicates an observation where no interest was paid. The measures of central tendency are for all firm year level observations for each variable over their respective periods to analysis.

Figure 2.3 Measures of Central Tendency for Aircraft leasing subpopulation (Gross assets and interest paid on PPL)

<i>Aircraft leasing subpopulation (Gross assets)</i>		<i>Interest on PPL</i>	
Mean	99382531.04	Mean	2820151.343
Standard Error	5491433.47	Standard Error	270073.0751
Median	46452329.5	Median	293683
Mode ¹	1	Mode	0
Standard Deviation	213672516.1	Standard Deviation	10505113.61
Sample Variance	4.56559E+16	Sample Variance	1.10357E+14

Similarly, the standard deviation for interest income for the subpopulation is large, albeit not to the same extent as gross assets. The mean value of interest income is around €2m. Similar to above, the value of this brought down by the modal number '0' which reflect a number of firms which received no interest income in certain years (see **Chapter 4**).

For the leasing subpopulation dataset (2010-2020), key variables for measuring central tendency were gross asset size and interest paid on PPLs. Figure 2.3 shows the mean, standard error, median, mode, standard deviation and standard variance of both of these two variables.

As was seen with the previous subpopulation, the standard deviation when it comes to gross assets is very large. This reflects the fact that some *Section 110* leasing firms may have held a single aircraft, whereas other may have held several. It is also the case that some firms which may have disposed of all their leased assets in a financial, meaning their gross assets were reduced to \$1/€1, whilst they were awaiting to acquire another aircraft for the purposes of leasing. The mean value of assets of this subpopulation was €99m.

For the variable interest payments on PPLs, the mean value was almost €3m with the media value smaller again. As we can see from the above, there is a wide variance in the levels of interest paid on PPLs, with some firms reporting nil value.

2.8 Methodology

This thesis is an empirically driven body of research. It has sought to create the first publicly available dataset of *Section 110* firms. The three related subpopulation datasets have sought to map the activities of firms, identify their organisational structures and identify their risk profiles.

The research approach has been primarily descriptive and exploratory with a focus on structural analysis. Both quantitative and qualitative methods have been used throughout. In relation to the former, financial methods were selected to allow for the accurate capture of certain patterns, risk exposures and systemic linkages.

Standard techniques and accounting conventions were also used to create certain financial ratios, which were described earlier in this chapter. A flows of funds analysis

along with an analysis of corporate structure is often considered one of the best approaches to analysing SPVs.

Section 110 firms as SPVs are contractual entities rather than behavioural ones. Hence, SPVs have been described as '*brain dead*' or on '*autopilot*'. Their economics are largely driven by predefined cash-flow rules, not by optimisation or market behaviour. Flows-of-funds analysis was deemed the best fit as it matches that reality, and thus forms a key component of analysis used later.

Content analysis was used for certain qualitative data particularly around the analysing of certain filings with the CRO, in particular prospectuses listed on the ISE. This was detailed in an earlier part of this chapter.

Early on alternative methods were considered for use to complement those methods previously described. For example, the use of regression analysis. However, it became clear that regression analysis did not necessarily lend itself well to an analysis of the three subpopulations. There were several reasons for this.

- Firstly, the data that was used could be somewhat heterogenous.
- Disclosures in company accounts could vary by firm.
- Certain variables could be missing.
- Firms could be submitting accounts 2-3 years late.
- SPVs often share sponsors, directors or asset structures, which introduces clustering effects that are difficult to model robustly with a limited dataset

So, when taken together, all of these things posed challenges for statistical assumptions for testing, such as total population variations, comparability, sufficient sample size, and independence of observations.

The subsequent three chapters detail the relationships between these SPVs and parent/sponsor firms. They offer explanations for certain tax/regulatory driven financial market behaviour. Each was grounded in an understanding of the institutional environment and how it related to the specific subsectors of securitisation, off balance sheet financing and leasing.

Chapter 3

'Ireland prides itself in matching best international practice in all aspects of financial regulation at both domestic and international level'.¹⁷⁸

- Tánaiste and Minister for Finance, Brian Cowen (2007)



3.0 Introduction

This chapter examines the securitisation subpopulation. As discussed in **Chapter 2**, this subpopulation is not analysed in the aggregate. Except for the purposes of quantifying the number of *Section 110* securitisation and non-securitisation firms identified by this research and cross referencing this with estimates by official sources.

Rather this chapter relies on several sampled observations over different time periods, which are relevant to different aspects of research on this subpopulation. These sampled observations capture the growth of mortgage-backed securities (MBS) issuance within the IFSC (1997-2008), firms connected to banks which failed during the *Great Financial Crash* (various years) and the profit distributions/tax practices of firms (2009-2015).

The chapter first provides a brief background on the development and growth of the sector. It provides some empirical data on the growth of mortgage-backed securities (MBS) issuance by *Section 110* firms with both resident and non-resident sponsors. This

¹⁷⁸ Dáil Éireann Debate, Tuesday - 16 October 2007, accessed <https://www.oireachtas.ie/en/debates/question/2007-10-16/75/>

covers the period of *Section 110*'s introduction (1997) to the year prior to Central Bank/ECB data collection (2008). Given the role played by securitisation during the GFC, financial stability issues are then identified via firm connections to troubled banks.

The stated low risk features of these firms, in particular their use of an '*orphan structure*', are then interrogated. Despite the ECB prescription that they be '*insulated from the risks of bankruptcy*', this section demonstrates that a total of 41 banks from Ireland, the UK, Germany and the US, amongst others, which incurred large losses/failed were connected to highly leveraged *Section 110* firms.

The following section explores the domestic regulatory environment firms operate within, and how this regulation is applied in practice. Considering that securitisation was identified as posing '*systemic risks*' in the aftermath of the GFC (FSB 2015), and *Section 110* firms created significant contagion effects for sponsoring banks, the supervision of this subpopulation is critically assessed.

The section thereafter examines the ECB regulations on data collection that were introduced post 2008 to improve oversight and financial stability of the securitisation sector. **Chapter 2** noted the existence of certain data anomalies and other shortcomings in official data and the implications this has for sectoral measurement. This section provides empirical evidence in support of those claims.

As firms have multiple reporting authorities (CRO, Revenue and Central Bank), from a data governance perspective this fragmented approach means no single authority has a fully consolidated real time overview of the sector. Evidence is provided that certain data published by the Central Bank, ECB and Department of Finance, appears inconsistent with that of Revenue. This section also raises questions about the ECB's classification system (FVCs vs SPVs) and how this creates boundary challenges and data gaps.

Lastly, cross border tax considerations are interrogated. The use of an '*orphan structure*' is often cited for reasons of risk reduction. This section explores how it can also be used for the purposes of tax arbitrage. It can be common for *Section 110* firms to report profits equal to zero over successive periods, despite substantial income and interest flows.

A sample of securitisation firms reporting profits equal to exactly zero are examined over the period 2009-2015. Despite considerable variability in the size of the sample's assets

and income over the period, profits remain relatively constant at zero. This is suggestive of tight financial control resulting in managed profits and potential intra group profit shifting.

A comparison is then made with Luxembourg and the tax strategies involved in the *Lux Leaks* case. Similarities and differences are identified between each. In each case the main beneficiaries are the corporate groups availing of these tax laws, and domestic professional service firms. Both structures enable tax arbitrage strategies.

The chapter then concludes and offers some remarks.

3.1 Background

As discussed in **Chapter 1**, developing the securitisation industry is a long-established policy of the Irish State, with favourable tax/legal provisions first introduced in 1991.¹⁷⁹ *Section 110* was later introduced (1997) and conferred wider advantages on qualifying firms.¹⁸⁰ Due to the extensive tax and regulatory concessions, Ireland is described as the '*jurisdiction of choice*' for establishing vehicles engaged in structured finance (Matheson 2016).¹⁸¹

In the years leading up to the GFC, major European/US banks made considerable use of *Section 110* securitisation vehicles. Between 2000 and 2008, MBS issuance including both residential mortgage-backed securities (RMBS) and commercial mortgage-backed securities (CMBS), accounted for the largest share of European securitisation issuance. The IFSC was a key location for this.

¹⁷⁹ As discussed in Chapter 1, these were prior to the introduction of Section 110 and did not have the desired effect. For more information on the state's long-established desire to foster securitisation see Department of An Taoiseach (2000).

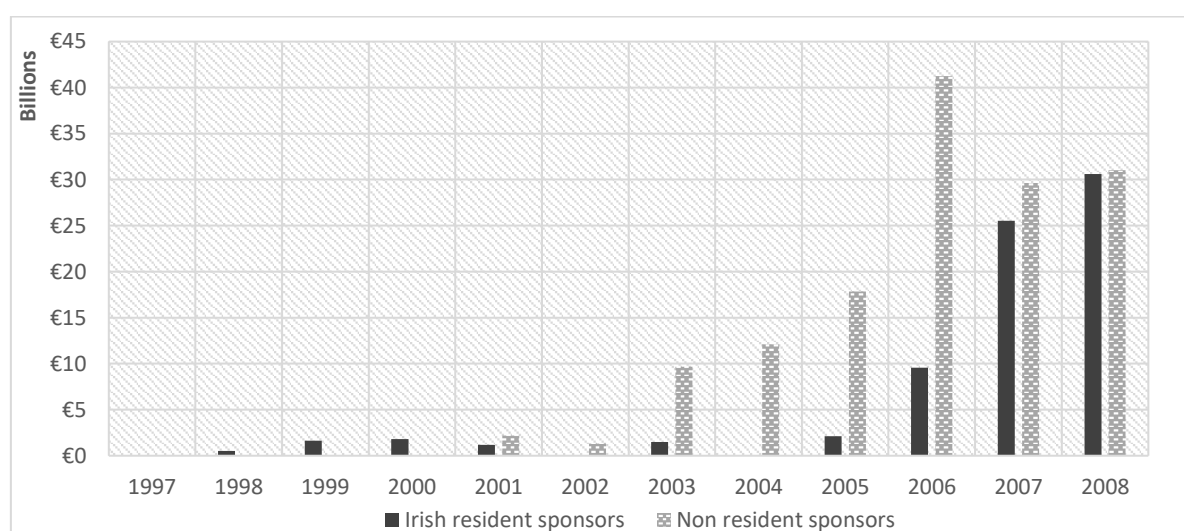
¹⁸⁰ A document published in 2011 by the Irish Government states '*The Department of Finance and the Irish Revenue will fully engage and consult with industry to enhance the tax framework, including through the annual Finance Bill process, in particular to facilitate areas where Ireland can gain first-mover advantage in developing sustainable business lines*', Department of An Taoiseach (2011) p. 18.

¹⁸¹ In a further comment they state; '*As the market has become more sophisticated, Ireland as a jurisdiction has constantly responded, in terms of its legal and tax framework, in order to continue to position itself as the location of choice*'. Matheson accessed http://www.matheson.com/images/uploads/documents/Matheson2__Ireland_-_The_SPV_Jurisdiction_of_Choice_for_Structured_Finance_Transactions.pdf

Little publicly available data regarding the value of Irish securitisation issuances exists prior to 2009. Figure 3.1 provides an estimate for the value of MBS issuance by *Section 110* firms between 1997 and 2008, disaggregated by resident and non-resident sponsors. A total of 169 unique firms were identified as having issued MBS over this period. These estimates are subject to certain caveats outlined below.

Figure 3.1 demonstrates that issuance by foreign lenders was minimal prior to 2003. It then increased to almost €10bn in that year and reached a peak of €46bn in 2006, with European banks accounting for the majority of issuances. The muted level of securitisation activity prior to 2003, and the significant increase in MBS issuance thereafter, can be attributed to legislative changes made to the regime discussed in **Chapter 1** (literature review).

Figure 3.1: Times series of *Section 110* MBS issuance (1997-2008): Irish resident vs non-resident sponsors



Source: *Section 110* dataset. Author's calculations.

- Notes:** (1) Issuances by Irish resident sponsors from 1998 converted from £(IRL) and £(UK) to € using exchange rate as of 31st of December of that year.
(2) Not all of these issuances by Irish resident sponsors related to solely to Irish mortgages, as issuances related to mortgages originated in the North of Ireland (UK) and in Britain, particularly from Ulster Bank, would also be included.
(3) In a small number of instances, issuances by non-Irish sponsors also included other non-mortgage assets.
(4) Includes securitisation of residential and commercial mortgages.
(5) For accounts/prospectuses dated before the 30th of June, these are applied to the previous financial year.
(6) Irish lenders include those firms identified in Appendix 3, non-Irish lenders included all other firms using of *Section 110* vehicles for MBS issuance. Does not include CDOs.

The extent to which Irish lenders engaged in securitisation during this period has received limited academic attention. Connor et al (2010) suggest that Irish banks were only marginal participants.¹⁸² Lane (2015) on the other hand argues that it played a significant role in their funding, estimating securitised residential mortgage loans of approximately €17bn in 2008.¹⁸³

This research identified residential MBS issuance of €27.7bn in 2008 via *Section 110* firms connected to Irish lenders. Table 3.1 details these issuances by issuing firm and associated lenders in that year, with Appendix 3 providing a comprehensive list of Irish sponsor related *Section 110*-securitisations. Differences in timing and measurement, as discussed in **Chapter 2**, may account for part of the discrepancy between these estimates of Lane (2015).

Table 3.1: Value of residential MBS issuance by Irish lenders (2008)

Lender	<i>Section 110</i> firm	Value of Residential MBS issuance
<i>First Active</i>	Celtic Residential Irish Mortgage Securitisation Ltd 14	€6.1bn
<i>Irish Nationwide</i>	Armoyn Securities	€1.5bn
<i>PTSB</i>	Fastnet Securities Ltd 4	€6.5bn
<i>PTSB</i>	Fastnet Securities Ltd 5	€1.7bn
<i>PTSB</i>	Fastnet Securities Ltd 6	€2.4bn
<i>PTSB</i>	Fastnet Securities Ltd 7	€1.5bn
<i>KBC</i>	Phoenix Funding No.3 Ltd	€3.2bn
<i>EBS</i>	Emerald Mortgages 5	€2.5bn
<i>AIB</i>	Clogher Securities Ltd	€2.3bn
Total		€27.7bn

Source: Author's *Section 110* dataset

Note: Table 12 differs from Figure 5 in that it only relates to MBS issuance where the underlying assets comprised residential mortgages, and does not include commercial mortgages.

As noted above, the estimates in Figure 3.1 are subject to material limitations and should be interpreted as lower-bound estimates of foreign lender activity. Amendments to the regime in 2006 (see **Chapter 1**) substantially reduced financial statement disclosure, and

¹⁸² Conner et al (2010), 'The U.S. and Irish Credit Crises: Their Distinctive Differences and Common Features' accessed <https://mural.maynoothuniversity.ie/id/eprint/1884/2/N206-10.pdf>

¹⁸³ Philip Lane (2015), 'The Funding of the Irish Domestic Banking System During the Boom?', Journal of the Statistical and Social Inquiry Society of Ireland, Vol. XLIV, accessed <https://www.tara.tcd.ie/tara8/server/api/core/bitstreams/997cc8cc-19e4-4925-bc48-ac662431996a/content>

in several cases the nature of the underlying securitised assets could not be determined.

¹⁸⁴ Accordingly, Figure 3.1 includes only issuances where the underlying assets were explicitly identified as mortgages.

Similar classification difficulties were identified by the ECB in its 2007 attempt to compile a provisional list of European securitisation vehicles. While a significant volume of issuance could not be classified, the ECB suggested that much of it was likely mortgage-backed.¹⁸⁵ Perhaps for these reasons ECB securitisation data developed after 2008 and discussed later, does not distinguish by type of underlying asset (e.g., consumer/SME loans, residential mortgages, commercial mortgages, etc).

The FSB (2015) also defines securitisation vehicles as '*bankruptcy remote*', a characterisation frequently applied to *Section 110* firms. Industry and regulatory literature often describe these entities as possessing low-risk features largely due to their use of a trust/charitable ownership structure, as outlined in **Chapter 1**.

Historically, this structure developed in part to facilitate capital raising through a vehicle positioned between the sponsoring company and investors. Its central function is to create legal separation between the firm and its sponsor. Consequently, the vehicle's assets and liabilities are legally distinct from those of the sponsor, which is said to limit spill over risk to the wider corporate group.

Section 110 securitisation firms are generally not consolidated with the sponsor, although a sponsoring bank may guarantee certain liabilities.¹⁸⁶ In adverse conditions, including significant asset value declines, the securitisation vehicle *nominally* remains legally insulated from the financial performance of its de facto parent, and *vice versa*.

Other low risk features are said to arise from restrictions on the nature of assets that may be bought, covenants that prevent the hiring of employees, and legal requirements that

¹⁸⁴ For instance, following this change there was more frequent reference in the financial statements to the securitisation of a '*portfolio of assets*', a '*portfolio of receivables*', or a '*reference portfolio*' with no further information on the asset types provided, i.e residential mortgages, commercial mortgages, SME loans, etc.

¹⁸⁵ ECB (2008), '*Financial Stability Review: Securitisation in the Euro Area*', accessed https://www.ecb.europa.eu/pub/pdf/fsr/art/ecb.fsrart200812_05.en.pdf

¹⁸⁶ These types of vehicles have been defined as '*a legally distinct entity with a limited life created to carry out a narrow-predefined activity or series of transactions for a "sponsor" company*' (Feng et al, 2009).

cash flows from their operations may only be used to pay investors and cannot be taken by the sponsoring company for any other purpose (Dharan, 2002).¹⁸⁷

However, despite these supposedly low risk features, many of these vehicles not only incurred losses for their investors during the GFC, but also losses for their sponsors several of whom failed or required significant taxpayer bailouts. Table 3.2 lists some of the banks, the identity of their home country, the cost of the taxpayer support they received, along with and their associated *Section 110* firms and their largest year of gross assets.

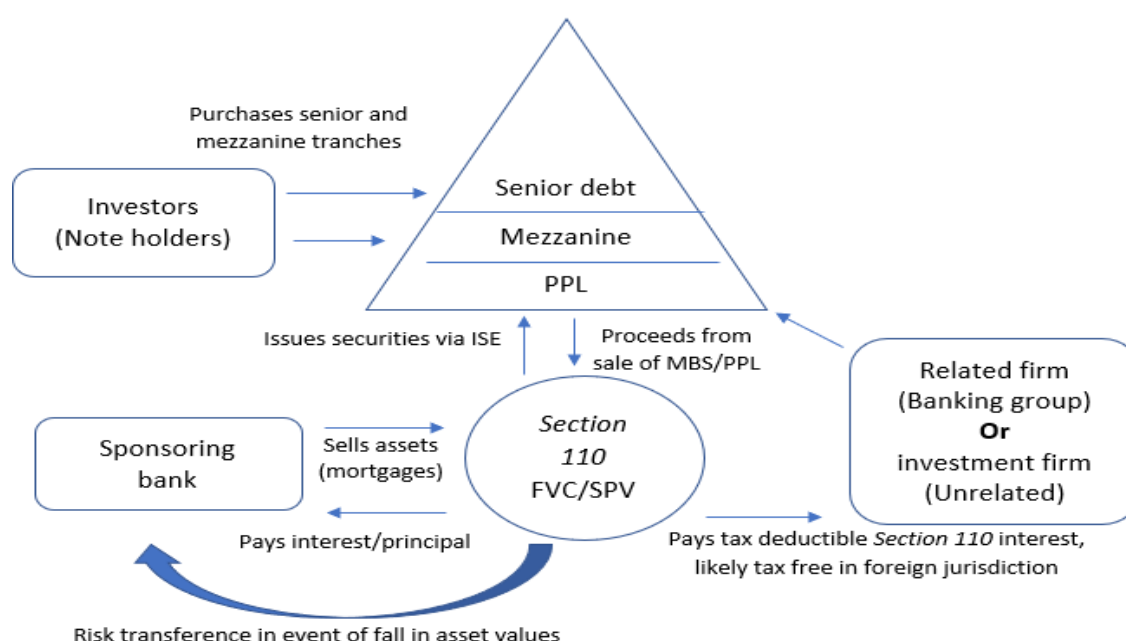
A total of 41 different banks from 14 separate countries are identified in Table 3.2. These firms experienced significant liquidity/solvency issues, and most of banks identified above had several associated firms. Many of these had highly significant levels of gearing. Following significant declines in asset values, many vehicles were brought back on the balance sheets of their connected banks.

Despite claims that an '*orphan structure*' creates a '*bankruptcy remote funding vehicle*' (Godfrey et al, 2015; FSB 2015), this is clearly open to challenge. Rather than eliminating risk, this structure transfers risk to a related company within the corporate group. In the event of a crisis situation, such risk may then be brought back on the balance of the sponsor/parent, which must then bear the losses and consequences. Figure 3.2 provides an illustrative example of this risk transference process.

The risk of bankruptcy is thus a function of the nature of the underlying assets and the possibility that they may not retain their value. Rather than the presence/absence of a trust structure which can be used to create a legal fiction. Bankruptcy remoteness also does not isolate risks arising from systemic risk as seen during the GFC.

¹⁸⁷ For example, see Stewart (2013), '*Low tax Financial Centres and the Financial Crisis: The Case of the Irish Financial Services Centre*', accessed <https://ideas.repec.org/p/iis/dispa/iisdp420.html>

Figure 3.2: Illustration of *Section 110* securitisation transaction and risk transference



Source: Author's illustration

Multiple vehicles controlled within the same corporate group can amplify contagion risks as was seen during this period. For example, the failure of securitised (subprime) mortgage assets during this period led to systemic risk failure resulting in serious counter party risks being realised (Financial Crisis Inquiry Commission 2011).

Although securitisation firms (FVCs) are today recognised as posing systemic risks (FSB 2015), the FSB does not discuss such risks in relation to non-securitisation SPVs.¹⁸⁸

Chapters 4 and 5 return to this issue in relation to the Russian connected and leasing subpopulations.

In the aftermath of the GFC shadow banking, or non-bank financial intermediaries (NBFIs), and their regulation became a key concern of policymakers (EU Commission 2013; FSB 2015). The next section considers the regulation of *Section 110* FVCs and SPVs and how this operates in practice.

¹⁸⁸ In these cases, risk may arise through losses on real assets, for example in aircraft values due to wars, terrorism, pandemics, etc, and where assets are partially rather than fully insured (see Chapter 5). Losses could also occur due to failures in insurance markets. Bankruptcy risks could also arise from competition driving down lease rentals and imbalances in supply demand especially in aircraft leasing. Bankruptcy and resulting losses may be remote, but because they are possible, current estimates of expected values are reduced and hence estimates of solvency.

Table 3.2: FVC's in Ireland associated with Bank losses/Failures							
FVC (Section 110)	Ownership	Year est.	Year of accounts	Gross Assets €m	Associated Bank	State support/ Bailout Cost (€bn)	Home country
<i>Kildare Securities</i>	Deutsche International Finance	2007	2007	2,593.8m	Bank of Ireland	4.7bn	Ireland
<i>Fastnet Securities 2</i>	Charitable trust	2006	2007	1,937.1m	Irish Life & Permanent	4bn	Ireland
<i>Armoyn Residential Securities</i>	INBS	2008	2009	1,460m	INBS	4.4bn	Ireland
<i>Clogher Securities Ltd</i>	Deutsche International Finance in trust for charity	2009	2009	2,706m	AIB	21bn	Ireland
<i>Emerald Mortgages no.1</i>	Castle Mortgages consolidated with EBS	2000	2009	128.3m	EBS	875m	Ireland
<i>Colligo Funding Limited</i>	Deutsche International Finance	2008	2008	3,762m	Anglo	34.5bn	Ireland
<i>Bocage Mortgages No.1 Limited</i>	Deutsche International Finance	2008	2009	935m	Barclays	N/A	UK
<i>Celtic Residential no. 8</i>	Deutsche International Finance in trust for charity	2003	2007	391.3m	Royal Bank of Scotland	£45bn	UK
<i>Epic (Value Retail) Ltd.</i>	Charitable trust	2007	2008	340.8m	Royal Bank of Scotland	£45bn	UK
<i>Wolfhound Funding 2008-1 Ltd</i>	Structured Finance Management on behalf of a charity	2008	2009	4,649.6m	Bank of Scotland	£45bn	UK
<i>Graphite Mortgages Limited</i>		2004	2005	705.6m	Northern Rock	£37bn	UK
<i>Metrix Securities PLC</i>	Structured Finance Management London. Consolidated into accounts of HSBC	2006	2007	£2,051.1m	HSBC	N/A	UK
<i>Pure Mortgages 2004 Public Limited Company</i>	Deutsche International Finance in trust for charity	2004	2004	174.2m	HSH Nordbank	13bn	Germany
<i>German Residential Funding Public Limited Company</i>	Osiris Trustees	2007	2007	2,888m	Deutsche Bank	N/A	Germany
<i>Ormond Quay</i>	JP Morgan Trustee Services	2004	2006	15,097m	Sachsen LB	17.3bn	Germany
<i>Bacchus 2007-1 ¹</i>	3 charitable trusts ¹	2006	2007	446.7m	IKB	1.5bn	Germany
<i>Bacchus 2006-1</i>	3 charitable trusts ¹	2005	2007	392.7m	IKB	1.5bn	Germany

<i>Kestrel Funding</i>	Deutsche International Finance	2006	2007	\$320m	WestLB	18bn	Germany
<i>Provide Residence 2002-1 Public Limited Company</i>	Deutsche International Finance	2002	2002	212.2m	Commerzbank	18.2bn	Germany
<i>Process Home 2003 Public Limited Company</i>	Trust	2003	2003	286.5m	Depfa/HRE Group	124bn ⁴	Germany
<i>Talisman -1 Finance PLC</i>	Deutsche International Finance held on trust for charity	2005	2007	297.7m	ABN Amro	22bn	Netherlands
<i>Venice Finance Public Limited Company</i>	Charitable trust	2002	2004	838.2m	KBC	7bn	Belgium
<i>Wise 2006-1 Public Limited Company</i>	Charitable trust	2006	2007	£63.7m	Dexia	11.9bn ⁵	Belgium
<i>Nostrum Mortgages 2003-1</i>	3 charitable trusts ¹	2003	2007	665.4m	Caixa Geral de Deposit	1.6bn	Portugal
<i>AR Finance 1 Public Limited Company</i>	3 charitable trusts ¹	2003	2003	109m	Banco Invest	4.9bn	Portugal
<i>Atlantes Mortgage No.1 Public Limited Company</i>	Deutsche International Finance held on trust for charity	2002	2003	493m	Banco Internacional do Funchal	2.2bn	Portugal
<i>Azor Mortgages Public Limited Company</i>	3 charitable trusts ¹	2003	2004	273m	Banco Comercial dos Açores	-	Portugal
<i>Caravela SME No.1 Limited</i>	Deutsche International Finance held on trust for charity	2008	2008	3,096m	Banco Comercial Português	3bn	Portugal
<i>Bmore Finance No.4 Public Limited Company</i>	3 charitable trusts ¹	2003	2004	171.9m	Banco Mais	-	Portugal
<i>Hipototta No 2 Public Limited Company</i>	3 charitable trusts ¹	2003	2004	2,468m	Banco Santander	N/A	Spain
<i>Cosima Purchase No. 15 Limited</i>	3 charitable trusts ¹	2008	2009	£162.8m	UniCredit	Merged with Capitalia S.p.A	Italy
<i>Cornerstone Titan 2005-1 Public Limited Company</i>	Wilmington Trust Service on behalf of a charity	2005	2005	595.8m	Credit Suisse	N/A	Switzerland
<i>Black Grouse Funding Limited</i>	Deutsche International Finance	2008	2008	468m	Natixis	2bn	France
<i>Provide Mortgage Loans France 2004 Public Limited Company</i>	Charitable trust	2004	2005	241m	Credit Foncier de France	N/A	France
<i>Mermaid Secured Finance Limited</i>	3 charitable trusts ¹	2007	2007	5,749bn	Danske Bank	Received a state guarantee	Denmark

<i>AZB CLO 1</i>	TMF Management on behalf of BADB charitable trust	2008	2010	478.9m	Azora Bank	\$4.5bn	Japan
<i>Fundus Mortgages 2008 Limited</i>	3 charitable trusts ¹	2008	2009	\$150.4m	VTB	\$6.4bn	Russia
<i>Moorgate Funding Limited</i>	Capita Trust	2009	2009	£850m	Merill Lynch	Acquired by Bank of America ⁶	US
<i>Currus VI Limited</i>	Deutsche International Finance held on trust for charity	2007	2008 (Jan.)	\$ 325.1m	Wachovia	Acquired by Wells Fargo ⁷	US
<i>Amber Funding</i>	Charitable trust (UK)	2006	2007	\$110.6m	Citibank	\$45bn	US
<i>Ursus EPC Public Limited Company</i>	Wilmington Trust Service on behalf of a charity	2005	2005	£135.8m	Bear Stearns	Acquired by JP Morgan Chase ⁸	US
<i>Citrine Finance Public Limited Company</i>	AIB Worthy Trust	2006	2006	136.6m	Lehman Bros	Allowed to fail	US

Notes:

(1) Badb, Medb and Eurydice charitable trusts, all operating from the same address as law firm Matheson.

(2) A third German Bank, Sachsen Bank, made large losses through an SPV called Ormond Quay (Stewart, 2013, p. 16). CRO files (including accounts) do not state this is a *Section 110* firm.

(3) This table is an updated version of that published in Stewart and Doyle (2017), to account for additional firms identified after its publication.

(4) This was in the form of loans, guarantees and direct capital injections.

(5) Dexia received a €6.4bn bailout from France, Belgium and Luxembourg in 2008, and then a further €5.5bn in 2012 from France and Belgium.

(6) This acquisition went ahead after the US government provided \$20bn in funding and Federal guarantee of \$118bn to protect against toxic assets, to assist Bank of America's takeover.

(7) Wachovia was acquired by Wells Fargo for \$12.7bn, the funds for which had been received from the US government's bailout of Wells Fargo of \$25bn.

(8) The Federal Reserve Bank of New York had agreed to buy \$30bn worth of bad assets from Bear Stearns in order to facilitate the takeover by JP Morgan Chase.

(9) Ormond Quay does not state in its accounts that it is availing of *Section 110*, but it is present in the ECB's FVC list.

3.2 The Regulation of FVCs and SPVs

The FSB have described *Section 110* securitisation firms as lying ‘*on or outside of the regulatory perimeter depending on the nature of their activities*’.¹⁸⁹ Other sources are more categorical. Professional services firms and other analysts have described them as ‘*unregulated*’ (Burke 2012; Davy 2015).¹⁹⁰

Revenue and the Central Bank serve as their primary regulators. The legislation which governs this tax regime is mostly focused on the type of activities that firms may engage in. Rather than the regulatory requirements that qualifying firms must adhere to, *per se*.

An exception is section 21 of the Finance Act (2016) which states that ‘*a company must inform the Revenue Commissioners in writing of its intention to be a Section 110 company within 8 weeks of acquiring qualifying assets of 10 million*’.¹⁹¹ This implies that prior to this amendment firms were operating and registered as *Section 110* firms before receiving Revenue approval.

The legislation requires the submission of a specific form (S110 form) which seeks certain information. The level of detail required is relatively minimal such as the name of the firm, the address of the company secretary, a description of its qualifying activities, and details of PPLs/PPNs that have been issued.¹⁹² Revenue does receive annual tax returns and a copy of the annual report and accounts, but there is no evidence of any analysis of this data.

The requirement to notify Revenue that *Section 110* is being availed of applies to the filing date of a firm’s first accounting period.¹⁹³ This is likely to be between one and two years after a firm first commenced trading. This then raises a second question, namely whether the granting of *Section 110* status is *de facto* automatic.

Considering a firm may have issued securities quoted on the ISE and entered into various contracts prior to notification, it would appear that the receiving of the associated tax

¹⁸⁹ Financial Stability Board (2015), ‘*Global Shadow Banking Monitoring Report 2015*’ accessed <https://www.fsb.org/uploads/global-shadow-banking-monitoring-report-2015.pdf>

¹⁹⁰ Davy accessed <http://www.davy.ie/binaries/content/assets/>

¹⁹¹ (Explanatory Memorandum Finance Bill 2016, p. 4), accessed <https://www.oireachtas.ie/en/bills/bill/2016/83/>

¹⁹² Revenue, accessed <http://www.revenue.ie/revsearch/search?q=Form+S.110&btnSearch=Find>).

¹⁹³ Parliamentary Question (ref 25661/16), accessed <https://www.oireachtas.ie/en/debates/question/2016-09-16/297/>

benefits is assumed to be a perfunctory matter by sponsors and their professional service firms.

It is certainly the case that after firms notify Revenue there is minimal ongoing scrutiny. As of 2011, Revenue was unable to state if there had been any audits of *Section 110* firms.¹⁹⁴ Nor were there any meetings between the Central Bank and Revenue in relation to *Section 110* firms. However, following legislative changes in 2013, two meetings took place in 2015 between the Central Bank and Revenue.

Central Bank regulations require that *'an FVC must register within one week of taking up business with the euro-area National Central Bank where it is resident'*.¹⁹⁵ As previously discussed, this arose from an ECB initiative to collect information on the shadow banking sector.¹⁹⁶ In a guidance note on this regulation the ECB states:

'Regulation ECB/2008/30 of 19 December 2008 concerning statistics on the assets and liabilities of financial vehicle corporations engaged in securitisation transactions, establishes a set of statistical reporting requirements for financial vehicle corporations (FVCs). Article 1 sets out the definitions of FVC and securitisation'.¹⁹⁷

The ECB regulations solely concern data collection. However, the Central Bank states that the data is used to *'compile euro area aggregates for statistical analysis, financial stability monitoring, and regulatory oversight of the FVC sector'*.¹⁹⁸ They further add that *'Once an FVC undertakes its first transactions, it should immediately begin the registration process with the Central Bank'*.

The most detailed description of information to be provided is prescribed by the Central Bank. This states that *'The FVC return can be thought of as similar to a set of financial accounts for a company'* and that *'Table 9 (Annual Profit and Loss) corresponds to the*

¹⁹⁴ (Parliamentary Question. 4th May 2011. No. 9954/11), accessed <https://www.oireachtas.ie/en/debates/question/2011-05-04/58/>

¹⁹⁵ (CBI, 2014, p.3)

¹⁹⁶ Article 9 (2) states that *'An FVC that has taken up business after 24 March 2009 shall inform the relevant NCB of its existence in accordance with Article 3(2)'*.

¹⁹⁷ Source: Guidance Note on the Definitions of Financial Vehicle Corporation' and 'Securitisation' under Regulation ECB/2008/30., available at :- <http://www.ecb.europa.eu/home/search/html/index.en.html?q=fvc>.

¹⁹⁸ Central Bank of Ireland (2016a), Financial Vehicle Corporations Quarterly Reporting FAQ document (p. 2-4)

income statement'.¹⁹⁹ Further details of information to be provided lists expenditure items to be included as;

- Interest payable on loans;
- Interest payable on debt securities;
- Financial services fees and commissions;
- Capital and exchange gains and losses both realised and unrealised;
- Other expenditure/operating costs.

Thus, it would appear that a topic of considerable interest in relation to tax payments is not collected by the regulator. It is also not clear whether a figure for profit before tax can be identified from data collected. This issue is returned to later in the chapter.

In addition, it is notable that the Central Bank collects information on interest paid.

Chapter 2 noted that lack of bilateral data on cross border interest payments. Despite the Central Bank collecting this data, there is no known publication where they have provided an annual figure for gross interest payments by this subpopulation. However, it does collect data on the identity of the counterparty jurisdictions.

As the foreign interest payments of these firms are unlikely to be taxed in the recipient jurisdiction (see **Chapter 1**), this means that the Central Bank should, at least in theory, be able to provide a measure of '*double non taxation*' broken down by geographical location, assuming no taxation is levied by Irish Revenue.

As the Central Bank has noted, prior to 2016 '*only the subset of SPVs which primarily engage in securitisation activities were obliged to report – Financial Vehicle Corporations (FVCs)*'. Thereafter quarterly reporting requirement were extended to all *Section 110* firms to '*address data gaps in the Irish financial system, and to enhance statistical analysis and regulatory oversight of the sector*'.²⁰⁰

¹⁹⁹ Central Bank of Ireland (2016b), '*FVC2_Reporting_Notes_On_Compilation-1*', accessed <https://www.centralbank.ie/polstats/stats/reporting/Pages/spv.aspx> .(p. 4)

²⁰⁰ Central Bank of Ireland (2016c) '*Special Purpose Vehicles Quarterly Reporting FAQ document*', accessed <https://www.centralbank.ie/polstats/stats/reporting/Pages/spv.aspx> (p.2).

The submission dates for returns and data requirements for these residual *Section 110* firms is identical to that required for FVC subpopulation.²⁰¹ Key information on tax payments is also not collected. Nor are there any publications which quantify the annual value of interest payments.

As the regulations that were introduced by the Central Bank/ECB post GFC largely concern data collection, the next section now looks at the approach to data governance, highlights certain shortcomings, and explores the implications this has for sectoral supervision and macro financial statistics.

3.3 Aggregate Data on Irish FVCs and approach to Data Governance

As previously seen *Section 110* firms, although defined by their tax status, have multiple reporting authorities when it comes to data governance. They file tax notifications and returns with Revenue, financial statements and prospectuses with the CRO, and certain statistical returns to the Central Bank. This fragmented reporting architecture means no single authority has a fully consolidated, real-time overview of the sector.

Boundary and classification also problems exist which create data gaps and regulatory inconsistencies. Securitisation firms (FVCs) are now narrowly defined as a subcategory of SPV based on their activity. Yet neither the ECB nor Central Bank provides a standalone wider definition of SPV, hence they are interpreted as encompassing various other types of non-securitisation activities.²⁰² In other words, they are interpreted on a functional and residual basis (all other activity).

There are many *Section 110* firms not classified as FVCs in ECB data, despite the fact that their primary function may be securitisation. By the same token, there are firms classified as FVCs which are involved in intergroup financing, the sale/acquisition of distressed property assets behalf of so-called vulture funds like Cerberus, Lone Star Capital, and Blackstone, with some involved in aircraft leasing.

²⁰¹ Central Bank Guidance (Special Purpose Vehicles Quarterly Reporting FAQ document), accessed https://www.centralbank.ie/docs/default-source/statistics/statistical-reporting-requirements/special-purpose-vehicles/spe-faq-document.pdf?sfvrsn=c88661a_1

²⁰² Central Bank guidance describes *Section 110* SPVs as engaged in activities that fulfil 'narrow, specific purposes' (Barret et al, 2016).

Hence, it can be difficult in practice to distinguish between those firms classified as *Section 110* FVCs compared to *Section 110* SPVs in the ECB data. More broadly, and to further complicate matters, the terms FVC and SPV are often used interchangeably in certain literature.

Official data

According to the Department of Finance, there were 2,480 *Section 110* firms which had notified Revenue of their existence in 2016.²⁰³ The total number of firms which had notified Revenue was ascertained via an answer to a Parliamentary Question. Prior to 2016 there were only two instances of the Central Bank providing an estimate for the total size of the population. These estimates were provided in 2012 and 2015 as part of their quarterly bulletins.

According to the ECB, Ireland's share of Euro area FVC assets varied between 21% and 24% over the period 2010-2015.²⁰⁴ The ECB reported that there were 823 *Section 110* FVCs holding €431.1bn in assets the end of 2015. Notably, the Central Bank which acts as its reporting agent reported slightly less than this (see Table 3.4).

The Central Bank estimated that 820 *Section 110* SPVs held €324bn at the end of 2015. There is no measure of Ireland's share of total Euro area SPV assets, as the ECB does not yet compile a harmonised dataset across the Euro area for vehicles falling outside the FVC definition.

Tables 3.3 and 3.4 provide aggregate population and subpopulation data on the number of firms and gross assets, derived from the ECB, the Central Bank and estimates provided by this research. **Chapter 2** explained the approach of this research to firm identification which relied on the ECB list of FVCs and the CRO.

Table 3.3 identifies the number of Irish registered FVCs estimated by the ECB for Q4 of each year over the period 2009-2016. It identifies the number of securities issued, the aggregate value of this issuance and the total value of Euro area assets. It also estimates

²⁰³ Answer to Parliamentary Question 34054/16. Accessed <https://data.oireachtas.ie/ie/oireachtas/debateRecord/dail/2016-11-10/writtens/mul@/main.pdf>

²⁰⁴ By 2024 its share of assets had further increased to 26% (€665.8bn) further increasing its dominance as the key European location for the administration of securitised assets.

the number of Irish registered FVCs estimated by this research, identified from the ECB list via the ISIN code and through the removal of duplicate firms.

Table 3.3: Data on FVC's for Ireland (2009-2016, €bn)

	No. Of securities Issued ¹	No. of FVCs estimated from ECB data ²	No. of FVCs ³	Aggregate stock of amount issued in Ireland ⁴	Total euro area ⁵
Q4 2009	907	907	-	538.2bn	2369.6
Q4 2010	4,521	770	827	576.1bn	2360.6
Q4 2011	4,036	716	776	499.6bn	2299.3
Q4 2012	3,801	712	742	441.9bn	2060.6
Q4 2013	4,121	722	726	418.5bn	1917.5
Q4 2014	4327	745	760	402.8bn	1848.1
Q4 2015	5,273	823	799	431.1bn	1832.3
Q4 2016	5,179	836	836	401.7bn	1804.6
Unique FVC's		1,396			

Notes:

- (1) Source: (ECB) accessed <https://www.ecb.europa.eu/stats/money/mfi/html/index.en.html>
- (2) Calculated from no. of securities issued by eliminating identical entries by name of firm. These numbers are lower than those published by the ECB, except for Q4 2015 and 2016.
- (3) Source: (ECB) accessed https://www.ecb.europa.eu/stats/pdf/money/fvc/FVC_Overview.pdf?d4745a3709d3f0d3f4065e48f2a92710
- (4) Source: (ECB) accessed <http://sdw.ecb.europa.eu/browseSelection.do?df=true&ec=&dc=&oc=&pb=&rc=&DATASETGROUPS>
- (5) Source: (ECB) accessed <http://sdw.ecb.europa.eu/reports.do?node=1000004041> and <http://sdw.ecb.europa.eu/browse.do?node=bbn362>

It shows discrepancies between the estimates of this research and the ECB, except for the Q4 2016 where the numbers match. In most years this research identified fewer firms than were reported by the ECB after accounting for the removal of duplicate firms in their list.²⁰⁵ In 2015 this research identified a larger number of firms in their list than the ECB reported. A total of 1,396 unique firms were identified by this research over the period.²⁰⁶

Table 3.4 looks at two years (2012 and 2015) for which the Central Bank provided their own figures for the number of *Section 110* FVCs/SPVs. These figures are compared to the ECB's and that of this research. As we can see, further data discrepancies are observed.

²⁰⁵ Duplication could be confirmed by cross referencing with the CRO, and checking firms CRO numbers.

²⁰⁶ The number of FVCs/SPV's incorporated in Ireland is likely to be a multiple of the number of *Section 110* firms.

Nevertheless, we are provided with the Central Bank's estimated size of the total population for 2015 (1,642)

Table 3.4: CB/ECB estimates for no. FVCs/non FVCs and size of assets for years 2012/2015 (€bn)

	Q4 2012 ² No. firms	Q4 2012 Gross assets ⁴	Q4 2015 ² No. firms	Q4 2015 ⁴ Gross assets
<i>Central Bank data for FVCs</i>	700	441.9bn	820	431.1
<i>Estimates from ECB for FVCs³</i>	712		823	
<i>Central Bank data for non FVCs¹</i>	600		822	324.0
<i>Total no. Section 110 firms according to Central Bank</i>	1,300		1,642	755.1

Notes:

(1) Defined as SPV's 'engaged in activities other than securitisation' Barrett et al, (2016, p. 72), for data on Non FVC's. See p. 72.

(2) For Q4 2012 Godfrey et al Q4, 2015, p. 50 .

(3) Derived from lists of securities issued by each FVC registered company available on ECB web site.

(4) Central Bank data, accessed

https://www.centralbank.ie/polstats/stats/fvc/Documents/2015q4_ie_fvc_publication.pdf

Firms that purchased property loans from NAMA, etc., for example various Cerberus- Promontoria firms, are classified by ECB as FVC's.

According to Revenue, there were 2,144 *Section 110* firms which had been established between 1997 and December 2015, and had not yet been liquidated.²⁰⁷ This implies that these 2,144 *Section 110* firms were still active in Q4 2015. However, the Central Bank estimated there were only 1,642 *Section 110* firms as of December 2015 (Table 3.4).

The total number of *Section 110* firms established between 1997 up until 2015 that were both active/liquidated is likely to be far larger than 2,144. This research identified 1,396 unique firms that were reported in the ECB data base between Q4 2009 and Q4 2015.

The Central Bank estimated that there were 822 non FVC *Section 110* in Q4 2015. Adding these two together (1,396 + 822) gives an identified number of 2,218 *Section 110* firms.

The Central Bank/ECB's reporting does not extend to firms established and dissolved between 1997 and 2009. Hence the number of firms established since 1997 is also likely to be far larger than those existing in Q4 2015. This research identified 2,415 unique *Section 110* firms (FVCs/SPVs) which had been established over the period 1997 to Q4 2015.

²⁰⁷ See Parliamentary Question 13th January 2016 no. 46892/15. The answer states: 'The number of Special Purpose Companies set up in accordance with section 110 of the Taxes Consolidation Act 1997 is 2,144. This excludes companies whose tax registration subsequently ceased as the company has been liquidated'.

The discrepancy between Revenue, Department of Finance, Central Bank and ECB data may be explained by several factors. There are numerous *Section 110* firms that have all the appearances of a securitisation vehicle which do not feature in ECB/Central Bank lists. Table 3.5 shows some examples of omitted firms.

All these firms have '*Atlas Reinsurance*' in title. One may have been omitted because a liquidator had been appointed, but two other firms are engaged in issuing variable rate notes quoted on the ISE. Hence, given they meet the criteria for inclusion their omission appears anomalous.

Another indication of underreporting arises from searches of filings in the CRO and prospectuses issued on the ISE. This research found 86 of which were issued by SPV's that were not listed in the ECB data base, but had issued quoted debt on the ISE, were availing of *Section 110* tax status and were engaged in securitisation or financial intermediation. This equated to just over 10% of the subpopulation of FVCs for the year 2015.

This is in contrast to several firms that have borrowed from financial institutions to purchase distressed property loans (Vulture funds), have not issued quoted debt but are nevertheless listed as FVC's in the Central Bank/ECB data base. As all prospectuses must be sent to the Central Bank for approval, their inclusion in the FVC list appears anomalous.

Table 3.5: A Case Study of FVC firms not in ECB Data Base

Name of firm	Ownership	ECB Data	Evidence for <i>Section 110</i> status FVC ¹	Year Est.	Year dissolved
<i>Atlas Reinsurance X Ltd</i>	Walkers Global Shareholding Services on behalf of a charitable trust	Yes	Issues participating notes quoted on Irish Stock exchange	2013	Active
<i>Atlas Reinsurance III Public Ltd</i>	Wilmington Trust SP services (Dublin)	No	Issued variable notes listed on Irish Stock Exchange	2006	2011
<i>Atlas Reinsurance IV Public Limited</i>	Wilmington Trust SP services (Dublin) on behalf of a charity	No	Issued variable notes listed on Irish Stock Exchange	2007	2013
<i>Atlas Reinsurance VII Limited</i> ²	Wilmington Trust SP services (Dublin) on behalf of a charity	No	Issued variable notes listed on Irish Stock Exchange	2012	Active

Notes:

(1). All are *Section 110* SPVs. Source: Prospectus issued to Irish Stock Exchange/Central Bank and annual report and accounts.

(2). The offering circular states '*Any losses incurred by the Issuer will be available for set off against its profits for any subsequent accounting period for so long as the Issuer continues to be subject to the Section 110 taxation regime*'.

Other anomalies were also discovered.²⁰⁸ For example, identified in the Central Bank/ECDB list were vehicles which were involved in aircraft leasing and also several which formed part of Ireland's National Asset Management Agency (NAMA). The NAMA group was involved in the acquisition and disposal of distressed property assets, but not involved in the securitisation of such assets, hence their inclusion appears anomalous (Table 3.6).

Table 3.6: *Section 110* firms within NAMA group structure

NAMA entity	Ownership	ECB Data	Description of activities
1. NAMA (<i>Non-Section 110</i>)	Ultimate Parent Co Semi-state agency*	No	Semi State Agency and ultimate parent company for the group
2. National Asset Management Agency Investment (<i>Section 110</i>)	Controlled by 1. (49% of shares held by 1, 51% held privately)	Yes	The company by which private investors invested in the NAMA group, by taking a 51% equity state. These investors were Irish Life & Permanent (as part of PTSB), New Ireland Assurance (as part of BOI), clients of Allied Irish Banks Investment Managers (as part of AIB)
3. National Asset Management (<i>Section 110</i>)	100% Subsid of 2.	Yes	Responsible for issuing government guaranteed debt/subordinate debt used for acquiring loan assets from participating institutions
4. National Asset Management Group Services (<i>Section 110</i>)	100% subsid of 3. Holdco for 5, 6, 7	Yes	Acts as holding company for 5, 6 and 7. Acquires beneficial interest in debt instruments issued by 3 (funded by way of a PPL). It then sells beneficial interest in debt instruments to 5.
5. National Asset Loan Management (<i>Section 110</i>)	100% Subsid of Holdco 4	Yes	Acquires Loans acquired from participating institutions. Receives beneficial interest in debt instruments acquired from 4. It funds this via a second PPL.
6. National Asset Property Management (<i>Section 110</i>)	100% Subsid of Holdco 4	Yes	Served as the property-holding and property-management vehicle within the broader NAMA group — taking title to real estate when appropriate, managing or disposing of those assets.

Source: Author's *Section 110* dataset

Some possible explanations for this discrepancy may be that some *Section 110* firms are not required to report to the Central Bank (2016c, p.2). These are:

1. Non-Irish domiciled companies (i.e. external entities incorporated in another jurisdiction).²⁰⁹
2. Companies which have already been liquidated.

²⁰⁸ Some examples: no account details are filed for Fortress Credit Europe Funding Limited, but is still included in the ECB list, whereas Fortress Centaurus Global Ireland established in 2014 has stated that it is a '*Section 110*' firm in account details, and prospectus and issues asset backed securities, but has been omitted from ECB/CB list. SVG Diamond Private Equity Holding III, established in 2009, changed its name to Aberdeen Diamond Private Equity III, remains a *Section 110* company but disappears from ECB list. GPB Eurobond Finance appears in Q4 2009 but not subsequently.

²⁰⁹ Also referred to as '*External companies*' by the Central Bank.

3. Companies which have disposed of all assets (save for cash holdings of less than €500,000) are not required to report the SPV Return.
4. Firms that have registered as a *Section 110* but have not yet undertaken any transaction.
5. Human error on the part of Corporate Service Providers

It should be noted that only a small number of firms were found in categories (3) and (4) and none in category (1) at the time of writing. It is also the case that human error could be a significant factor. As discussed in **Chapter 2**, the reporting agent for *Section 110* firms to the Central Bank is their corporate service provider (CSP).

Given the large number of firms that they hold directorships for simultaneously, the frequent reporting requirements, the minimal regulatory supervision, and the low level of levels of directorship fees, it is possible this exercise does not always attract meaningful attention.

In conclusion there appears to be considerable under-reporting of the total number of *Section 110* firms in ECB/CB data, with consequent implications for macro financial statistics. At the same time there appears to be overreporting via the inclusion of firms which would appear to fall outside the ECB's criteria for inclusion.

The next section considers the use of *Section 110* securitisation firms for purposes of intra group profit shifting. It provides some empirical analysis of a sample of firms. It then compares the use of *Section 110* firms to the tax strategies observed in the case of *Lux Leaks*.

3.4 Cross border tax considerations

The stated motivation for using an '*orphan structure*' often emphasises risk reduction and a lower cost of capital. Yet they are also used extensively in tax minimisation strategies and regulatory arbitrage (Stewart, 2013). As noted by Feng et al (2009) '*the financial reporting benefits that result when a sponsor avoids consolidating the SPV in its financial statements have been widely discussed*'.

This section explores the tax treatment of *Section 110* securitisation firms. It examines the pre-tax profits of a random sample of 82 firms extracted from Central Bank/ECB list

for Q4 2011, over two years. Of this sample, there were six firms which did not produce any accounts in 2009, and three which did not produce any accounts in 2010.

Table 3.7 shows data on the distribution of the value of reported pre-tax profits for the sample across these two years. As we can see below, there were 29 firms which reported profits equal to exactly zero in 2009. These firms were thus of interest due to the likelihood that this reflected careful financial engineering designed to create specific zero tax outcomes.

Table 3.7 Distribution of pre-tax profits for 79 FVC's for 2009 and 2010

	Pre-tax profits (2009)	Pre-tax profits (2010)
<i>Reported loss*</i>	9	15
<i>Profits = €0</i>	29	27
<i>Profits < €1,000</i>	11	9
<i>Profits = €1,000</i>	9	10
<i>Profits > €1,000 but < €10,000</i>	9	9
<i>Profits > €10,000</i>	9	9
No. firms	76	79

Note: 6 firms reported a loss of greater than €200k. Several firms present in the ECB list (2009) had not commenced trading (dormant firms) and hence were excluded from the analysis in that year. Three of these had begun trading in 2010 and were included in that year's analysis.

This led to the creation of a subsample of this 29 (Table 3.8), which gathered data on their gross assets, gross income and interest income over the period 2009-2015. Table 3.8 reports this for the group in terms of their mean and median values.²¹⁰ For this subsample, for all years included, gross income was very large amounting to €9.521bn, with interest income of €3.227bn, and interest paid € 1.445bn.

Table 3.8 shows considerable variability in these indicators from period to period, with a general decline in values through time. This decline likely reflected the repricing of asset values resulting from losses and impairments which followed in the wake of the GFC. However, pre-tax profits, and hence tax paid for this subsample throughout this period remained relatively constant, at zero.

Most firms reported profits equal to exactly zero over several consecutive periods. Given the complexity of the financial transactions and financial flows involved, achieving profits

²¹⁰ One firm (Glacier Securities) was also included that first produced accounts in 2010 and reported zero profits until 2014 when the firm was put into voluntary liquidation.

equal to zero over several periods indicates considerable control, despite the variability of financial flows and the income of counterparty firms.

Table 3.8: Gross assets and Income of FVC's reporting Zero profits (€m)

Year	No. firms	Gross assets		Interest received		Gross income	
		Mean	Median	Mean	Median	Mean	Median
2009	29	309.1	204.7	20.7	16.1	36.8	21.8
2010	24	463.1	359.5	16	11.7	30.4	11.8
2011	24	423.8	308.4	21.5	11	31.2	15.8
2012	24	390.5	209.2	14.1	6.2	35.4	21.9
2013	19	384	285.9	10.2	4.8	38.1	14.8
2014	15	242	223.6	7.6	4	16.4	8.4
2015	7	221.1	218.5	4.2	2.2	10.8	7.8

Note:

This is not possible for what are often described as '*independent*' firms, ones with no employees and part time directors, who are concurrently directors of several dozen companies. Hence it is hypothesised that these are '*controlled firms*'. This raised questions as to whether their income received, prices charged for services and interest paid are occurring at '*arm's length*' or better reflect '*profit shifting*' within a corporate group.

Section 110 vs Lux Leaks: A comparison of Tax Avoidance strategies

A comparison can be made between intragroup profit shifting strategies observed with *Section 110* firms and those observed in other jurisdictions like Luxembourg. The case of *Lux Leaks* reveals certain key similarities and differences between the manner in which favourable legal frameworks can be used for profit shifting and tax avoidance.

Lux Leaks arose in 2014 following the revelation that MNEs utilised Luxembourg's tax law to shift profits and achieve zero or near zero effective rates of tax. These tax structures were based on complex, opaque financial arrangements, where MNEs shifted profits from high-tax jurisdictions to their Luxembourg based subsidiaries.

The Luxembourg tax authority provided Advanced Tax Agreements (ATAs) guaranteeing specific concessionary tax treatments for a set period. These rulings granted rates far below those faced in their home countries, similar to the type of treatment observed in tax havens.

One common practice involved ‘*transfer pricing*’ agreements, where subsidiaries of an MNE were allowed to set artificially low prices for transactions between itself and the parent company in relation to intangibles like intellectual property. This saw effective rates reduced to less than 1%.²¹¹

The use of *Section 110* firms in a corporate structure has certain similarities to the *Lux leaks* case (Marian, 2016, Bowers, 2014), albeit with differences. In both cases the domestic firms tied to their respective corporate groups have no employees or fixed assets, with secretarial services provided by a specialist CSP firm. In contrast to the *Lux leaks* cases *Section 110* firms are not necessarily subsidiaries.

In the *Lux leaks* case tax haven/OFC type features emerge through ‘*opaque administrative practices*’ in relation to granting ATA’s coupled with secrecy (Marian, 2016). In the Irish case the same effect is achieved via a financial vehicle which, although obscure, is based on statute.

As noted previously, ‘*no special tax rulings or tax authorisations are required*’ from Revenue to receive *Section 110* status.²¹² Hence *Section 110* firms cannot be subject to EU competition investigations on illegal State aid based on rulings, as in the case of Luxembourg and Fiat Finance and Trade.²¹³ It is also the case that transfer pricing plays a lesser for *Section 110* firms as a mechanism for eliminating taxable profits.²¹⁴

As described in **Chapter 1**, the ‘*unique*’ manner in which taxable profits are be ‘*eliminated*’ is by allowing interest and other deductions from income *as if* the vehicle were a trading company.²¹⁵ This effectively means that profit (interest) distributions are treated as a tax deduction, rather than a distribution of after-tax profits.

²¹¹ Guardian (01/01/2017), ‘*Jean-Claude Juncker blocked EU curbs on tax avoidance, cables show*’, accessed <https://www.theguardian.com/business/2017/jan/01/jean-claude-juncker-blocked-eu-curbs-on-tax-avoidance-cables-show#:~:text=The%20secret%20to%20this%20success,person%20to%20champion%20such%20reforms.>

²¹² Lux Leaks was a financial scandal arising from advanced tax rulings for multinationals by Luxembourg’s tax authority, which was said to provide tax avoidance on an industrial scale. One of the striking features was the revelation of the existence of companies with billions of euros in assets but no employees.

²¹³ See: State aid SA. 38375 (2014/NN) (ex 2014/CP) – Luxembourg)

²¹⁴ Tax avoidance via transfer pricing can occur in relation to the charges for professional services, particularly those charged abroad for the likes of management fees, or large one off fees like consultancy fees, or contingency fees.

²¹⁵ For example, expenses arising from issuing loans or financial instruments, arrangements fees, insurance fees, contingency fees, management charges, portfolio charges, etc. and most important interest paid including profit participating interest.

The key differences with regard to profit shifting revolve around legal ownership and income relocation in the case of *Section 110*, and tax authority sanctioned internal pricing adjustments in the case of *Lux Leaks*. Nevertheless, they can both be viewed as mechanisms of state sanctioned tax arbitrage (Marian, 2016).

In both cases the chief beneficiaries are the corporate groups availing of these tax strategies, and at the domestic level, key professional service firms. The ‘*Big Four*’ accounting firms were key players in each, in addition to large domestic law firms and internationally orientated CSPs. These are the typical job profiles found in ‘*tax haven*’ type countries.

In both cases corporate tax payments were minimal. Although in the case of Luxembourg tax concessions only applied to corporate income tax. In Ireland, *Section 110* activities are also exempted from VAT which can result in a recovery of VAT paid on inputs. For example, refunded VAT amounted to approximately €3m in 2015.

Lastly, in both cases the extensive Double Tax Treaties (DTTs) held by each jurisdiction were important factors. Ireland’s 75 DTTs and Luxembourg’s 88 make them attractive conduit jurisdictions for cross border financial flows. Particularly when it comes to the issuing of securities, the establishment of holding companies, intra group loans, etc. As such, both jurisdictions are key locations for shadow banking and NBFIs.

3.5 Chapter Conclusion

This chapter has examined the *Section 110* securitisation subpopulation. It detailed the growth of MBS issuance within the IFSC up to the 2008. The financial risks posed by these off-balance sheet firms via their high levels of gearing, was explored through their connections to a large number of banks which failed during the GFC.

It has provided a critical assessment of the concept of ‘*bankruptcy remoteness*’ via the use of an ‘*orphan structure*’, a classification which is still widely used despite frequent criticism. The legislation governing the regulation of *Section 110* firms was then set out.

Despite recognition that securitisation and shadow banking more broadly pose systemic risks, *Section 110* firms still receive light touch regulatory treatment. Hence, they pose

significant unrecognised contagion risks to what are effectively their parent companies in foreign jurisdictions.

Chapters 4 and 5 provides further evidence of this via *Section 110* firms connected to Russian banks which failed during the Russian Financial Crisis (2014-2016), and large leasing MNEs which failed during the Covid19 pandemic. The Financial Crisis Inquiry Commission Report (2011) stated that a major cause of the GFC was not just de-regulation, but the failure '*to adopt new regulations or challenge industry on the risks of innovations*'.

The chapter dealt with one of the chief ECB regulations which was introduced post crisis, which dealt primarily with data collection. Various shortcomings in official data collection and governance were documented. These included the omission of securitisation firms from the ECB list, and the seemingly anomalous inclusion of non-securitisation firms.

It noted that with multiple reporting agents, no authority has a consolidated real time overview of this subpopulation, or the total population more broadly. It also noted how underreporting in official data has implications for sectoral measurement and by extension Euro area macro financial statistics.

The cross-border tax treatment of securitisation firms was also considered. Given the substantial foreign interconnections of this subpopulation, for example 88% of assets (€2.1tn) owned outside Ireland (FSB, 2015), their pre-tax profits and thus tax payments were of interest.

Despite often being referred to as '*independent*' firms, these firms are subject to tight external control in terms of the management of their inflows and outflows, the analysis presented indicates that they can be used for extensive profit shifting/extraction within a corporate group.

They are an example of what Marian (2016) has described as '*arbitrage manufacturing*' on the part of the state, and can be likened to the structures observed in the *Lux Leaks* case. Rather than competing for mobile capital these state sanctioned firms are engaged in '*competition for revenue*' (Marian, 2016). Revenue which can then be extracted by the corporate group via tax free interest distributions.

As noted in **Chapter 1**, and detailed further in subsequent chapters, the main beneficiaries are the corporate groups which establish these firms, and a select number of professional service firms. There is no meaningful contribution to the Exchequer as a result of firms '*tax neutral*' status.

Nevertheless, the size of this subpopulation in terms of its gross assets materially inflates Ireland's total financial assets (TFA), despite their net domestic economic footprint being very small. This can give an exaggerated picture of the level of economic activity taking place and the benefit accruing to the Irish economy.

Chapter 4

'It is important to note that there is nothing specific in the Section 110 regime that is of particular relevance to Russian investors or originators'.

– Minister for Finance Michael McGrath (November 2023)²¹⁶



Image: Arthur Cox.

4.0 Introduction

This chapter examines the Russian connected subpopulation over the period 2005–2017. As discussed in **Chapter 2**, it analyses 106 Russian connected firms nominally established for the purposes of external financing. Specifically, these are firms that raised debt on the ISE through the issuance of loan participation notes (LPNs), with the proceeds on lent to Russian-based MNEs or state-owned enterprises (SOEs) via a profit participating loan (PPL).²¹⁷ Over the study period, these firms raised a total of €118bn in gross funds.

Consequently, the IFSC has emerged as a significant source of finance for the Russian economy, a role that has received relatively limited attention in the academic literature.

²¹⁶ Parliamentary Question to the Minister for Finance (ref 48368/23), accessed <https://www.kildarestreet.com/wrans/?id=2023-11-07a.815>

²¹⁷ LPNs as similar to PPNs and both qualify for *Section 110* interest deductions. The former generates cashflow from the performance of the underlying loan, the latter generates cashflow from the performance of the issuing company.

Ireland, alongside OFCs such as Luxembourg, Cyprus, and the Netherlands, plays a disproportionately large role in cross-border debt flows.

A central question addressed in this chapter is what factors explain these flows. The chapter hypothesises that, at least in part, these flows represent '*round-tripped*' investment. This is defined as domestic funds channelled through OFCs back into the local economy in the form of direct investment (Aykut et al., 2017).

The chapter begins by situating Russian capital flows within the broader context of offshore wealth accumulation, highlighting the role of round tripping within its domestic economy. It briefly discusses the historical prevalence of capital flight from Russia and the early involvement of OFCs with extensive professional networks. Instances of IFSC connections to Russian money laundering during the 1990s are noted, to provide historical context for subsequent financial flows.

The next section quantifies the magnitude of financial flows from Ireland to Russia. Using data from the Central Bank of Russia (CBR), the analysis demonstrates that Ireland was the second-largest source of net debt flows to Russia over a ten-year period. This is followed by a discussion of the general institutional features of the Irish–Russian bond market.

Particular attention here is paid to the yields and maturities of these instruments, as well as adverse changes made to issued bonds terms and conditions, which have occurred largely in the absence of any identifiable litigation. These patterns raise questions regarding the identity of bond purchasers and whether there is an overlap between them and the owners of companies issuing the debt (round tripping).

The chapter then provides some empirical analysis of this subpopulation. Firstly, it quantifies the gross funds raised by the subpopulation (2005-2017), disaggregated by funds raised from market sources vs other sources (e.g., banks and other firms). Aggregate operating data for the subpopulation is then provided. Lastly, and most importantly, it provides a flows of funds analysis of the population which quantifies the gross and net debt flows.

This analysis highlights the disparity between the two and demonstrates that for certain periods *Section 110* firms, although nominally used to provide finance to Russian sponsors, were net recipients of funds. In other words, rather than being solely a source of funds, these firms are also a use of funds. This, when coupled with the adverse changes to bond terms and conditions, could indicate market manipulation and round tripping practices.

Given controversies associated with Russian based firms, the chapter then examines governance issues. Several firms in the study had Russian sponsors that were subject to various EU/US financial and economic sanctions. Despite this, a number of firms managed to raise finance in violation of sanctions.

Several other firms were connected Russian sponsors which were identified by the CBR as being involved in insider trading and market manipulation. Others were connected to sponsors which defaulted on bondholders, and required significant taxpayer bailouts. Given such regulatory concerns, the corporate governance rules applying to these *Section 110* firms are then considered.

Lastly the chapter considers the economic impact of this subpopulation. Similar to what was observed in **Chapter 3**, the economic footprint of this study group is small, but their financial activities and their structuring can impact certain macro financial indicators. Thus, giving an exaggerated picture of Ireland level of inward investment into Russia. The chapter then concludes and offers some remarks.

4.1 Russian capital flows, offshore wealth and round tripping

International capital flows are substantial in size. Gross FDI flows alone were estimated at approximately \$1.4tn in 2017. Estimates of offshore wealth are similarly large. Zucman (2015) estimates that offshore wealth defined as '*stocks, bonds and above all shares in mutual funds*' amounted to \$7.6tn in 2014.

However, this excludes important asset categories including housing and land held through non-quoted, privately owned corporations, as well as intangible assets such as patents, licences and copyrights. It also omits wealth held anonymously through trust ownership structures (Shaxson 2018). Broader estimates of offshore financial wealth are

considerably higher, ranging from \$21–32tn in 2010 and \$24–36tn in 2015 (Henry 2012; 2016).²¹⁸

The expansion of international capital movements and the accumulation of offshore wealth are closely intertwined with the growth of OFCs. The IFSC has emerged as a significant source of finance for Russian MNEs and SOEs, notwithstanding the relatively limited attention this role has received in the academic literature.

Empirical mapping of the global offshore network by Haberly and Wójcik (2014) identifies the post-Soviet Eastern bloc as structured around a '*Russia–Cyprus–British Virgin Islands (BVI) round-trip FDI circuit*', with additional nodes in Gibraltar and Liechtenstein. Cyprus, in particular, has functioned as the largest single source of FDI into Russia, accounting for approximately 25% of Russian capital stock registered abroad, followed by the Netherlands (Ledyaeva et al. 2015).

A strand of the literature on Russian cross-border capital flows highlights the analytical difficulty of distinguishing between direct (real) investment, indirect investment, and purely financial flows (Kalotay 2012). A salient feature of the Russian case is the coexistence of capital outflows with simultaneous inflows from jurisdictions that had previously received Russian capital.

A proportion of these flows reflects '*round tripping*', whereby domestically generated capital is channelled abroad and subsequently reinvested into the home economy under the guise of foreign investment. While round tripping is observable in multiple jurisdictions, it appears particularly pronounced in Russia (Borga 2016; Nesvetailova 2016). Damgaard et al. (2019) estimate that approximately 25% of Russian FDI is ultimately owned by domestic investors, compared with less than 10% in Germany and France.

During the 1990s Russia experienced substantial capital flight. Solongo (2001) estimates capital outflows of \$67.9bn between 1994 and 1997, of which approximately \$22.7bn is estimated to have been illegal and associated with money laundering. It is therefore a

²¹⁸ Offshore non-financial wealth has been estimated at \$5–10tn in 2015 (Henry 2016).

reasonable assumption that a portion of these illicit outflows, subsequently returned disguised as legitimate foreign investment.

Despite Russia's macroeconomic stabilisation from the early 2000s onwards, capital flight has remained a persistent issue. More recent estimates suggest that between \$20 and \$80bn in illicit funds exited Russia via fraudulent banking transactions between 2010 and 2014 (Bullough 2018), frequently involving OFCs.²¹⁹

These sustained outflows have contributed to a substantial increase in the stock of Russian offshore wealth. Novokmet et al. (2017) suggest that much of this wealth is ultimately reinvested in Russian firms, particularly in the energy and financial sectors. As a result, a significant proportion of Russia's foreign liabilities are in effective held by Russian nationals through offshore vehicles and reflect round-tripped capital.²²⁰

Explanations for Russian capital outflows extend beyond pure financial arbitrage. Institutional factors can also be important determinants. Weak protection of property rights, deficiencies in contract enforcement and corruption have all been identified as structural drivers (Bulatov 2012; Perez et al. 2012).

These conditions may be especially salient for capital controlled by Russian '*oligarchs*'. Other explanations emphasise '*system escape*' from perceived regulatory overreach on the part of the Russian state (Hansen 2013), the search for more stable investment jurisdictions, and forms of '*institution shopping*'.²²¹

Return flows may also be motivated by strategic considerations. Ledyeva et al. (2015) argue that round tripped investment enables firms to exploit business opportunities

²¹⁹ For example, a scheme involving Deutsche Bank resulted in outflows of \$10bn (Caeser 2016). Links between banks in Cyprus and Russia and money laundering has been frequently reported (Kirchgaessner and Farolfi 2017). The Estonian branch of Danske Bank was involved in laundering \$200bn of funds from Russia (Milne and Binha, 2018; Bruun and Hjejle 2018). See also European Parliament (2019) par. 234-242 for a summary of recent cases involving money laundering and European banks. Accessed <https://www.europarl.europa.eu/cmsdata/142725/EGOV%20Briefing%20on%20EU%20Banking%20supervisory%20perspective.pdf>

²²⁰ According to Thomas Piketty et al. (2015), financial wealth held in OFCs by wealthy Russians amounted to roughly 75% of national income by 2015. Put differently, the value of offshore financial assets owned by Russians was nearly equivalent to the total financial assets held domestically by Russian households.

²²¹ For example, better property rights protection and access to foreign investor state dispute settlement mechanisms. Flows from Russia to Cyprus, the UK and other countries, may be because of better property rights protection, in conjunction with more favourable corporate law such as ease of incorporation, the ability to hide ownership and access to international banking and other services (Bruun and Hjejle 2018; Nesvetailova 2016; Nougayrède 2015)

grounded in superior home market knowledge and networks, while potentially mitigating exposure to rent seeking by public officials. Such investments are often directed toward oligopolistic or state influenced sectors characterised by high profitability (Perez et al. 2012), and may benefit from incentives formally reserved for foreign investors.

Finally, state policy has at times actively encouraged the repatriation of offshore capital. As noted by Tooze (2018), Russian authorities have sought to facilitate the return of externally held assets. For example, in 2018 Russia issued a \$3bn sovereign bond aimed at wealthy Russians, including individuals potentially affected by sanctions, as a strategic mechanism to incentivise capital repatriation (Seddon 2018).

The IFSC: early connections

International professional networks play a central role in the management and administration of cross-border capital flows and the structuring of financial asset ownership. OFCs, particularly those characterised by significant concentrations of legal, accounting and corporate services professionals, function as pivotal nodes within these networks (Sikka 2005; Jones et al. 2017).

Their attractiveness is enhanced by the ease of incorporation and administration of certain corporate vehicles (e.g., SPVs), which are used to facilitate financial engineering of certain cross border structures. A defining feature of established OFCs, is the expertise they offer in navigating the interaction between ‘*onshore*’ tax and regulatory regimes and offshore legal frameworks. This includes the strategic use of double tax treaties (DTTs), bilateral investment treaties and inter jurisdiction information exchange arrangements.

Professional intermediaries, such as those based in the IFSC, often possess advanced technical knowledge of forthcoming tax/regulatory reforms and, in some cases, through public consultations and lobbying, be able to directly or indirectly influence the direction of reforms (see **Chapter 1**). Such informational and institutional advantages can provide strategic benefits to the financial groups and MNEs who use their services for cross border structuring.

As the same time, the comparatively ‘*light touch*’ regulatory environments that OFCs offer leave them vulnerable to illicit financial flows. Professional service firms operating

within the licit economy may become, whether intentionally or unintentionally, entangled with illicit financial activities. As has often been the case with the IFSC.²²²

For example, the case of Mossack Fonseca the law firm at the centre of the Panama Papers disclosures illustrates the scale and reach of such networks. Prior to its collapse, the firm maintained more than forty offices worldwide. This included several major OFCs, Ireland amongst them.²²³

The development of the IFSC during the 1990s coincided with Russia's post-Soviet transition towards a market-based economy. During this period, Ireland undertook a series of trade missions to Russia, frequently promoting the IFSC as a platform for deepening bilateral economic relations (see Appendix 4).

In 1992, then Minister for Trade Bertie Ahern characterised international financial services provision as the prospective '*bridgehead*' for expanding Ireland's economic links with the region. This policy orientation reflected a broader strategy of positioning Ireland as an intermediary jurisdiction within emerging East West capital flows.

Notwithstanding these strategic objectives, certain Irish corporate structures (IRNRs) came to be associated with Russian capital flight and other illicit activities, during this period (Department of Finance 1999).²²⁴ These company structures attracted sustained parliamentary criticism and adverse international media attention, including scrutiny from the US Department of State (2000).²²⁵

²²² For example, in 2015 the daughter of the former President of Uzbekistan, was reported to have laundered between \$100m and \$300m in corrupt payments through the IFSC. Corrupt payments were laundered through funds managed by Bank of New York Mellon in Dublin. In 2016 the head of Ireland's Criminal Assets Bureau (CAB) stated that IFSC was being used extensively by Russian criminals pointing out that '*It does not tend to be the subject of much investigation here because it tends to be hidden in large international funds*'.

²²³ Belfast Telegraph (06/04/2016), '*Panama Papers: Irish firm at centre of tax haven data leak keeping quiet*', accessed <https://www.belfasttelegraph.co.uk/news/republic-of-ireland/panama-papers-irish-firm-at-centre-of-tax-haven-data-leak-keeping-quiet/34605542.html>

²²⁴ This structure was the Irish Registered Non-Resident Company (IRNR). A company with no employees or fixed Irish assets, and which was not subject to tax or regulatory oversight.

²²⁵ For example, during the debate of the Finance Act (1998), former Tánaiste (Michael McDowell) stated '*following the fall of communism and the demolition of the Berlin Wall, Ireland has been touted as a location where this type of company structure exists*'. They were described by one Minister of State as posing one of '*greatest threats*' to the reputation of the IFSC. Dáil Éireann debate -Thursday, 26 Feb 1998 accessed <https://www.oireachtas.ie/en/debates/debate/dail/1998-02-26/9/?highlight%5B0%5D=irnr> See also US Department of State (2000), Report on '*Money Laundering and Financial Crimes*', accessed <https://2009-2017.state.gov/j/inl/rls/nrcrpt/1999/928.htm>

Table 4.1 identifies examples of Irish company structures that were connected to Russian money laundering and other illicit activities during the 1990s, in addition to an overview of the nature of these activities.

Evidence submitted to the US House Committee on Banking and Financial Services also documented extensive money laundering and other illicit financial flows from Russia during the 1990s, with funds reportedly being channelled via SPVs through Ireland, Cyprus, and other OFCs which were characterised as ‘*tax havens*’ (Palmer 1999).

These SPVs raised capital from Russian-controlled sources located in Western financial centres and subsequently reinvested a portion of these funds into Russia, frequently through joint ventures with Western firms.²²⁶ Notwithstanding such reinvestment, the principal objective during this period appears to have been the transfer and retention of capital outside the Russian Federation (Bullough 2019; Palmer 1999). These SPVs thus functioned both as a mechanism of capital intermediation and as a vehicle for capital flight.

Following legislative reforms in 1999, the use of those Irish company structures which had attracted adverse scrutiny were significantly curtailed. However, subsequent amendments to Ireland’s *Section 110* tax regime during the 2000s (see **Chapter 1**), together with additional reliefs applicable to Eurobond issuances, contributed to a marked resurgence in the use of *Section 110* SPVs by Russian-based sponsors from the mid-2000s onwards. Figure 4.1 shows the growth in the number of Russian connected *Section 110* firms and the size of their assets over this later period.

²²⁶ For example, one of the first IFSC certified companies Merchant Overseas Financial Group (1992) described its purpose the development of a ‘*Russian Commercial and Investment Bank in Moscow*’. Its legal advisor was Arthur Cox and its auditor was Arthur Andersen. It stated its business model involved ‘*Loan brokering for company real estate, banking advisory and training services to banks in Eastern Europe and Russia*’

Table 4.1: Examples of Irish companies linked to Russian connected illicit financial flows			
Scandal	Date	Overview	Irish companies
<i>Sark Lark</i>	Late 1980s early 1990s	The residents of the Channel Island of Sark established a lucrative business operating as nominee directors & shareholders for international companies to disguise beneficial ownership. ²²⁷ The residents of Sark became directors for tens of thousands of IRNRs (external companies) which were repeatedly tied to financial crimes in the territories of the former USSR.	Various
<i>Flight Capital from Russia</i>	1992-1998	Boris Birshstein was a former USSR intelligence officer and later successful businessman who became the Chairman of the investment and trading group Seabeco. He also served as an advisor to Prime Minister of Kyrgyzstan. ²²⁸ As was reported by RTE 'A number of Dublin-registered companies are playing a central role in the transfer of assets in Moldova owned by a businessman alleged to have links with the Russian mafia'. ²²⁹	Seabeco Industries Geranum Limited ²³⁰ Sturge Limited Maximilia Limited
<i>Russian loans for shares scandal</i>	1995-1996	This was a controversial privatisation scheme. In return for debt financing, the Russian government exchanged equity stakes in major state-owned enterprises. The scheme involved fraudulent trading, auction rigging, and price fixing by insiders, many of whom became the first generation of 'Oligarchs'. Many of the transactions involved the use of offshore companies, some of which were linked to Ireland.	Sidanco Limited Lukoil International (Dublin) Limited Sibco Oil Management
<i>Bank of New York money laundering scandal</i>	1996-1997	\$7.5bn laundered out of Russia into BNY accounts via front companies in Ireland, Bermuda, Cyprus and the Netherlands (Block and Weaver 2004). FBI investigation led to prosecution of bank employees, hearings by the U.S. House of Representatives' Committee on Banking and Financial Services, and a settlement of \$22.5bn by the bank made to the Russian state. ²³¹	Valmet (Ireland) G.T. Valmet Ireland Riggs Valmet R.V. (Ireland)
<i>Asset stripping of Russian SOEs</i>	1996-01	Two high profile instances of asset stripping occurred with state airline Aeroflot, and energy giant Gazprom. The former saw Oligarch Boris Berezovsky use of an Irish company (Grangeland) to charge onerous fees/rates of interest (30-65%) to extract funds. The latter saw former insiders use an Irish company ITERA Energy to strip assets from the former parent company	Grangeland Holdings ITERA Energy International
<i>Misappropriation of IMF support funds</i>	1993-99	Russian Central Bank funnelled \$50 billion of IMF bailout funds through offshore companies. ²³² US Treasury Secretary Robert Rubin told Congress that much of the aid may have been misused. A Jersey based company known as FIMACO was identified, although other companies were suspected of being involved. A search through other OFC corporate registries reveals that other companies with the name FIMACO, were established around the same time.	FIMACO Trading International Limited

²²⁷ Irish Times (05/06/1998), 'Residents are tops in 'Sark Lark' money spinner', accessed <https://www.irishtimes.com/business/residents-are-tops-in-sark-lark-money-spinner-1.160202>

²²⁸ Washington Post (31/01/1993), 'Ex-Communists are scrambling for quick cash', accessed <https://www.washingtonpost.com/archive/politics/1993/02/01/ex-communists-are-scrambling-for-quick-cash/00a47cf2-1f47-4051-90cd-844e3e35643b/>

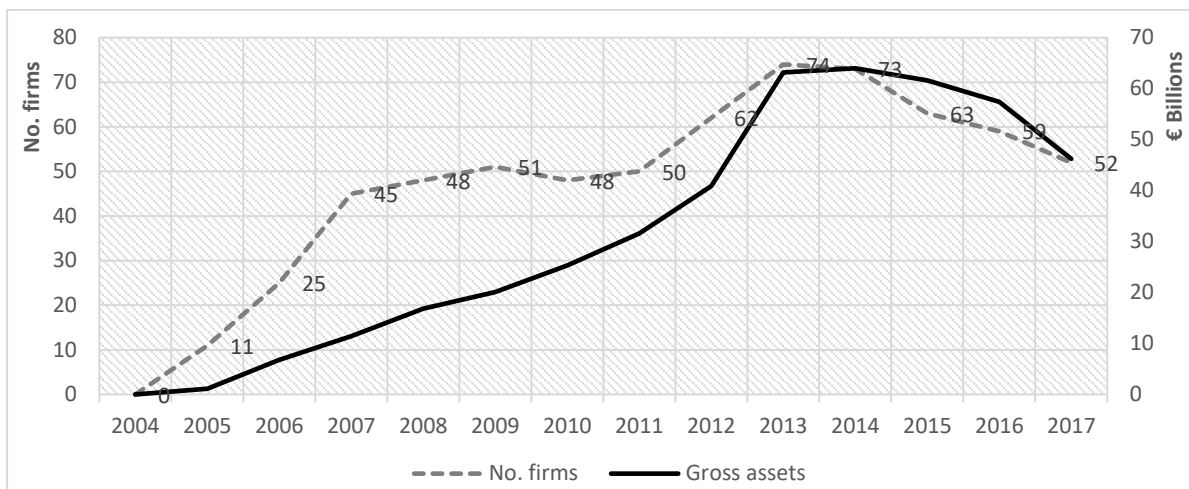
²²⁹ RTE (26/01/2007), 'Today in the Press', accessed <https://www.rte.ie/news/business/2001/0122/11806-presswatch-business/>

²³⁰ Alex Shnaider the Russian-Canadian billionaire who co-funded Trump Tower Canada, is listed as a former director of this company.

²³¹ In 2006 these employees were sentenced to five years' probation. Alan M. Dershowitz, the Harvard law professor, served as part of the Russian state's legal team, as did Richard Thornburgh, the former United States attorney general. (ABC News 2009)

²³² Guardian (17/10/1999), 'IMF knew about Russian aid scam', accessed <https://www.theguardian.com/world/1999/oct/17/russia.business>

Figure 4.1: No. Russian connected *Section 110* firms and size of gross assets (2005-2017)



Source: Author's *Section 110* dataset

The IFSC, via *Section 110*, has thus constituted an important financing hub for many of Russia's largest MNEs and SOEs. In this capacity, it serves as a significant conduit for gross debt flows to the Russian economy. At the same time, *Section 110* firms may also act as recipients of funds originating in Russia, a pattern potentially indicative of round tripping dynamics within broader cross-border capital flows.

4.2 Flows of funds from Ireland to Russia

According to the Central Bank of Russia (CBR), Ireland was the second single largest source of net debt flows to Russia for the period 2007-2017 (26.5%) with net flows nearly identical to Luxembourg (27%), and significantly ahead of the Netherlands (11.2%) (See Table 4.2).²³³

Table 4.2: Net Debt Inflows to Russia 2007-2017 (\$m)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
<i>Ireland</i>	44	46	718	2,270	5,053	9,824	10,272	-555	624	-1,858	895	27,333
<i>Luxembourg</i>	66	-177	6,018	2,737	3,501	9,912	11,178	-1073	-6,113	-1,080	3,081	28,050
<i>Netherlands</i>	268	951	652	2,341	4,666	7,152	4,360	-2349	-1,709	-1,954	-2,830	11,548
<i>Total inflows</i>	6,213	5,941	13,422	14,484	5,092	27,078	36,861	-1,068	-3,806	-3,342	1,956	102,997

Note: Central Bank of Russia (CBR) data regard debt inflows as foreign direct investment and that '*the geographical allocation of direct investment positions is made according to the immediate investing country principle*'. Source: Russian Central Bank Statistics, Russian Inward FDI Data, Debt instruments available at <http://www.cbr.ru/eng/statistics/?Prtid=svs>.

²³³ The year 2007 was the earliest year available for data from the CBR.

From the data compiled by this research and matched to the same ten-year period, Russian connected firms raised gross funds of over €110bn (€92bn from debt markets). Interestingly, net funds raised by this subpopulation (gross debt minus redemptions) was far higher at €48bn than the CBR's estimates of \$27.3bn.²³⁴

For the entire period of study (2005-2017) gross funds raised amounted to €118bn. Five state owned firms (VEB Finance, GPB Eurobond Finance, GPB Finance, Rosneft International Finance and RZD Capital) issued just over 31% (€31bn) of all bonds. Privately owned banks also represented a substantial share of aggregate bond issuance during the period.

The imposition of sanctions has disrupted the flow of funds from *Section 110* firms and is likely to have caused a reversal of flows of funds from Ireland to Russia. So that, while IFSC based firms are major sources of funds to Russia, there are also net outflows to bond purchasers via loan redemptions and interest payments. This is likely to be a significant risk reduction factor to borrowers using SPVs in Ireland, Luxembourg, The Netherlands and elsewhere.

Financial flows from Ireland to Russia are dependent on close networks and linkages with professional financial services firms within and outside Ireland, especially in London. Linkages were also found with professional service firms in Cyprus, Luxembourg, The Netherlands and other OFCs.²³⁵

Arthur Cox (one of Ireland's largest law firms) provided legal services for 77% of the subpopulation and were the most dominant in terms of advising on the '*Irish law*' aspect of debt issuances on the ISE.²³⁶ Linklaters was the main UK law firm cited in prospectuses as advising on international law aspects of the issuance. The '*Big Six*' accountancy firms provide tax and auditing services for 89% of disclosing firms.

²³⁴ Differences may be partly explained by RCB data showing direct financial flows from Ireland to Russia, whereas not all funds raised by Russian connected IFSC firms may be paid directly or indirectly to Russia.

²³⁵ Russian connected SPVs registered in Cyprus, Luxembourg and the Netherlands have also raised significant funds on the ISE, although these fall outside the scope of this research.

²³⁶ Arthur Cox also provides listing services to debt quoted on the ISE but issued by a conduit located elsewhere, for example, debt issued by Vimpelcom Holdings BV, based in the Netherlands.

The Irish – Russian bond market

The market for Russian debt securities issued through Ireland exhibits several distinctive characteristics. Despite debt instruments being predominantly quoted on the ISE, a significant proportion of associated services are performed in London.

Trustees for all identified debt issues were located there, as were paying agents responsible for disbursement of interest payments and most core international banking services. Deutsche Bank (London) was the most frequently cited banking institution, followed by the London branches of BNY Mellon and Citibank.²³⁷ Prospectuses for almost all debt issuances referenced legal advice provided by top tier London based law firms.

In addition, nearly all issuances cited legal advice from Moscow offices affiliated with the UK based law firms, reflecting the cross-border structuring of these transactions. Certain operational functions were also located in other OFCs. For example, registrars for issued securities were frequently identified as being located in Luxembourg.²³⁸

While OFCs maintain extensive connections with major onshore markets, London appears to have functioned as a principal hub for services related to debt issuance. This prominence is attributable, in part, to the international standing of the UK commercial courts. Locating trustee and paying agent functions in London may enhance creditor protection by anchoring contractual enforcement within a highly regarded judicial framework.²³⁹

The litigation arising from the dismantling of Yukos, which resulted in an arbitral award of approximately US\$50bn, illustrates the strategic value of contractual arrangements subject to UK linked legal regimes. The dispute involved SPVs incorporated in Cyprus and the Isle of Man holding Russian assets through ownership structures spanning Jersey, the Isle of Man, and Gibraltar. As Crown Dependencies, or UK linked jurisdictions, these territories are protected by the UK's investment treaty network (Nougayrède, 2015).

²³⁷ These banks have frequently been cited in connection to major Russian connected money laundering schemes.

²³⁸ Luxembourg served as registrar in the case of 44 of the firms in the subpopulation.

²³⁹ Robin Wigglesworth and Kate Allen, Financial Times, 20th September 2018, 'UK ruling sets stage for Ukraine-Russia 'odious debt' battle', accessed <https://www.ft.com/content/0149e0a2-bb46-11e8-94b2-17176fbf93f5>.

Specific features of Irish Russian bond market

Yields on multiple issuances were notably high. For example, BSPB Finance, connected to Bank Saint Petersburg, issued a US\$100m five-year loan note in 2013 with a yield of 10.75%. Such pricing may reflect heightened credit and jurisdictional risk. However, to the extent that yields deviate from *arm's length* benchmarks, they may also warrant scrutiny as potential indicators of non-market transactions or illicit financial flows.

The maturity profile of debt issued by the Russian connected subpopulation is predominantly short to medium term (2 to 7 years). Early redemption is relatively common, notwithstanding the absence of explicit disclosure in financial statements that these instruments are callable.²⁴⁰ Of the firms included in the sample, 36% redeemed bonds prior to maturity. Amongst those, 66% were privately owned.

The majority of issuances are denominated in US dollars, with Russian roubles representing the second most common currency. Although most securities are quoted on the ISE, there is no evidence of active secondary market trading there. Limited trading volumes were observed on the LSE, but the level of activity appeared minimal.²⁴¹

There was frequent mention in prospectus disclosures that beneficial ownership information would not be made available through Clearstream.²⁴² For instance, a 2016 prospectus issued by DME Limited noted that '*no clearing stream system has knowledge of the actual beneficial owners*'. Such opacity materially constrains any external assessment of the composition/identities of the LPN investors.

Multiple prospectuses expressly acknowledged potential conflicts of interest between controlling shareholders and noteholders, thereby highlighting governance risks. For example, Borets International Limited (2013 prospectus) cautioned that '*The interests of*

²⁴⁰ The early redemption pattern may suggest a degree of flexibility in repayment structures not readily apparent from formal documentation. On the face of it this could call into question the round tripping hypothesis. However, if such a degree was inbuilt in bond covenants, this would further reduce the likely pool of investors and thus reinforce the hypothesis that these are insiders purchasing the bonds.

²⁴¹ ISE Statistical Reports, do not show any trading in Russian connected bonds. LSE data shows very limited trading in bonds connected with Russian firms.

²⁴² Clearstream, a major provider of settlement and custody services for securities, only discloses customer identity where consent has been given. www.clearstream.com/clearstream-en/productsand-services/market-coverage/disclosure-requirement

the group's controlling beneficial owner could conflict with those of the holders of the Notes'. It stands to reason, that disclosures of this nature would reduce the attractiveness of such LPNs to independent, non-affiliated investors.

In addition to this, there were numerous amendments to the terms and conditions of issued bonds (see Table 4.3). Typically governed by a bond indenture constituting a legally binding agreement between issuer and bondholders, such instruments would ordinarily be expected to provide a stable contractual framework. Yet in multiple instances, however, modifications were made with apparent adverse consequences for bondholders. In conventional market settings such changes might reasonably be expected to trigger litigation.

Consistent with this observation, Arena (2018) finds that firms with higher litigation exposure tend to cluster around the speculative-grade (high-yield) segment, where contractual renegotiation risk is more pronounced. Within the Russian subpopulation, examples of substantive changes to terms include a 2013 issuance by BKM Finance of US\$200m in ten-year notes yielding 9.15%.

In 2015, these bonds were converted into instruments of '*indefinite*' maturity, with the coupon increased to 10%. The removal of a defined redemption date materially altered the risk profile of notes by eliminating investor certainty as to the timing of repayment. Similarly, SCF Capital amended tranche structures, effectively differentiating loan terms across categories of bondholders.

Notwithstanding repeated disclosures of shareholder creditor conflicts of interest coupled with instances of adverse changes to terms and conditions, there are remarkably few reported cases of litigation. This relative absence of formal dispute raises questions regarding the identity, incentives and motivations of the bond purchasers.

In particular, it invites consideration of whether a proportion of such holdings may be concentrated among affiliated or insider investors, such as the owners of the Russian companies issuing the debt. Thus, potentially representing a form of round tripping rather than reflecting a group of widely dispersed bond investors operating at *arm's-length*.

Table 4.3: Changes in Issued Bonds Terms and Conditions

Section 110 firm	Change to terms and conditions	Year	Changes made to terms of issued bonds	Ownership
<i>BKM Finance</i>	Debt issued made indefinite	2015	<i>'The loan was made available to Otkritie PJSC for an indefinite period of time'.</i>	Privately owned (nationalised 2017)
<i>SCF Capital</i>	Change in tranche structure	2011, 2012	On 29 th December 2011 the existing loan (\$800,000,000 LPNs issued at 5.375% due in 2017) was split into two tranches and in 2012 split into another two tranches	State Owned
<i>Borets Finance</i>	Change in interest rate	2016	Floating rate notes changed from 7.3% to 'a fixed rate of 7.625% per annum on the loan'.	Private
<i>Gasenegro Finance</i>	Change in interest rate	2015	<i>'\$400 million loan due June 2018 has been restructured...resulting in zero interest payable (previous rate 6.2%)'.</i>	State Owned
<i>Rosneft International Finance</i>	Change in interest rate	2015	\$1,000,000,000 3.1% LPNs and \$2,000,000,000 4.19% LPNs changed to interest rates of 15.75%...and 21%'.	State Owned
<i>Brunswick Rail Finance</i>	Extension of Maturity	2017	Maturity of notes extended from 1 November 2017 to 31 March 2025.	Private
<i>Transregional capital</i>	Extension of Maturity	2015	Maturity of 10-year notes was extended from 2017 to 18 September 2020, with an interest rate increase from 7.74% to 10%	Private
<i>Alfa Bond Issuance</i>	Issue of Perpetual debt	2016	\$700,000,000 8% loans notes, were made perpetual with the first interest reset date being 3 rd February 2022.	Private
<i>TFB Finance</i>	Issue of Perpetual debt	2015	\$60 million issued with interest of 12.5% p.a.	Private
<i>VTB Eurasia</i>	Issue of Perpetual debt	2012	<i>'The company issued \$2.25 billion Perpetual Loan Notes in two tranches in order to finance a subordinated loan to VTB Bank'.</i>	State Owned

Source: Company accounts lodged in CRO. Authors *Section 110* dataset

Further illustrative cases highlight the limited incidence of litigation despite apparent and substantial value impairment for investors. For example, in 2012 Amatarasu issued a US\$400m PPL note to a Maltese SPV (Juturna). The instrument was expressly described as '*limited recourse*', with principal and interest payments contingent upon '*the realisable value of the Company's assets*'.²⁴³

Those assets comprised distressed loan portfolios acquired from the distressed lender, MDM Bank. Between 2013 and 2015, the loan note was written down to zero (see **Chapter 1**). Notwithstanding the total erosion of noteholder value, no litigation by investors could be identified by this research.²⁴⁴

A comparable pattern is observable in the case of VPB Funding, which raised US\$225m in 2013 and on-lent the proceeds to Vneshprombank. Following the borrower's liquidation in 2015, noteholders were simply advised to contact the trustee with a view to forming a committee of creditors.²⁴⁵ Again, there was no evidence of litigation arising from these ensuing losses.

Similarly, the write-down to zero of bonds issued by TFB Finance did not give rise to reported judicial proceedings, despite the effective extinguishment of bondholder claims.

²⁴⁶ It issued a US\$60m perpetual note in 2014, followed by an additional US\$60m issuance in 2016. In 2017, the CBR revoked the banking licence of the underlying borrower, Tatfondbank, citing financial transactions conducted by former managers and owners that were characterised as criminal in nature (TFB accounts, 2016).

²⁴³ (Amatarasu annual report 2012)

²⁴⁴ MDM Bank merged with another Russian bank (B&N Bank) in 2016. In 2017, the merged group required emergency funding from the RCB. Source: Reuters (20/09/2017) and (21/09/2017) '*Bank bailout hits Russia as B&N asks central bank for aid*', accessed <https://www.reuters.com/article/business/bank-bailout-hits-russia-as-bn-asks-central-bank-for-aid-idUSKCN1BV1CL/>. See also Doyle (2018), '*Russian bank collapse Fictitious assets, hidden losses and the role of the IFSC*', accessed <https://www.thejournal.ie/readme/russian-bank-collapse-fictitious-assets-hidden-losses-and-the-ifsc-4339432-Nov2018/>

²⁴⁵ The banking licence was revoked because of breaches of Federal law on countering the legalisation (laundering) of criminally obtained incomes and the financing of terrorism, CBR press release, 21 January 2016.

²⁴⁶ The trustees, BNY Mellon Corporate Services do not '*take any action unless investors holding at least €15m of the notes request in writing that it do so and that they prefund any steps it takes*', Joe Brennan, '*Russian bank bankruptcy renders Irish bonds worthless*', Irish Times (21/04/2017), accessed <https://www.irishtimes.com/business/finance/2017/04/21/russian-bank-bankruptcy-renders-irish-bonds-worthless/>

TFB Finance's own accounts state that the vehicle was established '*for the benefit of the borrower*', which exercised '*significant influence as borrower*'.²⁴⁷ The structural alignment of issuer and borrower interests, combined with the absence of creditor enforcement following licence revocation and bond impairment, raises questions regarding the *de facto* independence of the noteholders.

One of the few instances of a publicly reported dispute concerns Brunswick Rail. The company's 2016 accounts record unsuccessful attempts to reach a '*consensual agreement*' with noteholders in relation to proposed bond write-downs. Ultimately, a committee representing approximately 80% of outstanding loan notes agreed to a restructuring.²⁴⁸

A former chief executive subsequently characterised the agreed scheme as defrauding certain creditors and shareholders.²⁴⁹ Even in this case, however, the dispute culminated in negotiated restructuring rather than sustained litigation.

Taken together, these cases demonstrate a recurring pattern: significant contractual modification or value destruction, frequently in circumstances involving borrower distress or regulatory intervention, followed by limited or no observable recourse to formal legal enforcement.

This outcome is difficult to reconcile with conventional expectations of *arm's length* transactions entered into by a group of widely dispersed bondholders, and instead suggests the possibility of concentrated, affiliated or otherwise aligned investors.

Who are the bond investors?

Investment in Russia has long been associated with elevated legal, political and governance risk. The acquisition of debt securities issued by SPVs whose principal asset consists of a loan to a Russian-based MNE/SOE introduces an additional layer of structural and credit risk. These issues were examined through a review of the most

²⁴⁷ One issued share is held on trust for charity by TMF Ireland, 2016 accounts, note 8.

²⁴⁸ Brunswick Rail accounts, 2016.

²⁴⁹ See Joe Nocera Bloomberg, 13 May 2018, available at: www.bloombergguint.com/business/russian-corporate-governance-plays-by-its-own-grim-rules

recently issued prospectuses of firms within the study that listed debt on the ISE. The majority of firms within this subpopulation issued a prospectus.²⁵⁰

Risk disclosures were extensive and consistent across issuers. Prospectuses routinely highlighted exposure to corporate malfeasance, regulatory uncertainty and systemic governance weaknesses. For example, the 2015 prospectus of RZD Capital (Russian Railways) referred explicitly to *'high levels of corruption and the penetration of organised crime into the economy'* as material risk factors. Such disclosures underscore the broader institutional environment within which these instruments were structured and marketed.

High risk means the potential pool of bond investors is likely small and raises questions as to their identity. A total of 41% of issued prospectuses stated that US citizens were prohibited from purchasing issued bonds, with some exemptions (Regulation 144A of the US Securities Act of 1933).²⁵¹ Most prospectuses examined (56%) stated that securities may not be sold under any circumstances within the US (Regulation S of Securities Act of 1933).²⁵²

Most prospectuses also imposed restrictions on participation by Russian investors. For example, the 2016 prospectus of Alfa-Bank stated that the notes had not been, and would not be, registered in the Russian Federation and were neither intended for *'placement'* nor for *'circulation in Russia'*. Such provisions are consistent with a structure designed to situate issuance formally outside the domestic regulatory perimeter, notwithstanding the Russian connection of the underlying credit exposure.

Most legal, accounting and other services connected with bond issuances take place in London. SIB a subsidiary of Sberbank which is majority owned by the CBR, was reported as a *'joint lead manager'* in 33% of issuances. The recurrent involvement of Cyprus in lead management roles is also notable. Given Cyprus's prominence as a jurisdiction for offshore asset holding by Russian nationals, this geographic linkage may reflect the

²⁵⁰ A total of 67 prospectuses were issued.

²⁵¹ These are sometimes referred to as a "private placement", and there is far less public disclosure, filing requirements and potential liability under the US securities Acts (see 'Frequently Asked Questions About Rule 144A, L. S. Harmetz, Morrison and Foerster LLP, 2009).

²⁵² Securities issued under regulation S are not registered with the Securities and Exchange Commission and are not offered for sale within the USA.

intermediation of offshore Russian capital in the structuring and distribution of the bonds.

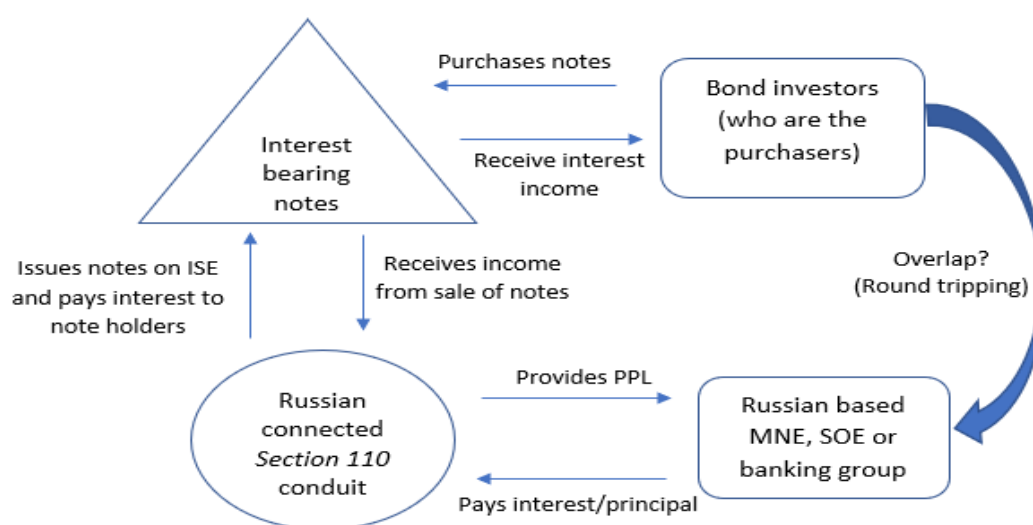
As a result of capital flight, Russian oligarchs and wealthy individuals may both own assets in Russia (for example, banks, mining and transport companies) and have large liquid assets outside Russia. Their Russian investments need finance but investment can be risky. *Section 110* firms may be a part solution. So that borrowing by firms based in Russia, is part funded by Russian owned offshore wealth, via an IFSC based vehicle.

The countervailing flows are less risky because they are short term, dollar denominated and organised by a nominally '*independent*' Irish firm whose owner/beneficial owner is in most cases a trust/charitable trust. Risk due to bond duration may be further reduced by early redemption of debt. The laws relating to bond issues are those of Ireland and the UK giving greater legal protection to bond purchasers than bonds issued in Russia.

Many firms were identified where debt was both issued and redeemed in the same year, with differing maturities and interest rates. *Section 110* SPVs may thus both send funds to and receive funds from the same Russian based firm within an accounting period. If interest payments to the SPVs are included, there is a net transfer of funds to the subpopulation for some years. This is an important factor in reducing risk to owners of debt and is explored further later on.

The absence of disputes between borrowers and lenders despite changes in terms and conditions, and the function of SPVs as both a source and use of funds for Russian sponsors, likely indicates significant overlap between certain purchasers of issued debt, and the owners of the sponsoring MNE. Figure 4.2 provides an illustration of this.

Figure 4.2: Illustration of Russian connected *Section 110* SPVs external financing



Source: Author's illustration

4.3 Empirical analysis of subpopulation

This section provides empirical data and analysis of the subpopulation over the period 2005-2017, and provides further support for the roundtripping hypothesis as an explanation for some of these flows of funds.

Table 4.4 quantifies the level of funds raised by the subpopulation over the study period. Some trends are identified and interpreted. It shows that debt issues rose from €1.66bn in 2005 to €22.7bn in 2013, then fell to €1.68bn in 2015 before rising again to €8.6bn in 2017. The recent fall in funds may reflect restrictions due to sanctions (Bradley et al 2014).

It is possible that the imposition of sanctions led some firms undertake financial transactions equivalent to the issuing of bonds. For example, BKM Finance reclassified loans as '*indefinite*' in 2015. It is also the case that the onset of the Russian Financial Crisis (2014-2016) was a factor in the general decline in issuance post 2013.

A fall in funds raised in the period 2008-2010 likely reflects market uncertainty and risk aversion during the GFC. In addition, there was substantial restructuring of major Russian firms and banks during this period (Tooze 2018).

The fourfold increase in the number of Russian connected firms from 11 (2005) to 45 (2007) is likely due to extensions in tax relief on quoted euro bonds in the Finance Act 2006.²⁵³ It is also likely that the reduced levels of disclosure required for a *Section 110* firms, due to the amendments to the regime outlined in **Chapter 1**, also played a role.

Table 4.4 shows that SOEs accounted for approximately 57% of total gross funds raised and 52% of funds raised through bond issuance over the study period. We can also see that the proportion of bond financing attributable to firms connected with SOEs declined markedly in 2015–2016.

Table 4.4: Gross Funds Raised (€bn)¹

Year	All N ²	Total Funds Raised	Gross Funds from other firms including banks	Gross Funds from markets	State owned No.	Total funds raised	Gross Funds raised from other firms	Gross Funds from markets
2017	51	8.915	0.243	8.671	13	3.023	0.0	3.023
2016	57	5.472	0.553	4.919	17	1.429	0.141	1.415
2015	63	1.736	0.051	1.685	22	0.232	0.131	0.101
2014	73	7.122	0.363	6.759	27	6.066	0.363	5.703
2013	74	29.329	6.562	22.758	29	17.864	6.509	11.345
2012	62	14.687	2.277	12.397	25	9.262	1.409	7.853
2011	50	10.227	1.339	8.871	19	4.496	1.339	3.157
2010	49	12.103	1.063	11.040	20	6.523	1.063	5.460
2009	55	7.624	4.913	2.710	22	7.391	4.913	2.478
2008	48	4.881	0.223	4.648	18	3.205	0.156	3.050
2007	45	8.516	0.797	7.718	17	5.605	0.791	4.274
2006	25	5.861	1.182	4.679	13	3.119	0.798	2.320
2005	11	1.666	0.285	1.665	7	1.097	0.002	1.096
Total		118.141	19.581	98.521		68.628	17.373	48.171

Notes:

(1) Aggregate changes also reflect exchange rate changes in Tables 23 to 25, because most assets are denominated in \$US.

(2). Dormant firms were excluded.

Table 4.5 examines aggregate operating data for the subpopulation. It shows that gross assets for the subpopulation expanded rapidly from 2005, peaking at €64bn in 2014, before falling to €46bn by 2017. Consistent with the earlier discussion, this contraction likely reflects a reduction in bond issuance following the introduction of international sanctions.

Estimates by the Irish Central Bank indicate that gross assets attributable to Russian-connected firms in 2015 amounted to €58bn when measured by reference to the location

²⁵³ Regulatory changes allowing bond sales to less than 100 investors may be another factor. See Irish Government Statutory Instrument No. 324/2005- Prospectus regulations

of the ‘*sponsor and consolidator*’. When gross assets are instead defined by the location of the underlying assets, the corresponding estimate falls further to €54bn (Barrett et al 2016).²⁵⁴ It is possible that this discrepancy between the Central Bank’s estimates and this research are reflective of the kind of underreporting detailed in **Chapter 3**.

Table 4.5 also shows that despite substantial gross income, both pre-tax profits and corporate tax liabilities remain minimal. In 2017, for example, median pre-tax profits and median tax charges were €530 and €180, respectively, compared with a median gross interest income of €27.3m.

Table 4.5: Aggregate Operating Data for 2005-2017

Year	N	Total assets €bn ¹	N ²	Total assets omitting firms with negative equity €bn	Equity €m	Interest Income €m	Pre-tax profit €m	Tax Paid Million €m
2017	52	46,299	46	45,685	0.621	2,805	0.008	0.037
2016	59	57,412	52	56,316	0.888	3,604	0.048	0.014
2015	63	61,600	56	60,299	0.959	3,672	0.045	0.013
2014	73	64,066	66	62,577	1.168	3,930	0.055	0.014
2013	74	63,227	67	61,895	0.983	3,326	0.071	0.019
2012	62	40,983	55	39,977	0.928	2,738	0.056	0.013
2011	50	31,636	47	31,045	0.934	2,338	0.027	0.007
2010	48	25,396	45	24,057	1.024	1,461	0.030	0.008
2009	51	20,199	47	19,657	1.031	1,260	0.002	0.008
2008	48	16,856	44	16,034	2.333	1,040	0.087	0.017
2007	45	11,446	42	10,954	2.289	766	0.792	0.203
2006	25	6,834	23	6,575	1.467	316	0.978	0.243
2005	11	1,616	10	1,540	0.387	71	0.120	0.018

Notes:

- (1). Dormant firms were excluded.
- (2). Dormant firms and firms with negative equity (for example due to loan write downs) were excluded.

Higher pre-tax profits and tax charges were recorded during the 2005–2008 period, reflecting the fact that not all firm income qualified for relief under *Section 110*. Across all years examined, the tax charge represents less than 0.1% of gross income.

Table 4.6 provides the flows of funds analysis with certain indicative patterns which could reflect round tripping in certain years. As shown, during the period 2014–2017 there was a net inflow of €32.9bn to IFSC firms, rather than a net outflow of funds to borrowers.

²⁵⁴ Total balance sheet value of *Section 110* firms amounted to €733bn in Q4 2017 and €743bn in Q4 2016. Source: Irish Central Bank Special Purpose Entities (SPEs) Statistics Q4 2017. Accessed <https://www.centralbank.ie/docs/default-source/statistics/data-and-analysis/other-financial-sector-statistics/financial-vehicle-corporations/2017-q4-irish-special-purpose-entities.pdf?sfvrsn=6>

Again, this pattern likely reflects both reduced lending flows to Russian based firms following the imposition of sanctions and increased outflows of funds from such firms.

A similar pattern is evident in earlier sub periods. Focusing solely on private sector firms, net outflows from Russia are observed in 2009, while an examination limited to SOEs indicates net outflows in 2010. Over the 2008–2017 period, the median *Section 110* firm received more funds than it disbursed, implying that, in aggregate, these entities were extracting funds from, rather than channelling funds to, Russian based sponsors.

Net flows from the IFSC firms to the borrower were calculated as gross funds raised minus redeemed funds minus total interest income received by the firm. A key assumption is that gross flows raised are passed to the borrower. This may slightly exaggerate lending to the borrower as a certain proportion of borrowings may be used within the *Section 110* firm.

However, as firms have no employees or fixed assets and generally have expenses paid by the borrower, these amounts are likely to be small. In addition, the eventual winding up of the firm is likely to increase outflows from Russia. For example, one firm showed \$400m issued debt securities in accounts prior to liquidation.²⁵⁵ Hence, flows were adjusted to reflect final balance sheet assets (Column 4, Table 4.6).

The previous section noted that rates of interest charged are high, particularly when compared to other dollar denominated debt. They are 2-3 times higher than yields on US Government five-year debt. This differential reflects both risk and an element of profit distribution. Median interest rates for state-controlled firms were in for most years, 1–2% lower than private owned firms.

This section has shown that IFSC based *Section 110* firms are an important source of finance to Russian based MNEs/SOEs. The pattern and structure of these investment flows are consistent with the possibility of ‘*round-tripping*’. Investment in Russia entails substantial risk, which is further amplified by the characteristics of certain borrowing entities. The following section therefore examines issues of corporate governance and default risk in greater detail.

²⁵⁵ Raspadskaya Securities, Annual Report and Accounts 2015, p. 2 and 9. Source: CRO.

Table 4.6: Flows of funds and Interest Payments for 2005-17 (€bn)

Year	N	Gross Funds Raised (1)	Redeemed funds (2)	Total interest income (3)	Gross assets of liquidated/ Dissolved firms (4)	Net flows = (column 1– 2-- 3 -4) (5)	Gross interest received/ Gross assets Median and average %	
2017	51	8.915	10.509	2.844	1.093	-5.531	5.7%	6.7%
2016	57	5.472	10.948	3.684	1.133	-10.293	6.4%	5.6%
2015	63	1.736	6.483	3.813	1.252	-9.812	6.2%	7.6%
2014	73	7.122	10.010	4.054	0.361	-7.303	6.7%	8.5%
2013	74	29.329	4.156	3.443	0.005	21.725	5.4%	6.6%
2012	61	14.687	3.323	2.763	0.00	8.601	5.7%	7.0%
2011	50	10.227	4.897	2.404	0.891	2.035	6.5%	7.6%
2010	48	12.103	8.196	1.505	0.865	1.537	6.5%	7.7%
2009	51	7.624	1.383	1.315	0.615	4.311	7.9%	7.9%
2008	48	4.881	0.591	1.111	0.043	3.136	8.4%	8.9%
2007	45	8.516	2.184	0.796	0.00	5.536	6.9%	6.4%
2006	25	5.861	0.803	0.319	0.00	4.739	4.9%	4.9%
2005	11	1.666	0.249	0.074	0.00	1.343	5.6%	4.7%
Total		118.141	63.509	28.126	6.254	20.252		

Notes:

(1). Dormant firms were excluded.

(2). This was estimated as gross assets from the last set of published accounts. For all firms in the study gross assets are nearly equal to gross liabilities as net equity is low for all years with median values under €5,000.

(3). Median values exclude firms where interest payments exceed 100 % of assets. This may arise where debt is repaid during an accounting period. Average values (in brackets) exclude firms reporting negative equity.

4.4 Governance issues: Sanctions, regulatory and financial risks

Notwithstanding the presence of sanctions, certain firms continued to access external financing in apparent contravention of the restrictions imposed. As noted above, some firms extended the maturities of existing loans, a strategy that may have operated as a mechanism to circumvent the practical effect of sanctions. More significantly, however, several were able to issue new debt, suggesting the existence of regulatory gaps or weaknesses in enforcement.

Table 4.7 identifies sanctioned firms that raised funds during the period 2014–2016. The ability of Gazprom PJSC and VTB Bank, both subject to sanctions, to raise funds in the UK has been the subject of sustained criticism in a report of the House of Commons (2018).

That report also drew attention to the role of professional service providers, including Linklaters, in facilitating such transactions.²⁵⁶

The evidence presented in Table 4.7 points to analogous regulatory weaknesses in an Irish context, where sanctioned entities similarly succeeded in accessing capital markets notwithstanding the formal restrictions in place. This again raises questions about how meaningful is regulatory supervision that these firms attract.

Table 4.7: Funds Raised 2014-2016 and Sanctions (€m)

Section 110 firm	Russian Firm	2014	2015	2016	Sanctions
<i>Alfa Bond Issuance</i>	Alfa Bank	198	459	664	Major shareholders on US 'Oligarch list'
<i>Alfa Holding Issuance</i>	Alfa Bank	4,756	23	0	Major shareholders on US 'Oligarch list'
<i>Expo Capital</i>	ExpoBank	0	18	0	Listed in USBRC combined sanctions list Jan 2017.
<i>Rosneft International Finance</i>	Rosneft	10,000			First sanctioned in 2014 along with Chairman (Igor Sechin), additional sanctions added later
<i>GPB Eurobond Finance</i>	Gazprom	3,952	0	0	Listed in USBRC combined sanctions list Jan 2017 ¹ .
<i>MMC Finance</i>	Norilsk Nickel	0	918	0	Shareholders Oleg Deripaska and Vladimir Potanin placed on new 'Oligarch list'
<i>Peresvet Capital</i>	Peresvet Bank (Owned by Rosneft since bailout)	0	99	0	Rosneft on EU/US Treasury Sanctions list. Chairman Igor Sechin is on sanctions list.

Source:(1)See:<http://eur-lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=OJ:L:2014:271:FULL&from=EN>;
<https://www.treasury.gov/ofac/downloads/ssi/ssilist.pdf>

In addition to the issue of sanctions evasion, *Section 110* firms were also identified in connection with Russian MNEs which have attracted significant adverse comment due to regulatory, governance and financial misconduct concerns. Table 4.8 lists some of these recent controversies.

Several firms in the subpopulation were connected to MNEs which the CBR identified as being involved with insider trading and market manipulation.²⁵⁷ All prospectuses examined refer to the risk of criminal activity within Russia with the potential to adversely affect bond holders.

²⁵⁶ Parliamentary Committee Report of the House of Commons, 'Moscow's Gold: Russian Corruption in the UK', accessed <https://publications.parliament.uk/pa/cm201719/cmselect/cmfaaff/932/93204.htm>

²⁵⁷ Central Bank of Russia, accessed www.cbr.ru/finmarket/inside/inside_detect/table

Table 4.8: Allegations of illegal activity/improper influence

Section 110 firm	Russian Firm	Connections	Source
<i>Alfa Bond Issuance; Alfa Holding Issuance</i>	Alfa Bank	<i>‘Significant favours continue to be done in both directions, primarily political ones for Putin and business/legal ones for Alpha’.</i>	Executives on ‘Oligarch list’
<i>Bom Capital</i>	Bank of Moscow	Taken over by VTB Bank in 2011. This followed police raids on Bank of Moscow and the homes of senior executives as part of a criminal investigation into alleged embezzlement of Rbs. 1 bn (\$449m).	Catherine Belton, ‘VTB in Bank of Moscow victory’, Financial Times February 26, 2011.
<i>Eurochem Global Investments</i>	Eurochem	Reports of improper and illegal activities undertaken by EuroChem, its owner, Andrey Melnichenko, and associates. Source: Complaints filed by International Mineral Resources	Eileen Sullivan et al. New York Times, (14/07/2017)
<i>Peresvet Capital</i>	Peresvet Bank	Peresvet debt was downgraded on Oct 24 th 2016, following appointment of an administrator by the CBR. Preceded by the disappearance of the chief executive and a report by Fitch that ‘roughly half of Peresvet’s capital — had been issued to companies and individuals with ‘no real assets’.	Moscow Times (14/10/2016)
<i>Renaissance Consumer Funding</i>	Renaissance Capital	Connected to Sergei Magnitsky, who was investigating instances of fraud.	Daily Telegraph (13/04/2017)
<i>Rosneft Intl. Plus four others</i>	Rosneft	The CEO (Sechin) is described as part of a group of all powerful businessmen ‘to be above the law and answerable only to the Kremlin’ and a ‘powerful arm of Russian foreign policy’.	Henry Foy, Financial Times, (01/03/2018)
<i>Sibur securities</i>	Sibur Holding	Owners subject to sanctions include Mikhelson, and Tinnchenko. A daughter of Putin is married to another shareholder, Shamalov.	Irish Times (05/11/2017)
<i>VEB Finance</i>	VEB (Vnesheconombank)	Dec. 2017 meeting between Chief executive of VEB, Russian ambassador to US, Kushner and others	Described as an agent of the State rather than a bank, NYT June 4 2017
<i>VPB Funding</i>	Vneshprom-bank	A CBR investigation revealed a \$2.2 billion deficit. <i>‘Former managers may have stripped the bank’s assets for investments in real estate, expensive vehicles and financial instruments’.</i>	Griffin and Brennan, Bloomberg, Feb. 24, 2016,

Several prospectuses specifically recognise that the funds raised by the *Section 110* firm may be used for money laundering. For example, Transcredit Finance's prospectus (2010) states that its AML measures '*may not be completely effective*'. VPB's prospectus (2013) states the same. Such disclosures underscore the extent to which illicit financial flow risks were formally contemplated within the transaction documentation.

Beyond concern for illicit financial flows, there are also financial stability risks posed by these *Section 110* SPVs, similar to what was observed in **Chapter 3**. Fourteen Russian Banks/MNEs connected to 26 *Section 110* firms required funds from the CBR and other sources (see Table 4.9), predominantly during the Russian Financial Crisis (2014-2016).

Some of these bank failures led to considerable write downs for bondholders. Despite the examples of sanctions evasion, connections to firms which engaged in financial misconduct and links to banks which failed, no evidence of regulatory action on the part of the Irish Central Bank could be identified.

One implication of sanctions is that regulators are required to assess the destination of loans or debt proceeds to individuals or companies. The Central Bank does not require any information on how loans and the proceeds of funds raised by debt instruments are used (Central Bank of Ireland 2016).²⁵⁸ Hence, the purpose for which loans are used cannot be assessed by regulators or professional advisors, and could be in breach of law relating to sanctions and other issues.

The CBR has stated that Promsvyazbank, a recently nationalised bank, would become a '*special-purpose bank for serving military-industrial-complex businesses*' (Seddon, 2018). An IFSC based *Section 110* firm (PSB-ECP) is connected to this bank. Other Russian based banks with IFSC firms, are reported to provide military related finance are Alfa-Bank, Gazprombank, Rossiya, Russian Agricultural Bank, Sberbank and VTB (Korsunskaya, 2017).

²⁵⁸ Golden and Hughes, 2018, p. 8 state *Section 110* firms (SPE's) are '*Not authorised by the Central Bank and are not subject to prudential regulation*'.

Table 4.9: Failures amongst Borrowers and Russian connected firm

Section 110 firm	Russian Firm	Date	Cost \$bn	Comment
<i>BOM Capital</i>	Bank of Moscow	June 2011	\$14bn ²⁵⁹	Bailed out. More than 50% of loan portfolio to management. (Wall Street Journal 02/07/2011)
<i>B&N Bonds</i>	B&N Bank	Sept 2017	\$6bn ²⁶⁰	Collapsed following merger with MDM. Many non-performing loans to shareholders and management (Bloomberg 27/12/2018)
<i>USIB Finance</i>	Bank Uralsib	Nov 2015	\$1.5bn loan to bank ²⁶¹	Bailed out. Putin ally Vladimir Kogan agrees to buy 82% stake to avoid bankruptcy. (Reuters 4/11/2015)
<i>Brunswick Rail Finance</i>	Brunswick Rail	N/A	N/A	40% write down on loans of \$600 million following litigation half of all investors.
<i>Amaterasu & 4 others²⁶²</i>	MDM Bank	Sept 2017	\$6bn	Merged with B&N Bank (2015). Acquisition led to the subsequent rescue of B & N bank (Max Seddon, Financial Times 20/09/2017).
<i>NBT Finance</i>	National Trust Bank	Dec 2014	\$0.530bn ²⁶³	Bailed out. Owners accused of making fraudulent loans involving companies in Cyprus, Switzerland and Austria (Moscow Times 26/04/2015)
<i>BKM Finance, OFCB Investments</i>	Otkritie	Nov 2017	\$7.83bn ²⁶⁴	First time a top 10 lender required state support. \$500 million 's. 110' loans will not be repaid. ²⁶⁵

²⁵⁹ Moscow Times (12/10/2017), 'Profit of Russian Banking Sector Tanks Following Summer Bailouts', accessed <https://www.themoscowtimes.com/2017/10/12/profit-of-russian-banking-sector-tanks-following-summer-bail-outs-a59252/pdf>

²⁶⁰ CNBC (22/09/2017), 'Banks Russia steps in to prevent "domino effect" in its banking sector — but confidence concerns linger', accessed <https://www.cnbc.com/2017/09/22/bn-bank-russia-central-bank-rescues-second-major-bank-in-less-than-a-month.html>

²⁶¹ Economist Intelligence Unit (18/12/2015), 'Russia's banking sector remains under pressure', accessed <http://www.eiu.com/industry/article/833791667/russias-banking-sector-remains-under-pressure/2015-1>

²⁶² Kherpi Finance, Grengam Finance, MDM ECP, MDM International Funding

²⁶³ The Guardian (22/12/2014), 'IMF raises fears of global crisis as Russian bank forced into bailout', accessed <https://www.theguardian.com/business/2014/dec/22/trust-bank-first-financial-casualty-russia-currency-crisis>

²⁶⁴ Reuters (22/12/2017), 'Russia's Otkritie says central bank bailout completed', accessed <https://www.reuters.com/article/russia-banks-otkritie-management/russias-otkritie-says-central-bank-bailout-completed-idUSL8N1OM21E>

²⁶⁵ Reuters (03/11/2017), 'Russia's Otkritie bailout hits home in Ireland', accessed <https://www.reuters.com/article/world/russias-otkritie-bailout-hits-home-in-ireland-idUSL8N1N919J/>

<i>Persevet Bank</i>	Persevet Bank	April 2016	\$1.19bn ²⁶⁶	Taken over by the Russian Regional Development Bank (Rosneft). Up to 80% of loans written off (Reuters, 5/03/2018).
<i>PRBB LPN Issuance, Vityaz Three</i>	Probusiness Bank	Aug 2015	\$0.989bn ²⁶⁷	Collapsed when CBR found RUB 67 billion black hole from fictitious bonds and poor-quality assets.
<i>Promsvyaz Finance, PSB ECP</i>	Promsvyazbank	Dec 2017	\$3.4bn ²⁶⁸	Nationalised. Former owners accused of using the bank's funds to buy its own bonds. (Financial Times 19/01/2018)
<i>Russian Standard Capital</i>	Russian Standard Bank (RSM)	N/A	N/A	Defaulted on \$451 million. Bonds issued reduced to 18% of nominal value.
<i>TFB Finance</i>	Tatfondbank	Nov 2016	Bankrupt ¹²⁶⁹	\$60 million of bonds revalued at zero. Main shareholder owned 65% of loan portfolio
<i>VPB Funding, VPB Finance</i>	Vneshprombank (VPB)	Jan 2016	\$2.2bn deficit ²⁷⁰	\$225 million bonds written down. License revoked, allegations management stole assets. 'Blackhole' of 187 billion-ruble (€2.2bn) found by regulators.
<i>VTB ECP Finance & 4 others</i> ²⁷¹	VTB	Dec 2014	\$2.6bn ²⁷²	Required bailout funds of \$1.8 billion (2014), following the imposition of sanctions.

²⁶⁶ Reuters (19/04/2017), 'Russia c.bank to lend \$1.2 bln to save Orthodox Church bank', accessed <https://www.reuters.com/article/russia-banks-peresvet/russia-c-bank-to-lend-1-2-bln-to-save-orthodox-church-bank-idUSL8N1HR3MI>

²⁶⁷ Moscow Times (13/09/2015), 'Russia's Biggest Banking Crashes of the Last 2 Years', accessed <https://themoscowtimes.com/articles/russias-biggest-banking-crashes-of-the-last-2-years-49505>

²⁶⁸ Reuters (15/12/2017), 'Russia hit by \$3.4 billion Promsvyazbank bailout in latest bank blow', accessed <https://www.reuters.com/article/us-russia-banks-promsvyazbank/russia-hit-by-3-4-billion-promsvyazbank-bailout-in-latest-bank-blow-idUSKBN1E91HD>

²⁶⁹ Business News Europe (13/03/2017), 'Russia's great daylight bank robbery' accessed <http://www.intellinews.com/long-read-russia-s-great-daylight-bank-robbery-117326/>

²⁷⁰ Irish Independent (22/02/2016), 'Russian bank collapse shines light into shadowy corners of Irish finance', accessed <https://www.independent.ie/business/irish/russian-bank-collapse-shines-light-into-shadowy-corners-of-irish-finance-34482531.html>

²⁷¹ VTB Eurasia plus 3 other conduits

²⁷² Moscow Times (12/10/2017), 'Profit of Russian Banking Sector Tanks Following Summer Bailouts', accessed <https://www.themoscowtimes.com/2017/10/12/profit-of-russian-banking-sector-tanks-following-summer-bail-outs-a59252/pdf>

Although not directly used to finance military expenditure, the *Section 110* regime and other incentives may be used to provide via cheaper and easier access to finance, to banks that directly finance military expenditure. Hence, to better align Ireland's regulatory system with adherence to international sanctions, the Central Bank should require information on the proceeds of *Section 110* finance is used.

4.5 Corporate governance in practice

As *Section 110* firms have no employees core governance responsibilities mandated under Irish company law formally rest with their directors and shareholders. Yet in practice these functions are exercised by a CSP.

The duties of directors and senior managers are further articulated in international corporate governance frameworks, including the 2015 principles issued jointly by the G20 and the OECD. The G20 and OECD (2015) recommends policies are introduced to prevent '*fraud and money laundering*'.²⁷³

Yet an implication of CSPs providing corporate services and directorships to a large number of '*shell companies*', is that governance, as required in the *Companies Acts* and codes of conduct, cannot be implemented as intended. A single CSP in Ireland may provide services for over 1,500 firms (see Table 4.10). The appointed directors are also paid by the CSP rather than the firm itself.

An individual employee of a CSP may hold over 100 directorships. In one case, a CSP appointee was a director of 413 firms simultaneously. The largest CSP (2017) was Deutsche International Corporate Services for the total of Russian connected and non-Russian connected *Section 110* firms. This degree of concentration underscores structural governance risks inherent in the administration of high volume SPV structures.

As noted above, ownership of *Section 110* firms is frequently stated to reside in a charitable trust or other trust structure. In substance, such arrangements typically imply

²⁷³ G20/OECD (2015), '*G20/OECD Principles of Corporate Governance*', accessed https://www.oecd.org/content/dam/oecd/en/publications/reports/2015/11/g20-oecd-principles-of-corporate-governance_g1g56c3d/9789264236882-en.pdf

that effective control is exercised elsewhere, yet the locus and purpose of that control are not transparently disclosed.

Table 4.10: Corporate Service Providers for *Section 110* firms (2017)

Name of provider	<i>Section 110</i> firms (2009-17)	Russian connected firms	Total including <i>Section 110</i> firms
<i>Deutsche International Corporate Services</i>	580	27	840
<i>TMF Administration Services Limited</i>	224	17	743
<i>MFD Secretaries Limited</i>	178	1	1611
<i>Link IFS Ltd. (formerly Capita International Financial Services/AIB International Financial Services)</i>	109	8	702
<i>Tudor Trust Limited</i>	112	0	1118
<i>Cafico Secretaries Limited</i>	39	30	39
<i>AIB International Financial Services Limited/Link IFS Limited/Capita International Financial Services Limited</i>	109	0	701
<i>Intertrust Finance Management (Ireland) Limited/Structured Finance Management Ltd.</i>	154	0	240

Source: Company data provider using CRO data.

In the majority of cases examined, operating expenses were borne by the loan recipient, suggesting that effective influence and decision-making authority were likely concentrated at the level of the borrower. In a minority of instances, the loan recipient was explicitly identified as the owner of the vehicle.

Golden and Hughes (2018) of the Central Bank contend that SPVs, including those connected to Russian firms, ‘*provide an efficient structure for the conduct of business activities across borders*’. However, where cross-border capital flows exhibit characteristics of round-tripping, operate within lightly regulated environments, rely on opaque ownership arrangements and may involve funds originating from illicit activity, the characterisation of such structures as ‘*efficient*’ warrants critical scrutiny.

These findings are also difficult to reconcile with the stated position of the Irish Department of Finance that the imposition of a 25% rate (passive income) would ‘*guard against “brass-plate” operations with low substance*’ and reinforce the role of Ireland’s corporation tax regime in supporting active and substantive trading activity (Department of Finance, 2013).

The empirical evidence presented in this chapter suggests that, notwithstanding formal tax policy objectives, structures with limited economic substance and diffuse governance

arrangements have persisted within the *Section 110* framework. As such they pose ongoing reputational risks for the IFSC.

4.6 Economic and statistical impact of subpopulation

Notwithstanding the large value of assets and interest income for this subpopulation, pre-tax profits are low as are corporate tax payments, in line with the ‘*tax neutrality*’ offered by the regime. The main economic impact is from domestic expenditures. Identified expenditures (audit fees, tax advice and CSP fees) reached a peak of €2.99m in 2013 and fell to €1.83m in 2017.

Most expenditures are for firms providing corporate services. Although legal fees are likely, in aggregate, to constitute a significant component of domestic expenditure, they are generally not separately disclosed in the financial statements.²⁷⁴ Administrative expenses for most firms in the study were paid for by the firm which received the loan or in some cases what is described as the ‘*arranger*’ of debt securities issued.

Fees for tax advice which reached a peak of €0.385m in 2014. They a large multiple of the tax charge in company accounts (Table 4.11) for all years. So much so that paid fees for tax advice are greater than the amount of tax revenue received by the Exchequer.

Table 4.11: Domestic Expenditures (€’000) 2005-16

Year	N	Audit Fees ¹	Tax Advice fees	CSP costs	Total
2016	56	801	281	1,454	2,536
2015	63	884	316	1,503	2,703
2014	72	928	385	1,681	2,994
2013	72	968	339	1,352	2,659
2012	57	800	269	1,048	2,117
2011	49	684	242	1,127	2,053
2010	48	666	269	938	1,873
2009	47	675	152	929	1,756
2008	48	679	179	996	1,854
2007	42	509	105	794	1,408
2006	24	280	45	487	812
2005	10	72	11	257	340

Notes:

(1). For all firms disclosing auditing expenditures.

²⁷⁴ For example, listing fees charged by Arthur Cox in relation to B&N Bonds prospectus, 2016 were €17,500. Source: emails filed with B&N bonds prospectus, CRO, 29 June 2016.

Expenditures in Ireland are low in relation to the value of assets and interest received. Total expenditures for 2017 amounted to 0.07% of gross interest income and 0.004% of gross assets. Median expenditures (audit, tax advice and CSP fees) varied between €27k and €46k per annum for the period 2005-2017. Median values for legal fees for a limited number of disclosing firms varied between €22k-€67k for most years.²⁷⁵

Golden and Hughes (2018) report relatively higher expenditures in Ireland of €237m on fees and commissions or 0.037% of gross assets, for 2017 for all *Section 110* firms. These higher numbers may be explained by non-disclosure, and hence, omission of legal fees in the current study which could amount to around €7m.²⁷⁶ These authors also report tax payments by *Section 110* firms of €128m for 2017.²⁷⁷

Despite this relatively modest domestic economic footprint, distortions can occur in certain macro-financial statistics, as observed in **Chapter 3**. In particular, the inclusion of SPV related flows in measures of foreign direct investment (FDI) can exaggerate the apparent scale and nature of economic activity.

Rather than reflecting substantial ‘*greenfield*’ investment, Ireland and OFCs may appear, due to these accounting conventions, to be the foremost FDI investors in Russia. Yet it can be the case that such investment represents round tripped investment. An appreciation of the divergence between gross debt and net debt flows can shed some light on this dynamic.

One consequence of these and other IFSC activities is an inflation of aggregate measures of foreign investment stocks and flows into and out of Ireland. While such activities may not materially affect measured GDP, because inflows (interest and capital) are largely offset by corresponding outflows, they can nonetheless create a misleading impression of the scale and substance of domestic economic activity.

²⁷⁵ Median values of annual listing fees amounted varied between €1,500-5,000 for disclosing firms.

²⁷⁶ Arthur Cox had estimated total earnings of €144m for 2017 (Shane Phelan, Irish Independent, 18 October 2018), accessed <https://www.independent.ie/irish-news/big-seven-irish-law-firms-earned-720m-last-year/36238417.html>. As the main provider of legal services to Russian connected conduits, around 5% of their total earnings could be derived from this source.

²⁷⁷ These tax payments are most likely to relate firms which purchased distressed assets, and which were subject to a special tax regime in 2016 (McCarthy and McGuinness 2018).

4.7 Chapter Conclusion

This chapter has shown that the IFSC, vis *Section 110* firms, has become one of the main sources of corporate debt flows to Russia. Gross flows of funds amounted to €118bn for 2005-2017. Net debt flows are lower at €55bn. If interest payments are subtracted net flows fall further to €27bn.

Section 110 firms may be both a source and a use of funds. So that for some years there is a net outflow from Russia to the IFSC firm. Net outflows of funds from Russia amounted to €31.8bn for 2014-2017. The chapter has argued that certain flows of funds are consistent with a pattern of '*round tripping*'.

Although *Section 110* firms are part of the licit economy in Ireland, the chapter has detailed links between specific firms and allegations of illegal/improper activity by their Russian sponsor. Hence, it is possible that although compliant in a narrow domestic sense, they may be misused for cross-border criminal operations.²⁷⁸ They reflect in some cases, an example of the interaction between '*legal and illegal business*' (Enderwick 2019).

The chapter has also discussed governance and regulatory concerns with this subpopulation in relation to sanctions evasion, and bond write downs arising from sponsor firm failures. Firstly, evidence was provided of firms which raised finance despite the presence of sanctions, thus highlighting regulatory gaps. Secondly, the significant financial risks associated with non-securitisation *Section 110* firms were also highlighted.

Although tax and regulatory concessions are major motives for their use, this chapter underscores how these would be of little value without a transnational network of advisory firms in Ireland, London and Cyprus, which provide links with Russian firms and sources of capital.

The growth of OFCs has been facilitated by governments on the basis that high value employment will be created. Shaxson (2018) in contrast argues that '*oversized finance and its agenda*' can cause '*economic crisis and stagnation*'. This chapter demonstrates

²⁷⁸ For a literature review, see Dörrenbächer and Gammelgaard (2019), '*Societally engaged, critical international business research: a programmatic view on the role and contribution of cpoib*', in Critical Perspectives in International Business, Vol.15, Issue 2-3. Accessed <https://www.emerald.com/cpoib/article/15/2-3/110/30148/Editorial>

that the economic impact of the subpopulation is minimal. The main beneficiaries in Ireland are a small group of law firms, accounting firms and firms providing corporate services.

There have been a number of recent reforms of the taxation of international investment and other reforms such as intercountry exchange of information.²⁷⁹ However, for SPVs which have no employees and are mostly owned by a charitable trust, governance mechanisms required by law are outsourced to a CSP. These firms lack transparency in terms of their governance, and thus inhabit something of a grey legal space.

A more important reform would be to provide international anti-money laundering regulatory bodies with sufficient legal powers of investigation and sanction, for example, as proposed by the European Commission (Brunsden and Fleming, 2019; European Parliament 2019; European Commission 2018).

In the absence of effective EU regulation, US regulatory authorities have been far more active in combatting money laundering in Latvia and other EU countries (European Parliament 2019; Milne 2018). Such changes, if implemented and enforced, would mean that developing offshore financial centres would be more difficult to sustain for an EU member state and potentially non-EU states.

Reducing competitive advantages from low tax and light touch regulation may, in turn, mean that policies to support financial centres, seek to enhance factors such as quality of services, technical ability and good governance. Given that such attributes are in short supply, effective regulation will place limits on the size and growth of OFCs such as the IFSC.

²⁷⁹ See, for example, OECD, accessed www.oecd.org/tax/beps/; www.oecd.org/tax/automatic-exchange/commonreporting-standard/; EU Commission, '*Tax and Transparency*', accessed https://ec.europa.eu/taxation_customs/business/tax-cooperation-control/

Chapter 5

'Ireland's aviation sector has gone from strength to strength...the growth that has taken place, the number of jobs that have been created and the impact the industry has had on the wider economy'.

- Minister for Finance, Paschal Donohue (03/07/2018)



Image: Aircraft Leasing Ireland Global Aviation Sustainability Conference (2024)

5.0 Introduction

Aircraft leasing in Ireland is often characterised as a *'global success story'*. Despite this reputation, there remains relatively little academic research on Ireland's sector, or on the global aircraft leasing industry more broadly. In an Irish context, this lack of scholarly attention is particularly notable given the scale of the sector. It is estimated that approximately 65% of the world's commercial aircraft are leased from Ireland (Department of Finance 2024).²⁸⁰

Although not always recognised as such, aircraft leasing is a key part of the shadow banking sector. This chapter focuses on one aspect of Ireland's leasing sector; leasing firms operating with *Section 110* status. This subpopulation represents between 15-20%

²⁸⁰ Irish Times (30/01/2025), *'Ireland can't afford to throttle back on aircraft leasing – it's a global success story'*, accessed <https://www.irishtimes.com/special-reports/2025/01/30/ireland-cant-afford-to-throttle-back-on-aircraft-leasing-its-a-global-success-story/>

of all Irish registered aircraft lessors. This chapter provides some empirical analysis of 527 *Section 110* aircraft leasing firms over the period 2010 to 2020.

The chapter begins by outlining the structure of the global aircraft leasing industry and its relationship to the wider aviation sector. It then traces the development of Ireland's leasing industry and the rapid growth in leased aviation assets in recent decades. Conventional accounts of Ireland's '*unrivalled track record*' in aircraft leasing frequently emphasise a supposed '*first mover advantage*', often linked to the success of Guinness Peat Aviation (GPA).

As one industry participant has argued, Ireland's success is '*more a product of business history than our favourable corporate tax treatment*'.²⁸¹ In contrast, this chapter argues that taxation has been a key determinant in the sector's development, with *Section 110* offering an illustrative example of this.

Despite frequent claims that aircraft leasing represents a major contributor to Ireland's economic development, the chapter provides a more measured assessment of its contribution to tax revenues and employment. It notes that the sector operates within the broader landscape of non-bank financial intermediation (NBFi), although it is not always explicitly recognised as such.

As a consequence, similar characteristics emerge to those identified elsewhere in the NBFi sector, including relatively weak domestic economic linkages and significant data gaps. Comparable financial and regulatory risks are also evident.

The Central Bank has observed that risks within non-financial vehicle corporation (non-FVC) sectors, including aircraft leasing, remain '*not well documented*'. In response, this chapter places significant emphasis on the potential risks associated with the *Section 110* aircraft leasing sector. Several subsequent sections address different dimensions of these risks.

²⁸¹ Irish Independent (17/04/2016), '*Why is Ireland a hub for the global aircraft leasing sector?*', accessed https://www.independent.ie/business/irish/why-is-ireland-a-hub-for-the-global-aircraft-leasing-sector/34633109.html?utm_source=chatgpt.com See also Irish Times (20/01/2020), '*Ireland at the epicentre of the aviation finance industry*', <https://www.irishtimes.com/sponsored/pwc/ireland-at-the-epicentre-of-the-aviation-finance-industry-1.4138304>

The first of these examines the regulatory framework governing the sector. It highlights that, in practice, the only substantial regulatory oversight relates to aircraft safety, while the financial structures underpinning leasing activity remain largely unregulated.

Proposed reforms in recent years have primarily focused on modest improvements in transparency and data sharing. Drawing on examples from both the GFC and the more recent Covid19 pandemic, it illustrates how highly leveraged leasing firms encountering financial distress can generate contagion effects for counterparties.

The following section explores emerging geopolitical risks. In particular, it considers recent doubts regarding the future enforceability of two international treaties that underpin the global aircraft leasing industry. These concerns arise from the seizure of leased aircraft by the Russian Federation following the imposition of international sanctions after the outbreak of the Ukraine war.

As these treaties are central to the functioning of the global leasing system, Russia's actions, and the possibility that other states might adopt similar measures in response to sanctions, raise important questions about their future enforceability. This development may also contribute to rising insurance costs and increased financing risks across the leasing sector.

The chapter then examines potential risks to *Section 110* lessors arising from recent EU Directives aimed at curbing aggressive tax practices, particularly those facilitating base erosion via artificially high interest expenses on intragroup finance. In this context, particular attention is paid to the Interest Limitation Rule (ILR) introduced in **Chapter 1**.

The subsequent section presents the empirical analysis of the leasing subpopulation. It quantifies and evaluates a range of key variables. These include aggregate asset values, pre-tax profits/losses, shareholders' funds, interest rates on profit participating loans (PPLs) relative to gross balance sheet borrowings, internal cash flows and capital gains.

This analysis identifies several notable vulnerabilities including aggregate losses, negative equity positions and declining asset values, particularly during the Covid19 period.

Despite these adverse conditions, the subpopulation as a whole continued to generate positive cash flows to parent and related companies.

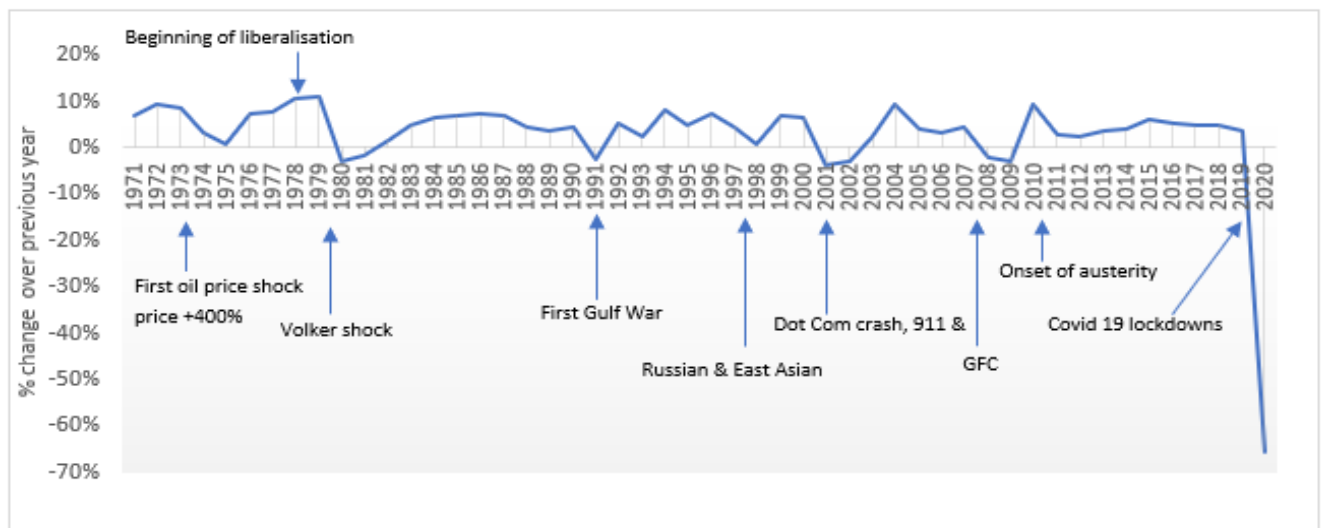
The analysis also identifies exceptionally high interest rates (reaching up to 18%) on certain intercompany debt transactions. Such rates may be indicative of profit extraction mechanisms and base erosion strategies of the type that the ILR is intended to combat. The chapter further examines the organisational structure of the firms within the subpopulation, including notable ownership patterns and the frequent location of parent companies in tax haven jurisdictions.

The chapter then concludes and offers some remarks.

5.1 Background

Today aircraft leasing is a central pillar of the global aviation industry, itself widely recognised as a highly cyclical sector. Aviation demand is particularly susceptible to exogenous shocks, including armed conflict and terrorism, oil price volatility, pandemics, and fluctuations associated with the general business cycle. Figure 5.1 demonstrates this demand volatility in air travel numbers over a period of 50 years, related to such shocks.

Figure 5.1: Cycles and Demand Shocks in Air Passenger Numbers (OECD 1971-2020)



Source: OECD, authors calculations

Within this context, aircraft leasing is commonly considered to help to mitigate demand volatility by affording airlines greater flexibility in their fleet management. By substituting large upfront capital expenditures for aircraft assets with periodic lease payments,

leasing arrangements enable airlines to adjust capacity quicker in response to changing market conditions.

Financial assets are generally more liquid than real assets, where liquidity refers to the ease with which an asset can be converted into cash at short notice without incurring a loss in value. The higher the liquidity of an asset, the lower the associated risk, as investors are better able to exit their position quickly and with minimal uncertainty regarding price.

Real assets, in contrast, are typically less liquid because they require more time to sell and their value may depend on specific market conditions. However, some real assets such as aircraft are relatively homogeneous. Aircraft are produced to standardised specifications and are widely used across the global aviation industry. This means they can often be transferred between operators more easily than many other types of physical assets.

As a result, aircraft leasing is structured in a way that helps reduce risk for owners of such assets. By leasing the aircraft rather than selling it outright, the lessor retains ownership of the asset while generating predictable income through lease payments. At the same time, the relative standardisation of aircraft means that if a lessee defaults or a lease ends, the aircraft can potentially be redeployed quickly to another airline.

This ability to re-lease or remarket the asset mitigates the risk associated with the lower liquidity of real assets and helps protect the lessor's investment. This model has greatly facilitated market entry by new carriers and supported the expansion of incumbent airlines, reducing the need to finance high-value, capital-intensive assets directly on balance sheet. Prior to liberalisation, most airlines retained aircraft ownership on balance sheet. The expansion of the leasing sector significantly altered this financing structure.

As the global leasing market developed following the period of liberalisation in the 1970s, airlines increasingly opted to lease aircraft rather than acquire them outright. In addition to operating and finance leases, sale-and-leaseback transactions whereby airlines sell aircraft to a lessor or a related SPV and lease them back, have become a common source of liquidity and balance sheet management. Today, the majority of airlines lease at least part, and often the greater part, of their fleets.

Large global lessors have consequently emerged as major customers of aircraft manufacturers and as significant actors in the secondary market for aircraft assets.²⁸² In 2024, approximately 50% of total output from Airbus, ATR, Boeing and Embraer was purchased by leasing firms (Airfinance Global, 2025). This underscores the sector's systemic importance within the aviation value chain.²⁸³

Ireland as the 'birthplace' of leasing

Ireland has frequently been described as the '*birthplace*' of modern aircraft leasing. The establishment of GPA in 1974 marked a pivotal development. By 1991, GPA had become the world's largest aircraft lessor, reporting turnover of approximately \$2bn and a global market share of 36.5% (Cahill, 2007).

Although GPA collapsed following a failed flotation and was subsequently taken over by GE Capital in 1993 (Muir, 2021), Ireland retained and expanded its position as a global hub for aircraft leasing. It is estimated that over 60% of the world's commercial aircraft are leased and financed from Ireland, and nineteen of the top twenty global lessors maintain operations within the IFSC.²⁸⁴

This is commonly characterised as a '*major success*' of Ireland's industrial policy, particularly within the development strategy for the IFSC. Industry reports, including those by PwC (2023), frequently emphasise the concentration of leading global lessors in Dublin as evidence of the sector's economic significance. The scale of balance sheet activity is considerable.

Assets of aircraft leasing firms located in Ireland increased from €121.3bn in 2013 to €262.9bn in 2024.²⁸⁵ Individual firms illustrate this concentration. In 2022, AerCap reported \$69.7bn in assets and operated through 621 subsidiaries, of which 347 (56%)

²⁸² For example, Irish based Avolon bought 89 aircraft and sold 108 aircraft in 2024 (Airfinance Global, 2025).

²⁸³ Three leasing firms purchased 36% of output.

²⁸⁴ These are trading firms charged at the 12.5% rate, as opposed to those *Section 110* lessors charged at the 25% rate (passive income).

²⁸⁵ CSO, '*Aircraft Leasing in Ireland 2024*', accessed <https://www.cso.ie/en/releasesandpublications/ep/p-ali/aircraftleasinginireland2024/>. Ownership of leased aircraft is based on the '*economic ownership of the aircraft*' as distinct from where the aircraft is registered, CSO, '*Moving to a Transfer of Economic Ownership Basis for Trade in Aircraft*', July, 2015

were incorporated and operating in Ireland. A further 38 subsidiaries were classified as ‘external’ firms, predominantly registered in Bermuda but operating from Ireland.

All Irish AerCap subsidiaries were ultimately owned by an external parent firm, itself a branch of a Dutch parent company. Similarly, Avolon reported \$31bn in assets and 834 leased aircraft in 2022, with over 120 Irish-registered subsidiaries and more than 140 ‘external’ subsidiaries, mostly incorporated in the Cayman Islands.²⁸⁶

Therefore, the sector can have a significant impact on Irish macroeconomic statistics. Given the scale of these capital transactions, aircraft leasing activity can materially affect Ireland’s balance of payments (Central Bank 2017).²⁸⁷ Perhaps because of these headline figures, the sector is frequently described as a substantial contributor to ‘*economic development and employment*’ (Grant Thornton, 2018).²⁸⁸ However, such claims warrant closer scrutiny.

Tax treatment

The Irish leasing sector is highly concentrated among a small number of large firms. Despite reporting substantial gross assets and income flows, corporate tax contributions appear limited, with VAT payments often negative as can be seen in Table 5.1. The interaction of allowable deductions, capital allowances, and other exemptions can substantially reduce taxable profits, thereby limiting Exchequer receipts.

²⁸⁶ Avolon Annual report, 2022. Bohai Capital, A Chinese firm is a majority owner of Avolon. Accessed CRO.

²⁸⁷ The frequent buying and selling of aircraft, most of which are never present in Ireland, has an impact on the capital account component of the balance of payments. According to the Central Bank ‘*The scale of the industry is now such that industry-specific developments*’ can ‘*add to the recorded capital stock for Ireland and leads to increases in investment, imports and over time, boosts services exports through higher leasing income flows, as well as affecting estimates of operating surplus and the consumption of fixed capital.*’ Source: Central Bank (2017), ‘*The Aircraft Leasing Industry in Ireland: Cross Border Flows and Statistical Treatment*’, accessed <https://www.centralbank.ie/docs/default-source/publications/quarterly-bulletins/quarterly-bulletin-signed-articles/the-aircraft-leasing-industry-in-ireland.pdf?sfvrsn=6#:~:text=The%20scale%20of%20the%20industry,the%20consumption%20of%20fixed%20capital>.

²⁸⁸ Grant Thornton (2018), ‘*Ireland as a location for aircraft leasing and financing*’, accessed <https://www.grantthornton.ie/globalassets/1.-member-firms/ireland/insights/publications/grant-thornton--ireland-as-a-location-for-aircraft-leasing-2018.pdf>

Capital allowances are a valuable fiscal incentive. For 2023 nearly 50% (€21bn) of plant and machinery capital allowances were claimed by aircraft leasing firms.²⁸⁹ It is also possible if the lessee is located in a jurisdiction other than Ireland that both the lessor and lessee may claim capital allowances on the same aircraft (*'double dip'* depreciation). This is because different rules may apply on entitlement to *'tax depreciation'*, for example based on legal ownership versus economic ownership.

For the subset of aircraft leasing firms this chapter is concerned with, *Section 110* debt may be of greater importance. *Section 110* tax relief may also be used in conjunction with accelerated capital allowances for aircraft and aircraft equipment. *Section 110* loans are likely to be from a related entity, a parent or fellow subsidiary, within a group structure. Interest rates can be as high as 18%.²⁹⁰ This means profits subject to tax and corporate tax payments are minimal and many firms have no tax liability.

Table 5.1: Aircraft Leasing Firms and Tax payments 2018-2024 (€m)

Year	No. firms	Net Corporate tax receipts	Tax as % of Gross Tax receipts	VAT Receipts
2024	569	151.5	0.4	-82.7
2023	599	68.5	0.3	-102.8
2022	569	49.6	0.3	-82.7
2021	420	46	0.4	-54.4
2020	515	105.5	0.9	-49.9
2019	483	142.7	1.5	-47.2
2018		54.3	0.6	

Note: Prior to 2021 *Section 110*, Aircraft leasing firms were excluded from aggregate aircraft leasing firms' data.

Source: McCarthy and Yvonne Hayden, Revenue Ireland, Corporation Tax 2024 Payments and 2023 returns, Table 13.

Revenue data show a total population of 4,861 aircraft leasing firms in 2022.²⁹¹ *Section 110* firms are likely a small part (<10%) of this total.

²⁸⁹ Revenue (2024), 'Corporation Tax Payments 2023, and 2022 Returns', accessed <https://www.revenue.ie/en/corporate/documents/research/ct-analysis-2024.pdf>

²⁹⁰ Some *Section 110* holding companies, issued debt to *Section 110* subsidiaries. To avoid double counting, these subsidiaries were excluded. In a few cases *Section 110* holding firms consolidate non-*Section 110* subsidiaries. For example, 2018 consolidated accounts for Dodder Aviation, a *Section 110* firm, had nine subsidiaries one of which was registered in Norway, eight registered in Ireland, and three *Section 110* firms which were excluded.

²⁹¹ Revenue (2025), 'Corporation Tax 2024 Payments, and 2023 Returns', accessed <https://www.revenue.ie/en/corporate/documents/research/ct-analysis-2025.pdf> (See Table 22).

Aggregate data for all leasing firms in Ireland show a profit rate (profit/gross assets) of 2% or under for the period 2013-2022 and under 1% for 2023-2024.²⁹² Table 5.1 includes only those firms that have a corporate tax liability. For 2020, 60% of firms included in this study reported a tax charge of zero or less. Hence the total number of aircraft leasing firms filing a corporation tax return are likely to be much larger than that shown in Table 5.1.

Employment

The impact of the leasing sector on employment is similarly contested. Official and industry estimates vary considerably. The Department of Enterprise (2018) reported approximately 18k persons employed in the '*wider sector*', a figure encompassing aircraft manufacturing, maintenance, and operational activities in addition to leasing.²⁹³

By contrast, PwC (2023) estimated that aircraft leasing supported approximately 8.6k jobs, including both direct and indirect employment. This estimate was based on an expenditure–employment multiplier methodology.²⁹⁴ Such an approach may overstate domestic employment effects if a significant proportion of professional and financial services expenditure accrues abroad.

As will be seen later, most expenditure by *Section 110* leasing firms likely accrues to affiliated firms in other OFCs and major international financial hubs, including the US. If this pattern holds for the wider leasing sector, then the merits of PwC's methodology are open to question on the basis that they are likely to significantly exaggerate employment effects.²⁹⁵

²⁹² CSO (2025), '*Aircraft Leasing in Ireland 2024*', accessed <https://www.cso.ie/en/releasesandpublications/ep/p-ali/aircraftleasinginireland2024/employmentandearnings/> (See: Table 2.1, 2.3 and 3.1).

²⁹³ This figure was stated to include '*manufacturing and services, MRO, leasing and space activities*'. They did note elsewhere in the document that 'almost 1,500 people employed in aircraft leasing activities'. This relates to those working for leasing forms. Source: Department of Enterprise (2018), '*Focus on Aerospace & Aviation*', accessed <https://enterprise.gov.ie/en/publications/publication-files/focus-on-aerospace-and-aviation.pdf>

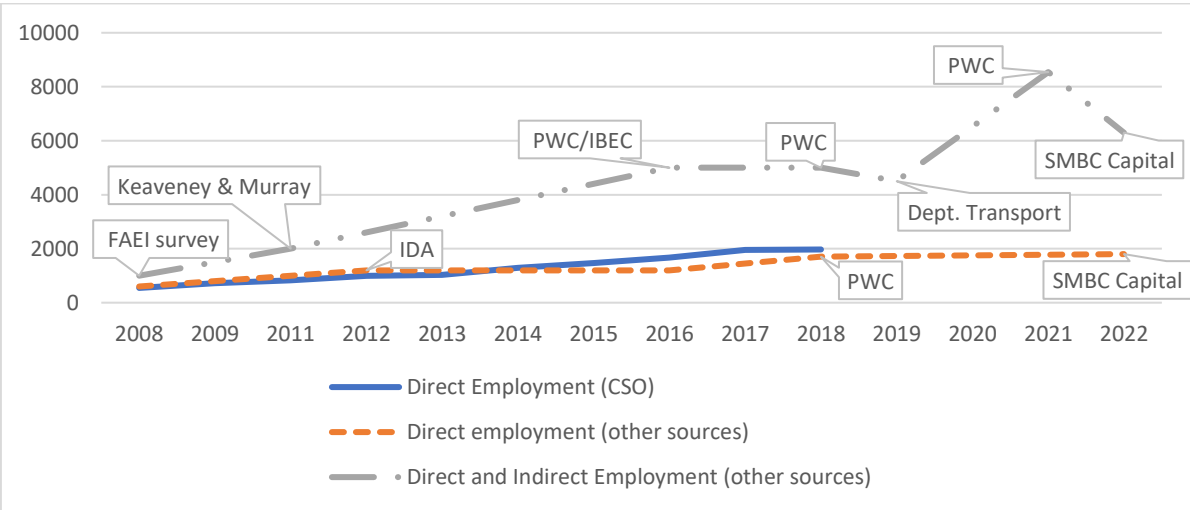
²⁹⁴ PwC (2023), '*Taking Flight 2023: An economic and employment analysis of the aviation leasing industry in Ireland*', accessed <https://www.pwc.ie/publications/2023/taking-flight-2023.pdf>

²⁹⁵ As the chapter later quantifies, local expenditure by *Section 110* leasing firms, as a percentage of their total expenditures was around 3% for period 2015 -2020. These are smaller again when measured as a percentage of revenues.

Estimates of direct employment are more modest. Survey-based industry/academic studies, as compiled by the present author (Figure 5.2), suggest that direct employment in aircraft leasing entities has remained relatively limited. Data from the CSO, arguably the most reliable source, indicate that over the period 2008–2018 direct employment in the sector did not exceed 2K employees.

This evidence calls into question broader claims regarding the scale of the sector’s domestic employment contribution and suggests the need for a more disaggregated assessment of its net economic impact.

Figure 5.2: Employment estimates for leasing sector (various studies/years)



Source: Various studies, *author’s compilation*

This data provided an early indication that the domestic contribution of the aircraft leasing sector was likely to be overstated and that its operational characteristics shared certain features with other forms of shadow banking activity, notably the reliance on complex corporate structures, large tax subsidies with little direct employment created in return.

Of the top twenty global lessors operating from Ireland, this research identified a total of only 1,107 employees reported in their 2023 financial statements (see Appendix 5). More recent CSO data (2025) estimates total sectoral employment at 2,609 full-time equivalents. This figure remains modest when set against the scale of assets under administration and the sector’s reported contribution to economic development.

Section 110 leasing firms as shadow banks

As outlined in **Chapter 1**, *Section 110* was extended to aircraft leasing activities in 2011.²⁹⁶ Ireland was already a key centre for aircraft leasing with most of these firms being charged at the 12.5% rate. One of the stated objectives of the *Section 110* reform was to enhance further the IFSC's attractiveness as a jurisdiction for aircraft leasing start-ups.²⁹⁷

In addition, the regime was also designed to accommodate alternative investment vehicles, including private equity sponsors and asset managers seeking exposure to aviation assets. Notably, the more established leasing incumbents with a presence in Ireland predating 2011, also began to make use of *Section 110* entities within their broader group structures.

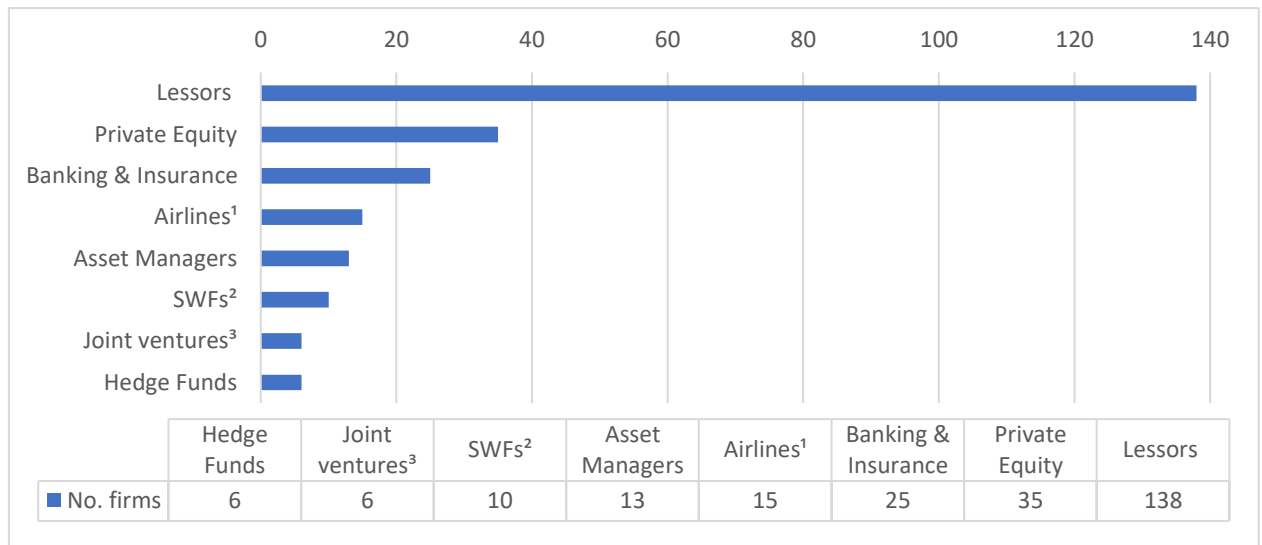
Figure 5.3 classifies the ultimate parent, controlling party, or sponsor of *Section 110* aircraft leasing firms by their industry sector for the year 2018. The evidence indicates that the majority of these vehicles are ultimately sponsored by aircraft leasing firms themselves. However, a non-trivial proportion is associated with other categories of Non-Bank Financial Intermediaries (NBFIs).

These include private equity structures, sovereign wealth funds and other financial intermediaries. In 2018, the aggregate assets of this *Section 110* leasing subpopulation amounted to approximately €20bn, underscoring both its scale and its relevance within the broader ecosystem of structured finance and aviation asset management.

²⁹⁶ Although there is some evidence that leasing firms had availed of this concession before the regime was amended.

²⁹⁷ Another stated objective originated from a proposal to establish a 'green' financial services sector by extending tax relief to carbon financing. However, aircraft leasing was the main beneficiary, because leased aircraft and aircraft engines were accepted as 'plant and machinery' when such assets were included as qualifying assets under the *Section 110* regime.

Figure 5.3: *Section 110* leasing firms' ultimate parent/controlling/sponsor by industry sector (2018)



Source: *Section 110* database. Firms classified by ultimate parent industry sector (2018), *author's calculations*

Notes:

1. These generally appear to be airlines engaged in sale and lease back arrangements whereby they sell an asset to a related SPV to move it off balance sheet, and then lease back the asset.
2. Relates primarily to DAE, owned by the Investment Corporation of Dubai (ICD), a Sovereign Wealth Fund.
3. These relate to joint ventures primarily between private equity firms and lessors.

Data gaps and issues

As discussed in **Chapters 2** and **3**, the Central Bank (2022) requires *Section 110* firms to report to them, '*with some exceptions*'.²⁹⁸ Such exceptions include external *Section 110* firms which are not registered in Ireland, but operate as a branch of Bermudan or Cayman Islands based firm. Revenue guidelines state that residency is sufficient for qualification for *Section 110* status meaning a firm can have both 'external' and *Section 110* status.²⁹⁹

In 2024 there was a total of 3,518 external companies. A total of 427 external companies were registered in the Cayman Islands and 139 in Bermuda.³⁰⁰ Many of these are aircraft

²⁹⁸ Central Bank guidelines (2021, p. 4) state that '*entities incorporated in another jurisdiction, do not fulfil the tax residency test in Ireland*' and are not '*part of the reporting population*'. Source Central Bank (2020), '*Special Purpose Entities (SPE) Registration FAQs*', p. 5.

²⁹⁹ Revenue (2025), '*Section 110: entitlement to treatment*', accessed <https://www.revenue.ie/en/tax-professionals/tdm/income-tax-capital-gains-tax-corporation-tax/part-04/04-09-01.pdf>

³⁰⁰ CRO (2024), '*Companies Registration Office Report 2024*', accessed <https://cro.ie/wp-content/uploads/2025/07/CRO-Annual-Report-2024-Final-ENG.pdf>

leasing companies. This structure could be described as a '*reverse double Irish*' tax strategy. That is, rather than being incorporated in Ireland and tax resident for example, in Bermuda, the firm is incorporated in Bermuda but tax resident in Ireland. However, the same '*double non taxation*' effect is created.

Data on external firms is further limited as most do not file audited accounts. Hence the number of external firms with *Section 110* status are unknown. Eight *Section 110* external leasing firms, with gross assets of €1.8bn, filed audited accounts and were included in the empirical analysis presented later in this chapter.

The Central Bank (2017) stated that it had developed a '*newly created internal Central Bank of Ireland database on aircraft leasing*'.³⁰¹ The data behind this formed the basis of a paper it produced as part of one of its quarterly bulletins. However, the data underlying this publication is not publicly available.³⁰² It is however possible that the financial structure and risks of *Section 110* leasing firms may be similar to the wider non-*Section 110* leasing sector.

The data used in this research is subject to accounting rules and reflects rule changes over time. Accounting for leases is complex and controversial (Cahill 2007). Accounting standards may also vary between Ireland and other countries. For example, there may be differences in the treatment of a capital profit on a sale and leaseback transaction depending on whether the leasing transaction is a finance lease or an operating lease.

A finance lease '*transfers substantially all of the risks and rewards incidental to ownership of the underlying asset*' and '*all other leases are operating leases*' (KPMG 2021). In Ireland these transactions are treated as an immediate profit (Cahill 2007). A new accounting standard was introduced in 2016 and implemented in 2019. KPMG (2019) state the new standard is '*essentially unchanged*' from the previous standard. Both IFRS 16 and IAS 17 allowed some discretion in lease accounting.

³⁰¹ Central Bank (2017), '*The Aircraft Leasing Industry in Ireland: Cross Border Flows and Statistical Treatment*', accessed https://www.centralbank.ie/docs/default-source/publications/quarterly-bulletins/qb-archive/2017/quarterly-bulletin-no-1-2017.pdf?sfvrsn=558bdf1d_12#page=60

³⁰² Nor has the Central Bank published any additional papers utilising this internal dataset. It is not clear if this is updated annually, or was discontinued shortly after.

5.2 Regulation of the sector and arising risks

Aircraft leasing firms are an often-unrecognised part of the NBFi sector. As such, they are not subject to meaningful regulation similar to the other subpopulations dealt with in **Chapters 3 and 4**. Nevertheless, they face certain similar risks, in addition to more general aviation industry risks such as cyclicalities.

Several specific risk factors can be identified. These include geopolitical risks, illustrated by the seizure of leased aircraft by Russia following the imposition of international sanctions. Recent regulatory and fiscal developments also present challenges. For example, evolving EU tax directives may undermine existing financial structures commonly used in aircraft leasing transactions.

In addition, leasing firms that issue *Section 110* debt often have incentives to undertake high levels of borrowing, sometimes at relatively high interest rates. When such leverage is combined with periods of low profitability, operational losses or demand shocks, firms may quickly experience deteriorating balance sheets and, in some cases, negative equity positions.

As was the case in **Chapters 3 and 4**, these financial risks may be obscured by complex ownership arrangements. Aircraft leasing firms frequently employ ‘*orphan*’ structures or Limited Liability Companies (LLCs), which can make it difficult to identify the ultimate beneficiaries and the distribution of risk within corporate groups.

In practice, a significant portion of the financial risk is transferred to lenders (e.g., banks), many of whom are located outside Ireland. At the same time, the international structure of these SPVs may generate fiscal implications for other jurisdictions, including potential revenue losses arising from untaxed or lightly taxed income flows.

These developments should be viewed within the broader context of the growing interconnectedness between NBFIs and the banking sector. Acharya et al. (2024) argue that the ‘*intermediation activities and risks of NBFi*’ and banks are ‘*inextricably intertwined*’, giving rise to what they describe as a ‘*nexus of NBFi–bank systemic risk*’.

One implication of this interdependence is that lender-of-last-resort (LOLR) facilities may have been implicitly extended to parts of the NBFi sector, even though these vehicles

operate outside the traditional regulatory purview. Given the scale of the aircraft leasing industry in Ireland, assessing the risks associated with firms that utilise *Section 110* financing is therefore of considerable importance.

The primary government body overseeing the aviation sector in Ireland is the Irish Aviation Authority (IAA), whose regulatory focus is predominantly on aircraft safety.³⁰³ *Section 110* leasing firms' financial operations are not subject to financial regulation in a meaningful sense.³⁰⁴

For example, one law firm (A&L Goodbody) states '*The leasing of aircraft is not a regulated industry in Ireland.... the principal legislation governing the incorporation of companies in Ireland is the Companies Act*'.³⁰⁵ In contrast the ECB Financial Stability Review states '*Persistent liquidity and leverage vulnerabilities in the NBFIs sector require a comprehensive policy response*' which includes '*monitoring and tackling risks arising from non-bank leverage*'.³⁰⁶

As noted in previous chapters, and as stated by the Central Bank (2024), Irish registered SPVs engaged in leasing or other activities, '*are not authorised by the Central Bank and are not subject to prudential regulation*'. Certain reforms have been proposed but these are relatively modest in nature. For example, '*to pursue cooperation*' and the '*sharing of data*' at EU level and that a list of all *Section 110* firms be published (Dept. Finance 2024).

Wandelt et al (2023) conclude that the global aircraft leasing industry faces challenges that could turn into problems affecting the entire aviation industry. The high dependency of aircraft leasing firms on debt means that these challenges pose a risk to the wider banking system. The Covid pandemic illustrated risks from high borrowing. The debt to

³⁰³ The Irish Aviation Authority (IAA), accessed <https://www.iaa.ie/>

³⁰⁴ One law firm (Arthur Cox 2023) states a *Section 110* firm '*is an unregulated vehicle that can be used to engage in an extensive range of financial and leasing transactions*'. Arthur Cox (2023), '*Submission to Funds Sector 2030 review*', accessed <https://assets.gov.ie/static/documents/arthur-cox-submission-bcbe3607-3cd0-446e-8af3-c0cc10c487fc.pdf>

³⁰⁵ A&L Goodbody, '*Guide to Investing in Ireland*', accessed <https://www.algoodbody.com/media/AircraftLeasing1.pdf>

³⁰⁶ ECB (2025), Financial Stability Review, accessed <https://www.ecb.europa.eu/press/financial-stability-publications/fsr/html/ecb.fsr202505~0cde5244f6.en.html#toc1>

assets ratio for the world's top eight leasing firms rose from 89% in 2020 to 112% in 2021 and fell to 89% in 2024.³⁰⁷

In the *Great Financial Crash* (GFC), the potential failure of a major insurance firm (AIG) and its leasing subsidiary, International Lease Finance Corporation (ILFC) led to the takeover and rescue of AIG by the US Government. ILFC was described in 2008 as the '*largest aircraft lessor in the world*'.³⁰⁸ The collapse of AIG was due to their dependence on securitised debt instruments (Collateralized Debt Obligations) based on mortgages and aircraft.³⁰⁹

Following the impact of the Covid19 pandemic, Nordic Aviation Capital (NAC) based in Ireland entered chapter 11 bankruptcy proceedings in 2022. This led to a reduction of capital by €3.4bn. Prior to restructuring NAC was described as '*the world's largest lessor of regional aircraft*'.³¹⁰ Several major aircraft lessors collapsed in the wake of Covid19.

There are other risks. *Section 110* firms have complex organisational structures. Complex organisational structures can give rise to risks of money laundering.³¹¹ The Department of Finance (2024) states that risks from money laundering and sanctions evasion '*continue to be addressed to avoid impacts on Ireland's reputation as a stable and well-regulated global financial centre*'.

The seizure of leased aircraft by Russia has also drawn attention to international treaties and risks to aircraft leasing firms if they are breached. These are discussed next.

5.3 International Treaties and risk

An Irish Government document states that the growth of aircraft leasing was facilitated by factors such as the protection of lessors by international treaties, and '*as well as the*

³⁰⁷ Air Finance Global (2025), p. 5, and previous years.

³⁰⁸ MarketWatch (17/09/2008), '*Troubles at AIG could bruise aircraft backlogs*', accessed <https://www.marketwatch.com/story/aigs-aircraft-leasing-unit-in-focus-founder-said-to-be-a-bidder>

³⁰⁹ Financial Crisis Inquiry Report (2011), accessed <https://www.govinfo.gov/content/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf>

³¹⁰ Irish Independent (08/01/2025), '*Nordic Aviation Capital sold to Dubai-based lessor*', accessed <https://www.independent.ie/business/nordic-aviation-capital-sold-to-dubai-based-lessor/a2026475371.html>

³¹¹ Central Bank (2023), '*Perspectives on the Evolution of the Investment Funds Sector in Ireland: The Central Bank of Ireland's response to the Department of Finance Funds Sector 2030 Review*', accessed <https://assets.gov.ie/static/documents/central-bank-of-ireland-submission.pdf> (p. 46).

development of a comprehensive network of tax treaties'.³¹² Double taxation treaties (DTTs) are important in ensuring interest on *Section 110* loans can be paid to a relevant country without payment of tax.

Whereas DTTs ensure that cross border lease payments can be paid tax free, international like the *Cape Town Convention* and the *Chicago Convention*. These conventions are key to the functioning of the global leasing industry for several reasons as will be explored in a moment. Ireland was an early signatory to both conventions. However, a new form of geopolitical risk has now raised questions around their future enforcement.

Following the invasion of Ukraine in 2022, the European Union imposed a series of sanctions on Russia, including measures directed at the aviation sector. Among these measures was a requirement that all aircraft leasing arrangements between EU-based lessors and Russian operators be terminated by 28th March 2022.

Russian airlines did not return the leased aircraft within this timeframe, resulting in widespread contractual breaches and violations of the legal protections provided under the *Cape Town Convention on International Interests in Mobile Equipment*.³¹³ At the time, it was estimated that approximately 500 foreign-owned aircraft were leased to Russian operators.

Of these, roughly 330 aircraft were owned by Irish leasing companies, with an estimated aggregate value of between \$3.5bn and \$4.5bn. The total value of legal claims brought against insurance companies in relation to these aircraft has been reported to reach approximately \$15bn. Among the affected lessors, Avolon is reported to have had the largest single exposure, with 152 aircraft leased to Russian operators with an estimated value of \$2.5bn (Johnsson and Lee, 2022).

The seizure of these leased aircraft by Russia, together with the legislative measures they undertook permitting their re-registration within the Russian aircraft registry, represents a breach of international aircraft leasing agreements and of the obligations arising under

³¹² Department of Transport Tourism and Sport, 2015 p. 66)

³¹³ ICAO, '*Cape Town Convention and Protocol*', accessed <https://www.icao.int/sustainability/Pages/Capetown-Convention.aspx>

both the *Cape Town Convention* on International Interests in Mobile Equipment and the *Chicago Convention* on International Civil Aviation.

In particular, the re-registration of aircraft without the consent of the lawful owner or the prior deregistration from the state of original registry is inconsistent with the registration and nationality framework established under the Chicago Convention. These treaty regimes have been central to the development of the modern aircraft leasing industry, as they facilitate the separation of aircraft ownership and financing from the operational management of leased aircraft by airlines.

The Cape Town Convention

The Cape Town Convention gives rights to a creditor to repossess a leased aircraft after a specified period.³¹⁴ The convention supports international cooperation and commercial law standards between states. It was established as an intergovernmental agency (UNIDROIT) in 2001.³¹⁵

Part of the Cape Town Convention, referred to as '*Alternative A*', is specifically designed to meet the requirements of structured financing.³¹⁶ It is central '*to lowering the cost*' and increasing finance '*for aircraft equipment*' (Grey et al 2017). This is achieved by giving certainty to creditors to repossess a leased aircraft after a specified period.

It means that for aircraft leasing, domestic courts and insolvency procedures are not applicable. Debtor protections in insolvency procedures are removed in favour of creditors (Grey et al 2017). This is important because for many countries (particularly civil law countries) insolvency procedures are more '*debtor friendly*' than common law jurisdictions (Denton 2016).

This illustrates the ability of law to selectively code certain assets as capital (Pistor 2019). As such, some claims become durable, enforceable, and prioritised, while others remain ordinary economic interests. In the instance, creditors' claims are deemed more

³¹⁴ ICAO, '*Cape Town Convention and Protocol*', accessed <https://www.icao.int/sustainability/Pages/Capetown-Convention.aspx>

³¹⁵ UNIDROIT, '*Overview*', accessed <https://www.unidroit.org/about-unidroit>

³¹⁶ ICAO, '*Cape Town Convention and Protocol*', accessed <https://www.icao.int/sustainability/Pages/Capetown-Convention.aspx>

legitimate than that of debtors, users or providers of services to the asset. In 2014 Ireland enacted measures to introduce the Cape Town Convention insolvency procedures in law.

This states that on the occurrence of an '*insolvency event*', the lessee must give possession of the aircraft to the creditor without any further action by the creditor and there can be no recourse to court action (Ager and O'Neill, 2017). Breaches by the Russian Federation Government, a signatory of this convention, raise issues as to its enforceability.

The Chicago Convention

The Chicago Convention requires aircraft to be registered in only one State. This State then ensures compliance with the rules of the Chicago Convention. It is administered by the International Civil Aviation Organisation (ICAO) a U.N. body established in 1944, that ensures '*uniformity and mutual recognition of aviation licences and certificates*'.³¹⁷

The Chicago Convention allows the state of registration and the state of operation to sign a bilateral agreement which transfers responsibilities for regulation and safety to the state of the operator (Wedenig and Hanley 2022). This is important for centres of aircraft leasing such as Ireland.

It means that most commercial leased aircraft owned and financed in Ireland, have key functions, such as maintaining airworthiness, that take place outside Ireland in the state of the operator. Hence most aircraft leasing employment in Ireland involves the provision of corporate, tax and legal services with a consequently relatively low proportion of Irish expenditures.

Eighteen firms in the current study had aircraft leased in Russia. These firms reported asset write downs of £313.7m for 2021. Seven firms reported losses and write downs greater than 50% of assets. Most of these firms also stated that insurance claims had

³¹⁷ UNIDROIT, '*Overview*', accessed <https://www.unidroit.org/about-unidroit>

been lodged. An estimated total insurance claim of \$8 - \$15bn has resulted from Russian seizure of leased aircraft, although these claims are contested by insurance firms.³¹⁸

Most aircraft leased to Russia were registered in Ireland and Bermuda. Both countries revoked certificates of airworthiness, thus largely preventing Russian leased aircraft flying internationally. On March 14th 2022 Russia enacted legislation allowing Russian based airline operators to reregister these aircraft in breach of the Chicago convention, as there was no agreement to allow certification in Russia, the operating state (Wedenig and Hanley 2022).

Russian Insurance company NHS, purchased 17 jets belonging to Irish based leasing firm AerCap, for \$465 million.³¹⁹ A Russian state-owned insurance company purchased 100 seized aircraft for \$2.5bn.³²⁰ Important issues arise relating to differences between the price received and possible insurance claims based on the pre-Ukrainian war market price may have arisen.

Unilateral breaking of international conventions by Russia and possibly in the future by other countries poses additional risk to all aircraft leasing firms and their lenders. It is part of the retreat of '*rules based*' international trade and investment, and is also reflected in current US administration policies (Coates 2025).

The next section provides empirical analysis of the subpopulation of *Section 110* leasing firms over the period 2010-2020 and considers financial risks arising from losses, negative equity and their borrowing structure.

5.4 EU Directives and risks to *Section 110* finance

As touched upon in **Chapter 1**, EU directives have the potential for adverse impacts on the *Section 110* regime. As the main tax advantage of *Section 110* loans is the tax

³¹⁸ Reuters (14/12/2022), 'Aircraft lessors sue insurers for \$8 billion over trapped Russian planes' <https://www.reuters.com/business/aerospace-defense/aircraft-lessors-sue-insurers-65-billion-over-trapped-russian-planes-2022-11-21>

³¹⁹ Reuters (06/09/2023), 'Lessor AerCap agrees settlement over Aeroflot jets stranded in Russia', accessed <https://www.reuters.com/business/aerospace-defense/aircraft-lessor-aercap-settles-russia-aeroflot-claim-645-million-2023-09-06/>

³²⁰ Reuters (20/01/2024), 'Aviation lessor settlements with Russia over trapped planes', accessed <https://www.reuters.com/business/aerospace-defense/aviation-lessor-settlements-with-russia-over-trapped-planes-2024-01-31/>

deductibility of Irish interest payments which can reduce taxable profits to near zero, and the non-taxation of those interest payments in another country, the OECD BEPS initiative addressed this issue in two reports.

The first report is aimed at hybrid financial instruments.³²¹ The second report deals with the situation where a portion of income is not taxed in the branch or residence jurisdiction.³²² These two reports formed the basis of an EU Directive aimed at limiting Hybrid mismatches between two countries which result in double non-taxation.³²³

Interest limitation Rule (ILR)

Restrictions on the level of interest that may be tax deductible are a key part of the Hybrid Directive. The new rules mean net interest paid (gross interest paid minus interest received) is tax deductible up to a limit of 30% of earnings before deduction of interest and tax (EBIDTA).³²⁴ Interest payments above that level may be deferred until they are tax deductible.

The new rules could mean that for some leasing firms with high gearing levels, interest payments would no longer be tax deductible. Some forecast the new rules to ‘*have a significant impact on Section 110 companies*’ (Grant Thornton 2022).³²⁵ The detailed rules are complex. Irish Revenue Guidance on the ILR (Part 35D-01-01 manual 2023), has 67 pages of examples showing complex organisational and financial structures.

They also reflect significant lobbying by interest groups. PwC in a submission to the Department of Finance argued for an extension of the definition of interest paid to

³²¹ OECD (2015), ‘*Neutralising the Effects of Hybrid Mismatch Arrangements, Action 2 - 2015 Final Report*’, accessed https://www.oecd.org/en/publications/neutralising-the-effects-of-hybrid-mismatch-arrangements-action-2-2015-final-report_9789264241138-en.html

³²² OECD/G20 (2017), ‘*BEPS Project Neutralising the Effects of Branch Mismatch Arrangements Action 2: Inclusive Framework on BEPS*’, accessed https://www.oecd.org/en/publications/neutralising-the-effects-of-branch-mismatch-arrangements-action-2_9789264278790-en.html

³²³ Council Directive (EU) 2017/952 of 29 May 2017, accessed <https://eur-lex.europa.eu/eli/dir/2017/952/oj/eng> amending Directive (EU) 2016/1164 as regards hybrid mismatches with third countries, accessed <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017L0952>

³²⁴ Revenue (2025), ‘*Anti-base erosion profit shifting (BEPS) measures*’, accessed <https://www.revenue.ie/en/companies-and-charities/anti-beps-measures/interest-limitation-rule.aspx>

³²⁵ Grant Thornton, accessed <https://www.grantthornton.ie/insights/factsheets/irelands-interest-limitation-rules>

include: *'interest income on all forms of debt'* and *'other income economically equivalent to interest and income earned in connection with the raising of finance'*.³²⁶

The Finance Act 2021 reflects these submissions. The definition of interest paid includes not only *'amounts economically equivalent to interest'* but also any expenditures *'arising directly in connection with raising finance'* (Finance Act 2021). As a result, a major law firm (Arthur Cox 2020) stated that *'Most transactions involving Section 110 companies will be unaffected by new rules'* because of the way *'Section 110 companies are established and governed'*.

This is because *'taxable interest equivalent'* and *'deductible interest equivalent'* (including interest on PPL debt) match so that the company should not have any exceeding borrowings costs. Arthur Cox (2021) state *'Very helpfully and correctly from a policy perspective, "taxable interest equivalent" and "deductible interest equivalent" are defined symmetrically'*.

PwC stated that Ireland has adopted a *'practical approach'* incorporating the anti-avoidance directive into Irish tax law which *'allows taxpayers to apply (and Irish Revenue to police) the rules in a sensible manner'* (PWC 2020).

An alternative view, one held by this author, is that this and other provisions undermine the stated intentions of the Hybrid Directive and OECD Action 2, that is *'to neutralise the effect of hybrid mismatch arrangements'*. A proposed EU Directive on *'shell companies'* could have a greater impact still, by requiring all companies to have a minimum level of employment.³²⁷ Something that would directly impact on SPVs.

The next section provides empirical analysis of the subpopulation of *Section 110* leasing firms over the period 2010-2020 and considers risks arising from losses, negative equity and their financing structure.

³²⁶ PWC (2021), *Interest limitation Feed Back Statement*, <https://assets.gov.ie/static/documents/pwc-d1eb8dbc-2b29-4472-8f46-5e57798d7733.pdf>

³²⁷ EU Commission (2021), *'Unshell: A proposal to fight against the misuse of shell entities'*, accessed https://taxation-customs.ec.europa.eu/taxation/business-taxation/unshell-proposal_en

5.5 Empirical analysis of subpopulation: Risks from Losses and Financing

The size of the subpopulation varies through time as a result of new incorporations and liquidation of existing firms. This resulted in a total study population of 527 firms. The number of firms included increased from 17 in 2010 to 148 in 2015, following increased eligibility for *Section 110* tax relief in 2011 and reached a peak of 240 in 2018.³²⁸

The below empirical analysis details the deterioration in the financial performance of this subpopulation during the period of the Covid19 pandemic which severely disrupted the global aviation sector. Airline revenues collapsed as international travel restrictions and reduced passenger demand led to widespread aircraft groundings, renegotiation of lease agreements and delays in lease payments.

As we'll see, aggregate losses were reported in a majority of years in the study period. Prior to the Covid19 pandemic, smaller reported losses arose from profit extraction via high interest costs on intercompany debt. However, as show there was a significant increase in reported losses, negative equity and declines in asset values over the period 2019-2020.

This is reflective of the adverse economic conditions which negatively affected aircraft valuations and the recoverability of lease receivables, contributing to the increase in reported losses among aircraft leasing firms. However, it is of interest that despite such conditions internal cashflow remained positive.

This likely reflects the fact some element of profit shifting/extraction was still taking place within respective leasing groups. It also appears firms attempted to offset losses by re-evaluating intercompany *Section 110* loans, which were reported as gains. Again, raising questions about the *arm's length* nature of these transactions.

Table 5.2 quantifies the gross assets of firms included in the study for the period 2010–2020. In 2020, gross assets amounted to €17.5bn, representing approximately 8.0% of the Central Statistics Office (CSO) estimate of the total size of the aircraft leasing sector in Ireland. Over the sample period, firms reported aggregate pre-tax losses in most years.

³²⁸ A small number of leasing firms were operating with *Section 110* status prior to the regime being expended to encompass leasing as a qualifying asset for this tax status.

However, these losses were generally small relative to gross assets, remaining below 1% until 2019–2020. In 2020, pre-tax losses increased significantly, reaching 4.6% of gross assets, reflecting the sectoral impact of the Covid19 pandemic discussed above.

Table 5.2: Pre-tax Profits and Gross Assets of 'S. 110' Leasing Firms 2010-2020 (€m)

Year	No. firms	Pre-tax profits ¹	Gross Assets	Shareholder funds	Gross Assets of external firms
2020	219	-802.9	17,581.7	-983.6	1,862 - (8 firms)
2019	233	-636.8	21,090.2	-462.2	1,966 - (7 firms)
2018	240	-194.3	20,791.6	97.3	1,887 - (6 firms)
2017	228	-145.7	17,537.1	- 22.6	1,082 - (5 firms)
2016	188	-75.1	15,883.8	23.4	244 - (4 firms)
2015	148	78.0	12,576.8	50.3	229 - (4 firms)
2014	71	-55.0	8,070.6	16.6	147 - (4 firms)
2013	47	--23.2	4,659.9	15.6	-
2012	18	-8.9	1,420.3	13.3	-
2011	28	-2.0	1,476.0	3.1	-
2010	17	0.0	780.3	0.08	-

Notes: (1). Most firms have a December 31st year end. Firms whose accounting year ends between January 1st and June 30th are allocated to the previous calendar year in all tables.

(2) Blanks indicate that no 'external' firms were identified for these years.

Table 5.3 expands on this by reporting the number of firms recording losses and negative equity over the same period. The proportion of firms reporting losses peaked in 2020 at 51%. Similarly, the share of firms with negative equity reached its highest level in 2020, at 56%. Among firms with negative equity, the deficit relative to gross assets increased markedly, rising from 4.3% in 2018 to 21% in 2020.

The data further indicates that, for the years 2018–2020, the majority of the aggregate deficit was concentrated among a relatively small number of firms with negative equity exceeding 10% of gross assets. In 2020, 74% of the total deficit was attributable to 58 firms, representing 26% of the subpopulation study. In 2019, 79% of the deficit was accounted for by 36 firms, or 15% of subpopulation study.

Although Table 5.2 shows aggregate reported losses in most years, gross internal cash flow (defined as profits before tax plus depreciation) remained positive throughout the period (Table 5.4). Impairment charges increased substantially in 2020, significantly reducing internal cash flow relative to earlier years. For many firms, however, the impact of these impairment charges was partially offset by the recognition of income from

revaluation gains on loans, including *Section 110* loans, as well as gains arising from aircraft sales.

Table 5.3: Firms Reporting Pre-tax losses and Negative Equity 2010-2020 (€m)

Year	% Showing pre-tax losses ¹	Size of net losses	% Showing Shareholder deficit	Shareholder deficit for firms with negative equity	Deficit as % of Gross Assets	% of total pop. with Negative Equity > 10% of Assets	Size of Deficit	Deficit as % of all firms reporting equity Deficit
2020	51%	-952.4	56%	--1,196.0	-13.1%	26%	880.7	-74%
2019	45%	-746.2	45%	- 795.8	-0.9%	15%	606.9	-79%
2018	40%	-320.5	43%	-307.1	-4.3%	10%	196.4	-64%
2017	46%	-255.6	41%	-374.3	-6.8%	9%	166.6	-45%
2016	42%	-190.6	34%	-322.2	-6.2%	6%	102.0	-32%
2015	34%	-88.0	32%	-196.2	-3.8%	7%	80.8	-41%
2014	45%	-73.2	28%	-70.3	-2.0%	4%	16.3	-23%
2013	38%	-37.3	19%	-26.9	-4.8%	9%	13.9	-52%
2012	22%	-15.3	17%	-8.7	-4.2%	0%		
2011	18%	-3.8	14%	-3.0	-0.8%	0%		
2010	0	0	6	0	0%			

Note: (1). A small number of firms reporting zero profits were excluded for each year

Losses are also reduced by including maintenance reserves in the income statement.

Table 5.4 in addition to showing positive cashflow, also shows an increase in capital gains from aircraft sales in 2019-20, and large variability in reported capital gains for earlier years. Hence, despite firms reporting both losses and negative equity most firms continued to pay interest on *Section 110* loans. Table 5.4 also indicates the significant value of depreciation charges.

Table 5.4: Internal Cash Flow, Impairment Charges and Capital Gains 2010-2020 (€m)

year	N	Pre-tax Profits/ losses (1)	Depreciation (2)	Internal cash flow (1) + (2)	Impairment Charge	All Capital Gains included in pre-tax profits ¹	Capital Gain from Asset Sales only ²
2020	219	-802.9	860.5	57.6	805.4	179.8	97.6
2019	233	-636.8	959.7	322.9	474.5	135.6	56.9
2018	240	-194.3	866.6	672.3	96.2	84.0	22.9
2017	228	-145.7	720.0	574.3	52.4	42.4	13.0
2016	188	-75.1	565.1	490.0	20.8	66.5	12.2
2015	148	78.0	351.6	429.6	4.7	22.3	16.9
2014	71	-55.0	257.8	202.8	0.3	6.9	2.0
2013	47	--23.2	109.5	86.3	0	5.4	0
2012	18	-8.9	31.6	22.7	0	4.4	0.4
2011	28	-2.0	8.1	6.1	0	0	0
2010 ³	17	0.0	0.0	0.0	0	0	0

Notes: 1. All firms in 2010 were financial leasing firms with no provision for depreciation.

2. Aircraft and aircraft equipment.

Section 110 firms are often described as '*bankruptcy remote*'. Tables 5.2, 5.3 and 5.4 are significant because they show large losses, negative equity and debt write downs. This means that owners incurred substantial losses. Those providing loans face substantial debt write downs and increased risks of bankruptcy. This is discussed further in the next section.

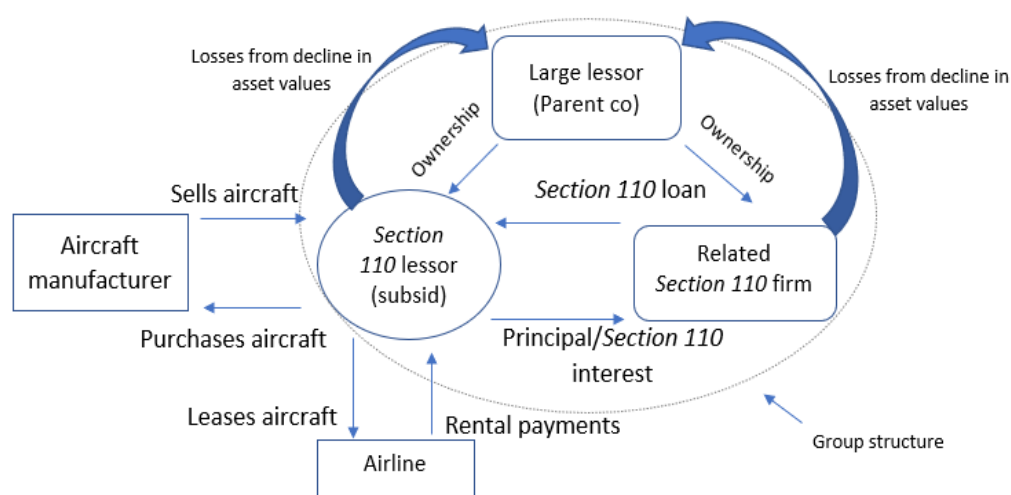
Financing risks

Related to those risks discussed above, are the risks related to their debt financing structure. As NBFi type firms, these leasing vehicles can be highly leveraged. This business model is designed to amplify returns but can equally amplify risks. Income streams are heavily dependent on the performance of the lease contracts and the market value of aircraft assets.

Adverse shocks like Covid19 can thus have a disproportionate impact on firms financial position. Particularly if they are then required to refinance under less favourable conditions. The post pandemic increase in refinancing costs would later highlight the sensitivity of highly leveraged aircraft leasing structures to changes in credit market conditions.

As a result, the same risk transference mechanism observed in **Chapters 3** and **4** can occur (see Figure 5.4), whereby significant declines in asset values and losses can then pose contagion effects for parent lessors. These parent firms then having to recognise losses on their balance sheets, and suffer the consequences. This is discussed in further detail in a subsequent section.

Figure 5.4: Illustration of *Section 110* leasing transaction within group structure



Source: Author's illustration

Table 5.5 looks at key balance sheet financing indicators. It demonstrates that borrowing accounted for more than 90% of external finance throughout the study period. Within total borrowing, *Section 110* loans represented a significant component, accounting for approximately 33% to 37% of borrowing in most years. The next largest source of external funding was security deposits.

The table also shows that new equity subscriptions were limited. The annual value of newly subscribed equity reached a peak of €103m in 2018, while the median value of new equity issued across all years was zero. In many cases, firms reported only nominal capital contributions, often just \$1, and company accounts frequently indicated that even these nominal amounts remained unpaid.

Table 5.5: Key Balance Sheet Financing indicators 2010-2020 (€m)

Year	N	Total external finance (1+4)	Balance Sheet gross borrowing ¹ (1)	Balance sheet S.110 Loans ² (2)	Balance Sheet Shareholder funds (3)	New Equity	Security deposits (4)	Letters of Credit
2020	219	18,566.3	17,507.9	5,978.3	-983.6	67.8	1,058.4	58.1
2019	233	21,552.4	20,245.9	7,342.1	-462.2	95.7	1,306.5	62.9
2018	240	20,694.3	19,391.7	6,695.7	97.3	103.0	1,302.6	70.6
2017	228	17,559.7	16,393.8	4,746.9	- 22.6	78.8	1,165.9	79.6
2016	188	15,860.4	14,792.6	4,661.2	23.4	84.0	1,067.8	147.2
2015	148	12,526.5	11,787.8	4,397.6	50.3	32.6	738.7	66.0
2014	71	8,054	7,693.1	2,778.4	16.6	5.4	360.9	40.6
2013	47	4,680.4	4,424.2	1,474.9	15.6	4.5	256.2	45.9
2012	18	1,407	1,298.9	750.4	13.3	0	108.1	1.5
2011	28	1,472.4	1,410.1	231.4	3.1	5.1	62.3	1.7

2010	17	780.2	780.2	0.0	0.08	0	0	0
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Notes:

(1). Estimated as a residual = Gross assets minus (security deposits and shareholder funds). This is a slight overestimate of borrowing because all current liabilities are included.

(2) Firms were excluded where PPL loans were not separately identified.

Debt financing may be structured in multiple tranches with differing levels of risk and corresponding interest rates, as illustrated in Table 5.6. The interest rate applied to each tranche reflects its priority in the payment hierarchy for interest and principal. Tranches with the lowest priority carry the highest interest rates, typically ranging from 10% to 20%.

The main form of external financing is non-PPL debt. There are some exceptions. Table 5.6 example (2) shows PPL loans provide 60% of total borrowing. Most *Section 110* loans are provided by a connected party, a parent company or a fellow subsidiary. All loans in Table 5.6 example 1, were provided by a parent resident in Luxembourg.

Table 5.6: Debt Structure examples of two firms for 2020 (\$m)

(1) SASOF III (E) Aviation Ireland DAC 2020	Interest Rate %	Amount
<i>Class A</i>	5.1%	5.3
<i>Class B</i>	7.3%	10.6
<i>Class C</i>	18%	15.6
<i>PPL loan</i>	Variable	3.8.
(2) Panamera Aviation Leasing IV		
<i>Secured Loan from DVB Bank</i>	4.2% & 3.7%	29.6
<i>Intrafirm subordinated PPL loan</i>	10.9%	46.9

Interest on PPL loans is often accrued and thus adds to the level of debt financing. High borrowing which matches assets, means low contributed equity (Table 5.5). Parent company external debt is also likely to be high. Negative equity for most firms (Table 5.3) will also be reflected in parent company equity. It is thus not surprising that in recent years holding companies with several *Section 110* subsidiaries have required restructuring.³²⁹

Table 5.7 shows estimated aggregate interest payments on debt financing. Aggregate interest payments mostly varied between 4.9% and 7% for 2013-2020. Estimated interest

³²⁹ In 2023 Voyager Aviation Holdings, LLC, the ultimate parent of several *Section 110* firms entered section 11 bankruptcy proceedings in New York. Source: Panamera Aviation Leasing IV, 2022 accounts note 23.

rates for *Section 110* firms, that disclose both the interest and capital value, are larger and varied between 9.4% and 11.2%.

For 2019-2020, *Section 110* loans provided approximately 25% of gross borrowing but accounted for 50% of interest payments. There appears to be no trend in the aggregate rate of interest over the study period, reflecting stable ECB interest rates. There are also some instances of reduced, eliminated, or repaid interest on *Section 110* loans for 2019-2020.

As discussed in earlier chapters, interest payments received outside Ireland on *Section 110* loans are treated for tax purposes as a dividend distribution. Most PPL interest is paid to a related party. Interest rates on non- PPL loans (interest rate > 10%) thus may also reflect '*profit*' distribution. The large difference between aggregate interest payments on non-*Section 110* loans and *Section 110* loans indicates the significance of this fiscal incentive.

Table 5.7: Interest Rates and borrowing 2010-2020 (€m)

Year	N	Gross Interest	Balance Sheet value of Gross Borrowing	Int. rate	Interest paid on S. 110	Balance Sheet value of S. 110	Interest rate
2020	219	959.9	17,507.9	5.5%	479.2	4,293.0	11.2%
2019	233	1,199.8	20,245.9	5.9%	596.0	5,457.5	10.9%
2018	240	1,295.1	19,391.7	6.7%	601.3	5,979.8	10.1%
2017	228	955.0	16,393.8	5.8%	425.4	4,052.5	10.5%
2016	188	1,033.0	14,792.6	7.0%	437.4	3,952.2	11.1%
2015	148	635.7	11,787.8	5.4%	374.7	3,971.3	9.4%
2014	71	393.5	7,693.1	5.1%	247.8	2,639.8	9.4%
2013	47	217.7	4,424.2	4.9%	148.4	1,468.3	10.1%
2012	18	167.6	1,298.9	12.9%	60.4	750.4	8.0%
2011	27	53.6	1,410.1	3.8%	6.8	231.4	2.9%
2010	16	38.1	780.2	4.9%	0	0.0	0%

5.6 Organisational Structure of *Section 110* leasing firms

The previous section noted that *Section 110* aircraft leasing firms exhibit a number of risk transfer mechanisms, similar to those analysed in the other subpopulations examined in this thesis. Such risks are similarly transferred to external and/or related counterparties, including providers of debt finance, suppliers of loan guarantees, and insurance providers.

This became particularly evident during the Covid19 period and subsequent geopolitical developments. For example, losses related to aircraft seized in Russia were subject to insurance claims. Oil price shocks driven by wars and geopolitical conflict may also generate adverse consequences for leasing firms. If airlines reduce flight capacity or enter bankruptcy, this has knock-on effects for lessors through lower lease revenues, repossession costs, and potential asset impairments.

The use of an '*orphan*' ownership structure as an assumed risk reduction mechanism appears to be less prevalent among aircraft leasing firms than in the other two subpopulations analysed. Nonetheless, such arrangements remain in use. In recent years, between 31% and 37% of *Section 110* leasing firms reported that they were owned by a charitable trust or simply a trust. In some cases, firms with trust ownership also disclosed the identity of the beneficial owner.

However, the share of group assets held by trust-owned firms declined over the study period, falling from 53% in 2014 to 33% in 2020. By 2020, although these firms were formally owned by a trust, approximately one-third were consolidated in the financial statements of a parent company. Consolidation implies that the parent exercises control over the subsidiary, indicating that the firm functions as a controlled entity within a wider corporate group.

Consistent with this interpretation, some firms reporting trust ownership also referred in their accounts to financially linked entities as '*sister*' firms. Under Irish corporate law, consolidation implies that a holding company has control or a '*dominant influence*' over a firm (Companies Act 2014, section 7), which appears inconsistent with the notion of independent ownership through a trust structure.

Recent guidance issued by the Irish Revenue Commissioners implementing interest limitation rules under the EU Anti-Tax Avoidance Directive may also affect these arrangements. The guidance indicates that the deductibility of interest on profit participating loans (PPLs) may be restricted where such loans are provided by '*specified persons*'.

This term includes companies that control, or are controlled by, the qualifying company (Revenue 2022). On a strict interpretation, this provision could imply that entities

operating through an orphan structure may not qualify for the full tax benefits associated with *Section 110* loans. However, legal commentary suggests that other forms of documentation '*may be considered*' in determining control or qualification beyond formal share ownership (Arthur Cox 2021).

Given the common bilateral relationship between these *Section 110* firms and the jurisdiction of their reported parent/ultimate parent company, which is often a 'tax haven', this should warrant scrutiny. For example, between 2017 and 2020, 52% to 58% of firms reported a parent/ultimate parent in a '*tax haven*'.

These firms with a parent/ultimate parent in a tax have location accounted for between 40% and 47% of gross assets. The Cayman Islands was the main tax haven location followed by Bermuda. Some parent companies were also located in the jurisdictions of the British Virgin Islands, Jersey and Luxembourg.

Location in a tax haven is particularly attractive to aircraft leasing firms because of low/no tax, light touch regulation and minimal disclosure requirements. For cross border income this can create double non taxation structures. One Irish based law firm states in relation to a location in the Cayman Islands:

'With a Cayman exempted company, there is no requirement to appoint auditors, or to hold an annual general meeting, nor is there any statutory prohibition on the company giving financial assistance for the purchase of its own shares, so long as the directors are acting in the company's best interests. The corporate records of Cayman exempted companies are not publicly available and there is no requirement for directors or officers of the company to be resident in the Cayman Islands'.

Other services may include an '*Encrypted password-protected briefcase which can be purged centrally*'.³³⁰ This highlights significant opacity issues and the provision of niche services which could be attractive for certain arbitrage or even potentially illicit practices.

Location In Bermuda has similar attractions. In addition, Bermuda is the largest location for registration and documentation relating to airworthiness.³³¹ This is crucial in the

³³⁰ Dillon Eustace, '*Company Secretarial Services (Cayman)*', accessed <https://www.dilloneustace.com/expertise/cayman-islands-services/legal-and-company-management-services/company-secretarial-services/>

³³¹ Bermuda Civil Aviation, accessed <https://www.bcaa.bm/>

resale and leasing of aircraft. Half of all commercial airlines (740 aircraft) operating in Russia were registered in Bermuda, and the majority of these were leased by Irish registered aircraft leasing firms (Palazzo 2022).

In the context of increasing geopolitical risks, including US and EU sanctions and the retaliatory confiscation of aircraft by Russia, the growing share of Chinese owned *Section 110* aircraft leasing firms is also noteworthy. In 2021 China enacted the Anti-Foreign Sanctions Law, which authorises the Chinese government to introduce countermeasures against foreign states imposing sanctions.³³² Such countermeasures may include asset freezes, restrictions on transactions, and potentially the seizure or re-registration of assets located in China.

Chinese ownership of *Section 110* firms has increased from 7% in 2015 to 21% in 2020. Their share of gross assets doubled from 3% to 10% over the same period. The total number of Chinese owned aircraft leasing firms, (*Section 110* and non-*Section 110* firms), is likely to be much larger. For example, a major Irish owned leasing firm, Avolon, was purchased by Bohai a subsidiary of China Construction Bank in 2015.³³³ Subsequently Avolon purchased an Irish based leasing firm, Castlelake, for €1.2bn.³³⁴

For more recent years, over 74% of Chinese owned firms, had a parent/ultimate parent located in a tax haven, mostly the Cayman Islands followed by Bermuda. Some Chinese owned aircraft leasing firms (*Section 110* and non-*Section 110* firms) are external firms.

5.7 Chapter Conclusion

The Irish aircraft leasing sector is regarded as a ‘*success story*’ and a key part of Ireland’s industrial strategy. This is despite low direct employment, low linkages with the domestic

³³² UN Trade and Development Policy (2021), ‘*China adopts Anti-Foreign Sanctions Law*’, accessed <https://investmentpolicy.unctad.org/investment-policy-monitor/measures/3739/china-adopts-anti-foreign-sanctions-law>

³³³ Irish Independent (16/10/2015), ‘*China Construction Bank establishes \$500m aircraft leasing business in Dublin*’, accessed <https://www.independent.ie/business/irish/china-construction-bank-establishes-500m-aircraft-leasing-business-in-dublin/34115021.html> Irish Times, 1 Jan. 2025).

³³⁴ Irish Times (17/01/2025), ‘*Avolon completes purchase of portfolio of planes in deal worth almost €1.2bn*’, accessed <https://www.irishtimes.com/business/2025/01/17/avolon-completes-purchase-of-portfolio-of-planes-in-deal-worth-almost-12bn/>

economy and low tax payments. Total sectoral employment for 2024 was low at 2,609 fulltime equivalent employees, even though assets amounted to €267bn.³³⁵

Corporate tax payments are minimal at €151m for 2024, and VAT receipts are negative at -€87.8m.³³⁶ When it comes to the *Section 110* leasing subpopulation, low domestic linkages are even more pronounced. Most expenditures are likely to take place outside Ireland. Audit, tax compliance and corporate services are the only certain Irish expenditures.

Local expenditure as a % of total expenditures varied between 3.2% and 3.8% for 2015 - 2020. As a proportion of revenue, expenditures varied between 0.2% and 0.4%. Total local expenditures will be higher because for example, of legal fees. Legal fees are not disclosed by most firms. Including these payments may increase local expenditures by 2-3%.

Professional expenditures are highly concentrated amongst a select number of Dublin based auditing, legal and CSP firms. Although there has been a slight reduction in the level of concentration since *Section 110* was first expanded to include aircraft leasing (see **Chapter 1**). That is, it looks at the % of *Section 110* firms serviced by the top six accounting firms, and the top five legal/CSP firms across these two years. It is possible that this level of concentration could be reflective of the leasing sector as a whole.

Table 5.8: % of *Section 110* firms serviced by top auditing, legal and CSP firms (2011 vs 2020)

Type of Service provision	% of subpopulation serviced by	2011	2020
Accountancy/audit/tax	'Big Six' ¹	99.9%	93%
Legal advice	Top five ²	96.2%	70.3%
Corporate Service Provision	Top five ³	100% ⁴	71.9%

Notes: (1) This includes KPMG, PWC, EY, Deloitte, Grant Thornton, BDO

(2) This includes Arthur Cox, Matheson, A&L Goodbody, Mason Hayes, McCann Fitzgerald

(3) This includes Deutsche International Corporate Services, TMF Administration, Matsack Trust, Capital International, PAFS Ireland, MFD Secretaries

³³⁵ CSO (2025), 'Aircraft Leasing in Ireland 2024', accessed

<https://www.cso.ie/en/releasesandpublications/ep/p-ali/aircraftleasinginireland2024/employmentandearnings/>

³³⁶ Revenue (2025), 'Corporation Tax 2024 Payments, and 2023 Returns', accessed

<https://www.revenue.ie/en/corporate/documents/research/ct-analysis-2025.pdf> (Table 13).

(4) In 2011 Deutsche International Corporate Services acted as CSP for 74% of *Section 110* leasing firms, but it was no longer active by 2020

Table 5.8 tells us little about how their dominant position as fee recipients is reflected in indirect employment creation within firms. Table 5.9 examines the top six auditing firms and the top five law firms in terms of the number of professionals identified as serving on their respective aviation leasing advisory teams. This is intended to give an indication of the relationship between this level of concentration and the creation of employment within these firms.³³⁷

It demonstrates the small size of accounting and legal firms' respective aviation advisory teams. Hence even despite the concentration of benefits amongst firms, it is likely these benefits are quite concentrated within firms (e.g., for a select group of partners in law firms).

As we can see below the '*Big Six*' auditing firms reported that a total of 85 professionals worked on their respective leasing teams in 2024. This was out of a total number of 19,761 employees for all six. For the top five law firms, 46 professionals were stated to be working on their respective leasing teams, out of a total number of 3,890 employees.

It is unlikely that those identified above are the only professionals working on leasing related activities within their firms. Professionals working in different functions (e.g., tax) may also work on leasing related activities from time to time. Nevertheless, these figures still indicate that *Section 110*, and indeed the wider leasing sector, likely only makes a marginal contribution to indirect employment.

Despite the low domestic linkages of the sector, aircraft leasing firms pose risks for financial stability as they are a major part of the largely unregulated NBFi sector in Ireland. The aircraft leasing sector is subject to particular risks. Apart from inherent cyclicity, risks arise from high debt equity ratios, reported losses and negative equity. As a result of the linkages via ownership and sources of finance from NBFi firms to the regulated banking sector, risk is transferred to regulated financial institutions many of which are outside Ireland.

³³⁷ This relates to teams servicing the sector as a whole, rather than the solely the *Section 110* subpopulation.

Table 5.9: No. professionals working for top accounting/law firms' aircraft leasing teams

Auditing Firm	No. employees	No. leasing partners	Total no. working on leasing team (incl. Partners) (as of 15/03/2024)
PWC	3,600 ³³⁸	3	9 – Tax (3), Finance (4), Audit/Assurance (2)
KPMG	4,326 ³³⁹	4	27 – Tax (9), Finance (9), Audit/Assurance (9)
Deloitte	3,200 ³⁴⁰	5	15 – Tax (11), Finance (1), Audit/Assurance (2) Strategy (1)
E&Y	5,035 ³⁴¹	5	9 identified (on team) – Tax (2) Finance (4) Audit/Assurance (3)
Grant Thornton	3,000 ³⁴²	1	16 identified (on team) – Finance (6) Audit/Assurance (3) Advisory (3) Consulting (3) Risk (1)
BDO	600 ³⁴³	-	9 identified (on team)
Total	19,761	16	85 specific aviation professionals reported
Law Firm	No. employees	No. leasing partners	No. aviation professionals stated
Matheson	860	8	8 identified: All partners ³⁴⁴
A&L Goodbody	1,000	4	10 identified: 4 partners and 6 associates. Website says that there are 4 partners and 20 other lawyers ³⁴⁵
Arthur Cox	830	5	10 identified: 3 partners dealing (leasing), 2 partners, 1 counsel, and 2 associates (aviation disputes/litigation)
McCann Fitzgerald	600	6	11 identified: 6 partners, 2 associates, 1 counsel, 1 director, 1 group leader
Mason Hayes	600	7	7 identified: All partners ³⁴⁶
Total	3,890	30	46 specific aviation professionals reported

³³⁸ <https://www.irishtimes.com/business/financial-services/2025/06/06/pwc-ireland-boss-focused-on-getting-tech-to-do-some-heavy-lifting/>

³³⁹ <https://www.irishtimes.com/business/2023/04/29/kpmg-ireland-increases-revenues-by-15-to-579m/#:~:text=The%20firm%20hired%20almost%201%2C300,period%20to%20December%2031st%2C%202022.>

³⁴⁰ <https://www.deloitte.com/ie/en/about.html>

³⁴¹ https://www.ey.com/en_ie/news/2023/10/ey-ireland-reports-revenues-on-island-of-ireland-up-31-percentage-to-a-record-705-million#:~:text=EY%20Ireland%20total%20headcount%20on,the%20past%20five%20years%20alone.

³⁴² <https://www.grantthornton.ie/news-centre/grant-thornton-announces-it-has-created-over-1500-new-jobs-in-ireland-in-just-two-years-with-further-growth-planned/>

³⁴³ <https://www.rte.ie/news/business/2022/12/09/1340880-bdo-to-create-100-jobs/>

³⁴⁴ <https://www.matheson.com/people?service=aviation-finance-and-transportation>

³⁴⁵ [Aviation & Transport Finance | Law Firm | A&L Goodbody | A&L Goodbody LLP \(algoodbody.com\)](#)

³⁴⁶ <https://www.mhc.ie/practice-areas/aviation-asset-finance-and-leasing>

This chapter has also examined the organisational structure of *Section 110* aircraft leasing firms. They are exclusively '*shell companies*' with no employees. A proposed EU directive on '*shell companies*' if implemented, would necessarily affect corporate structures. *Section 110* loans which enable interest to be both deductible for the borrowing firm in Ireland and tax free to the recipient outside Ireland.

These interest payments are a form of profit distribution. Interest paid is substantially higher than non-*Section 110* loans. It varied in aggregate between 9.4% and 11.2 %. In some cases, the interest rate was as high as 18%. *Section 110* loans tax relief costs are high to both Ireland and the country receiving interest payments.

The profile and economic contribution of aircraft leasing firms is similar to economic activities in '*tax haven*' type economies. Most of the direct expenditures and benefits to the host country accrue to law and accounting firms and to corporate service providers. The main direct beneficiaries are to airlines that lease aircraft, via lower finance costs. Providers of finance, such as Limited partnerships, often located in a tax haven, also benefit through lower tax payments.

The Russian invasion of Ukraine and seizure of leased aircraft, highlights the dependence of aircraft leasing on international treaties and the rule of law. Violating international treaties poses considerable risk to aircraft leasing. Aircraft leasing is an under researched part of the NBFIs sector posing risks to the wider regulated financial system. A key issue is that the Irish aircraft leasing sector is subject to substantial risk, but that most of this risk is to firms and the financial system outside Ireland.

Thesis conclusion

This concluding chapter first reflects on the core research aims outlined in **Chapter 1**, summarises the principal research findings along with their key contributions to data, public policy and the academic literature. The implications of the research are briefly considered, in addition to some of its limitations. Avenues for further research on other important *Section 110* subpopulation are then identified. Finally, the chapter offers some concluding and critical remarks.

The research sought to address three principal gaps. Firstly, it attempted to reduce a significant data gap for a systemically risky sector. Through original data construction the first publicly available population-level dataset exists for *Section 110* firms, in addition to three granular level datasets for key subpopulations.

Secondly, the research has responded in part to the absence of any rigorous cost–benefit analysis (CBA) of the *Section 110* regime. This research has not provided a full CBA, nor has it followed the type of methodological approach that this entails. Rather it identified certain costs via particularly risks, in addition to quantifying certain directly observable benefits.

Thirdly, the thesis has addressed the limited academic literature on *Section 110* firms. In doing so, the analyses conducted across the three previous chapters provide insights into how the regime functions at a cross border level and has offered explanations for certain subpopulation market behaviour, which have been grounded in the institutional (tax, regulatory and legal) environment that firms operated within.

The research identified significant risks across all three subpopulations. These risks not only applied to their foreign counterparty firms (sponsors), but also to the foreign jurisdictions where the sponsor was based. The organisational structure of *Section 110* firms results in high levels of leverage, hidden vulnerabilities via off balance sheet structures and complex cross border ownership and financing activity, which create opacity.

This in turn hinders supervision and risk mitigation. Such structural features increase vulnerability to shocks and amplify losses during periods of stress. The foregoing chapters have provided considerable evidence of firm failures, investor losses, asset write-downs,

negative equity positions, contagion effects and, in some cases, the realisation of systemic

risks necessitating taxpayer-funded bailouts. OFCs like Ireland, via regimes like *Section 110*, serve as locations of financial fragility within the global financial system.

Regulatory and governance risks were highlighted via the use of trust/charitable trust ‘*orphan*’ structures and CSP appointed directors. In documented instances of sanctions evasion and potentially illicit financial flows, these ‘*orphan*’ structures pose a challenge to the application of corporate governance rules, and where regulatory accountability lies.³⁴⁷

The Revenue risks posed to other jurisdictions via these firms ‘*tax neutrality*’ is significant. The potential for ‘*double non taxation*’ also raises significant compliance concerns with this aspect of the Irish tax code, and wider EU law. Despite OECD/EU efforts to address base erosion via PPLs and excessive interest cost deductions, the research has provided evidence that the reforms as legislated for in Ireland may not be working as intended. The manner of transposition also reflects considerable industry lobbying.

The research has demonstrated that, beyond the corporate groups availing of these SPV structures, the chief domestic beneficiaries of the regime are a select number of Dublin based professional firms providing auditing/tax, legal and corporate services. The narrow concentration of these benefits must be weighed against the broad risk dispersion that arises from their service-based activities.

Section 110 firms make a negligible direct contribution to the Irish Exchequer via tax receipts. This must be considered in light of the significant cost of this tax expenditure in terms of revenue forgone. There are considerable reputational risks arising for such activities. The Department of Finance states that the IFSC applies a 25% rate for passive income to guard against ‘*brass plate*’ operations with little economic substance.

³⁴⁷ As was stated by a senior official with the Department of Finance, the enforcement of sanctions against such firms was extremely difficult to the complexity of these transactions, and opaqueness of their organisational structures. Source: Irish Times (28/10/2023), ‘Authorities ‘powerless’ to stop Russian money flowing through funds in Ireland, says official’, accessed <https://www.irishtimes.com/crime-law/2023/10/28/department-of-finance-official-says-russian-sanctions-unenforceable-in-practice/>

The research findings challenge those official claims. The scale of *Section 110* firms in terms of their size of their assets and financial flows are very large. Yet they have very weak domestic economic linkages and are used extensively for the purposes of aggressive tax and regulatory arbitrage.

As a consequence of all of the above, this research has made a considerable contribution to knowledge with implications for public policy and academic research. In relation to the former, recent reform discussions at the EU level have emphasised the need for greater NBFIs sector '*data sharing*' amongst member states.

This research has demonstrated that data gaps remain persistent for a key component of Ireland's NBFIs sector. Moreover, the limited data that is available is subject to considerable limitations with deficiencies and other anomalies having been identified in official data. It must be borne in mind that multilateral organisation has been urging Ireland to improve its approach to data collection since the GFC.

Relatedly, the research should provide further evidence of the need for a full CBA, in line with the Department of Finance's own best practice guidelines. The potential systemic risks are significant, and the ongoing evidence of aggressive tax practices suggests an incorrect, or even defective, transposition of two key EU Directives.

In response the research proposes two additional prudential measures. Firstly, Ireland should request that the European Stability Risk Board (ESRB) to undertake a detailed evaluation of the systemic and counterparty risks posed by these SPVs. The ESRB has such powers within its mandate and can assist member states upon request.

Secondly, Ireland should seek an assessment from the European Commission Directorate-General for Taxation and Customs Union regarding the compatibility of the *Section 110* regime with EU law. The Directorate General can provide a legal opinion on the compatibility of member states law from an EU compliance perspective, and can provide guidance in relation to required reforms.

The academic contribution of this research lies primarily in having expanded the critical literature on *Section 110* SPVs. As noted in **Chapter 1**, the research literature on SPVs is quite fragmented spanning several disciplines. This thesis has attempted to integrate

various research insights to arrive at a more rounded understanding of how *Section 110* firms operate.

That is, the interdisciplinary approach adhered to conceives of *Section 110* SPVs as key instruments of wider Irish industrial policy, rather than purely technical objects. Particular attention has been paid to the institutional environment in which they operate, as this concessionary environment is both key to their attraction, as well as an amplifier of their risks. The financial/tax, economic and legal/regulatory analyses applied, have offered certain explanations for firm level behaviour and their strategic use within corporate groups.

It is the case, and should be noted, that the entire population of firms has not been analysed in the aggregate. As such, certain inferences have to be drawn from subpopulation behaviour. The scale of data entry required for such analysis, was beyond the scope of this research. Nevertheless, the population dataset constructed does create a foundation for future academic work on additional subpopulations. One particularly relevant research area concerns firms involved in the issuance of collateralised loan obligations (CLOs).

Notably, the largest share of assets within CLOs is composed of technology sector related leveraged loans, which may be especially vulnerable in periods of market stress.³⁴⁸ Some have likened CLOs to another instrument, collateralised debt obligations (CDOs), which were considered a key amplifier of financial distress during the GFC.

Final concluding remarks

Almost two decades on from the GFC, leading regulators are once again warning of a systemic shock of similar magnitude. In 2026, the ECB and the ESRB issued a joint report in which they cautioned that distress in the NBFIs sector could '*rapidly spill over into the banking system*' with cascading effects.

³⁴⁸ Reuters (17/03/2026), 'Debt investors offloading exposure to software companies is latest sign of pain', https://www.reuters.com/business/finance/debt-investors-offloading-exposure-software-companies-is-latest-sign-pain-2026-03-17/?utm_source=chatgpt.com

Despite aiming to provide a comprehensive assessment, their report acknowledged significant data limitations.³⁴⁹ The ECB further conceded shortcomings in its own data collection practices and those of member states. This admission is particularly striking in light of longstanding criticisms of the post GFC regulatory agenda.

Reform efforts were widely viewed as lacking ambition. They focused primarily on incremental improvements in transparency, data collection, corporate disclosure and collateral management. Hence, an opportunity was missed to pursue more stringent and meaningful measures. As Rixen (2013) argued at the time, these reforms represented '*at best, minor improvements over the status quo*'.

That top regulators now concede that even these limited objectives remain unfulfilled is a cause for significant concern. The global shadow banking sector has now grown larger than it was prior to the GFC. This could suggest that systemic vulnerabilities, rather than having been meaningfully reduced, are more pronounced than before.

When the Financial Stability Board (FSB) first outlined its modest reform agenda, a fundamental oversight was clear. Namely the failure to address the role of OFCs as key hubs of NBFI activity engaged in ongoing regulatory competition. Concerns are frequently raised that interjurisdictional tax and regulatory competition is driving a '*race to the bottom*' in international standards (Oxfam 2016).³⁵⁰

However, the case of *Section 110* suggests a more nuanced dynamic. Rather than a race to zero standards, it is better understood as a race to the lowest level of standards that remains internationally acceptable. Large professional service networks concentrated in OFCs play a central role in sustaining this dynamic. These actors possess detailed knowledge of how '*onshore*' legal systems interact with offshore frameworks, enabling them to structure arrangements that exploit gaps and inconsistencies across jurisdictions. Crucially, they are also able to shape the legislative process itself.

³⁴⁹ These constraints, it noted, have curtailed authorities' ability 'to monitor and assess the activities, interconnectedness and potential risks these entities pose to the broader financial system, and to euro area banks more specifically', cited in ESRB (2026), 'Financial stability risks from linkages between banks and the non-bank financial intermediation sector', accessed https://www.ecb.europa.eu/pub/pdf/other/ecb.report202602_financialstabilityrisks.en.pdf

³⁵⁰ For instance, in 2016 the leaders of the G7 countries gave a commitment to end with this, with the then US President Biden singling out OFCs as facilitating this through the 'abuse of shell companies' (Sybblis 2022).

By engaging with policymakers, they can ensure that new reforms appear aligned with evolving international best-practice guidelines while still preserving scope for intra-group arbitrage strategies. In addition, these networks frequently exert significant influence in resisting more robust transparency measures.

The fact that the list of qualifying *Section 110* firms remains undisclosed, despite recommendation for this to be made public, speaks to this level of influence. As a result, regulatory change often produces only superficial convergence, leaving the underlying opportunities for regulatory and tax arbitrage largely intact.

Section 110 is likely to remain a key tool of Irish industrial policy going forward.

Nevertheless, should another systemic crisis emerge in the NBFIs sector, then it would seem likely that it will act as a channel for further reputational damage to be done to Ireland.

Policy recommendations

1. This list of *Section 110* firms held by Revenue should be made publicly available, as per the recommendation of the Funds Sector 2030 review, and the list should be published via Revenue's website.
2. The total annual cost of *Section 110* (tax forgone) should be published by Revenue along with the cost of other tax expenditures it provides on its website.
3. Revenue's definition of tax expenditure should be amended in line with the OECD and Department of Finance's own definition.
4. *Section 110* should be subject to a full cost benefit analysis by a Commission on Taxation and the Department of Finance.
5. *Section 110* should be subject to a full risk analysis in terms of bilateral contagion risk carried out by the Department of Finance, in consultation with the European Stability Risk Board (ESRB), and these findings should be published.
6. *Section 110* transactions should be brought fully within the new OECD transfer pricing rules.
7. Profit participating loans (PPLs) should be brought fully within the interest limitation rules.

8. A review of the Interest Limitation Rule (ILR) legislation should be conducted in consultation with the DG TAXUD, to ascertain whether it currently limits base erosion via excessive interest deductions, as intended by the Directive.
9. A review should be undertaken of the rates charged on related party borrowings by the leasing sector, to determine if they could be deemed excessive.
10. Ireland's Companies Acts should be amended, to introduce a rule on thin capitalisation.
11. The Central Bank should publish data on *Section 110* firms interest receipts and payments, disaggregated on a bilateral basis.
12. The Central Bank in consultation with Revenue, should publish a list of the top 10 foreign financial institutions with the greatest exposure to *Section 110* firms.
13. The Central Bank in consultation with Revenue, should publish a list of the top 10 foreign jurisdictions with the greatest exposure to *Section 110* firms.
14. The Central Bank should better enforce the rules in the maximum number of directorships that can be held, particularly where it concerns CSPs offering director service for *Section 110* individuals.
15. The CRO should review its lists of directorships, to identify where individuals have used to different variations of their names, and dates of birth to circumvent the rules on the maximum number of directorships that can be held at once.
16. 'External' firms with *Section 110* status should be required to publish full audited financial statements with the CRO.
17. A review should be carried out to determine whether 'external' firms should qualify for *Section 110* status, and if so, the identities of these firms should be published.
18. *Section 110* firms should be required to submit to Revenue, as part of their S.110 form, details of any other firms within their corporate group that are availing of *Section 110*.
19. Ireland should make its register of beneficial ownership publicly available and improve the level of detail required, and lower the threshold (25% shareholding) for disclosure.

20. In line with recommendations of the Charities Regulatory, that a *Section 110* firm should not be the reason for a charitable trust's existence, the Department of Finance, Justice, and Central Bank should undertake a review.

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List of appendices

The list of appendices is listed below:

Appendix 1. Paper 1 – *The Measurement and Regulation of Shadow Banking in Ireland* (2017). Published in the Journal of Financial Regulation and Compliance. A pdf of the paper has been inserted below. Please see here for a link to the original paper:

<https://www.emerald.com/jfrc/article-abstract/25/4/396/227446/The-measurement-and-regulation-of-shadow-banking?redirectedFrom=fulltext>

Appendix 2. Paper 2 – *Financing Russian Firms: Ireland and ‘round tripping’*. Published in Critical Perspectives in International Business. A pdf of the paper has been inserted below. Please see here for a link to the original paper:

<https://www.emerald.com/cpoib/article-abstract/17/4/522/20269/Financing-Russian-firms-Ireland-and-round-tripping?redirectedFrom=fulltext>

Appendix 3. Identified securitisation issuances by Irish lenders via Irish registered FVCs (1995-2010). Source: Author’s *Section 110* dataset.

Appendix 4. Trade missions from Ireland to Russia (1992 to 2017).

Appendix 5. Top 20 global lessors registered in Ireland with identified employment for the financial year 2023.

Appendix 1



Journal of Financial Regulation and Compliance

The measurement and regulation of shadow banking in

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The Measurement and Regulation of Shadow Banking in Ireland

1. Introduction

Since the Great Financial Crash, shadow banking and its regulation have become a key concern of policy makers (Financial Stability Board (FSB), 2015, European Commission, 2013).

Financial Vehicle Corporations (FVCs) are a large part of the Shadow banking sector in the Eurozone. Ireland's share of Euro area FVC assets has varied between 21 and 24% over the period 2010-2015, and amounted to €431.1 billion the end of 2015.

This paper is a study of FVC's and some other special purpose (SPVs) in Ireland. The study is limited to FVCs and SPVs that avail of special tax concessions ('section 110' of 1997 Finance Act), and are widely referred to as 'section 110' firms. There were 2480 such firms in 2016³⁵¹. SPV's are widely used in the banking and financial sectors, but are also to transfer assets, avoid tax and provide legal protection (PwC, 2011, p.2). Hence the number of SPV's incorporated in Ireland is likely to be a multiple of 'section 110' firms.

'Section 110' SPV's also includes firms involved in financing real assets. Aircraft leasing in particular has benefitted from 'section 110' as well as other incentives so that one estimate is that half the world's aviation fleet are managed from Ireland³⁵². The use of 'section 110' companies is likely to grow in future years to include other capital assets such as wind farms.

The European Central Bank (ECB, 2008) defines an FVC as a firm that 'intends to carry out, or carries out, one or more securitisation transactions and is insulated from the risk of bankruptcy or any other default of the originator'. For this reason FVCs in Ireland are often described as 'bankruptcy remote vehicles'. The Financial Stability Board (FSB 2015, p. 51) defines FVCs as "bankruptcy remote securitisation vehicles funded through the issue of marketable securities".

Developing the securitization industry is a long established policy of the Irish State (Department of An Taoiseach 2000, p. 11). Favorable tax provisions to encourage securitization were first introduced in 1991 but limited to those firms located at the Irish Financial Services Centre, Dublin (IFSC) (Godfrey et al, 2015, p. 49). 'Section 110' of the Taxes Consolidation Act 1997, conferred these advantages on all FVC's (including those located outside the IFSC)³⁵³.

³⁵¹ Answer to Parliamentary Question 34054/16.

³⁵² See <http://irishaviationresearchinstitute.blogspot.ie/p/ireland-global-hub-of-aircraft-leasing.html>).

³⁵³ A document published in 2011 by the Irish Government states "The Department of Finance and the Irish Revenue will fully engage and consult with industry to enhance the tax framework, including through the annual Finance Bill process, in particular to facilitate areas where Ireland can gain first-mover advantage in developing sustainable business lines" Department of An Taoiseach (2011) p. 18.

Most FVC's act as financial intermediaries – that is they buy and sell various types of financial assets³⁵⁴. Although some firms classified as an FVC by the Central Bank of Ireland (CBI), have been used to raise funds to purchase distressed, on behalf of firms such as Cerebus, Lone Star Capital, and Blackstone. The range of activities undertaken by firms that may benefit from 'section 110' has been substantially extended since 1997. This means that many SPV's availing of this incentive, are not classified as FVC's in ECB statistics.

All FVCs and firms established using 'section 110' in Ireland, are incorporated under the companies Acts and are required to file documents, including company accounts, in Companies Registration Office (CRO) in Ireland. This paper used data published by the ECB to identify individual FVC's and thus to access accounts³⁵⁵. In addition special purpose vehicles (SPVs), sometimes referred to special purpose entities (SPE's) established using 'section 110' provisions were also identified in searches of CRO and Irish Stock Exchange (ISE) filings.

The vast majority of FVCs in Ireland are owned by a charitable trust (described as an 'orphan structure'), have no subsidiaries, fixed assets or employees. However in some cases the accounts may be consolidated into a banking group. Even though they may be large with over one €billion in gross assets and have large gross income, they pay very little in corporate tax.

'Section 110' special purpose vehicles (SPVs) engaged in activities described as fulfilling

'narrow, specific purposes', were also required to report to the CBI since 2015 (Barret et al, 2016, p.1). As shown later, 'section 110' SPV's connected to Russian firms, all acted as a intermediary in raising debt which was used to provide a loan to a specific Russian firm. As in the case of FVCs, securitisation may also be the primary function of 'section 110' SPV's. Hence it may be difficult in practice to distinguish between those firms classified as an FVC compared to a 'section 110' SPV.

The paper shows that despite the ECB prescription that they should be 'insulated from the risks of bankruptcy' many of the banks that incurred large losses in Ireland, the UK and Germany, in the financial crash, were found to be connected to FVC's incorporated in Ireland, organized as 'section 110' firms. This pattern is repeated more recently in relation to SPVs connected with Russian Banks. None of these SPVs are classified as FVCs (in CBI/ECB data up to 2015).

The paper argues that the data published by the CBI/ECB on the population of FVCs in Ireland and more recently special purpose vehicles appears inconsistent with the total number of special purpose vehicles authorised by the Revenue in Ireland. Furthermore the CBI/ECB data appears to omit many firms that issued a prospectus and debt securities quoted on the ISE. At the same time the CBI/ECB data base includes firms that do not appear to meet the definition of an FVC.

The paper is structured as follows. The next section examines tax concessions available to SPVs in Ireland which are frequently cited to explain the growth and development of securitization. The

³⁵⁴ The list of FVC's includes firms dealing with instruments such as asset backed securities (ABS), commercial paper, distressed debt, repackaging, securitisation, etc.

³⁵⁵ https://www.ecb.europa.eu/stats/financial_corporations/list_of_financial_institutions/html/index.en.html

paper then considers aggregate data for SPV's and some anomalies in this data. The next section considers regulation and gaps in regulation of FVC's. Finally the paper concludes that the benefits to Ireland are minimal largely consisting of payments to providers of services such as accounting and legal services.

2. The Tax Benefits

One of Ireland's leading law firms (Matheson) states:-

"In recent years Ireland has become the jurisdiction of choice for the establishment of special purpose vehicles (SPVs)".

In a further comment they state:-

"As the market has become more sophisticated, Ireland as a jurisdiction has constantly responded, in terms of its legal and tax framework, in order to continue to position itself as the location of choice for SPVs³⁵⁶.

Ireland is been described a "the jurisdiction of choice" because of a very favorable tax regime. Another firm (PwC) states 'Section 110' is at the heart of Ireland's structured finance regime.... it is widely used and internationally regarded"³⁵⁷.

The 'special tax regime' means effective tax rates on profits are zero or near zero.

The tax benefits have been described as follows :-

"Transactions involving a Section 110 company may be structured to be tax neutral.

While the Section 110 company tax rules provide that a "qualifying company" will be subject to Irish corporation tax at a rate of 25% on its taxable profits, such taxable profits can be eliminated with appropriate structuring. It is important to note that although the qualifying company must notify the Revenue Commissioners if it wishes to be treated as a Section 110 company, no special tax rulings or tax authorisations are required in Ireland in order for the Section 110 company to achieve this tax neutral status. Furthermore, no minimum taxable profits are required to be left in Ireland" (McCann Fitzgerald, 2012)³⁵⁸.

Taxable profits can thus be 'eliminated' by allowing deductions from income as if the securitization vehicle were a trading company. For example expenses arising from issuing loans or financial instruments, arrangements fees, insurance fees, contingency fees, management charges, portfolio charges, etc. and most important interest paid including profit participating

³⁵⁶ Available at:-

http://www.matheson.com/images/uploads/documents/Matheson2_Ireland_The_SPV_Jurisdiction_of_Choice_for_Structured_Finance_Transactions.pdf.

³⁵⁷ See PwC at <http://www.pwc.ie/services/tax/international-tax/structured-finance.html>.

³⁵⁸ Available at :- <http://hb.betterregulation.com/external/Ireland.2012.pdf>

interest. This effectively means that profit distributions are treated as a tax deduction, rather than a distribution of after tax profits. Such a deduction has been described as “unique” in Irish tax legislation³⁵⁹.

There are also no withholding taxes on interest paid abroad by ‘section 110’ companies.

The use of ‘Section 110’ companies in a corporate structure is similar to the tax reduction strategies described in the Lux leaks case (Marian, 2016, Bowers, 2014), but one key difference as noted above is that “no special tax rulings or tax authorisations are required”. Hence ‘section 110’ companies cannot be subject to EU competition investigations on illegal State aid based on rulings, as in the case of Luxembourg and Fiat Finance and Trade (see: State aid SA. 38375 (2014/NN) (ex 2014/CP) – Luxembourg). They are an example of tax arbitrage, facilitated by the State as in the Lux leaks (Marian, 2016, pp. 2-3). In the Lux leaks case tax haven type features emerges through “opaque administrative practices” in relation to granting Advance tax agreements (ATA’s) coupled with secrecy (Marian, 2016, p. 3). In the Irish case the same effect is achieved via a financial conduit which although obscure is based on statute, and in contrast to the Lux leaks cases ‘s110’ firms are not subsidiaries but rather structured as independent firms owned by a trust and in more recent years a ‘charitable trust’. In both the Lux leaks tax strategy and the use of ‘section 110’ firms, firms have no employees or fixed assets, with secretarial services provided by a specialist firm such as Structured Finance Management, or Bedell Trust.

As noted earlier several advisory firms have described ‘Section 110’ as enabling companies to be effectively “tax neutral” (Dillon Eustace, p. 4)³⁶⁰. This means that ‘section 110’ firms can claim expenses including variable interest payments so that income minus expenses results in zero profits and zero tax.

A PwC document states that with appropriate structuring “the effective tax rate can be close to zero”³⁶¹.

Given the value of the ‘section 110’ tax regime and its widespread use, it is of interest that there is no estimate of the cost in terms of tax expenditures³⁶². In response to a query about tax foregone as result of ‘section 110’ and other measures the Minister of Finance stated that no tax was foregone as “the securitization industry would not be here in the first instance” (PQ 22nd May 2012 no. 25501/12). This answer however fails to recognize the mirror image of the cost of tax expenditures, that is the tax savings to ‘section 110’ firms in Ireland and the cost in terms of tax foregone to other countries because of the nonpayment of tax on the interest/profit distribution.

³⁵⁹ Davy Stockbrokers, <http://www.davy.ie/binaries/content/assets/davypublic/fund-services/briefings/ireland-as-a-location-for-distressed-debt>.

³⁶⁰ FVCs are described in similar terms in research papers produced by the Central Bank. For example Godfrey et al refer to ‘section 110’ FVCs as being “broadly profit and tax neutral” (Godfrey, et al, 2015, p. 51).

³⁶¹ See:- <http://taxsummaries.pwc.com/uk/taxsummaries/wwts.nsf/ID/Ireland-Corporate-Tax-credits-and-incentives>.

³⁶² See:- <http://www.revenue.ie/en/about/statistics/costs-expenditures.html>.

Perhaps because of this viewpoint neither the Irish Revenue or CBI collect data on tax payments³⁶³.

In order to explore this issue further data was examined for a random sample of 82 FVC's extracted from ECB data for Q3 2011³⁶⁴. Three firms did not produce any accounts for 2010 resulting in a sample of 79. Table (1) below shows data on tax distributions of a sample of firms for 2009 and 2010.

Table (1)
Distribution of Tax payments for 79 FVC's for 2009 and 2010

	Pretax profits 2009	Pretax profits 2010
Profits = €0	29	27
Profits < € 1000	11	9
Profits = €1000	9	10
Profits > €1000 but < €10,000	9	9
Profits > €10,000	9	9
Reported a loss (6 firms > €200,000)	9	15
No. Of firms	76	79

Of those firms that reported zero profits in 2009, twenty three firms were identified that reported zero profits for all subsequent years for which accounts were produced in the period 2009-2015 (Table 2). One firm (Glacier Securities) was also included that first produced accounts in 2010 and reported zero profits until 2014 when the firm was put into voluntary liquidation.

Table (2) shows mean and median values of gross assets, interest received, and gross income and shows considerable variability from period to period with a general decline in values through time through time. However pre-tax profits throughout this period are constant at zero. Mean and median values of tax paid were zero for 2010-2015 and slightly above zero for 2008 and 2009. Given the complexity of financial transactions and financial flows, achieving profits equal to zero over a number of periods, indicates considerable control and possible variability in financial flows and income of counterparty trading firms. This is not possible for an independent firm with no employees and part time directors, who are concurrently directors of several dozen companies.

The implications are that these are not independent firm but rather 'controlled firms', raising issues of whether income received, prices charged for services and interest paid were at 'arms length' or involved an element of 'profit switching'.

Table (2)
Gross assets and Income of FVC's reporting Zero profits (€ million)

Year	N	Gross assets	Interest Received	Gross Income
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³⁶³ Central Bank data collection list items to be included from the Annual profit and loss accounts as Interest income from loans and deposits; debt securities; derivatives (net); Portfolio investment dividends receivable; and Other income not classified elsewhere. While expenditure includes interest payable on loans and debt securities; Financial services fees and commissions; Capital and exchange gains and losses both realised and unrealised; and Other expenditure/operating costs.

³⁶⁴ Stewart (2013) discusses aspects of this sample in terms of the growth of shadow banking in Ireland.

		Mean	Median	Mean	Median	Mean	Median
2015	7	221.167	218.546	4.213	2.295	10.878	7.826
	15	242.085	223.692	7.642	4.099	16.430	8.426
2013	19	384.031	285.986	10.219	4.872	38.184	14.802
	24	390.547	209.279	14.104	6.282	35.450	21.965
	2011	24	423.867	308.493	21.564	11.023	31.298
	15.892						
2010	24	463.139	359.574	16.031	11.737	30.459	11.886
2009	23	309.106	204.775	20.759	16.192	36.853	21.879

For the group as a whole for all years included gross income amounted to €9.521 billion interest income €3.227 billion interest paid € 1.445 billion.

The next section examines bank failures associated with SPV's in Ireland.

3. Special Purpose Vehicles (SPVs) in Ireland and Banking Failures

Most of FVC's are located at the Irish Financial Services Centre with ownership typically by a charitable trust. Even though there may be liabilities guaranteed by a bank, they are mostly not consolidated.

An SPV has been defined as "a legally distinct entity with a limited life created to carry out a narrow predefined activity or series of transactions for a "sponsor" company (Feng et al, 2009). Although the historic motivation for the development of SPV's was to raise capital via a low risk investment vehicle between a sponsoring company and investors, they are also used extensively in tax minimization strategies and regulatory arbitrage (Stewart, 2013). As noted by Feng et al "the financial reporting benefits that result when a sponsor avoids consolidating the SPV in its financial statements" have been widely discussed.

Low risk features consist of restrictions on the nature of assets that may be bought, ownership by a trust (in Ireland generally a charitable trust) and covenants that prevent hiring of employees, so that an SPV has been described as being "brain dead or on autopilot". Cash flows from the SPV's operations may only be used to pay investors and cannot be taken by the sponsoring company for any other purpose (Dharan, 2002).

SPV's and Banking Failures in the Financial Crash.

Despite these features many financial SPV's not only incurred losses for their investors, but also for the sponsoring company. The table below lists some of the banks that incurred large losses in the recent financial crash and the associated FVC located in Ireland.

Table (3) below lists some of the 'section 110' conduits that experienced liquidity/solvency issues in the recent financial crash and the associated banks. Most of the firms listed had several associated conduits.

Table (3).
FVC's in Ireland associated with Bank losses/Failures

FVC (Section 110)	Ownership	Year estb.	accnts. year	Gross Assets (€ mill.)	Associated Bank
Kildare Securities	Deutsche International Finance	2007	2007	€2,594	Bank of Ireland
Fastnet Securities 2	Charitable trust	2006	2007	€1,937	Irish Life & Permanent
Armoir Residential Securities	INBS	2008	2009	€1460	INBS
Celtic Residential no. 8	Deutsche International Finance in trust for charity	2003	2007	€391	Royal Bank of Scotland
Epic (Value Retail) Ltd.	Charitable trust	2007	2008	€340	Royal Bank of Scotland
Wolfhound Funding 2008-1 Ltd	Structured Finance Management on behalf of a charity	2008	2009	€4649	Bank of Scotland
Emerald Mortgages no.1	Castle Mortgages consolidated with EBS	2000	2009	€128	EBS
Metrix Securities PLC	Structured Finance Management London. Consolidated into accounts of HSBC	2006	2007	£2051	HSBC
Currus VI Limited	Deutsche International Finance held on trust for charity	2007	2008 (Jan.)	\$ 325	Wachovia
Bacchus 2007-1 ¹	3 charitable trusts ³	2006	2007	€446	IKB
Bacchus 2006-1	3 charitable trusts ³	2005	2007	€392	IKB
Kestrel Funding ²	Deutsche International Finance	2006	2007	\$320	Westdeutsche Landesbank
Nostrum Mortgages 2003-1	3 charitable trusts ³	2003	2007	€665	Caixa Geral de Depositas
AZB CLO 1	TMF Management on behalf of BADB charitable trust	2008	2010	€478	Azora Bank
Taurus CMBS No. 1 PLC	AIBWT on behalf of a trust	2004	2007	£ 31	Merill Lynch

(1) Badb, Medb and Eurydice charitable trusts, all operating from the same address as law firm Matheson.

(2) A third German Bank, Sachsen Bank, made large losses though an SPV called Ormond Quay (Stewart, 2013, p. 16). CRO files (including accounts) do not state this is a 'section 110' firm.

Some consider that a structure where the shares are held on trust by a charity results in a "bankruptcy remote funding vehicle" (Godfrey et al, 2015). However the risk of bankruptcy is a function of the nature of assets and the possibility that they may not retain their value. For example in the case of systemic risk failure in the case of securitised assets, resulting in counter party risks (Financial Crisis Inquiry Report, 2011, chapter 16). This may be due to the failure of counter parties. Systemic risk arising from FVCs is discussed by the Financial Stability Board (2015). This report also describes FVCs as "bankruptcy remote" (FSB, 2015, p. 51). This report

does not discuss risk in relation to non-financial SPVs, such as leasing firms. In these cases risk may arise through losses on real assets, for example in aircraft values due to wars, terrorism, etc.) and where assets are partially rather than fully insured. Losses could also occur due to failures in insurance markets. Bankruptcy risks could also arise from competition driving down lease rentals and imbalances in supply demand especially in aircraft leasing. Bankruptcy and resulting losses may be remote but because they are possible, current estimates of expected values are reduced and hence estimates of solvency.

SPVs and Russia and Risk

As noted earlier some Russian banks with extensive borrowings from Irish SPVs have reported large losses in recent years. A subsample of 81 SPVs with Russian connections, which filed accounts, were identified through searches of files in CRO, Dublin³⁶⁵. All were 'section 110' firms, with most (75%) organized with an 'orphan' type structure¹⁶. That is ownership was via a trust, in most cases a charitable trust. None of the firms appeared in ECB/CBI FVC lists (to Dec. 2015), except for one firm which was included for Q4 2009 and excluded thereafter. Most of the firms raised funds on the ISE and issued a prospectus, and more recently have issued Loan Participation Notes (LPN), using an Irish SPV. Ireland has been described as "the most popular choice of jurisdiction for the SPV as a Eurodollar issue (Deboise and Plimpton 2013, p. 2). One reason given for the popularity of such structures are that for 'tax and regulatory' reasons Russian firms cannot issue Eurobonds directly and that "since the issuer of the SPV is usually unaffiliated with the Russian company" far less disclosure is required, including those related to "interested party transactions" (Deboise and Plimpton 2013, p. 2)³⁶⁶. Other reasons given relate to the tax advantages of section 110 firms in Ireland (Dillon Eustace, 2010).

The gross assets of identified firms with available accounts, amounted to €58.5 billion in 2015, a fall of €5.8 billion compared with 2014, but was substantially higher than the total for 2010 of €19.4 billion³⁶⁷. For 2015 interest income amounted to €3.57 billion, pre-tax profits €35,800 and the tax charge came to €11,400, indicating the value of 'section 110' tax incentives³⁶⁸. The big six audited almost all firms, and solicitors services were provided by the largest legal practice in Ireland (Arthur Cox) for over 80% of disclosing firms. Four of the firms included, accounted for €27.17 billion of total assets for 2015 (Alfa Bank Issuance, GPB Eurobond Finance, VEB Finance, RZD Capital).

³⁶⁵ That is firms registered in Ireland for any of the years 2010-2015, subject to the section 110 tax regime, and whose purpose is to raise funds and on lending these funds to Russian based firms. Russian connected SPV's involved in aircraft leasing with gross assets in excess of €1.5 billion were excluded, because they are not 'section 110' firms. ¹⁶

This finding is at variance with CBI data that "over half of Irish domiciled SPVs are consolidated into other entities", See Barret et al (2016 a), p. 7.

³⁶⁶ Although described as Eurobond issues the most common currency denomination is the U.S. dollar, followed by Roubles.

³⁶⁷ This compares with Central bank estimates for 2015, using location of 'sponsor and consolidator' of €58 billion and using location of assets of €54 billion (Barrett et al. 2016b, chart 3a and chart 3b). Central Bank data relates to data submitted to the Central Bank derived from company accounts. So that data submitted in 2016 may in some cases relate to the accounting year ending December 2014.

³⁶⁸ Two firms were omitted from the total of pre-tax profits due to a large reported loss due to a bond write down (Brunswick Rail) and a large capital gain on loans and receivables (Grenam Finance).

All Russian connected SPVs had a common business model which involved raising funds, in general via the ISE and in turn on lending these funds to a Russian based firm. In several cases this was to a Russian Bank or financial institution. The following firms with an Irish connected SPV, suffered large losses and two are in administration.

Example 1: Peresvet Bank

Peresvet Capital Ltd, is a 'section 110' SPV owned by a charitable trust. The accounts state the firm was established to raise and lend funds to Peresvet Bank. The accounts note:-

"in 2014, certain sectoral sanctions against Russia were imposed by several countries. The sanctions continue to be in effect in 2015. While the company is not directly subject to sanctions, along with the drop in crude oil prices and a significant devaluation of the Russian Rouble continue to have an adverse effect on the Russian economy." (Annual Report and Accounts, 2015 p. 3).

On 24th October 2016 all Peresvet debt was downgraded after the Russian Central Bank appointed an administrator and a moratorium was imposed on paying debt interest which is interpreted as a default³⁶⁹. This was preceded by the disappearance of the chief executive and a report by Fitch that "roughly half of Peresvet's capital — had been issued to companies and individuals with "no real assets,"³⁷⁰

Example 2: Vneshprombank Ltd

VPB funding Ltd is a 'section 110' SPV established in 2013, and raised \$225 million in funding for a Russian bank, Vneshprombank. This bank is reported as having a \$2.2 billion deficit in its balance sheet following an investigation by the Russian Central Bank. It has also been reported that "Former managers may have stripped the bank's assets for investments in real estate, expensive vehicles and financial instruments" (Griffin and Brennan, 2016).

The accounts of VPB funding for 31st December 2015 stated that on 18th December the Central Bank of Russia established an administrator. On 21st January 2016 the banking licence was revoked and on 11th March 2016 the borrower was declared bankrupt. The accounts of VPB funding state "The company's obligation to the noteholders is limited to the net proceeds or recovery of the loans issued".

Example 3: Bank of Moscow

SPV Bom Capital is a 'section 110' SPV, established in 2008 to provide finance to the Bank of Moscow. The bank of Moscow was taken over by VTB Bank in 2011. The Financial Times states that the takeover followed "police raids on Bank of Moscow and the homes of its senior

³⁶⁹ See:- <http://www.reuters.com/article/idUSFit977727>.

³⁷⁰ Available at:- <https://themoscowtimes.com/news/head-of-russian-bank-controlled-by-church-disappearsreports-5575>.

executives last week as part of a criminal investigation into the alleged embezzlement of Rbs. 1 bn (\$449 m.) from bank of Moscow” (Catherine Belton, VTB in Bank of Moscow victory, Financial Times February 26, 2011).

Example 4: Tatfondbank and Brunswick Rail Finance

More recently there have been widely reported losses on bonds issued by TFB to Tatfondbank³⁷¹. Less widely reported have been losses to bondholders on securities issued by Brunswick Rail Finance. Financial statements (Brunswick Rail Finance 31 December 2015, p. 27) show a write down of over 40% on \$600 million of loans.

In all five cases legal services to the Irish SPV were provided by Arthur Cox, auditing and taxation services were provided by one of the big six, and banking services provided by Citi Bank London or BNY Mellon, London.

It is likely that there will be further losses amongst bondholders issued by Russian connected SPV's in future years because of economic turmoil in Russia, and a weak Rouble compared with the currency of most bond issues, the U.S. dollar. These risks are reflected in high yields of Russian connected bonds issued in Ireland. For example, VPB issued three year dollar denominated loan notes in 2013 with a yield of 9% (VPB annual Report and accounts, 2015, p. 3); TFB issued dollar denominated three year loan notes in 2014 with a yield of 11% (TFB Annual Report and accounts 2015, p. 3)³⁷². Given the risk (as indicated by high yields) the identity and motives of those purchasing Bonds issued by Irish based, but Russian connected SPV's is of interest³⁷³.

The next section examines aggregate data for FVC's and 'section 110' SPV's.

4. Aggregate Data on FVCs in Ireland

Many of the 'section 110' firms established were 'off balance' sheet vehicles of banks. Following the financial crisis the ECB required Central Banks in the eurozone to collect information on firms in the shadow banking sector. More recently the CBI was required to collect information on all 'section 110' companies and not just FVCs³⁷⁴.

³⁷¹ J. Brennan, “Russian bank collapse hits Dublin bond, Irish Times March 18, 2017”, and “Russian bank bankruptcy renders Irish bonds worthless”, Irish Times, April, 21, 2017.

³⁷² See:- J. Corcoran and A. Baraulina, “The Coming Die-Off in the Russian Banking Sector”, Bloomberg, April 15, 2015.

³⁷³ Risks unique to operating in Russia are sometimes stated in annual accounts. For example accounts for PSPB (2015 note 12c) and TFB (accounts 2015, note 9a) states “Russia is a place of geopolitical instability”. The accounts of RTZ (2015 p. 4 note e(f) state; “The Russian Federation display characteristics of a developing economy”.

³⁷⁴ <http://www.arthurcox.com/publications/non-fvc-section-110-companies-now-have-reporting-obligation-to-the-central-bank>.

Not surprisingly because of tax benefits, the gross assets held by 'section 110' companies are large. CBI data (Table 4) shows that for Q4 2015, 821 FVC's held €431.1 billion in assets (http://www.centralbank.ie/polstats/stats/fvc/Documents/2015q4_ie_fvc). This is down from a peak of €574.8 Billion in Q4 2010. Ireland's share of Euro area FVC assets has varied between 21 and 24% over the period 2010-2015.

Table (4)
Data on FVC's for Ireland

	No. of Issued securities ¹	No. of FVC's derived from ECB data ²	No. of FVC's ECB data ³	Aggregate amount issued in Ireland ⁴ € billion	Total euro area ⁵ € billion
Q4 2009	907	907		538.2	2369.6
Q4 2010	4521	755	827	576.1	2360.6
Q4 2011	4036	715	776	499.6	2299.3
Q4 2012	3801	697	742	441.9	2060.6
Q4 2013	4121	711	726	418.5	1917.5
Q4 2014	4327	748	760	402.8	1848.1
Q4 2015	5273	820	799	432.1	1832.3
Q4 2016	5179	836	836	401.7	1804.6
Unique FVC's to Q4 2015		1396			

Notes:-

(1). Source:- <https://www.ecb.europa.eu/stats/money/mfi/html/index.en.html>

(2) Calculated from no. of securities issued by eliminating identical entries by name of firm. Note these numbers are lower than those published by the ECB, except for Q4 2015 and 2016.

(3) Source:- https://www.ecb.europa.eu/stats/pdf/money/fvc/FVC_Overview.pdf?d4745a3709d3f0d3f4065e48f2a92710

(4). Source:-

<http://sdw.ecb.europa.eu/browseSelection.do?df=true&ec=&dc=&oc=&pb=&rc=&DATASETGROUPS>

(5). Source:- <http://sdw.ecb.europa.eu/reports.do?node=1000004041> and

<http://sdw.ecb.europa.eu/browse.do?node=bbn3621>

The CBI as agent for the ECB has published aggregate details on Financial Vehicle Corporations (FVC's) since 2009. The ECB publishes lists of securities issued by these firms on a quarterly basis. This list was examined for the fourth quarter of each year to produce a unique list of FVC's that existed in ECB data base over the period 2009-2015. In total 1396 'section 110' companies were identified. Table (5) below gives some summary data on FVC's.

Table (5)

CBI/ECB estimates of the number of FVCs and non FVC 'section 110' firms for year end 2012 and assets (€ billion) 2015¹

	Q4 2012 ⁴ No.	Q4 2012 Gross assets ⁵	Q4 2015 ⁴ No.	Q4 2015 Gross assets ⁵
CBI Data for no. of FVC 's	700	441.9	820	431.1
CBI Data for non FVC's ³	600		822	324.0
Total no. of 'section 110' firms	1300		1642	755.1

Notes

(1). There are unexplained differences in the number of FVC's reported by the CBI and the ECB for 2012 and 2015 (700 and 820 compared with 742 and 799 shown in Table 2). However gross assets reported by the Central Bank and ECB are identical or very close for all years. SPVs (for example Cerebus subsidiaries) that purchased distressed property loans from banks and the National Asset Management Agency (NAMA), are classified in CB/ECB data as FVCs.

(2) Derived from lists of securities issued by each FVC registered company available on ECB web site.

(3). Defined as SPV's "engaged in activities other than securitisation" Barrett et al, (2016, p. 72).

(4). For Q4 2012 Godfrey et al; For Q4, Godfrey et al, 2015, p. 50. (5) CBI data available at :- https://www.centralbank.ie/polstats/stats/fvc/Documents/2015q4_ie_fvc_publication.pdf

5. Some Data Anomalies

There were 2144 'section 110' firms established from 1997 until December 2015 (excluding those liquidated)³⁷⁵. This implies that there are 2144 'section 110' firms trading. However CBI data (Table 3) identifies 1642 'section 110' firms as of December 2015.

The total number of 'section 110' firms established between 1997 until 2015 is likely to be far larger than 2144. Our research indicates that there were 1396 unique firms in the ECB data base between Q4 2009 and Q4 2015. CBI estimates are that there were 822 Non FVC 'section 110' in Q4 2015. Adding these (1396 + 822) gives a number of identified section 110 established since 1997 of 2218. Non FVC 'section 110' firms established and dissolved between 1997 and 2009 are not included in CBI data, and the number of non FVC 'section 110' established since 1997 is also likely to be far larger than those existing in December 2015. Hence including both FVC and non-FVC firms that were dissolved/liquidated in the period up until December 2015, means the number of 'section 110' firms established between 1997 and 2015 is likely to exceed 2500.

The gap between Irish Revenue data and CBI data may be explained by a number of factors. There are a number of 'section 110' firms that have all the appearances of a securitisation vehicle which do not feature in CB lists. Table (6) shows some examples of omitted 'section 110' FVC's in CBI Data. All firms have 'Atlas Reinsurance' in title. One may have been omitted because a liquidator had been appointed, but two other firms are 'section 110' firms and are engaged in issuing variable rate notes quoted on the ISE.

Table (6): A Case Study of FVC firms not in ECB Data Base

³⁷⁵

See Parliamentary Question 13th January 2016 no. 46892/15. The answer states:- "The number of Special Purpose Companies set up in accordance with section 110 of the Taxes Consolidation Act 1997 is 2,144. This excludes companies whose tax registration subsequently ceased as the company has been liquidated".

Name of firm	Ownership	ECB Data	Evidence for 'section 110' FVC ¹	Year Est.	status
Atlas Reinsurance X Ltd	Walkers Global Shareholding Services on behalf of a charitable trust.	Yes	Issues participating notes quoted on Irish Stock exchange. States s. 110 in accounts and prospectus	2013	active
Atlas Reinsurance services (Dublin) PLC	Wilmington Trust SP Irish Stock Exchange.	no	Issued variable notes listed on Prospectus p. 23	2006	2011 Reinsurance III
Atlas Reinsurance IV PLC	Wilmington Trust SP services (Dublin) on behalf of a charity	no	Issued variable notes listed on Irish Stock Exchange Prospectus p. 23	2007	2013
Atlas Reinsurance VII Limited ²	Wilmington Trust SP services (Dublin) on behalf of a charity	no	Issued variable notes listed on Irish Stock Exchange Prospectus p. 52	2012	active

(1). All are 'section' 110 SPV's . Source: Prospectus issued to Irish Stock Exchange/CBI and annual report and accounts.

(2). The offering circular states "Any losses incurred by the Issuer will be available for set off against its profits for any subsequent accounting period for so long as the Issuer continues to be subject to the Section 110 taxation regime".

Another indication of underreporting in CBI data is that searches of filings in Companies Registration Office and prospectuses issued on the ISE, found 86 (64 issued prior to 2015) issued by SPV's that were not listed in the CBI/ECB data base, but had issued quoted debt on the ISE and had the tax status of a firm engaged in securitization or financial intermediation ('section 110 'firm). In contrast several firms that have borrowed from financial institutions to purchase distressed property loans but have not issued quoted debt, are listed as FVC's in the CBI/ECB data base.

As all prospectuses must be sent to the CBI for approval, their omission from FVC lists appears anomalous. Other anomalies were also discovered³⁷⁶.

Possible Reasons for Data discrepancies.

Some possible explanations for this discrepancy may be that some 'section 110' firms are not required to Report to the CBI (2016c, p.2). These are:-

(1). Non-Irish domiciled companies (i.e. Entities incorporated in another jurisdiction)

(2). Companies which have already been liquidated

³⁷⁶ Some examples: no account details are filed for Fortress Credit Europe Funding Limited , but is still included in the ECB list, whereas Fortress Centaurus Global Ireland established in 2014 has stated that it is a 'section 110' firm in account details, and prospectus and issues asset backed securities, but has been omitted from ECB/CB list . SVG Diamond Private Equity Holding III, established in 2009, changed its name to Aberdeen Diamond Private Equity III, remains a 'section 110' company but disappears from ECB list. GPB Eurobond Finance appears in Q4 2009 but not subsequently.

(3). Companies which have disposed of all assets (save for cash holdings of less than €500,000) are not required to report the SPV Return.

(4). Firms that have registered as a 'section 110' , but have not yet undertaken any transaction .

However a small number of firms were found in categories (3) and (4) and none in categories (1).

In conclusion there appears to be considerable under-reporting of the total number of 'section 110' firms in CBI data, with consequent implications for CBI statistics. Some reasons for this under-reporting may be found in the regulations governing 'section 110' firms. The next section considers the formal structure of FVC/SPV regulation.

6. The Regulation of FVC/'section 110' SPV

The Regulation of FVC's

The main regulation of 'section 110' firms is undertaken by the Irish Revenue and the CBI.

Legislation concerning 'section 110' firms is mostly focused on the type of activities that 'section 110' firms may engage in rather than regulation. An exception is section 21 of the 2016 Finance Act which states that "a company must inform the Revenue Commissioners in writing of its intention to be a section 110 company within 8 weeks of acquiring qualifying assets of 10 million" (Explanatory Memorandum Finance Bill 2016, p. 4). This implies that prior to this amendment firms were operating and registered as 'section 110' firms before receiving revenue authorization. Notification of being a 'section 110' was only made on the filing date for the accounting period that the firm is first a 'section 110 company (Parliamentary Question 25661/16). This is likely to be between one and two years after a firm first commenced trading.

A second question arises, given that firms may have issued securities quoted on the ISE and entered various contracts assuming 'section 110', tax benefits, was whether granting 'section 110' status was automatic.

Legislation refers to a form notifying the Irish Revenue of a firm's "intention to be a s. 110 company". This Form seeks minimal information such as the name and address of the company secretary²⁸. Revenue does receive annual tax returns and a copy of the annual report and accounts, but there is no evidence of any analysis of this data.

In contrast the CBI requires a great deal more information. CBI regulations require that "an FVC must register within one week of taking up business with the euro-area National CB where it is resident" (CBI, 2014, p.3).

Initially this requirement was for s.110 firms involved in various forms of securitization, and categorised as FVC's. and stemmed from an ECB initiative to collect information on the shadow

banking sector. The data is collected on a quarterly basis starting in Q4 2009²⁹. In a guidance note on this regulation the ECB states:-

“Regulation ECB/2008/30 of 19 December 2008 concerning statistics on the assets and liabilities of financial vehicle corporations engaged in securitisation transactions, establishes a set of statistical reporting requirements for financial vehicle corporations (FVCs). Article 1 sets out the definitions of FVC and securitisation”³⁰.

The ECB regulations solely concern data collection. However a CBI document (2016a, p. 2) states that the data is used to compile euro area aggregates, for statistical analysis, financial stability monitoring, and regulatory oversight of the FVC sector”. The document also states p. 4 that “Once an FVC undertakes its first transactions, it should immediately begin the registration process with the Central Bank”.

The most detailed description of information to be provided is prescribed by CBI (2016b, p. 4) which states that “The FVC return can be thought of as similar to a set of financial accounts for a company” and that “Table 9 (Annual Profit and Loss) corresponds to the income statement”. Further details of information to be provided (p. 25) lists expenditure items to be included:- as Interest payable on loans; Interest payable on debt securities; Financial services fees and commissions; Capital and exchange gains and losses both realised and unrealised; and Other expenditure/operating costs. Thus it would appear that a topic of current exceptional interest in relation to tax payments is not collected by the regulator. It is also not clear whether a figure for profit before tax can be identified from data collected.

²⁸ See:- <http://www.revenue.ie/revsearch/search?q=Form+S.110&btnSearch=Find>).

²⁹ Article 9 (2) states that “ An FVC that has taken up business after 24 March 2009 shall inform the relevant NCB of its existence in accordance with Article 3(2).

³⁰ Source:- Guidance Note on the Definitions of Financial Vehicle Corporation’ and ‘Securitisation’ under Regulation ECB/2008/30., available at :- <http://www.ecb.europa.eu/home/search/html/index.en.html?q=fvc>).

The Regulation of ‘section 110’ SPV’s

Since July 2015 all ‘section 110’ firms that did not already report to the CBI, were required to do so. A CBI (2016c, p.2). document states:-

“The requirement for Special Purpose Vehicles (SPVs) to report quarterly balance sheet and annual profit and loss data to the Central Bank of Ireland (hereafter, the Central Bank) was announced in July 2015. Up until this point, only the subset of SPVs which primarily engage in securitisation activities were obliged to report – Financial Vehicle Corporations (FVCs). The extension of quarterly reporting requirements to this new population was primarily to address data gaps in the Irish financial system, and to enhance statistical analysis and regulatory oversight of the sector”.

The dates for submission of returns and data requirements for these residual 'section 110' firms is identical to that required for FVC's. The relevant guidance (Special Purpose Vehicles Quarterly Reporting FAQ document, p.3) states "the first reporting quarter for an SPV should be the quarter in which it undertook its first transactions (Special Purpose Vehicles Quarterly Reporting FAQ document, p.3). There is an additional requirement that "SPVs are reported on a non-consolidated basis, so each constituent company of a group should register separately and submit individual returns".

Key information on tax paid payments is also not collected. There is also more likely to be impairment charges in the income statement of s. 110 firms holding distressed property loans, meaning that CBI data cannot give an indication of pre-tax profits.

7. Regulation in Practice

Effectively the Irish Revenue authorities act as gatekeepers as to nature of assets that may be used by 'section 110' companies. This raises a number of issues. One relates to regulation. As of 2011, the Irish Revenue authorities were unable to state if there had been any audits of 110 companies (Parliamentary Question. 4th May 2011. No. 9954/11). There were no meetings between the Regulator and Revenue Authorities in relation to section 110 companies. Following legislation in 2013, two meetings took place in 2015, between the Regulator (CBI) and Irish Revenue Authorities. The Financial Stability Board (FSB) (2015, p. 51) in discussing the non-bank financial sector in Ireland states "FVCs lie on or outside of the regulatory perimeter depending on the nature of their activities".

Other sources are more categoric. For example, one financial firm in discussing the relative merits of different structures owning distressed assets, refers to the "unregulated section 110 company"³⁷⁷;

Elsewhere it is stated that "another positive of the Section 110 Company is that there are no regulatory restrictions regarding lending as is the case with a QIF (Qualifying Investor Fund)" and that the benefits of an Irish location [for structures owning distressed assets] is that financial services regulation is not generally applicable (Davy, 2012).

Another source (Burke, 2012) states "A section 110 company is unregulated and issues debt securities."

8. What are the Economic Benefits ?

FVCs and SPVs have no direct employees. Corporate tax payments are minimal and activities are exempt from VAT and may result in a recovery of VAT paid on inputs. Refunded VAT amounted to approx. €3 million in 2015. The main benefit to the Irish economy consists of payments to

³⁷⁷ See:- (<http://www.davy.ie/binaries/content/assets/>)

service providers consisting of secretarial, auditing, tax and legal services. These are the typical job profiles found in 'tax haven' type countries.

It is also likely that interest income which has been exempt from tax in Ireland is also exempt on remission to another country as it has been paid from income that has already been subject to tax - an example of double 'non-taxation'. It is for this reason that all discussions of the benefits of 'section 110' firms also refer to Ireland's extensive double tax treaty network.

Thus the growth of 'section 110' companies poses substantial risk to the revenues of other countries. They also pose a regulatory risk to other countries. This is because almost all of these firms are off balance sheet with ownership held by a trust and in some cases 'a charitable trust'. In many cases they have very high gearing – the ratio of equity to total assets³⁷⁸. They form an extensive part of the 'shadow banking system'. No regulation/light touch regulation plus possible linkages to the 'parent company' in the event of a financial deficit, results in substantial unrecognised risk.

9. Conclusion

Despite considerable research on the shadow banking sector some argue that shadow banking is still only partially understood (Bengtsson, 2016). The growth in shadow banking is often explained by regulatory arbitrage (Petitjean, 2013). This paper highlights another reason - corporate tax laws that ensure that profits of special purpose entities are zero or close to zero.

FVC's and 'section 110' SPV's in Ireland, are large in terms of assets and revenues, but they have minimal economic impact in Ireland (Stewart, 2013, Table 3). They have no employees or fixed assets. Their effective tax rate is zero or close to zero. But they pose a substantial risk of tax losses in other jurisdictions. They are an example of what Marian has described as 'arbitrage manufacturing' in relation to the Lux leaks', which rather than being competition for mobile capital constitutes 'competition for revenue' (Marian, 2016, p. 54). But in the Irish case rather than the state benefitting, service providers in Ireland (legal and accounting firms) are the main beneficiary.

FVC's and 'section 110, SPVs suffer from a number of regulatory issues in terms of identifying the population and failure to collect certain key data, such as tax payments. The regulator appears to accept that they are 'bankruptcy remote' even though they have been associated with bank failures in the past and more recently. They form a substantial part of the shadow banking sector in Ireland and there are substantial foreign interconnections, for example 88% of assets (€2140 billion) were owned outside Ireland (FSB, 2015, exhibit 33, p.

49).

The Financial Crisis Inquiry Report states that a major cause of the financial crisis was not just deregulation, but the failure "to adopt new regulations or challenge industry on the risks of innovations" (Financial Crisis Inquiry Commission, 2011, p. 50). The shadow banking sector thus deserves far greater analysis.

³⁷⁸ The minimum capitalisation is €1 (<http://www.davy.ie/binaries/content/assets/davypublic/fundservices/briefings/ireland-as-a-location-for-distressed-debt>). For example, Promontoria Eagle has issued capital of €1 with assets of €1.1 billion in 2014. Financial 'section 110' firms may have issued capital of €40,000. For example, dbInvestor Solutions had issued capital of €40,000, retain earnings of €68,000 and gross assets of €2.2 billion for 2014.

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Appendix 2

Financing Russian firms: Ireland and round tripping

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Abstract

Purpose – Ireland has become one of the main sources of finance for Russian based firms. The purpose of this paper is to quantify and analyse these flows to examine governance and regulatory issues, in particular the possible effect of sanctions.

Design/methodology/approach – The paper is based on detailed searches of publicly available filings in Company House, Ireland to identify Russian connected conduits. Data was extracted from available accounts and prospectuses for 106 conduits operating in Ireland for some or all of the period 2005-2017.

Findings – The paper shows gross flows from Irish based conduits to Russian firms amounted to €118bn for 2005-2017; flows may be partly explained by round tripping; sanctions have also affected flows; flows are facilitated by close linkages with professional networks both within Ireland, and other offshore financial centres, especially London; The conduits examined have no employees and are mostly owned by a charitable trust or trust. They have become a major part of a largely unregulated shadow banking system.

Originality/value – This paper used searches of publicly available company filings to create a unique database of individual firms. Data on the use of financial centres by individual firms is hard to obtain and the results of this study may be indicative of the use and nature of conduits in other financial centres which form part of the shadow banking sector.

Keywords Ireland, Financing, Sanctions, Russian firms, Round-tripping

Paper type Research paper

1. Introduction

There are two long established policies to enable industrial and economic development in Ireland. The first and better known is attracting foreign direct investment (FDI), by relying on fiscal and other incentives. As a result, MNEs such as Apple, Google and Facebook have a major presence in Ireland. The tax minimisation strategies used by these firms have also become well known, for example, the “double Irish” in the case of Google and Facebook and “stateless income” in the case of Apple (Stewart, 2018). This inflow has considerable benefits for Ireland, in terms of creating employment and generating corporate tax revenues. The loss in tax revenues for other countries is much larger. As a result of these and other policies, Ireland is often described as a tax haven (Oxfam, 2019, Table 4; Tørsløv et al., 2018, p. 20 and Table 2).

A second less well-known policy is the establishment of an international financial centre in Dublin in 1987, the Irish Financial Services Centre (IFSC), with very favorable tax incentives (Shaxson, 2015; Customs House Development Authority, Appendix, 1987).

The IFSC with e3.94tn in gross assets in 2018, (12 times Irish GDP [1]), has become a major centre for offshore finance and “shadow banking” that is banking activities performed by non-banks. Using a narrow definition, the global value of “shadow banking” amounted to \$51.6tn in 2017 (Financial Stability Board, 2019, p. 5). Since 2011, Ireland and three other

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countries (Cayman Islands, China and Luxembourg) have accounted for two-thirds of the increase in the value of these assets (Financial Stability Board, 2019).

The IFSC has also become one of the main sources of finance for Russian based firms, although this role has received relatively little attention in research literature. For example, Haberly and Wojcik (2014, p. 264) in a detailed mapping of the global offshore network, discuss the post-Soviet Eastern bloc as centering on the “Russia-Cyprus-BVI round trip FDI circuit”, as well as branches in Gibraltar and Liechtenstein. Ledyeva et al. (2015, p. 312 and Table 2) emphasise

that Cyprus is the largest single source of FDI into Russia where 25% of Russian capital stock is registered and The Netherlands is the second largest source ([Ledyaeva et al., 2015](#), p. 312 and [Table 2](#)).

The main research question in this paper is what explains these financial flows. The central hypothesis is that these capital flows reflect “round tripping”. That is capital flight from Russia has returned to Russia via Ireland in the form of financial flows. Given controversies associated with Russian based firms, the paper also examines governance issues. Capital flows from Ireland to Russia are examined using granular level data, rather than aggregate country flows. The main data sources consists of publicly available company accounts lodged in Companies Registration Office (CRO), Dublin and prospectuses for listed securities on the Irish Stock Exchange (ISE).

Section 2 discusses capital flows and round tripping. Section 3 describe the selection of firms in the study group, key features of the Irish-Russian bond market, trends in funds raised, interest received, tax payments and flows of funds. Section 4 discuss governance issues in terms of bond failures, bank rescues, and connection to illegal/improper activity. Finally, Section 5 concludes that effective multilateral regulation is required and in particular at EU level.

2. Capital flows and round tripping

International capital flows are large. Gross FDI flows alone are estimated at \$1.4tn in 2017 [[2](#)]. Estimated offshore wealth is also large. Zucman estimates offshore wealth (defined as “stocks, bonds and above all shares in mutual funds”) at \$7.6tn in 2014 (Zucman, 2015, p. 36). However, wealth such as housing and land held by non-quoted, privately owned corporations and intangible assets (patents, licenses, copyrights) are excluded. Wealth held in the form of trusts where beneficial ownership is not recorded is also excluded ([Shaxson, 2018](#), p. 324). Other estimates for financial wealth held in offshore “secrecy jurisdictions” are larger at \$21-32tn in 2010 and \$24-36tn in 2015 ([Henry, 2012, 2016](#)). Offshore non-financial wealth has been estimated at \$5-10tn in 2015 ([Henry, 2016](#)).

In some studies the distinction between direct investment (real investment), indirect (real investment) and financial flows is ambiguous ([Kalotay, 2012](#)). For example, concurrently with outflows, there are capital inflows to Russia from those countries that received outflows. Some of these flows reflect “round tripping”, described as “domestic funds channelled through OFC’s [back] to the local economy in the form of direct investment” ([Aykut et al., 2017](#)). Round tripping may be prevalent in numerous countries, but especially for Russia ([Borga, 2016](#), p. 2; [Nesvetailova, 2016](#), p. 122). [Damgaard et al. \(2019\)](#), p. 22 and Figure 9) estimate that around 25% of Russian real FDI is owned by domestic investors, compared with under 10% for Germany and France.

Capital outflows from Russia for 1994-1997 have been estimated at \$67.9bn of which \$22.7 is estimated to be illegal and linked to money laundering ([Solongo, 2001](#)). Solonga concludes it is reasonable to assume that illegal capital outflows return as “legitimate foreign investment” ([Solongo, 2001](#), p. 221). Evidence to the US House Committee on Banking and Financial Services reports widespread theft and money laundering in Russia in

the period 1986-1989 and depositing profits from firms trading in Russian resources in Ireland, Cyprus and other “tax havens” (Palmer, 1999, p. 4). At a later stage, 1989-1991, shell companies or special purpose entities (SPEs) were established in Ireland, Switzerland, the USA and the UK. These SPEs raised funds from Russian controlled sources in western countries and reinvested some funds in Russia, often in the form of joint ventures with Western firms. The key goal at this time was to transfer and keep funds outside Russia (Bullough, 2019, pp 71-72; Palmer, 1999, p. 4).

More recent estimates are that between \$20 and \$80bn of illegal funds flowed from Russia, via fraudulent banking transactions during 2010-2014 (Bullough, 2018; Harding et al., 2017). A scheme involving Deutsche Bank resulted in outflows of \$10bn (Caeser, 2016). Links between banks in Cyprus and Russia and money laundering has been frequently reported (Kirchgaessner and Farolfi, 2017). The Estonian branch of Danske Bank was involved in laundering \$200bn of funds from Russia (Milne and Binham, 2018; Bruun and

Hjejle, 2018) [3].

Capital outflows have resulted in a large increase in Russian offshore wealth. This was near zero in 1990 and increased to almost 75% of national income in 2015 (Novokmet et al., 2017, p. 18 and Figure 5c). These authors state “they are tempted to conclude” that (most) of this offshore wealth is invested in Russian companies, in particular in the energy and financial sectors. That is most Russian foreign liabilities are “actually held by Russians via offshore accounts and reflect round tripping” (Novokmet et al., 2017, p. 23).

Apart from the desire to launder illegal funds and evade taxation, capital outflows from Russia have been explained by lack of transparency of property rights, corruption and weak contract enforcement (Bulatov, 2012, p. 88; Perez et al., 2012, p. 110). These factors may, in particular, influence outflows connected with Russian “oligarchs”. Outflows have also been explained by “system escape” from deemed excessive regulation (Hansen, 2013), search for a more “stable” location for capital, as well as “institution shopping”, for example, better property rights protection and access to investor state dispute settlement mechanisms compared with purely domestic investors. Factors such as avoiding political and economic risk, tax arbitrage, regulatory arbitrage, corruption and money laundering may be equally important (Aykut et al., 2017; Ledyeva et al., 2015; Nougayrède, 2015, p. 342).

Flows from Russia to Cyprus, the UK and other countries, maybe because of better property rights protection, in conjunction with more favorable corporate law such as ease of incorporation, the ability to hide ownership and access to international banking and other services (Bruun and Hjejle, 2018, par 7.24; Nesvetailova, 2016, p. 123, Nougayrède, 2015, p. 342). Concealing investment through offshore entities may also be a means of “laundering” corrupt flows (Kuzmina et al., 2014).

Ledyeva et al. (2015, p. 309) argue that return flows (“round tripping”) to Russia may be to exploit “business opportunities due to home market knowledge and networks” to “avoid rent seeking by public officials” and may also be to firms controlled by “oligarchs”. Firms receiving funds often operate in oligopolistic or controlled sectors with highly profitable investment opportunities (Perez et al., 2012, note 4). So that strategic investment in Russia is undertaken by Russians while incurring large expenditures on luxury goods elsewhere (Milne and Binham, 2018). Another important reason for return flows is that encouraging the return of capital held abroad is Russian Government policy (Tooze, 2018, p. 224). For example, Russia issued a \$3bn government bond in 2018, designed for wealthy Russians, who may be subject to sanctions, to repatriate capital held abroad (Seddon, 2018).

International capital movements and growth in offshore wealth is closely connected to the growth of international financial centers. International flows of finance and ownership of financial assets are also facilitated by international professional networks. For example, the firm at the centre of the Panama papers Mossack Fonseca had over 40 offices located in different countries, including most major “tax havens” including Ireland (Harding, 2016). External firms are used because developing the capacity “required to engage in certain value chain activities may be difficult, time-consuming and effectively impossible for some firms to acquire” (Gereffi et al., 2005, p. 81).

OFCs have also grown because they have developed highly specific knowledge in conjunction with low tax rates and “light touch regulation” (Dorry, 2015, p. 808).

OFCs have highly specific knowledge on the interaction of “on shore” tax and regulatory codes with OFC codes, for example, double taxation agreements and inter-country information exchange. They may also influence and have advance knowledge of tax and regulatory change directly affecting the financial centre. These are valuable and hard to replicate specific assets. “Light touch regulation” is often associated with de-regulation of markets and institutions or failure to properly enforce existing regulation and may be justified as a policy response to competitive pressures (Dagher, 2018, pp. 37-38 and 49; Stewart, 2008, p. 200).

3. Flows of funds from Ireland to Russia

Ireland was the second single largest source of net debt flows to Russia for the period 2007-2017 (26.5%) with net flows nearly identical to Luxembourg (27%) (Table 1).

For the same period (2007-2017), Russian connected IFSC conduits raised gross funds of over €110bn (€92bn from debt markets). Net funds raised (gross debt minus redemptions) was far higher at €48bn compared with Central Bank of Russia (CBR) estimates of \$27bn [4]. In addition, Russian connected conduits registered in Cyprus, Luxembourg and The Netherlands have also raised funds on the ISE.

Financial flows from Ireland to Russia are dependent on close networks and linkages with professional financial services firms within and outside Ireland, especially London. Linkages were also found with professional service firms in Cyprus, Luxembourg, The Netherlands and other offshore centres. In Ireland, flows take place via conduits or SPEs with no employees or fixed assets and which benefit from very favorable tax concessions. The main fiscal advantage is contained in “Section 110” of the Irish Taxes Consolidated Act 1997 and these firms are often referred to as “Section 110” firms.

Most “Section 110” firms are involved in securitization, raising finance and leasing aircraft (Golden and Hughes, 2018, charts 3 and 4). Russian connected “Section 110” firms often raise funds using hybrid debt instruments, known as “loan participation note’s (LPN)”, quoted on the ISE. These funds are then lent to a particular Russian based firm or firm with a majority of assets in Russia. Thus, the IFSC based firm serves as a “conduit”. There are some exceptions. For example, two “Section 110” firms both raised debt and borrowed funds from MDM Bank in Russia, which were then used to purchase “distressed” loans from MDM

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total	
Ireland	44,467	18,270	5,053	9,824	10,272	Lux. 66,177	6,018	555	624	1,858	1,080	895	27,333
	2,737	3,501	9,912	11,178	Neth. 268,951	652	2,341	4,666				3,081	28,050
	7,152	4,360						1,073	2,349	6,113	1,709	2830	11,548
Total inflow	6,213	5,941	13,422	14,484	5,092	27,078	36,861	1,068	3,806	3,176		1,956	10,2997
Note: CBR data define debt inflows as FDI and that “the geo positions is made according to the immediate investing country principle													ion of direct investment
Source: Russian Central Bank Statistics, Russian Inward FDI in direct investment													
at: cbr.ru/eng/statistics/?Prtd=svs													www.cbr.ru/eng/statistics/?Prtd=svs

Table 1.
Net debt inflows to
Russia 2007-2017
(\$million)

Bank. Another firm Vityaz raised funds in Rubles used to fund mortgages denominated in US dollars.

Several conduits were connected to Russian based firms subject to EU and US sanctions. They are also, as discussed later, connected to Russian firms or firms owned by Russian individuals, accused of fraud, money laundering and criminal activity. Several feature in the Special Council Report of Russian interference in the 2016 US election, for example, VEB (US Department of Justice, 2019, p. 161). VEB has an associated IFSC firm (VEB Finance) which raised \$9.28bn in bonds quoted on the ISE in 2010-2015.

The imposition of sanctions has disrupted the flow of funds from Irish based conduits and is likely to have caused a reversal of flows of funds from Ireland to Russia (Table 1). So that, while IFSC based conduits are major sources of funds to Russia, there are also net outflows to bond purchasers via loan redemptions and interest payments. This is likely to be a significant risk reduction factor to borrowers using conduits in Ireland, Luxembourg, The Netherlands and elsewhere.

4. The study population

There were 3606 active “Section 110” firms at end 2017. These Irish Revenue reported numbers are substantially higher than those reported by the Central Bank of Ireland (CBI).

This discrepancy has been attributed to under reporting to the CBI (Stewart and Doyle, 2017).

There is no publicly available database of “Section 110” firms. However, this research identified over 80% of the population from various data sources [5]. (Table 2).

The firms in the study were selected from this population as follows:
they were conduits which raised funds, mostly on the ISE, and on-lent these funds to a Russian based corporation. A few firms were involved in related activities such as purchasing property mortgages from a Russian bank and/or accounts stated most assets of the borrowing firm were located in Russia.

Other Russian connected conduits identified, for example, aircraft leasing firms were not included as they were not “Section 110” firms. Non-Irish based firms or conduits, using the ISE to raise funds for Russian based firms or the Russian Federation were also excluded.

Firms with passive income (interest, dividends and rent) are subject to a corporate tax rate of 25% in Ireland, but firms with “Section 110” status have low/zero tax rates. This is because deductions are allowed from income as if the firm were a trading company. For example, expenses arising from issuing loans or financial instruments, arrangements fees,

Year	New firms Revenue revenue	Total no. Revenue estimates of reporting to ceased	No. of FVCs active	No. of FVCs Section 110 ^a	Section 110 registered with reporting to ECB/ ICB ^b	Active No. identified in current study
2015	423	12	1,790	1,642	799	1,331
2016	477	6	2,208	1,768 ^b	844	1,836
2017	759	1	2,966	2,066 ^b	962	1,774

Notes: ^aSource PQ 15 January 2019, questions 236, 237, 238, 239, 240, 242, 242; ^bFor 2017, see ICB Special Table 2. Purpose Entities statistics 2017 and Financial Vehicles Statistics 2015 and 2016. This data refers to SPV's Total number of for which ICB collects data “Section 110” firms

insurance fees, contingency fees, management charges, portfolio charges and most important interest paid including profit participating interest. This results in what has been described by law and other advisory firms as a “tax neutral” status (Dillon Eustace, 2016, p. 4). In effect profit distributions are treated as a tax deduction, rather than an after tax distribution of profits. This treatment has been described as “unique” in Irish tax legislation (Stewart and Doyle, 2017). There is no withholding tax and because interest

payments may vary, interest payments abroad are deemed to be “distributions” which have already been _____ subject to tax, thus giving rise to the possibility of double non-taxation [6].

A total of 121 Russian connected conduits (Section 110 firms) were identified for the period 2005-2017 [7]. Excluding dormant firms and firms that did not trade, resulted in accounts for 106 firms for all/some of the years 2005-2017 [8]. Several of these were connected to large Russian MNEs with international operations such as Gazprom, Rosneft and VEB.

Of 121 firms identified, 66 were owned by a “charitable trust”. A further 25 stated they were owned by a “trust” and 10 firms stated they were owned/part-owned by a “Stichting” [9]. Four stated they were owned by a charitable trust/trust or for the benefit of a charitable trust but that accounts were consolidated with another company [10]. Three of the firms owned by a Stichting stated accounts were consolidated with a parent company (Gazprom). Just 20 firms (17% of the total) stated they were owned/consolidated with another firm, with no intervening trust structure. A similar structure was found for 2017 with 75% of firms owned by a trust/charitable trust. This ownership structure is different from CBI estimates that “around half of non-securitisation SPEs are consolidated into the accounts” of other firms (Golden and Maqui, 2018, p. 3).

Given there are no employees, corporate administration and compliance functions are provided externally by Irish corporate service providers (CSPs) which may be affiliated with a large law or accounting firm [11]. Arthur Cox (one of Ireland’s largest law firms) provided legal services for 88 of 114 disclosing firms and the “Big Six” auditing firms provided auditing and tax services for 92 of 103 disclosing firms. Arthur Cox was also frequently cited in prospectuses as legal advisors in relation to “Irish law” (55 cases) and as listing agent to the issuer on the ISE (52 cases) [12]. Linklaters (25 cases) was the main UK law firm cited in prospectuses.

The following section discusses specific features of the Russian Bond market in Ireland and trends in aggregate data for the period 2005-2017.

5. The Irish – Russian bond market

The IFSC is a very attractive location for establishing conduits because Ireland is a member of the EU and Eurozone and, in addition, has:

- a very favorable tax regime;
- light touch regulation; and
- favorable company law provisions such as ease of incorporation.

For the period 2005-2017 gross funds raised amounted to e118bn. Five state owned firms (VEB Finance, GPB Eurobond Finance, GPB Finance, Rosneft International Finance and RZD Capital) issued just over 31% (e31bn) of all bonds. Privately owned banks also issued large sums.

The bond market for Russian debt in Ireland has a number of distinct features. Debt is mostly quoted on the ISE, but many connected functions are performed in London. For example, trustees for all debt issues were located in London. Agents responsible for paying interest were also located in London, as were most banking services. Deutsche Bank (London) was the most frequently cited bank, followed by London branches of BNY Mellon and Citi bank. Almost all debt issues referred to legal advice from a London based law firm. Almost all debt issues also cite a Moscow branch of the UK based law firm as giving legal advice. Services may also take place in other financial centres, for example, the registrar for issued securities was frequently located in Luxembourg (44 cases).

Offshore Financial Centres have many connections to large onshore financial centres, but London is likely to be a dominant location for services connected with debt issuance because the UK commercial courts are regarded as being highly influential in international business [13]. A London location for trustee and paying services gives added security to bond holders. The Yukos case, which resulted in an award of \$50bn, shows the benefits of contracts subject to the UK commercial courts. The case involved two companies based in Cyprus and the Isle of Man but owning assets in Russia, with ownership structures in Jersey, Isle of Man and Gibraltar. These latter jurisdictions as foreign dependencies of the UK, benefit from UK investment protection treaties (Nougayrède, 2015, p. 335).

5.1 Specific features of Russian bond market in Ireland

Yields are high. For example, BSPB, issued a \$100m five year loan note in 2013, yielding 10.75% to provide funds to Bank St. Petersburg. Most debt is short/medium term (2-7 years). Of the 106 firms included, 38 redeemed issued bonds earlier than the due date. Most of these (25) were privately owned. Most debt is denominated in US dollars. The second largest denomination is Rubles. Even though most debt is quoted on the ISE no trading takes place. There is some trading on the London Stock Exchange (LSE) but of small amounts [14].

Prospectuses often state that details of debt ownership will not be disclosed on Clearstream [15]. For example, DME (prospectus 2016, p. 242) states “no clearing stream system has knowledge of the actual beneficial owners of the notes held”. Many prospectuses refer to possible conflicts of interest between controlling shareholders and owners of debt, increasing risk and reducing the likelihood of non-shareholders purchasing debt. For example, Borets International Limited Prospectus (2013, p. 14) states “The interests of the group’s controlling beneficial owner could conflict with those of the holders of the nNotes”. There have been numerous changes to issued bonds terms and conditions (Table 3). For example, BKM Finance issued \$200m 9.15% 10 year notes in 2013, which were lent to Khanty-Mansysk Bank. In 2015, the interest rate was increased to 10% and the bonds were made “indefinite”. The structure of debt tranches has also been changed (SCF Capital) signifying different loan terms for different bond owners.

Despite stated shareholder/debt owners conflict of interests and adverse changes to terms of debt issues, such as making issued bonds “indefinite”, there are few reported cases of litigation. For example, in 2012, Amatarasu issued a \$400m profit participating loan note, described as “limited recourse”, to a Maltese company (Juturna). The principal and interest was contingent on “the realisable value of the Company’s assets” (Amatarasu Annual Report, 2012, p. 6). These were “distressed loan assets” purchased from MDM Bank. The loan note was written down to zero over the period 2013-2015, yet there was no litigation from the note holders [16].

VPB funding raised \$225m in 2013. The funds were lent to Vneshprombank, which was liquidated in 2015 (Citi Bank, 2016, p. 2). However, noteholders were merely advised to contact the trustee with a view to forming a committee of noteholders [17].

The write down of issued bonds to zero by TFB Finance, is another illustration of absence of litigation following changes to bond structures and bond write downs [18]. TFB

Debt issued made indefinite	Year	Changes made to terms of issued bonds	Ownership
BKM Finance	2015	“The loan made to Otkritie PJSC was changed to an ‘indefinite period of time’”	Privately owned (nationalised 2017)
Change in tranche structure	Year		
SCF Capital	2011, 2012	On 29 December 2011, an existing loan (\$800,000,000 LPNs issued at 5.375% due in 2017) was split into two tranches, and in 2012 split into another two tranches	State owned
Change in interest rate	Year		
Gasenegro Finance	2015	“\$400m loan due June 2018 has been restructured[...]resulting in zero interest payable (previous rate 6.2%)”	State owned
Rosneft International Finance	2015	\$1,000,000,000 3.1% LPNs and \$2,000,000,000 4.19% LPNs changed to interest rates of 15.75%[...]and 21%	State owned
Extension of Maturity	Year		
Brunswick Rail Finance		Maturity of notes extended from 1 November 2017 to 31 March 2025	Private
Transregional capital	2015	Maturity of 10 year notes was extended from 2017 to 18 September 2020, with an interest rate increase from 7.74 to 10%	Private
Issue of Perpetual debt	Year		
Alfa Bond Issuance	2016		Private
TFB Finance	2015	\$700,000,000 8% loans notes, were made perpetual with the first interest reset date being 3 February 2022	State Owned
VTB Eurasia	2012	\$60m issued with interest of 12.5% p.a	
		\$2.25bn perpetual loan notes issued “to finance a subordinated loan to VTB Bank”	

Table 3. Changes in terms and conditions of issued bonds

Source: Company accounts lodged in CRO

Finance issued a \$60m perpetual note in August 2014 (Table 3). In November 2016, an additional \$60m loan notes were issued. The following April, the CBR revoked the banking licence of the borrower (Tatfondbank), citing financial transactions conducted by the former managers and owners of the borrower' deemed to be "criminal" (TFB accounts, 2016). TFB Finance (accounts 2016, note 11) state that "the company was set up for the benefit of the borrower" who has "a significant influence as borrower" [19].

Brunswick Rail is a rare example of a public dispute. The 2016 accounts, report failed attempts to reach a "consensual agreement" with noteholders in relation to bond write downs. Subsequently, a committee representing 80% of the loan notes reached agreement with the company in relation to restructuring the loan notes [20]. A former CEO of Brunswick described the agreed scheme as defrauding creditors and some shareholders [21].

6. Who are the bond investors?

Investing in Russia is risky. Purchasing debt issued by a firm whose main collateral is a loan to a Russian based firm has added risks.

This and other issues were further explored using the most recently issued prospectus for firms in the study who listed debt on the ISE. As not all firms in the study issued a prospectus this resulted in 67 cases. All prospectuses refer to considerable investor risk from corporate malfeasance and other factors. For example, RZD Capital (Russian Railways) prospectus (2015, p. 25) cites risk as "high levels of corruption and the penetration of organised crime into the economy."

High risk means the likely pool of investors is small and raises questions as to the nature of the bond investors. For 28 cases, US citizens were prohibited from purchasing issued bonds, with some exemptions (Regulation 144 A of the US Securities Act of 1933) [22]. Most prospectuses examined (38 cases) stated, securities may not be sold under any circumstances within the USA (Regulation S of Securities Act of 1933) [23].

Most prospectuses (54) stated that Russian investors purchasing bonds were subject to restrictions. For example, Alfa-Bank prospectus (2016, p. ii) states the notes have not and will not be "registered in Russia", nor intended for "placement" neither "circulation" in Russia".

Most legal, accounting and other services connected with bond issues take place in London. SIB in Cyprus was reported as a "joint lead manager" in 22 cases. SIB is a subsidiary of Sberbank, 51% owned by the CBR. Cyprus is a widely cited location for offshore assets held by Russian nationals, which may explain why a "lead manager" is located there.

Because of capital flight, Russian oligarchs and wealthy individuals may both own assets in Russia (for example, banks, mining and transport companies) and have large liquid assets outside Russia. Their Russian investments need finance but investment is risky. IFSC based conduits

may be a part solution. So that borrowing by firms based in Russia, is part funded by Russian owned offshore wealth, via an IFSC based conduit. The countervailing flows are less risky because they are short term, dollar denominated and organised by a firm whose owner/beneficial owner is in most cases a trust/charitable trust. Risk due to bond duration may be further reduced by early redemption of debt. The laws relating to bond issues are those of Ireland and the UK giving greater legal protection to bond purchasers than bonds issued in Russia.

Many firms were identified where debt was both issued and redeemed in the same year, with differing maturities and interest rates. IFSC conduits may thus both send funds to and receive funds from the same Russian based firm within an accounting period. If interest payments to the IFSC conduit are included, there is a net transfer of funds to the IFSC conduit for some years. This is an important factor in reducing risk to owners of debt of IFSC based conduits and is explored further in Section 7.

The absence of disputes between borrowers and lenders despite changes in terms and conditions and the use of conduits as both a source and use of funds to Russian connected firms may indicate overlap between purchasers of debt issued by the conduit and the borrowing firms owners.

7. Trends in aggregate data

Table 4 shows debt issues rose from e1.66bn in 2005 to e22.7bn in 2013, fell to e1.68bn in 2015 and rose to e8.7bn in 2017²⁴ (Table 4). The recent fall in funds may reflect restrictions due to sanctions, (Bradley et al., 2014). Possibly because of sanctions, some conduits undertook financial transactions equivalent to issuing bonds. For example, BKM Finance reclassified loans as “indefinite” in 2015.

Year	N ^b	Gross funds raised		Gross funds from other firms including banks		Gross funds from markets		State owned N	Total funds raised	Gross funds raised from other firms		Gross funds from markets
2017	51	8.915		0.243		8.671		13	3.0.023	0.0		3.023
2016	57	5.472		0.553		4.919		17	1.429	0.141		1.415
2015	63	1.736		0.051		1.685		22	0.232	0.131		0.101
2014	73	7.122	0.363	6.759	27	6.066	0.363		5.703			
2013	74	29.329	6.562	22.758	29	17.864			6.509	11.354	2012	62
		14.687	2.277	12.397	25	9.262			1.409	7.853		
2011	50	10.227		1.339		8.871		19	4.496	1.339		3.157
2010	49	12.103		1.063		11.040		20	6.523	1.063		5.460
2009	55	7.624		4.913		2.710		22	7.391	4.913		2.478
2008	48	4.881		0.223		4.648		18	3.205	0.156		3.050
2007	45	8.516		0.797		7.718		17	5.126	0.792		4.334
2006	25	5.861	1.182	4.679	13	3.119	0.798	2.320	2005	11	1.666	0.285
total	118.141	19.581	98.521	68.628	17.373	51.254						

Table 4.

Gross funds raised Notes: ^aAggregate changes also reflect exchange rate changes as most assets are denominated in \$US; 2005-2017 (ebillion)^a ^bDormant firms were excluded

A fall in funds raised in 2008-2010 is likely to reflect market uncertainty and risk aversion during the Great Financial Crash. In addition, there was substantial restructuring of major Russian firms and banks during this period (Tooze, 2018, pp. 221-227). The increase in the number of conduits from 11 in 2005 to 45 in 2007 is likely due to extensions to tax relief on quoted euro bonds in the Finance Act 2006 [25].

State owned firms accounted for about 57% of gross funds raised and 52% of funds from bond issues over the period (Table 4). The share of funds from bonds issued by conduits connected with State owned firms fell sharply in 2015-2016.

Gross assets grew rapidly from 2005 and reached a peak of e64bn in 2014 (Table 5) and then fell to e46.2bn in 2017 (Table 5). The decline in gross assets is likely to reflect falling bond issues due to the introduction of sanctions. CBI estimates of gross assets for Russian connected firms for the year 2015 are lower at e58bn if gross assets were defined by location of “sponsor and consolidator”. Gross assets were lower still at e54bn if defined by location of assets (Barrett et al., 2016, charts 3a 3b) [26].

Despite large gross income, pre-tax profit and corporate tax payments are low (Table 5). For example, for 2017 median values of pretax profits and the tax charge were e530 and e180, respectively, with median values of gross interest income of e27.3m. Pre-tax profits and the tax charge were higher in the period 2005-2008, as not all of some firms income was eligible for “Section 110” relief. The tax charge is under 0.1% of gross income for all years.

Table 6 shows that for the period 2014-2017, rather than a net flow of funds to borrowers, there is a net flow of funds to IFSC conduits of e32.9bn. This is likely to reflect both reduced flows to Russian based firms, due to sanctions and increased outflows of funds from Russian based firms. If private sector firms alone were examined there were also outflows of funds from Russia for 2009 and if state owned firms alone were examined there were outflows from Russia for 2010. For the period 2008-2017, the median conduit received more funds than were disbursed, meaning most conduits were extracting funds from rather than sending funds to Russian based firms.

year	N	Gross assets ^a e billion	N ^b	Gross assets omitting firms with negative equity e billion	Equity e million	Interest income e million	Pre-tax profit e million	Tax charge million e
2017	52	46.229	46	45.685	0.621	2,805	0.008	0.037
2016	59	57.412	52	56.316	0.888	3,604	0.048	0.014
2015	63	61.600	56	60.299	0.959	3,672	0.045	0.013
2014	73	64.066	66	62.577	1.168	3,930	0.055	0.014
2013	74	63.227	67	61.895	0.983	3,326	0.071	0.019
2012	62	40.983	55	39.977	0.928	2,738	0.056	0.013
2011	50	31.636	47	31.045	0.934	2,338	0.027	0.007
2010	48	25.396	45	24.057	1.024	1,461	0.030	0.008

2009	51	20.199	47		19.657	1.031	1,260	0.002	0.008
2008	48	16.856	44	16.034	2.333	1,040	0.087	0.017	2007 45 11.446 42 10.954 2.289 766 0.792 0.203
2006	25	6.834	23		6.575	1.467	316	0.978	0.243
2005	11	1.616	10		1.540	0.387	71	0.120	0.018

Table 5.

Notes: ^aDormant firms were excluded; ^bDormant firms and firms with very variable profits and resulting Aggregate operating negative equity (for example, due to loan write downs) were excluded data 2005-2017

Year	N ^a	Gross funds		Total interest income (3)	Gross assets of liquidated/ dissolved firms ^b (4)	Net flows = (column 1– 2– 3 –4) (5)		Gross interest received/gross assets ^c	
		raised (1)	Redeemed funds (2)					Mean	Median
2017	51	8.915	10.509	2.844	1.093	5.531		6.7	5.7
2016	57		5.472	10.948	3.684	1.133	10.293	5.6	6.4 2015
	63	1.736	6.483	3.813	1.252	9.812	7.6	6.2	
2014	73	7.122	10.010	4.054	0.361	7.303		8.5	6.7
2013	74	29.329	4.156	3.443	0.005	21.725		6.6	5.4
2012	61	14.687	3.323	2.763	0.00	8.601		7.0	5.7
2011	50	10.227	4.897	2.404	0.891	2.035		7.6	6.5
2010	48	12.103	8.196	1.505	0.865	1.537		7.7	6.5
2009	51	7.624	1.383	1.315	0.615	4.311		7.9	7.9
2008	48	4.881	0.591	1.111	0.043	3.136		8.9	8.4
2007	45	8.516	2.184	0.796	0.00	5.536		6.4	6.9
2006	25	5.861	0.803	0.319	0.00	4.739		4.9	4.9
2005	11	1.666	0.249	0.074	0.00	1.343		4.7	5.6
Total		118.141	63.509	28.126	6.254	20.252			

Notes: ^aDormant firms were excluded; ^bestimated as gross assets from the latest published accounts. Gross Table 6, assets are nearly equal to gross liabilities for all firms in the study, as net equity is low for all years with

median values under €5,000; ^cvalues where interest payments exceed 50% of assets were excluded. This ^dFlows of funds may arise where debt is repaid during an accounting period. Average values (in brackets) exclude firms (^e€billion) and interest reporting negative equity payments 2005-2017

Net flows from the IFSC conduit to the borrower were calculated as gross funds raised minus redeemed funds minus total interest income received by the conduit. A key assumption is that gross flows raised are passed to the borrower. This may slightly exaggerate lending to the borrower as a certain proportion of borrowings may be used within the conduit. However, as conduits have no employees or fixed assets and generally have expenses paid by the borrower, these amounts are likely to be small.

In addition, the eventual winding up the conduit is likely to increase outflows from Russia. For example, one conduit showed \$400m issued debt securities in accounts prior to liquidation[27]. Hence, flows were adjusted to reflect final balance sheet assets (Column 4, Table 6).

Interest rates are relatively high compared with other dollar denominated debt (Table 6). They are 2-3 times higher than yields on US Government five year debt. This reflects both risk and an element of profit distribution.

Median interest rates for state controlled firms were in for most years, 1–2% lower than private owned firms.

This section has shown that IFSC based conduits are an important source of finance to Russian based firms. These investment flows may reflect “round-tripping”, that is funds that left Russia were subsequently reinvested in Russia.

Investment in Russia is risky. There is added risk from the nature of the firms receiving borrowed funds. The next section considers governance issues and default risk.

8. Governance and regulatory issues

Fourteen Russian firms connected to 26 IFSC conduits required funds from the CBR and other sources, resulting in bond write downs (Table 7). Seven Russian firms in the study connected with 13 IFSC conduits were identified by the CBR as being subject to insider trading and market manipulation[28].

In spite of these failures, there is no public evidence of regulatory action in Ireland involving IFSC conduits listed in Table 7. The “big six” provided auditing services to 20 of these IFSC conduits. Legal services within Ireland were provided by Arthur Cox for all but two cases. In recent years, there have been 21 auditor resignations from conduits in the study group and 16 of these were by the “big four”. Auditor resignations may predict subsequent risk, such as problems with internal control or delisting from a stock exchange (Ghosh and Tang, 2015).

8.1 Sanctions

The introduction of sanctions may explain a reduction in funds raised. However, some sanctioned firms continued to raise funds, and as noted sanctions may have led an extension of the loan duration of existing loans. Table 8 lists sanctioned firms in the study that raised funds in the period 2014-2017.

Raising funds as sanctions were imposed may indicate further evidence of regulatory gaps. Raising funds in the UK by Gazprom PJSC and VTB, which are both subject to sanctions, has been extensively criticized in a House of Commons Report (House of Commons, 2018, par. 16) as are services provided by law firm Linklaters (par. 19).

There has also been considerable adverse comment on Russian firms and the Russian financial system. Table 9 lists some firms that have featured in recent controversies involving Russian firms and IFSC conduits.

8.2 Russian connected conduits and regulation in Ireland

Despite valuable tax concessions (Stewart and Doyle, 2017) IFSC conduits with “Section 110” status are “self-declared”. This means that a firm itself decides whether it fulfills

Section 110 firm Russian firm		Date		Cost \$ billion		Comment		2011)	
BOM Capital Bank of Moscow	June 2011	\$14				a	Bailed out. More than 50% of loan to management.	2018)	
B&N Bonds B&N Bank	September 2017	\$6				b	Wald Bank of Russia merged with MDM. Many non-performing loans were to shareholders and management	2018)	
USIB Finance Bank	Ural Sib November 2015	\$1.5	loanto			bank ^c	Blat Bank of Russia merged with MDM. Many non-performing loans were to shareholders and management	2018)	
Brunswick Rail Finance	Rail N/AN/A	40%	wrote down non loan of \$600m	following litigation			Blat Bank of Russia merged with MDM. Many non-performing loans were to shareholders and management	2018)	
Amaterasu, Kherpi Finance, Grengam Finance, MDMECP and MDM Internat. Funding	September 2017	\$6	Merged with B&N Bank	(2015)			Blat Bank of Russia merged with MDM. Many non-performing loans were to shareholders and management	2018)	
NBT Finance National Trust	Bank	December 2014	\$0.530			d	subsequent rescue of B&N Bank (Max Seddon, Financial Times, 20 September 2017)	2015)	5
BKMF Finance, OFCB Investments, OFCB Capital	Otrikie November 2017	\$7.83				e	Moscow Times, 27 April 2017, \$500m "Section 110" loans will not be repaid \$800m of "Section 110" loans written off in 2017	2018)	
Persevet Bank	Persevet Bank April 2016	\$1.19				f	Taken over by the Russian Regional Development Bank Rosneft) Upto 80% of loans written off (Reuters, March 2018)	2018)	
PRB LPN Issuance, Vityaz Three Promsvyaz Finance, PSBECP	Probusiness Bank Promsvyaz bank December 2017	\$3.4				g	Collapsed when CBR found RUB 67bn black hole from fictitious bonds and poor quality assets	2018)	
Russian Standard Capital	Russian Standard Bank RSM					h	Nationalised former owners accused of using the bank's funds to buy its own bonds. (Financial Times, 19 January 2018)	2018)	
							N/AN/A Defaulted on \$451m. Bonds issued reduced to 18% of nominal value		

(continued)

Table 7.
Failures amongst
borrowers and
Russian connected
IFSC conduit

Table 7.

Section 110 firm Russian firm Date Cost \$ billion Comment					
TFB Finance	Tatfondbank	November 2016	Bankrupt		
VPB Finance	Funding, VPB	VPB	January 2016	\$2.2 bn	\$60m of bonds revalued at 0. Main shareholder owned 50% of loan portfolio
VTB Finance	ECPF Finance, VTB Eurasia and three other conduits	December 2014	\$2.6	65	\$225m of bonds written down. Licence revoked, allegations management to leave assets. "Blackhole" of 187 billion ruble (e) found by regulators Required bailout funds of \$1.8bn (2014), following the imposition of sanctions
Sources: ^a https://themoscowtimes.com/articles/pfit-of-russian-banking-sector-tanks-following-summer-bail-outs ; ^b www.cnb.com/2017/09/22/bn-bank-russia-central-bank-rescues-second-major-bank-in-less-than-a-month.htm ; ^c www.eiu.com/industry/article/833791667/russias-banking-sector-remains-under-pressure-2015- ; ^d www.theguardian.com/business/2014/dec/22/trust-bank-fict-financial-casualty-russia-currency-crisis ; ^e www.reuters.com/article/us-russia-banks-otkritie-management/russias-otkritie-says-central-bank-bailout-completed-idUSL8N10M21E ; ^f www.cnb.com/2017/11/02/reuters-america-russias-otkritie-bailout-hits-home-in-ireland.htm ; ^g www.reuters.com/article/russia-banks-peresvet/russia-c-bank-to-lend-1-2-bln-to-save-orthodox-church-bank-idUSL8N1HR3M ; ^h themoscowtimes.com/articles/pfit-of-russian-banking-sector-tanks-following-summer-bail-outs ; ⁱ www.reuters.com/article/us-russia-banks-promsvyazbank/russia-hit-by-2016-cyberattacks-600-million-rubles-russian-bank-idUSL8N1HR3M ; ^j www.intellinews.com/long-read-russia-s-great-daylight-bank-robbery-117326 ; ^k www.independent.ie/business/irish/russian-bank-collapse-shines-light-into-shadowy-corners-of-irisfinance-34482531.htm ; ^l themoscowtimes.com/articles/pfit-of-russian-banking-sector-tanks-following-summer-bail-out .					

Conduit Russian firm 2014 2015 2016 2017 Sanctions

Alfa Bond Issuance	Alfa Bank	198	459	664	287	Main shareholders on US "oligarch list"
Alfa Holding Issuance	Alfa Bank	4,756	23	0	499	Main shareholders on US "oligarch list"
Expo Capital	ExpoBank	0	18	0	0	Listed in USBRC combined sanctions list January 2017
GPB Eurobond Finance	Gazprom	3,952	0	0	0	Listed in USBRC combined sanctions list January 2017
MMC Finance	Norilsk Nickel	0	918	0	0	Shareholders Oleg Deripaska and Vladimir Potanin placed on new "oligarch list"
Peresvet Capital	Peresvet Bank (owned by Rosneft since bailout)	0	99	0		Rosneft on EU/US Treasury Sanctions list. Chairman Igor Sechin is on sanctions list

Source: <http://eur-lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=OJ:L:2014:271:FULL&from=EN;www.treasury.gov/ofac/downloads/ssi/ssilist.pdf>

Table 8.
Funds raised
2014-
2017 and
sanctions
(emillion)

requirements as a "Section 110" firm. Although introduced in 1998, "Section 110" firms were first required to notify revenue of their tax status in 2003. The Finance Act 2016 required a "Section 110" firm' to inform Irish Revenue of its status "within 8 weeks of acquiring qualifying assets of 10 million" (Explanatory Memorandum Finance Bill, 2016, p. 4). Companies that have notified revenue that they are a "qualifying" company are required to submit corporate tax returns within nine months of the year end (Parliamentary Questions 4705-4711, 31 January 2018).

One implication of sanctions is that regulators are required to assess the destination of loans or debt proceeds to individuals or companies. Revenue do not collect information on the value or type of qualifying asset[29]. Data on most but not all assets of "Section 110" firms is collected by the CBI. The CBI does not require any information on how loans and the proceeds of funds raised by debt instruments are used (Central Bank of Ireland, 2016a, pp. 14-15, Central Bank of Ireland, 2016b, p. 4)[30]. Hence, the purpose to which loans are put, cannot be assessed by regulators or professional advisors and could be in breach of law relating to sanctions and other issues.

The CBR has stated that Promsvyazbank, a recently nationalised bank, would become a "special-purpose bank for serving military-industrial-complex businesses" (Seddon, 2018). An IFSC based conduit, PSB-ECP is connected to this bank. Other Russian based banks with IFSC based conduits, are reported to provide military related finance are Alfa-Bank, Gazprombank, Rossiya, Russian Agricultural Bank, Sberbank and VTB (Korsunskaya, 2017). Although not directly used to finance military expenditure, the "Section 110" regime and other incentives may be used to provide via cheaper and easier access to finance, to banks that directly finance military expenditure.

All prospectuses examined refer to the risk of criminal activity within Russia adversely affecting bond holders. A number of prospectuses specifically recognize that the funds raised by an IFSC conduit may be used for money laundering. For example, Transcredit Finance prospectus (2010, p. 41) states: "The measures implemented by TCB to prevent it from being used as a conduit for money laundering or terrorist financing"

[...] “may not be completely effective”. Similarly, VPB prospectus (2013, p. 10) states “VPB measures to prevent money laundering and/or terrorist financing may not be completely effective”.

	Conduit	Russian firm	Connections	Source
	Alfa Bond Issuance; Alfa Holding Issuance	Alfa Bank	“Significant favours continue to be done in both directions, primarily political ones for Putin and business/legal ones for alpha”	Executives on “oligarch list”
	Bom Capital	Bank of Moscow	Takenover by VTB Bank in 2011 following police raids on Bank of Moscow and the homes of senior executives as part of a criminal investigation into alleged embezzlement of Rbs. 1bn (\$449m)	Catherine Belton, Financial Times, 26 February 2011
	Eurochem Global Investments	Eurochem	Reports of improper and illegal activities undertaken by EuroChem, its owner, Andrey Melnichenko and associates. Source: Complaints filed by International Mineral Resources	Eileen Sullivan et al. New York Times, 14 July 2017
	Peresvet Capital	Peresvet Bank	The chief executive “disappeared” and Fitch reported that ‘roughly half of Peresvet’s capital – had been issued to companies and individuals with “no real assets”. Peresvet debt was downgraded on 24 October 2016, following appointment of an administrator by the CBR Connected to Magnitsky, who was investigating fraud	Moscow Times, 14 October 2016
	Renaissance Consumer Funding	Renaissance Capital		Daily Telegraph 13 April 2017
	Rosneft Internat. Plus four others	Rosneft	The CEO (Sechin) is described as part of a group of all powerful businessmen “to be above the law and answerable only to the Kremlin” and a “powerful arm of Russian foreign policy” Owners subject to sanctions include	Henry Foy, Financial Times, 1 March 2018
	Sibur securities	Sibur Holding		Irish Times, 5 November 2017
	VEB Finance	VEB	Mikhelson and Tinnchenko (Vnesheconombank)	December 2017 meeting between Chief executive of VEB, Russian US ambassador, Kushner and others
	Described as an agent of the state rather than a bank, New York Times, 4 June 2017	Vneshprom-bank		
9. Allegations of illegal activity/improper influence	VPB Funding Table		A CBR investigation revealed a \$2.2bn deficit. “Former managers may have stripped the bank’s assets for investments in real estate, expensive vehicles and financial instruments”	Griffin and Brennan, Bloomberg, 24 February 2016

8.3 Corporate governance in practice

The “Section 110” firms do not have employees. Legal services, company formation and other secretarial functions are performed by a “corporate service provider” (CSP) based in Ireland. A single CSP in Ireland may provide services for over 1,500 firms. CSPs also provide directors paid by the CSP and not the firm. An individual employee of a CSP may holdover 100 directorships. In one case, a CSP appointee was a director of 413 firms. The largest CSP (2017) was Deutsche International Corporate

Services for the total of Russian connected and non-Russian connected “Section 110” conduits.

Shareholders and directors are given key governance functions in company law. In addition, codes of conduct by directors and managers are specified in corporate governance codes ([G20 and OECD, 2015](#)). For example, [G20 and OECD \(2015, p. 56\)](#) recommends policies are introduced to prevent “fraud and money laundering”. An implication of CSPs providing corporate services to a large number of companies and providing directors to “shell companies”, is that governance, as required in the companies acts and codes of conduct, cannot be implemented as intended.

As noted earlier ownership is in many cases stated to be a “charitable trust” or a trust. This is often described as an “orphan structure”. Stated ownership by a “charitable trust” in effect means that control is exercised elsewhere, but the location and purpose of control is not transparent. In most cases, expenses were paid by the recipient of the loan and this is where control is most likely to be exercised. In a minority of cases, the recipient of the loan was stated to be the owner.

[Golden and Hughes \(2018\)](#) from the Irish Central Bank, argue that SPEs including Russian firms can “provide an efficient structure for the conduct of business activities across borders”. Round tripping of international flows of funds that are largely unregulated with opaque ownership structures and whose funds may originate from illegal activities cannot be regarded as “efficient”.

These results are at variance with the stated position of the Department of Finance in Ireland that a 25% corporate tax rate on investment/non-trading income would “guard against “brass-plate” operations with low substance” and “inforce the role of Ireland’s corporation tax regime in fostering active, substantial, trading operations here” ([Department of Finance, 2013](#)).

9. Economic impact

[Table 5](#) above shows that despite the large value of assets and interest income, pretax profits are low as are corporate tax payments. The main economic impact is from domestic expenditures, identified expenditures (audit fees, tax advice and CSP fees) reached a peak of e2.99m in 2013 and fell to e1.83m in 2017. Most expenditures are for firms providing corporate services to the conduit. Legal fees, which in general are likely to be the largest local expenditure are not generally disclosed[31].

Administrative expenses for most firms in the study were paid for by the firm which received the loan or in some cases what is described as the “arranger” of debt securities issued. Fees for tax advice which reached a peak of e0.385m and fell to e0.188m are a large multiple of the tax charge in company accounts ([Table 5](#)) for all years.

Expenditures in Ireland are low in relation to the value of assets and interest received. Total expenditures for 2017 amounted to 0.07% of

gross interest income and 0.004% of gross assets. Median expenditures (audit, tax advice and CSR fees) varied between e27,000 and e46,000 per annum for the period 2005-2017. Median values for legal fees for a limited number of disclosing firms varied between e22,000-67,000 for most years. Median values of annual listing fees amounted varied between e1,500-5,000 for disclosing firms.

[Golden and Hughes \(2018\)](#) report relatively higher expenditures in Ireland of e237m on fees and commissions or 0.037% of gross assets, for 2017 for all “Section 110” firms. These higher numbers may be explained by non-disclosure, and hence, omission of legal fees in the current study which could amount to around e7m[32]. These authors also report (p. 19) tax payments by “Section 110” firms of e128m for 2017. These tax payments are most likely to relate firms which purchased distressed assets, and which were subject to a special tax regime in 2016 ([McCarthy and McGuinness, 2018](#), p. 36).

One effect of these and other IFSC activities is to increase aggregate measures of the stock and flows of foreign investment into and out of Ireland. Aggregate effects on measured GNP may not be affected because inflows (interest and capital flows) will be matched by outflows. This in direct contrast to other IFSC activities such as aircraft leasing where Ireland accounts for around 50% of the total world aircraft leases and is forecast to provide finance of over e1tn over the next 20 years ([KPMG, 2018](#)).

10. Conclusion

Ireland has for many years relied on tax and other incentives as a major tool of industrial policy. A major policy initiative was the establishment of the IFSC, which has become one of the main source of corporate debt flows to Russia. Gross flows of funds from IFSC conduits to Russian connected entities amounted to e118bn for 2005-2017. Net debt flows are lower at e55bn. If interest payments are subtracted net flows fall further to e27bn. IFSC conduits may be both a source and a use of funds. So that for some years there is a net outflow from Russia to the IFSC conduit. Net outflows of funds from Russia amounted to e31.8bn for 2014-2017.

One implication is that data on direct investment flows that includes flows from conduits needs to be interpreted with caution as net flows may be very different from gross flows.

The paper also presents evidence that the Irish-Russian bond market is different from that of other bond markets in terms of risk and changes in bonds terms and conditions. The paper argues that these factors together with flows of funds from IFSC entities to Russian connected firms are consistent with “round tripping”, that is some capital outflows from Russia has returned via financial flows from Irish based conduits.

Low tax and relatively light touch regulation are major motives for the use of IFSC based conduits. However, these tax and regulatory advantages would be of little value without a transnational network of advisory firms in Ireland, London and OFCs such as Cyprus, providing links with Russian firms and sources of capital. Of equal importance is a banking system allowing free international movement of capital.

The conduits examined are part of the licit economy in Ireland. However, the paper shows links between conduits in the study and allegations of illegal/improper activity by Russian controlled firms. Hence, it is possible that conduits in Ireland though totally compliant are misused by cross-border criminal organisations[33]. They reflect in some cases, an example of the interaction between “legal and Illegal business” (Enderwick, 2019, p. 120).

The paper also discusses consequent bond write downs by conduits as a result of failures by the borrowing firm. A number of conduits also provided finance to Russian based firms, who, in turn, provide finance for Russian military expenditure. Several are subject to sanctions by the USA and the EU. These sanctions are likely to have had an effect in reducing flows of funds to Russian based firms via IFSC conduits.

As these firms have no employees and are mostly owned by a charitable trust, governance mechanisms required by law are outsourced to a corporate services provider. As a result, these firms lack transparency in term of governance. They have become a major part of a largely unregulated shadow banking system.

The growth of OFCs has been facilitated by governments on the basis that high value employment will be created. Shaxson (2018, p. 266) in contrast argues that “oversized finance and its agenda” can cause, “soaring poverty” and “economic crisis and stagnation”. This paper demonstrates that the broad economic impact of the study group is minimal. The main beneficiaries in Ireland are a small group of law firms, accounting firms and firms providing corporate services.

Tax reliefs for “Section 110” firms effectively mean that profits are not taxed in Ireland or in other countries. The cost in terms of tax expenditures both in Ireland and in other countries is likely to be substantial. As a result of these and other tax incentives, Ireland is
often classified as a tax haven.

There have been a number of recent and proposed reforms of the taxation of international investment and other reforms such as intercountry exchange of information. These reforms will impact on tax avoidance and money laundering. Some reforms have come from OECD initiatives and EU directives[34]. However, what is more, important are anti-money laundering international regulatory bodies with legal powers of investigation and sanction, for example, as proposed by the European Commission (Brunsden and Fleming, 2019; European Parliament, 2019, par. 247; European Commission, 2018, p. 5). In the absence of effective

EU regulation, US regulatory authorities have been far more active in combatting money laundering in Latvia and other EU countries ([European Parliament, 2019](#), par 234; [Milne, 2018](#)).

Such changes, if implemented and enforced, would mean that developing offshore financial centres would be more difficult to sustain for an EU member state and potentially non EU states. Reducing competitive advantages from low tax and light touch regulation may, in turn, mean that policies to support financial centres, seek to enhance factors such as quality of services, technical ability and good governance. Given that such attributes are in short supply, effective regulation will place limits on the size and growth of offshore financial centres, such as the IFSC.

Notes

1. Central Statistics Office, International Accounts, Table 5.7, Q4, 2018.
2. www.oecd.org/daf/inv/investment-policy/FDI-in-Figures-April-2018.pdf.
3. See European Parliament (2019) par. 234-242 for a summary of recent cases involving moneylaundering and European banks.
4. Differences may be partly explained by RCB data showing direct financial flows from Ireland to Russia, whereas not all funds raised by Russian connected IFSC conduits may be paid directly or indirectly to Russia.
5. See European Central Bank Financial Vehicle Corporation database available at www.ecb.europa.eu/stats/financial_corporations/list_of_financial_institutions/html/index.en.html. Other sources: prospectuses issued on the ISE, and searches of lists of company directors filed at CRO, Dublin.
6. The ATAD directive affecting hybrid instruments (https://europa.eu/rapid/press-release_MEMO18-6855_en.htm) could have an adverse effect on 's. 110' firms (Cliff Taylor Irish Times, 30 July 2019). Although required legislation is complex and Ireland has sought a derogation until 2024.
7. The number of IFSC based Russian connected conduits may be larger. Law firm, Arthur Cox, advised on over 180 Russian "securitisation structures since 2005". Source: www.Arthurcox.com/practice_area/debt-capital-markets/OtherlawfirmsalsoprovideadvicetoRussianconnectedconduits.
8. Some conduits that appear Russian connected did not file accounts, but may have traded, as the firm was liquidated before the due date for filing accounts.
9. A "Stichting" is a Dutch legal entity which with similar attributes to a special purpose entity.
10. Two firms stated that ultimate ownership was in Cyprus and one in Bermuda although most assets are located in Russia.
11. Corporate service providers provide company formation and secretarial services, as well as the provision of directors.
12. Arthur Cox also provides listing services to debt quoted on the ISE but issued by a conduit located _____ elsewhere, for example, debt issued by Vimpelcom Holdings BV, based in the Netherlands.
13. Robin Wigglesworth and Kate Allen, Financial Times, 30 September 2018.
14. ISE Statistical Reports, do not show any trading in Russian connected bonds. LSE data shows very limited trading in bonds connected with Russian firms.
15. Clearstream, a major provider of settlement and custody services for securities, only discloses customer identity where consent has been given. www.clearstream.com/clearstream-en/productsand-services/market-coverage/disclosure-requirement
16. MDM Bank merged with another Russian bank (B&N Bank) in 2016. In 2017, the merged group required emergency funding from the RCB. Source: Reuters, 20 and 21 September 2017.

17. The banking licence was revoked because of breaches of Federal law on countering the legalisation (laundering) of criminally obtained incomes and the financing of terrorism, CBR press release, 21 January 2016.
18. The trustees, BNY Mellon Corporate Services do not “take any action unless investors holding at least €15m of the notes request in writing that it do so and that they prefund any steps it takes”, Joe Brennan, “Russian bank bankruptcy renders Irish bonds worthless”, Irish Times, 21 April 2017.
19. One issued share is held on trust for charity by TMF Ireland, 2016 accounts, note 8.
20. Brunswick Rail accounts, 2016.
21. See Joe Nocera Bloomberg, 13 May 2018, available at: www.bloomberquint.com/business/russian-corporate-governance-plays-by-its-own-grim-rules
22. These are sometimes referred to as a “private placement”, and there is far less public disclosure, filing requirements and potential liability under the US securities Acts (see ‘Frequently Asked Questions About Rule 144A, L. S. Harmetz, Morrison and Foerster LLP, 2009).
23. Securities issued under regulation S are not registered with the Securities and Exchange Commission and are not offered for sale within the USA.
24. Funds raised areas shown in company accounts. As far as was possible bond issues were recorded gross of issue costs. Bonds issued at a discount were shown gross of the discount.
25. Regulatory changes allowing bond sales to less than 100 investors may be another factor. See Irish Government Statutory Instrument No. 324/2005- Prospectus regulations.
26. Total balance sheet value of “Section 110” firms amounted to €733bn in Q4 2017 and €743bn in Q4 2016. Source: Irish Central Bank Special Purpose Entities (SPEs) Statistics Q4 2017.
27. Raspadskaya Securities, Annual Report and Accounts 2015, p. 2 and 9.
28. www.cbr.ru/finmarket/inside/inside_detect/table
29. Parliamentary question no. 236-242, 15 January 2019.
30. Golden and Hughes, 2018, p. 8 state “Section 110” firms (SPE’s) are “Not authorised by the Central Bank and are not subject to prudential regulation”.
31. For example, listing fees charged by Arthur Cox in relation to B&N Bonds prospectus, 2016 were €17,500. Source: emails filed with B&N bonds prospectus, CRO, 29 June 2016.
32. Arthur Cox had estimated total earnings of €144m for 2017 (Shane Phelan, Irish Independent, 18 October 2018). As the main provider of legal services to Russian connected conduits, around 5% of their total earnings could be derived from this source.
33. For a literature review, see Dörrenbächer and Gammelgaard (2019).
34. See, for example, www.oecd.org/tax/beps/; www.oecd.org/tax/automatic-exchange/common-reporting-standard/; https://ec.europa.eu/taxation_customs/business/tax-cooperation-control/

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Appendix 3: Identified securitisation issuances by Irish lenders via Irish registered FVCs (1995-2010)

Irish lender	Issuing SPV/FVC	Date/value of issuance	ABS type	Section 110?	% Bonds rated non-investment*	Lender in receipt of bailout?	Bought back securities?
Local Authorities/NTMA	Ulysses Securitisation PLC	1995/1996 - £190m (IRL)	RMBS	No	0%	N/A	N/A
First Active/First National Building Society/Ulster Bank	Celtic Residential Irish Mortgage Securitisation PLC 1	1998 - £196m (IRL)	RMBS	Yes	5.22%	£15bn (€17.5bn) From British taxpayer via its parent bank RBS	Yes (2013) it announced that €1.25bn of notes would be bought back at a discount as little as 45cents ³⁷⁹ on the euro
	Celtic Residential Irish Mortgage Securitisation PLC 2	1998 - £200m (IRL)	RMBS	Yes	6.6%		
	Celtic Residential Irish Mortgage Securitisation PLC 3	1999 - €248m	RMBS	Yes	5.6%		
	Celtic Residential Irish Mortgage Securitisation PLC 4	1999 - €300m	RMBS	Yes	5%		
	Celtic Residential Irish Mortgage Securitisation PLC 5	2000 - €300m	RMBS	Yes	6%		
	Celtic Residential Irish Mortgage Securitisation PLC 6	2000 - €350m	RMBS	Yes	6.25%		
	Celtic Residential Irish Mortgage Securitisation PLC 7	2001 - €650m	RMBS	Yes	5.2%		
	Celtic Residential Irish Mortgage Securitisation PLC 8	2003 - €750m	RMBS	Yes	5%		
	Celtic Residential Irish Mortgage Securitisation PLC 9	2005 - €1.75bn	RMBS	Yes	4%		
	Celtic Residential Irish Mortgage Securitisation PLC 10	2006 - €1.79bn	RMBS	Yes	5%		
	Celtic Residential Irish Mortgage Securitisation PLC 11	2006 - €3.2bn	RMBS	Yes	7.55%		
	Celtic Residential Irish Mortgage Securitisation Ltd 12	2007 - €1.95bn	RMBS	Yes	6.5%		
	Celtic Residential Irish Mortgage Securitisation Ltd 13	2007 - €1.9bn	RMBS	Yes	7.5%		
	Celtic Residential Irish Mortgage Securitisation Ltd 14	2008 - €6.1bn	RMBS	Yes	21.5%		
	Celtic Residential Irish Mortgage Securitisation Ltd 15	2009 - €4.4bn	RMBS	Yes	25.29%		
	Celtic Residential Irish Mortgage Securitisation Ltd 16	2010 - €1.05bn	RMBS	Yes	26.4%		
	First Active Treasury PLC	2000 - €1.5bn	CP	No	N/A		
	Armoir Securities	2008 - €1.5bn	MBS	Yes	19.1%		

³⁷⁹ Irish Independent (12/06/2013), 'Ulster Bank aims to cut debts with buy-back offer for its bondholders' accessed <https://www.independent.ie/business/irish/ulster-bank-aims-to-cut-debts-with-buy-back-offer-for-its-bondholders/29337834.html>

Ireland and round tripping

PTSB/Irish Life and Permanent*	Fastnet Securities PLC 1	1999 - €600m	RMBS	Yes	6.6%	€4bn From Irish taxpayer	Yes (2012) bought back €1.2bn of notes ³⁸⁰
	Fastnet Securities PLC 2	2006 - €2.15bn	RMBS	Yes	7.1%		
	Fastnet Securities PLC 3	2007 - €8bn	RMBS	Yes	25%		
	Fastnet Securities Ltd 4	2008 - €6.5bn	RMBS	Yes	4%		
	Fastnet Securities Ltd 5	2008 - €1.7bn	RMBS	Yes	9%		
	Fastnet Securities Ltd 6	2008 - €2.4bn	RMBS	Yes	19%		
	Fastnet Securities Ltd 7	2008 - €1.5bn	RMBS	Yes	25%		
	Fastnet Securities Ltd 8	2010 - €2.1bn	RMBS	Yes	31%		
ICS Building Society/ Bank of Ireland	Liberator Securities No.1 PLC	1999 - €500m	MBS	Yes	4.6%	€4.7bn From Irish taxpayer via NPRF	Yes (2012) bought back €1.1bn of notes at discounts ranging from 33%-92% ³⁸¹
	Kildare Securities	2007 - €2.95bn	RMBS	Yes	7.2%		
	Morrigan CMBS 1***	2008 - €1.75bn	CMBS	Yes	20.7%		
	Melepard CDO 1 Ltd	2008 - €1.2bn	CDO	Yes	39% unrated		
Irish Intercontinental Bank/KBC***	Phoenix Funding	2000 - €650m	MBS	Yes	3.5%	€1.4bn from Belgian taxpayer via its parent bank. The parent bank received €3.5bn from Federal government and €3.5bn from regional authorities ³⁸²	
	Phoenix Funding No.2 Ltd	2007 - €7.5bn	RMBS	Yes	5%		
	Phoenix Funding No.3 Ltd	2008 - €3.2bn	RMBS	Yes	5%		
Educational Building Society (EBS)/AIB	Emerald Mortgages 1	2000 - €495m	MBS	Yes	4.3%	€20.8bn From Irish taxpayer via NPRF (€16bn)	Yes (2011) bought back €2bn of notes at 70% discount ³⁸³
	Emerald Mortgages 2	2001 - €525m	MBS	Yes	3.9%		
	Emerald Mortgages 3	2003 - €750m	MBS	Yes	5%		
	Emerald Mortgages 4 PLC	2006 - €1.5bn	MBS	Yes	4.8%		

³⁸⁰ Irish Independent (12/01/2012), 'PTSB buys back bonds' accessed <https://www.independent.ie/regionals/herald/ptsb-buys-back-bonds/28850008.html>

³⁸¹ <https://www.williamfry.com/knowledge/bank-of-ireland-raises-e350-million-through-buy-back-of-mortgage-backed-bonds/>

³⁸² Financial Times (17/11/2013) 'BNP Paribas signals return to health with €3.25bn Fortis deal' accessed <https://www.ft.com/content/542a4852-4d4b-11e3-bf32-00144feabdc0>

³⁸³ Irish Times 'AIB gains €1.4bn from debt buy-back', accessed <https://www.irishtimes.com/business/financial-services/aib-gains-1-4bn-from-debt-buy-back-1.1279252>

	Emerald Mortgages 5 Clogher Securities Ltd. MESPI 1 RMBS	2008 - €2.5bn 2008 - €2.3bn 2010 - €751m	MBS RMBS RMBS	Yes Yes Yes	5% 19% unrated 0%	and Exchequer (€4.8bn)	
Anglo Irish Bank	Colligo Funding*** Colligo Funding***	2007 - €2.8bn 2008 - €2.8bn	CMBS CMBS	Yes Yes		€34.7bn from Irish taxpayer	
Start Mortgages	Lansdowne Mortgage Securities No. 1 PLC Lansdowne Mortgage Securities No. 2 PLC	2005 - €370m 2006 - €552m	RMBS RMBS	Yes Yes	9%	Parent company (Investec) sold the company to Lone Star (Vulture Fund)	
Friends First**	Amicus Funding No. 1	2002 - €132.9m	ABS	Yes	N/A		
Treasury Holdings	Opera Finance (CMH) PLC	2006 - €375m	CMBS	Yes	0%	NAMA acquired €1.7bn worth of loans from Treasury Holdings. In 2015 these bonds went into default.	

Source: Section 110 dataset

Note: Relates to securitisation by Irish lenders via Irish registered SPVs. Does not include securitisations done via foreign registered SPVs.

*Relates to ratings on date of prospectus issuance concerning % of bond rated as non-investment grade. Some rounding effects.

**Relates to the securitisation of Irish hire purchase and unsecured consumer loans

For issuances made before the 1st of June in a calendar year, this is ascribed to the previous financial year.

Includes on balance sheet and off balance sheet securitisations

*** Some or all non-Irish assets securitised

**** NPRF represent National Pension Reserve Fund

The first CMBS would not be issued by a bank, but by a subsidiary of Treasury Holdings, the property development firm owned by Johnny Ronan and Richard Barrett.

The Section 110 firm Opera Finance (CMH) PLC, issued €375m worth of bonds in 2006 with the underlying assets consisting of commercial mortgages in the Dublin and Cork areas

Appendix 4: Trade missions from Ireland to Russia (1992 to 2017)		
Trade Mission/Delegation led by	Year	Stated purpose of Irish Russia Trade Mission
Minister for Trade/Marketing (Bertie Ahern)	1992	It was stated <i>'the main emphasis'</i> was <i>'promoting Irish capabilities in consultancy and services'</i> . It was further stated <i>'In fact, I would see the consultancy and services sectors as providing the bridgehead for building our economic links with the region'</i> . ³⁸⁴
Minister for Tourism/Trade (Ivor Callely)	1993	The stated purpose was an <i>'attempt to identify business prospects relevant to Ireland's supply capability with emerging Russian organisations who have hard currency availability'</i> . ³⁸⁵
Minister of State for Enterprise, Trade & Employment (Mr. T. Kitt)	1997	The mission was <i>'designed to help Irish companies achieve and increase business in selected target markets'</i> . In addition to providing an <i>'opportunity for companies to establish high level contacts relevant to the development of their business in the market in question'</i> . ³⁸⁶
Minister of State for Enterprise, Trade & Employment (Mr. T. Kitt)	1998	
Minister of State for Enterprise, Trade and Employment (Mr. T. Kitt)	2000	The Minister <i>'led a group of 19 companies to Russia to identify new opportunities there and to raise the profile of Ireland as a supplier of goods and services'</i> . ³⁸⁷
Taoiseach (Bertie Ahern)	2003	The purpose was to <i>'raise Ireland's profile as a world class supplier of goods and tradeable services, and increase awareness of Ireland, in particular, our recent economic performance. Missions project Ireland as a competitive source of world class expertise'</i> . ³⁸⁸
Taoiseach (Bertie Ahern)	2005	The purpose was to <i>'raise Ireland's profile as a world class supplier of goods and tradeable services, and increase awareness of Ireland, in particular, our recent economic performance. Missions project Ireland as a competitive source of world class expertise'</i> . ³⁸⁹
Minister for International Trade (Tom Kitt)	2007	The Minister led a trade mission of 20 Irish companies to promote the <i>'service capability of Irish companies and encourage collaborative business ventures between Ireland and Russia'</i> . ³⁹⁰
Minister for Trade & Commerce (John McGuinness)	2007	The Minister said the government had identified opportunities for Irish companies in the <i>'[professional] service sector'</i> amongst others, which could benefit from commercial ties with Russia. ³⁹¹
The Tánaiste/Minister for Enterprise (Mary Coughlan)	2009	The Deputy leader of the country led a 10-day mission to facilitate <i>'networking opportunities for companies already in the Russian market'</i> . ³⁹²
Minister for Trade & Commerce (Billy Kelleher)	2010	The Minister led a week-long trade mission. It was said to be part of a <i>'strategy to drive export growth that will support employment and business growth back home'</i> . ³⁹³
Tánaiste/Minister for Foreign Affairs & Trade (Eamon Gilmore)	2011	The Deputy leader of the country <i>'co-chaired a meeting of the Joint Economic Commission with Russia and signed an agreement on a programme for trade and economic cooperation between Ireland and Russia'</i> . ³⁹⁴
Minister of State for Foreign Affairs & Trade (Joe Costello)	2012	The Minister led a five-day mission to <i>'reinforce the continued development of Ireland's Joint Economic Commission (JEC) with Russia'</i> . It was stated that service exports grew 32% to €1.3 billion in the previous year with the intention to build on this. ³⁹⁵
Minister of State for Small Business (John Perry)	2013	The Ireland Russia Business Association (IRBA) and Enterprise Ireland held a conference with stating that <i>'doing business in Russia is an important part of the Government's exports [strategy]'</i> . ³⁹⁶
Minister of State for Transport (Alan Kelly)	2013	The Minister led a trade mission designed to promote the <i>'20 best-in-class Irish companies from the aviation sector'</i> . ³⁹⁷
Minister of State (Kathleen Lynch)	2015	Minister of State (Kathleen Lynch) visits. ³⁹⁸

Not stated	2017	Former Taoiseach Bertie Ahern took part where he detailed the ‘competitive advantages’ Ireland had to offer. Listed attendees included a representative from VEB, the Russian bank which was under sanction by the US/EU. ³⁹⁹
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³⁸⁴ Dáil Éireann debate - Wednesday, 3 Jun 1992, accessed <https://www.oireachtas.ie/en/debates/debate/dail/1992-06-03/64/?highlight%5B0%5D=trade&highlight%5B1%5D=missions&highlight%5B2%5D=trade&highlight%5B3%5D=mission&highlight%5B4%5D=russia>

³⁸⁵ Dáil Éireann debate - Wednesday, 5 May 1993, accessed <https://www.oireachtas.ie/en/debates/debate/dail/1993-05-05/95/?highlight%5B0%5D=russia&highlight%5B1%5D=trade&highlight%5B2%5D=mission>

³⁸⁶ Dáil Éireann debate - Thursday, 3 Dec 1998, accessed <https://www.oireachtas.ie/en/debates/debate/dail/1998-12-03/85/?highlight%5B0%5D=trade&highlight%5B1%5D=missions&highlight%5B2%5D=russia&highlight%5B3%5D=russia&highlight%5B4%5D=trade&highlight%5B5%5D=missions&highlight%5B6%5D=trade&highlight%5B7%5D=mission&highlight%5B8%5D=trade&highlight%5B9%5D=missions>

³⁸⁷ Dáil Éireann debate - Thursday, 3 May 2001, accessed <https://www.oireachtas.ie/en/debates/debate/dail/2001-05-03/79/?highlight%5B0%5D=trade&highlight%5B1%5D=trade&highlight%5B2%5D=mission&highlight%5B3%5D=trade&highlight%5B4%5D=missions&highlight%5B5%5D=trade&highlight%5B6%5D=mission&highlight%5B7%5D=trade&highlight%5B8%5D=missions&highlight%5B9%5D=russia>

³⁸⁸ Dáil Éireann debate - Wednesday, 29 Mar 2006, <https://www.oireachtas.ie/en/debates/debate/dail/2006-03-29/33/?highlight%5B0%5D=trade&highlight%5B1%5D=missions&highlight%5B2%5D=missions&highlight%5B3%5D=trade&highlight%5B4%5D=missions&highlight%5B5%5D=missions&highlight%5B6%5D=trade&highlight%5B7%5D=trade&highlight%5B8%5D=trade&highlight%5B9%5D=missions#s152>

³⁸⁹ Dáil Éireann debate - Wednesday, 29 Mar 2006, <https://www.oireachtas.ie/en/debates/debate/dail/2006-03-29/33/?highlight%5B0%5D=trade&highlight%5B1%5D=missions&highlight%5B2%5D=missions&highlight%5B3%5D=trade&highlight%5B4%5D=missions&highlight%5B5%5D=missions&highlight%5B6%5D=trade&highlight%5B7%5D=trade&highlight%5B8%5D=trade&highlight%5B9%5D=missions#s152>

³⁹⁰ RTE (26/01/2007), ‘Kitt leads Russian trade mission’, accessed <https://www.rte.ie/news/business/2001/0402/13874-russia-business/>

³⁹¹ Irish Independent (18/10/2007), ‘Irish lead a second eastern front’, accessed <https://www.independent.ie/business/irish-lead-a-second-eastern-front/26325728.html>

³⁹² Irish Times (16/02/2009), ‘Tánaiste to lead trade mission to Russia’, accessed <https://www.irishtimes.com/news/tanaiste-to-lead-trade-mission-to-russia-1.836209>

³⁹³ RTE (06/09/2010), ‘30 firms on trade mission to Russia’, accessed <https://www.rte.ie/news/business/2010/0906/135232-enterprise-business/>

³⁹⁴ Dáil Éireann Debate, Wednesday - 17 October 2012, accessed <https://www.oireachtas.ie/ga/debates/question/2012-10-17/30/>

³⁹⁵ Journal.ie (18/06/2012), ‘Moscow calling: Government leads trade mission to Russia’, accessed <https://www.thejournal.ie/russia-trade-exports-mission-enterprise-ireland-costello-490187-Jun2012/>

³⁹⁶ Irish Independent (07/06/2013), ‘Forum aims to boost trade between Ireland and Russia’, accessed <https://www.independent.ie/business/irish/forum-aims-to-boost-trade-between-ireland-and-russia/29326800.html>

³⁹⁷ Dáil Éireann Debate, Tuesday - 3 December 2013, accessed <https://www.oireachtas.ie/en/debates/question/2013-12-03/137/#:~:text=Minister%20for%20Jobs%2C%20Enterprise%20and%20Innovation,,-Share&text=Based%20in%20Moscow%2C%20this%20trade,has%20yet%20to%20be%20finalised.>

³⁹⁸ Department of Enterprise, Tourism and Employment (23/02/2012), accessed <https://enterprise.gov.ie/en/news-and-events/department-news/2015/february/23022015a.html>

³⁹⁹ Irish Times (23/12/2017), ‘Irish trade mission to Russia discussed potential Crimean investments’, accessed <https://www.irishtimes.com/news/ireland/irish-news/irish-trade-mission-to-russia-discussed-potential-crimean-investments-1.3337038>

<i>Ministers of State for Trade/Training (Pat Breen/John Halligan)</i>	2018	Breen said ' <i>sanctions are not there forever</i> ' and hence preparations should be made for their removal. ⁴⁰⁰ Minister of State for Training (John Halligan) led a trade mission to Russia's largest aviation trade fair to help promote Irish lessors.
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⁴⁰⁰ Irish Times (19/02/2018), '*Trade the target as Ireland seeks a reset in relations with Russia*', <https://www.irishtimes.com/news/ireland/irish-news/trade-the-target-as-ireland-seeks-a-reset-in-relations-with-russia-1.3396716>

Appendix 5: Top 20 global lessors registered in Ireland and identified employment (2023)				
Firm	Rank	Name	CRO no.	Employees per financial statements (2023)
<i>AERCAP</i>	1	AerCap Ireland Limited	51950	300
<i>SMBC Capital</i>	2	SMBC AVIATION CAPITAL LIMITED (consolidated)	270775	268
<i>Air Lease Corporation</i>	3	ALC AIRCRAFT LIMITED	526328	25
<i>Avolon</i>	4	Avolon Aerospace Leasing Limited	906378	Not stated (External)
<i>BOC Aviation</i>	5	BOC AVIATION (IRELAND) LIMITED	234471	11
<i>BBAM</i>	6	BBAM AVIATION SERVICES LIMITED	476880	36
<i>ICBC Leasing</i>	7	ICBC INTERNATIONAL LEASING COMPANY LIMITED	483636	18 (2022)
<i>Aviation Capital Group</i>	8	ACG AIRCRAFT LEASING IRELAND LIMITED	410601	20
<i>DAE</i>	9	DAE (IRELAND) LIMITED	275812	40
<i>BOCOM Leasing</i>	10	BOCOMM AVIATION LEASING IRELAND COMPANY LIMITED	559552	18
<i>CBD Aviation</i>	11	CDB AVIATION LEASE FINANCE DESIGNATED ACTIVITY COMPANY	472612	83
<i>Jackson Square Aviation</i>	12	JACKSON SQUARE AVIATION IRELAND LIMITED	461635	35
<i>Carlyle Aviation</i>	13	Carlyle Aviation Fly Ltd.	909573	Not stated (external)
<i>CES International Financial Leasing</i>	14	-	-	-
<i>Avic International Leasing</i>	15	-	-	-
<i>Castlelake</i>	16	CASTLELAKE AVIATION HOLDINGS (IRELAND) LIMITED	627830	23
<i>CMB Financial Leasing</i>	17	CMB FINANCIAL LEASING (IRELAND) LIMITED	584920	8
<i>Orix</i>	18	ORIX AVIATION SYSTEMS LIMITED	170923	87
<i>Aircastle</i>	19	AIRCASTLE (IRELAND) DESIGNATED ACTIVITY COMPANY	513581	29
<i>AviLease</i>	20	AVILEASE AVIATION MANAGEMENT IRELAND LIMITED	721171	8

Note: (1) Table does not include *Section 110* leasing firms where direct employment is generally zero.

2. Blanks indicate no firm with identifiable employment could be found.

