

**Was the early food the late poison?
Foreign banks and the retail credit market during Ireland's financial crisis**

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Abstract: Ireland's banking system is among the most open in the world, with a significant amount of the industry headquartered in other countries. In this paper we examine the development of the industry in the run up to the recent domestic and international financial crises. We highlight the three distinct categories of banks operating in Ireland, which allows for a more accurate analysis of the interaction of the banking system with the domestic economy. Focussing specifically on the retail market, we analyse the role of foreign ownership in determining how banks responded to the domestic and international crises through their provision of credit to the Irish non-financial private sector. We find a significant role for parent group liquidity and conditions related to recapitalisation by home country governments in explaining the difference between credit growth during the crisis for foreign and Irish-owned banks. The potential for EU policy developments to avoid such differences in future crises is explored.

Keywords: Credit, Ireland, Banking Union, Multinational banks.

JEL classifications: E44, E51, F23, F36, F44, G21.

1. INTRODUCTION

‘Progress would not have been the rarity it is if the early food had not been the late poison.’
Walter Bagehot, *Physics and Politics*, ch. 2, sct. 3 (1872).

Can Bagehot's hypothesis on the development of social and political institutions in ancient civilisations hold for the banking system in Ireland? For the best part of thirty years, Ireland has been home to an extremely open and large financial sector (2,180 per cent of 2012 GDP), of which the banking system makes up approximately one-third. The early benefits of this openness were reflected in a rise of skilled employment in the banking sector, a more competitive domestic banking market and an ability to exploit the funding opportunities arising from the rapid globalisation of finance and the advent of monetary union. However the experience since 2008 has not been as favourable, as the direct and indirect costs of resolving the problems stemming from the excessive expansion of the banking system in the years preceding the domestic and international financial crises have been extremely large by historic standards. In this paper we examine the resident banking system at a dis-aggregate level over the decade, analysing how Irish and non-Irish owned banks evolved in advance of, and during, the domestic and international crises. In doing so we investigate the extent to which foreign ownership, one aspect of the openness of the banking system, has contributed to the development of the domestic credit market.

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Foreign participation in the domestic banking system has been an area of study in international finance for decades, with the theoretical benefits and costs of financial deepening and integration being subject to numerous empirical analyses. Among the costs of foreign participation is the potential for foreign banks to add instability to the domestic credit market, contributing to excessive credit growth during booms and excessive contractions during downturns. In this paper we analyse whether foreign bank participation in Ireland's retail credit market has been "costly" in terms of an excessive reduction in bank credit during the crisis and the channels through which that cost is realised. We also discuss the potential for policy recent policy developments in terms of banking union in the EU to minimise such costs generally.

Our paper makes two primary contributions. First, using confidential data collected by the Central Bank of Ireland for monetary statistics purposes we identify three categories of banks based on their ownership and business models (Irish-owned institutions; non-Irish retail institutions; and IFSC institutions). We analyse the aggregate balance sheets of these bank categories over the 2003-2013 period, broken down by the key asset and liability instruments across different counterparties and geographical splits, and show how their characteristics are important when examining aggregate trends in the banking system with reference to the domestic economy.

Second, we add to the empirical literature on foreign bank credit allocation in host markets and on the Irish financial crisis. We do this by examining the drivers of the different response evident in the data by Irish and foreign owned banks in the retail loan market in the context of the literature on multinational banks and the specific policy context and developments in the EU. In aggregate, we find a similar profile to developments in NFC lending by Irish and non-Irish banks over the period, whereas the non-Irish retail banking group reduced their lending to Irish households more so than Irish banks during the crisis. Using bank-level micro data in our econometric analysis we control for an array of common and bank specific demand and supply factors and show that foreign ownership was a key determinant in the different response of Irish and non-Irish retail banks in terms of lending to households during the crisis. We also highlight the channels through which this differential emerged: parent group liquidity considerations and conditions related to the recapitalisation of foreign banks by their home government. In our discussion we note the role of policy developments in the establishment of the Single Supervisory Mechanism, the Single Resolution Mechanism and the Single Resolution Fund in potentially removing those channels in any future systemic crisis.

The paper proceeds as follows: section 2 defines the three distinct categories of banks operating in Ireland and tracks the key asset and liability side developments on their balance sheets in aggregate over 2003-2013; section 3 examines developments in the retail market to a greater degree by focussing on the bank lending market for Irish households and non- financial corporations; section 4 discusses the relevant literature and the policy backdrop which present a number of research questions to be addressed in the Irish context; section 5 analyses the role played by foreign ownership in a banks reaction to the domestic and international crises and the channels through which it operates; section 6 concludes.

2. THE DEVELOPMENT OF THE BANKING SYSTEM IN IRELAND 2003-2013

Irish resident credit institutions² can be split into three categories, based on their ownership and the nature of their business. These categories are outlined in Table 1. The disaggregation of resident credit institutions by business activity allows for a clear distinction between retail and non-retail banks, facilitating a more comprehensive understanding of the evolution of the various banking groups over the past decade. The further disaggregation of retail banks into those that are Irish-owned and foreign-owned permits a deeper analysis of the response of these institutions to the crisis, and the extent to which parent-bank factors may have influenced their response.

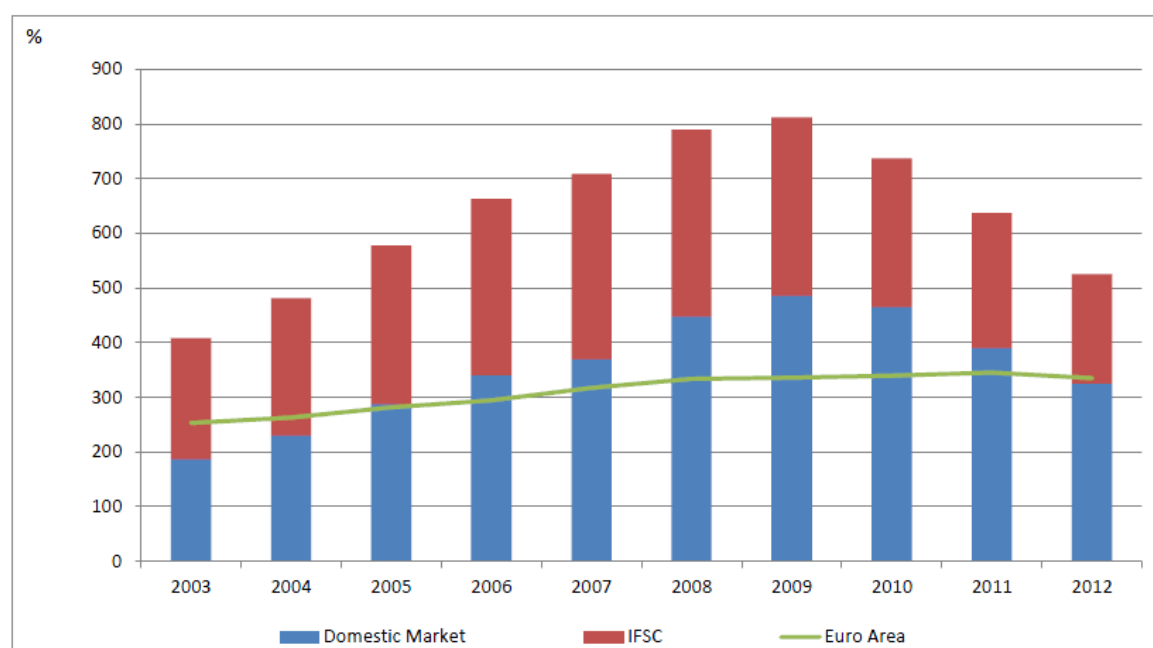
² Irish resident credit institutions refers to those incorporated and located in the Republic of Ireland, including subsidiaries and branches of institutions that have their head office outside the Republic of Ireland. All data discussed in this paper refer to these Irish resident offices, unless otherwise stated. Further information on the statistical definitions underpinning this reporting population and the data used can be found in McElligott and O'Brien (2011). Credit Unions are excluded from the discussion in this paper

Table 1: Categories of Irish Resident Credit Institution

Category	Definition
Domestic market credit institutions	Institutions whose ultimate parent entity is resident in Ireland, or which have a significant (>20%) level of business with Irish households and non-financial corporations in terms of their overall resident business activity.
Irish-owned credit institutions	Institutions whose ultimate parent entity is resident in Ireland.
Non-Irish retail credit institutions	Institutions whose ultimate parent entity is resident outside Ireland and which have a significant (>20%) level of business with Irish households and non-financial corporations in terms of their overall resident business activity.
IFSC credit institutions	Institutions whose ultimate parent entity is resident outside Ireland and whose main purpose is the provision of banking services to non-Irish residents.

In assessing the size of the Irish banking system in a comparative context, it is useful to measure it relative to the domestic economy as a whole. Figure 1 shows the total assets of Irish resident credit institutions as a percentage of nominal GDP for the period from 2003 to 2012, with comparative figures for the euro area. Total assets of Irish resident credit institutions increased steadily from 2003, reaching a peak of 812 per cent of Irish GDP at end-2009, before shrinking back to 525 per cent of GDP at end-2012. Developments in the size of the banking system were far more pronounced in Ireland compared to the euro area as a whole, highlighting the rapid expansion and subsequent crisis experienced by the domestic banking system. Total assets of euro area credit institutions showed a more gradual increase, reaching a peak of 345 per cent of euro area GDP at end-2011. These figures imply that the Irish banking system remains large in proportion to the economy as a whole, by international comparison.

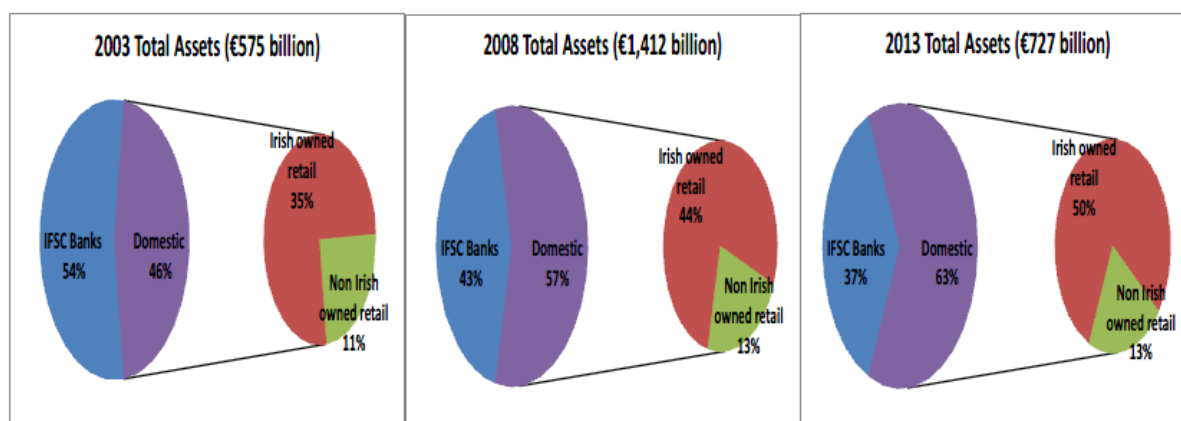
Figure 1: Total Assets of Irish Resident and Euro Area Credit Institutions as % of Nominal GDP, 2003-12



Source: Central Bank of Ireland, European Central Bank and Eurostat.

Looking at the categories of resident credit institutions in more detail, Figure 2 examines the changes in their relative size over the period 2003-2012. In 2003, at the onset of the period of credit-fuelled domestic demand, IFSC banks accounted for the majority share of the Irish banking system. Over the years to 2008, the resident banking system almost tripled in size, primarily driven by the Irish-owned banks, whose share of the market increased by nine percentage points. The non-Irish retail institutions also increased their market share during this period, albeit by a more modest two percentage points. This rapid expansion among the retail banks saw the market share of the IFSC banks fall to 43 per cent by end-2008. This group began to contract from its peak of 707 billion in mid-2008, as the international financial crisis of 2007-2009 had a more significant direct impact on these banks. By end-2013 the size of the resident banking system had fallen by 41 per cent from its peak with IFSC banks reporting the sharpest decline. The composition of the resident banking system has shifted markedly over the period, with the Irish-owned institutions now accounting for the largest share (50 per cent) at end-2013.

Figure 2: Total Assets of Irish Resident Credit Institutions by Institution Category, 2003-2013



Source: Central Bank of Ireland, Money and Banking Statistics.

The main asset class driving the expansion from 2003 to 2008 for the domestic market credit institutions was credit advanced to the Irish resident non-financial private sector (HHs and NFCs), with growth among the non-Irish retail banks outpacing that of the Irish-owned banks, as shown in Table 2. Meanwhile, the increase in the IFSC banking sector over this period was predominantly driven by increases in credit advanced to the non-resident private sector (which includes HHs, NFCs, insurance corporations, pension funds and other financial intermediaries). The Irish-owned banks also recorded strong growth in credit to the non-resident private sector, resulting in an increase of 13 percentage points in their share of this market over the period. All three categories of banks funded these activities largely through increases in private-sector deposits, as shown in Table 2, as well as increased issuances of debt.

As the property market began to falter, the domestic economy began to contract, and the wider international economy stagnated from 2008, the response of the three categories of bank was characterised by a retrenchment to home markets. Credit advanced to the non-resident private sector declined significantly among the Irish-owned institutions, while the non-Irish retail banks recorded an increase over the same period (Table 2). Meanwhile, the non-Irish retail banks withdrew from the domestic market, as evidenced by a relatively larger decline in credit advanced to the resident non-financial private sector and, as a result, a fall in their market share. This apparent emphasis on home market activity in the aftermath of the financial crisis will be explored further in our empirical analysis.

During the period from 2008 to 2013, the liabilities of all categories of banks decreased significantly, as the effects of the global and domestic financial crises took hold. Non-resident private-sector deposits fell sharply, with particularly large declines recorded by the Irish-owned and non-Irish retail institutions. Market tensions during this period made it increasingly difficult for banks to rely on debt issuance as a source of funding, and all credit institutions experienced a significant decline in their outstanding debt securities. The change in the funding profile of the domestic market credit institutions was also reflected in an increase in borrowings from central banks.

These shifts in the asset and liability profile of the banking system over the past decade have been reflected in the net foreign assets held by the Irish resident banking system. The IFSC banks have consistently held a positive net position with the rest of the world over the period. In contrast, the domestic market credit institutions displayed a negative net position with the rest of the world for most of the period covered, as their expansion in the Irish market over the early part of the decade was funded by incurring increasing levels of foreign liabilities. In the case of Irish-owned institutions these foreign liabilities were predominantly from non-affiliated sources. The non-Irish owned retail banks net foreign liability position was primarily with their parent or other affiliated banks.

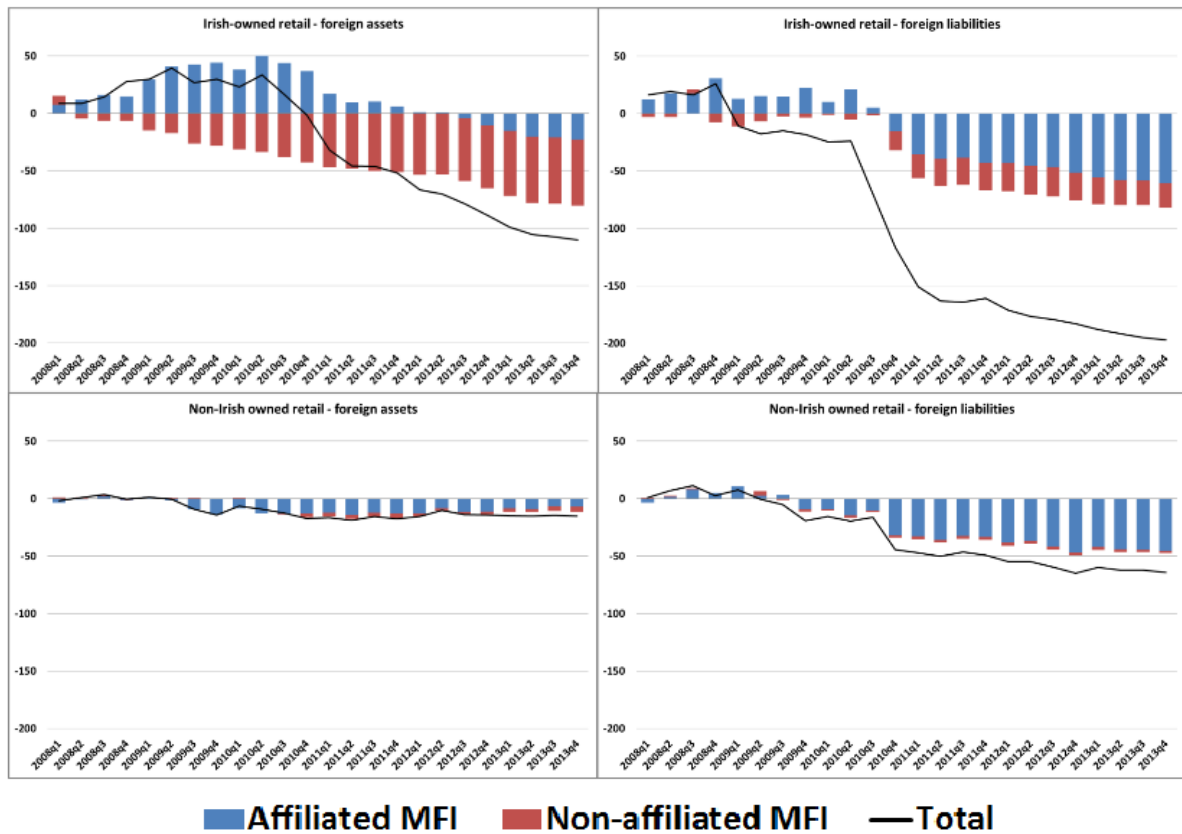
Table 2: Balance Sheet Developments, Pre- and Post-Crisis

	Irish-owned banks	Non-Irish retail banks	IFSC banks	Irish-owned banks	Non-Irish retail banks	IFSC banks
Pre-Crisis (2003 – 2008)	% change over the period			% market share, end 2008		
Total assets	238	219	124	44	13	43
Credit to resident non-financial private sector	176	222	99	70	29	1
Credit to non-resident private sector	535	103	215	28	2	70
Deposits from resident non-financial private sector	67	53	-25	80	19	1
Deposits from non-resident private sector	218	67	182	33	7	59
Debt securities issued	352	550	112	51	3	46
	€bn, end-2008					
Net foreign assets	-65	-53	42			
Post-Crisis (2008 – 2013)	% change over the period			% market share, end 2013		
Total assets	-38	-17	-52	50	13	37
Credit to resident non-financial private sector	-12	-20	-44	74	25	1
Credit to non-resident private sector	-54	-5	-52	29	3	68
Deposits from resident non-financial private sector	-16	11	143	76	22	2
Deposits from non-resident private sector	-74	-71	-22	19	4	77
Debt securities issued	-74	-92	-61	43	1	56
	€bn, end-2013					
Net foreign assets	20	-1	20			

From 2009, the net foreign position of the Irish-owned institutions began to improve. This was mainly driven by a decrease in their foreign liabilities held by non-banks (Figure 3). At the same time Irish-owned banks were increasing their foreign assets by reallocating funds they had placed with non-affiliated banks to their foreign affiliates as well as using more domestically raised funds in their subsidiaries and branches outside Ireland. As the original liability guarantee scheme³ put in place for the Irish-owned institutions by the Irish government came to an end, the net foreign position of those banks swung into positive territory as foreign depositors withdrew funds maturing in 2010. Meanwhile the foreign position of the non-Irish owned retail banks moved from a net liability position of 53 billion in 2008 to being broadly balanced by end-2012. This has predominantly been due to a reduction in their liabilities held by their foreign affiliates of approximately 45 billion over the period (Figure 3).

³ The Credit Institutions (Financial Support) Scheme became effective on 30 September 2008 with an initial period set to run until 29 September 2010.

Figure 3: Cumulative change in foreign assets and liabilities by counterpart from end-2007

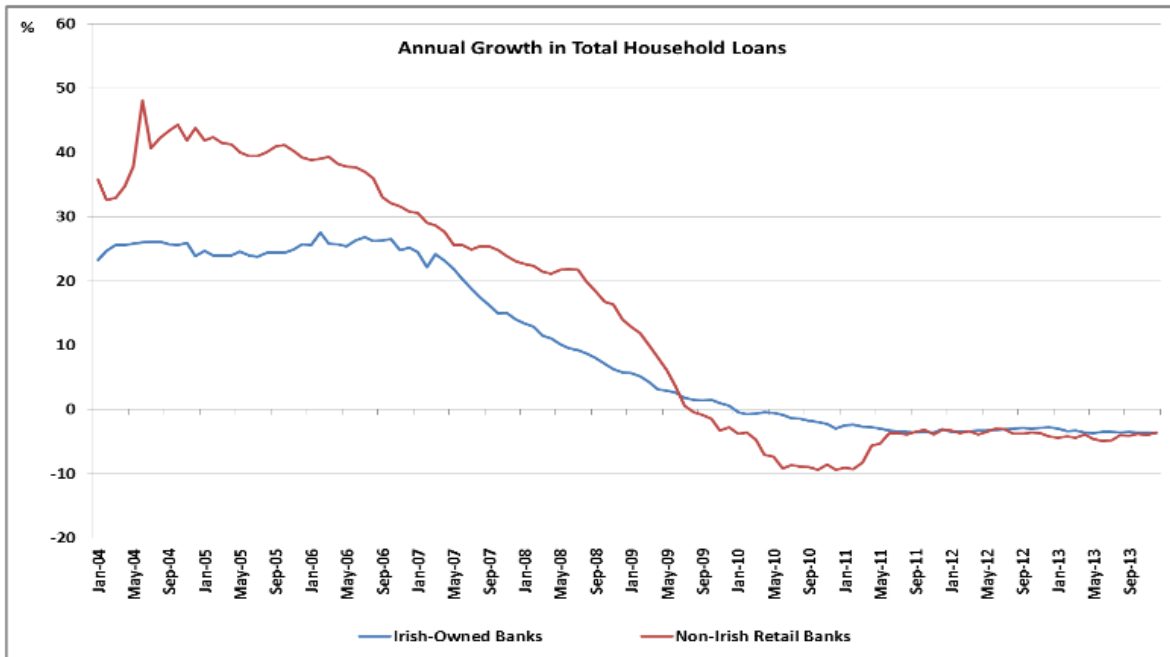


Source: Central Bank of Ireland, Money and Banking Statistics

3. A CLOSER LOOK AT THE RETAIL MARKET - LENDING VOLUMES AND INTEREST RATES

As discussed in Section 2, the domestic market credit institutions reported a significant increase in credit advanced to the Irish resident non-financial private sector (households and NFCs) in the period from 2003 to 2008. As shown in Figure 5 and Table 3, total loans advanced to Irish resident households in aggregate by the non-Irish retail banks grew at a faster rate than those of the Irish-owned banks. Over the whole period, the pace of growth among the non-Irish retail bank group was almost twice that of the Irish-owned bank group. This trend largely reflected developments in the mortgage market, where credit advanced by the non-Irish retail banks increased significantly, particularly in 2004 and 2005. Loans advanced to Irish resident NFCs by the domestic market credit institutions also grew rapidly from 2003 to 2008, with the pace of growth among the Irish-owned institutions surpassing that of the non-Irish retail banks.

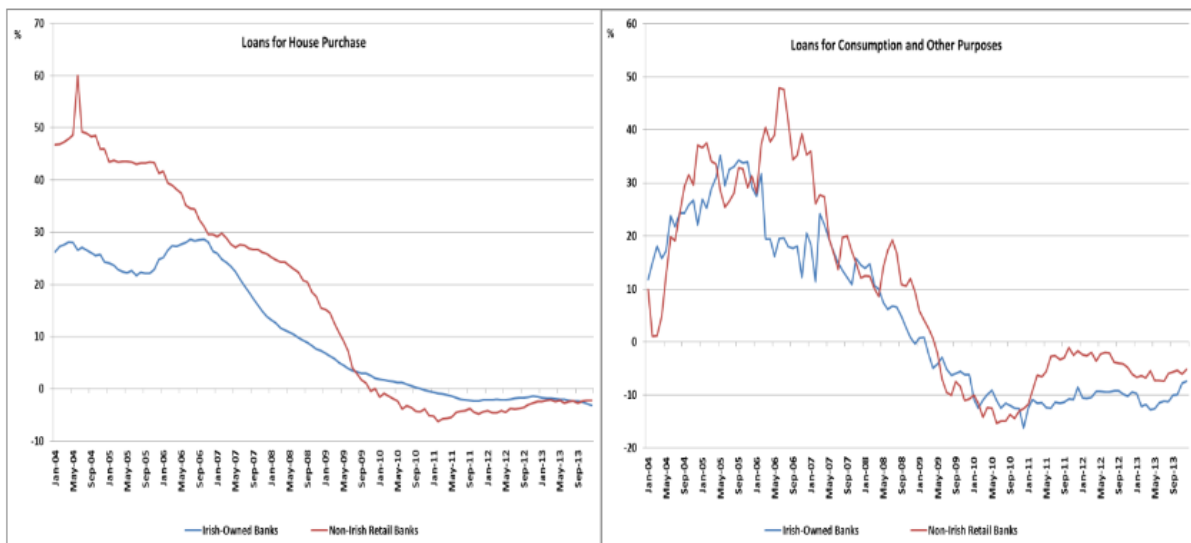
Figure 4: Annual Growth in Loans to Households



Source: Central Bank of Ireland, Money and Banking Statistics.

As the domestic economy contracted and the international financial crisis intensified, lending to households declined sharply. As shown in Table 3, the pace of decline has been much more severe among the non-Irish retail bank group, again reflecting developments in the mortgage market, which accounted for approximately 80 per cent of total lending to Irish households in 2008. The share of the mortgage market accounted for by the non-Irish retail banks fell by nine percentage points between end-2008 and end-2013. By contrast, lending to households for consumption and other purpose declined at a slower pace among the non-Irish retail banks. The composition of total household lending by these banks changed significantly between 2008 and 2013. At end-January 2008, 81 per cent of total household lending by these banks was accounted for by loans for house purchase. By end-December 2013, this had fallen to 54 per cent. This shift away from mortgage lending has resulted in an increase in these banks share of the market for consumption and other loans, to 50 per cent. However, their share of total household lending declined over the period, by four percentage points. They also surrendered market share in the NFC sector, reflecting the sharper decline in outstanding loans to NFCs relative to that recorded by the Irish-owned institutions.

Figure 5: Annual Growth in Loans to Households by type of loan and bank category



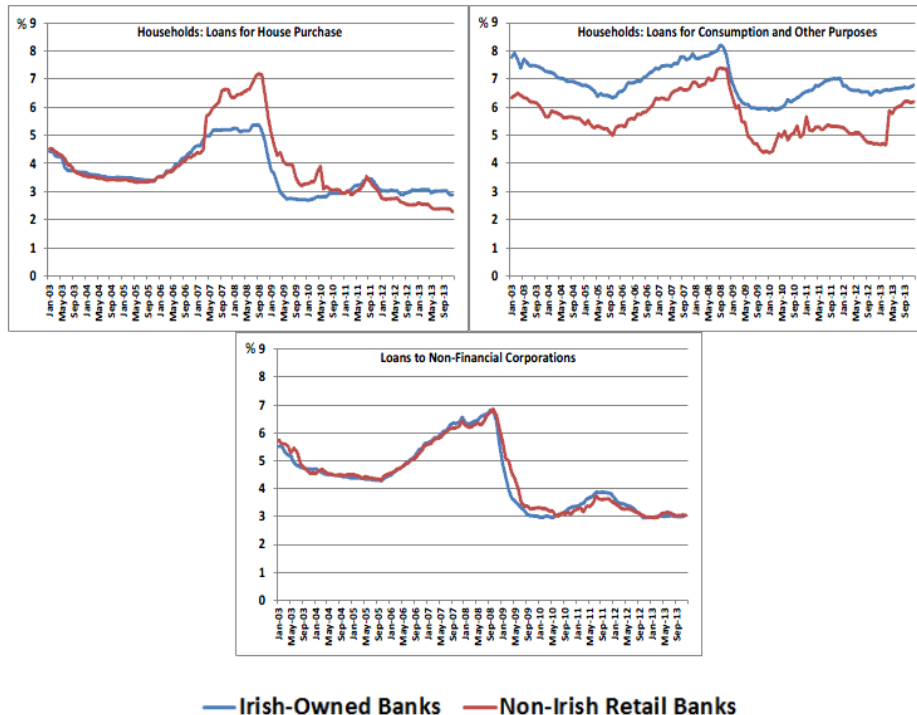
Source: Central Bank of Ireland, Money and Banking Statistics.

Table 3: Developments in Retail Lending, Pre- and Post-Crisis

	Irish-owned banks	Non-Irish retail banks	Irish-owned banks	Non-Irish retail banks
Pre-Crisis (2003 – 2008)	% change over the period		% market share	
Loans to Irish resident households	135	267	74	26
For house purchase	140	288	76	24
For consumption/other	117	199	67	33
Loans to Irish resident NFCs	233	185	68	32
Post-Crisis (2008 – 2013)	% change over the period		% market share	
Loans to Irish resident households	-11	-21	78	22
For house purchase	-5	-13	85	15
For consumption/other	-40	-32	50	50
Loans to Irish resident NFCs	-13	-19	71	29

In relation to the cost of borrowing from the domestic market credit institutions, interest rates charged by both categories of banks for the most part exhibited similar trends over the period from 2003 to 2013 (Figure 6). One exception to this was the elevated rates charged by the non-Irish retail banks on loans for house purchase from 2007 to mid-2010. During this period the weighted average interest rate on outstanding mortgage loans issued by these banks was 5.12 per cent, a full percentage point above the average rate charged by the Irish-owned banks over the same period. By contrast, although the costs of consumption and other loans from the two retail banking groups have tended to move in line with each other, the average rate charged by the Irish-owned banks has been persistently higher than that of the non-Irish retail banks. The widest margin between these rates was observed in December 2012, at 1.87 percentage points. Interest rates on outstanding NFC loans for the two banking groups have exhibited almost identical trends over the period from 2003 to 2013.

Figure 6: Retail interest rates on loans to Households and Non-financial corporations by bank category



Source: Central Bank of Ireland, Money and Banking Statistics.

The aggregate data examined in this and the previous section shows that the response of banks operating in the retail credit market in Ireland to the domestic and international crises may be determined by the ultimate ownership of that bank, i.e. Irish or foreign. In the following sections we examine the relevant literature and policy context and use micro-data to examine whether this is indeed the case.

4. RELATED LITERATURE, POLICY ISSUES AND RESEARCH QUESTIONS

A significant literature has emerged in recent years analysing the impact that foreign owned banks have on credit availability in host markets, particularly during the financial crisis. These banks face broadly the same market conditions as indigenous banks in a given retail market, but are also subject to shocks to their parent company, wider banking group, or their home market. The theoretical literature on foreign ownership and bank credit allocation in host markets cuts across the microeconomic aspects of the industrial organisation of financial intermediaries and the macroeconomic aspects of cross-border shock transmission. At the crux of the issue in terms of this paper is the operation of an internal capital market (ICM) in the foreign-owned multinational banks operating in Ireland, through which these banks move funds across their various global operations.

Morgan et al (2004) extend the intermediation model of Holmstrom and Tirole (1997) to include the possibility of banks operating across borders. In their model, banks operating in different markets (A and B) can respond to shocks in either market by shifting the banking groups resources from A to B or vice versa via their ICM, depending on the source and type of shock. They show how the effect of a bank capital, or supply shock in either market is dampened by the presence of the multi-national bank, as an adverse shock in A will see the bank shift capital into A from B due to the higher rate of return on that scarce capital in A. However the impact of an adverse demand shock in A, through lower collateral values etc. is amplified by the presence of the multi-national bank as this directly reduces the return on the bank's capital in A thus leading it to shift the resources into B.

In their comprehensive review Navaretti et al (2010) label these the support and substitution effects of operating an ICM. They note that these effects mean that multi-national bank lending activities in host markets are less correlated with funding activities in those markets. This can stabilise credit provision in the host market following an idiosyncratic shock in the host, particularly if support effects dominate. In the case of a systemic crisis which affects multiple markets, Navaretti et al (2010) show how a multi-national bank may not be able to activate support effects through an ICM to the same extent as when faced with an idiosyncratic crisis. However the economies of scale and risk diversification that arise from having a cross-border ICM allow for lower funding costs for multi-national banks compared to stand-alone banks. This can lead to relatively more market funding to be available for the multi-nationals during a systemic crisis, which in turn could alleviate the impact of systemic crises on lending by multi-national banks across all its markets. In their empirical analysis Navaretti et al find that multi-national banks did not react more negatively in terms of credit provision in host markets than stand-alone domestic banks during the 2007-2009 international crisis.

Early empirical studies on the matter focussing on central and Eastern Europe showed that cross-border banking groups support their foreign subsidiaries during crises specific to the host market and can act as a stabilising force on credit provision (De Haas and Van Lelyveld, 2006). However, in contrast to Navaretti et al (2010), more recent analysis indicates that during a widespread crisis, such as that of 2008 onwards, foreign owned banks are more likely to curtail their lending in host markets (De Haas and Van Lelyveld, 2011; Popov and Udell, 2012). In these cases the parent bank was more likely during the financial crisis to use their deposit base in the host market to support the wider group as opposed to using that deposit base to fund lending activity in the host market (Cettorelli and Goldberg, 2011a, 2011b). In contrast, using a large panel dataset covering a number of individual banks and markets, Claessens and van Horen (2012) and Ongena et al (2013) show that while foreign banks in general reduced their lending in host markets more than domestic banks during the financial crisis, this effect was weaker for foreign banks with significant deposit bases in those host markets.

In the previous section, the experience of the Irish and non-Irish owned institutions operating in the domestic retail market were analysed in aggregate. Research on the Irish retail loan market during the crisis has highlighted the impact of both non-performing loans and credit standards on credit provision and pricing and has for the most part focussed on household loans. Lydon et al (2011) note the reduced demand for loans by households given the broad economic situation in Ireland and the characteristics of the mortgage loan book. Goggin et al (2012) show that the pass-through from policy and money market rates to standard variable mortgage interest rates breaks down post-2008. They demonstrate that higher retail interest rates than would have been expected with a more complete pass-through during this period are partly explained by crisis-related phenomena of rising arrears rates on existing mortgages and higher funding costs faced by the banks included in

their sample.⁴ Using micro-data covering the Irish owned banks and survey data from their customers, McCarthy and McQuinn (2013) calculate a mortgage credit supply indicator which, when controlling for demand, suggests a significant contraction in the supply of mortgage credit in 2009 and 2010.

The theoretical literature is yet to address the specific policy context within which the domestic and European financial crises emerged - a single market for financial services in the EU alongside regulation and resolution competencies only at the Member State level.⁵ Funding shortfalls and concerns regarding adequate capitalisation throughout the financial crisis resulted in significant pressure on European banks to deleverage, and to focus on their "core" asset portfolios. As discussed in Section 2, the deleveraging experience in the Irish banking sector has been characterised by a retrenchment to home market activities. Any use of public funds to support struggling banks is likely to reinforce the trend towards a re-nationalisation of financial markets, by prioritising the provision of financial services to the domestic economy. This has been the case for many European banks, where capital injections by national governments have been followed by the implementation of detailed restructuring plans, with a renewed focus on the domestic retail and corporate activities of the bank. While deleveraging may be a necessary post-crisis adjustment process aimed at "right-sizing" balance sheets, the scale of government interventions during the crisis period, and the associated fears of increased linkages between bank failures and sovereign risk, may have resulted in overly aggressive credit contractions in host markets.

Establishment of a full banking union in (at least) the euro area may go some way towards mitigating these negative effects of foreign ownership during financial crises.⁶ The rationale for banking union tends to focus on breaking the connection between financial sector and budgetary instability by weakening any linkages between a national banking system and the state in its home jurisdiction. Such linkages may be broken if the costs of stabilising a banking system no longer rest exclusively with the home jurisdiction but are instead shared across jurisdictions. However, the rationale for moving towards a full banking union in the euro area (and other Member States which opt-in) goes beyond breaking the bank-sovereign nexus. It is envisaged that banking union may also enhance financial stability by reducing market fragmentation and by supporting the Single Market for financial services. This aspect may be particularly relevant, given the increasing shift towards home-bias in banks' asset portfolios in recent years.

The first pillar of banking union in Europe is the Single Supervisory Mechanism (SSM), which will see a shift in responsibility for banking supervision from national authorities to the European Central Bank (ECB). The creation of SSM was also a consequence of a decision that the recapitalisation of banks could come directly from the European level, to ease the pressure on sovereigns. Under SSM, the ECB will directly supervise all significant credit institutions in the euro area and other participating EU countries. It will also work closely with the national competent authorities to supervise all other credit institutions. The SSM is designed to enforce supervision consistently across the participating members. By shifting responsibility for supervision to the European level, the focus of supervisory activities will be aligned with the activities of cross-border banks and the European-wide financial sector, and therefore less influenced by domestic issues. It is envisaged that this will increase the efficiency of the European banking system, and support its role as the dominant source of credit for the entire European economy.

Perhaps more relevant in the context of this paper is the approach taken to crisis management and resolution in banking union, with the underlying principle of effective risk-sharing. This is to be achieved by ensuring, firstly, that the costs of bank failures are borne pre- dominantly by the private sector and, secondly, that any resolution costs are more evenly spread across the European banking sector and less concentrated in the affected countries. The Bank Recovery and Resolution Directive (BRDD) sets out new rules designed to put an end to bank bail-outs using public funds, by instead relying on the principle of bail-in, so that losses are allocated to shareholders and creditors following a clearly defined hierarchy. The Single Resolution Mechanism (SRM) implements the BRDD, and ensures that if a bank subject to SSM faces serious difficulties, its resolution can be managed efficiently with minimal costs to the taxpayer and the real economy. Precise arrangements are set out for how home and host authorities of banking groups are to cooperate in all stages of cross-border resolution, and the SRM will introduce a Single Resolution Fund (SRF) by 2016 that is funded by and available to all banks

⁴ Kelly et al (2013) show similar crisis-related pressures on NFC loan pricing in Ireland.

⁵ On the empirical side Rose and Wieladek 2011 find that home government recapitalisation had a negative impact on credit extension in the UK market by foreign banks operating there.

⁶ Details on the establishment of the various pillars of banking union can be found in the relevant EU Council Regulations: No. 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions; No. 806/2014 of 15 July 2014 establishing uniform rules for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund.

participating in SSM. From 2016, all bank resolution cases will require a bail-in of shareholders and creditors equal to at least 8 per cent of total liabilities of the bank. Only after this threshold is attained can money from the single resolution fund be used, and for a maximum amount of 5 per cent of total liabilities. The use of public money for recapitalisation, either national or European, can therefore only be considered at the very end of this process, after these two other sources of remedial action have been used.

The centralisation of responsibility for supervision and resolution activities should contribute to more sustainable financial integration in Europe, and halt the fragmentation of banking along national lines that has intensified since the financial crisis. In doing so, banking union presents an opportunity to maximise the benefits of integration by creating a policy framework more conducive to cross-border retail banking. It can also break the sovereign-bank nexus which may have contributed to the fragmentation seen in recent years, and in part avoid a cost of financial crises in terms of inadequate credit allocation in host markets.

The theoretical and empirical literature presents a number of policy relevant research questions that can be addressed in the Irish context:

1 - Does foreign ownership in and of itself directly contribute to instability in credit provision through excessive credit growth during booms and, more specifically in terms of this paper, credit contractions during downturns?

2 - If foreign ownership is a determinant of differences in credit growth between banks, through which channels does it operate - internal capital markets as set out in the literature or the implications of the sovereign-bank nexus that has emerged?

3 - To what extent can policy innovations since the onset of the financial crisis offset those channels and minimise the cost of foreign bank participation in the domestic credit market in terms of credit allocation during downturns?

5. EMPIRICAL ANALYSIS

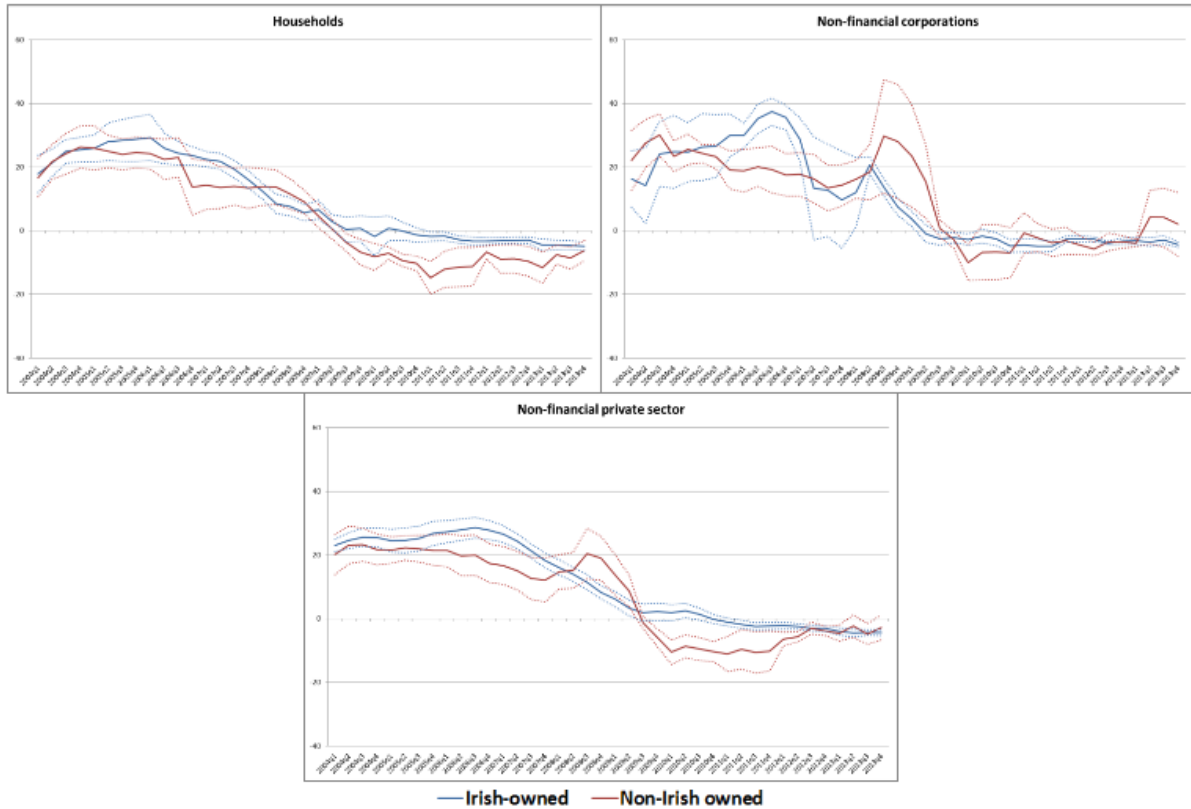
In this section we use bank level data for a sample of banks across the Irish-owned and non-Irish owned retail groups to examine the annual change in non-financial private sector (NFPS) loans, in total and broken down in to lending households and non-financial corporations (NFCs). Specifically, we aim to determine whether foreign bank ownership contributed to the contraction in household lending during the crisis, and if so through which channels did it do so, as set out in section 4.⁷

Neither Goggin et al (2012) nor McCarthy and McQuinn (2013) explicitly consider foreign-owned banks in their analysis, and as such no direct comparison between Irish and non-Irish owned retail banks has been undertaken. In contrast, the dataset used in this paper allows for such a direct comparison to be analysed. We use confidential bank level data for balance sheet items and interest rates collected by the Central Bank of Ireland for compiling the aggregate Money and Banking Statistics and Retail Interest Rate Statistics discussed in the previous sections. We also include in our dataset financial data for each banks ultimate parent group which allows us to analyse the role of wider banking group issues on NFPS lending in Ireland. The banks in our sample cover all franchises operating in the Irish NFPS loan market for which lending volume and interest rate data are available at any point from 2003 to 2013. This results in an unbalanced panel of 17 individual licensed entities, with an average of 29 quarterly observations per institution.⁸

⁷ This analysis does not examine the discrete choice to enter or exit a particular market.

⁸ Details of the data used are presented in an appendix.

Figure 7: Mean of year-on-year rate of change in NFPS loans



Source: Authors calculations based on Central Bank of Ireland, Money and Banking Statistics.

Our main variable of interest is the year-on-year rate of change in loans to Irish households and NFCs. Figure 9 shows the mean and standard errors of these variable for Irish- owned and non-Irish owned institutions included in our analysis. For most periods over our sample both categories of banks exhibit similar trajectories in terms of household and NFC loan growth, with the only graphical evidence for a significant difference between the two being over the 2009-2011 period for household lending.

Our empirical analysis follows that of Claessens and van Horen (2012) and Ongena et al (2013). We begin by estimating the following specification:

$$Loangrowth_{bt} = IntRate_{bt} + Foreign_b + Year_t + Foreign_b * Year_t + fixedeffects + t + \epsilon_{bt}$$

where $Loangrowth_{bt}$ is the yearly growth rate of loans to Irish households/NFCs/NFPS for bank b in quarter t (t runs from 2004q1 to 2013q4);⁹ $IntRate_{bt}$ is the agreed new business interest rate on loans to households/NFCs/NFPS for bank b in quarter t , and is included as the main observable factor to differentiate between demand for loans from each bank; $Foreign_b$ is a dummy variable equal to one if the bank is in the non-Irish owned retail group and zero otherwise; and $Year_t$ is a set of dummy variables equal to one for observations in each year from 2004 to 2012 respectively, and zero otherwise.¹⁰ We add bank fixed effects and a time trend to control for time-invariant differences between banks in our sample (e.g. business models and strategies, etc.) and for common factors facing each bank in a given period (e.g. the state of the wider Irish economy and demand for loans). We estimate this specification over two time periods, pre-crisis (2004-2008) and post-crisis (2009-2013). The coefficient on the interaction term $Foreign_b * Year_t$ in our pre-crisis estimation will indicate whether non-Irish owned retail banks increased their lending to the Irish NFPS more than Irish-owned banks prior to the crisis. In the post-crisis estimation the interaction term will verify whether the opposite was true since the onset of the crisis, with the expectation that a significant effect may be found for household lending in 2009, 2010 and 2011 given Figure 7.

⁹ Expressed as $\log(Loan_{bt}) - (Loan_{bt-4})$

¹⁰ The 2013 year effect cannot be directly estimated due to collinearity.

The results of these estimations are in Table 4. In the pre-crisis models, the coefficient on the *Foreign* interaction term can be interpreted as the differential in loan growth between the non-Irish and the Irish-owned retail banks in the years 2004-2008. As can be seen, this coefficient is statistically insignificant for all years for NFPS loans in aggregate as well as for the subset of NFC loans, and for 2004-2007 for household loans. This is in line with the graphical evidence above, that broadly speaking there was no systematic difference in loan growth across the two categories of banks in those years. This finding warrants some discussion, as it seems contrary to the common perception that the growth of foreign banks in the Irish retail market was a contributing factor in the creation of the credit bubble in the early part of the century. The analysis here, however, does not directly contradict this perception. Rather it does point out that the foreign banks in and of themselves were not a destabilising force. Their growth was more than matched by the growth of Irish banks in the market, as the search to maintain or increase market share drove overall credit growth to unsustainable levels.

Table 4: Loan growth by bank type before and during the crisis

<i>Independent variables</i>	<i>Model</i>	Non-financial private sector		Non-financial corporations		Households	
	Interest rate	0.032 <i>0.052</i>	0.037 <i>0.058</i>	0.006 <i>0.045</i>	0.009 <i>0.062</i>	-0.031** <i>0.013</i>	-0.028** <i>0.013</i>
2004*Foreign	-0.259 <i>0.191</i>		-0.283 <i>0.238</i>		0.015 <i>0.056</i>		
2005*Foreign	-0.146 <i>0.126</i>		-0.143 <i>0.159</i>		0.066 <i>0.052</i>		
2006*Foreign	-0.038 <i>0.089</i>		-0.084 <i>0.145</i>		0.055 <i>0.057</i>		
2007*Foreign	0.214 <i>0.252</i>		0.259 <i>0.316</i>		0.064 <i>0.049</i>		
2008*Foreign	0.424 <i>0.361</i>		0.469 <i>0.402</i>		0.081* <i>0.039</i>		
2009*Foreign		-0.068 <i>0.139</i>		0.016 <i>0.251</i>		-0.075** <i>0.034</i>	
2010*Foreign		-0.145 <i>0.271</i>		-0.238 <i>0.316</i>		-0.096* <i>0.047</i>	
2011*Foreign		-0.308 <i>0.248</i>		-0.374 <i>0.306</i>		-0.074 <i>0.049</i>	
2012*Foreign		-0.191 <i>0.194</i>		-0.358 <i>0.235</i>		0.005 <i>0.055</i>	
2013*Foreign		-0.347 <i>0.292</i>		-0.442 <i>0.332</i>		0.035 <i>0.052</i>	
Constant	2.277*** <i>0.667</i>	0.828 <i>1.412</i>	2.741** <i>1.228</i>	0.785 <i>1.756</i>	1.961*** <i>0.269</i>	2.091*** <i>0.264</i>	
Bank fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	
Time	Yes	Yes	Yes	Yes	Yes	Yes	
Number of observations	472	472	417	417	509	509	
R-squared	0.175	0.141	0.175	0.141	0.693	0.708	

Notes: Robust standard errors clustered by bank are presented in italics. ***, ** and * indicates statistical significance at the 1, 5 and 10 per cent level, respectively.

It is interesting to note that the *Foreign* * 2008 interaction term is positive and statistically significant for household loans. This indicates that growth in loans to households of foreign banks in that year was systematically higher than Irish banks, accounting for common demand factors, retail interest rates and bank fixed effects. This was despite the fact that the difficulties in the property market and wider economy became ever more apparent as 2008 progressed. One possible explanation for this finding is that senior management of

foreign banks face informational asymmetries due to greater distance of headquarters from the domestic market than Irish banks. As a result these banks may react slower to changes in the domestic market than Irish banks, but also when they react do so more sharply. However this response is more likely in the case of cross-border lending, as opposed to local lending through affiliates and subsidiaries which is covered in this paper.¹¹

The *InterestRate* coefficient in Table 4 only appears statistically significant and, as would be expected, negative in the estimates for household lending. As interest rates rise at a given bank, demand for loans by households from that bank falls and vice versa. The insignificance of the coefficient for NFC, and by extension aggregate NFPS lending may be due to the prevalence of speculative property related lending during the boom. In these cases the capital appreciation of the property asset over the life of a project was anticipated to be so high that the relatively low level and volatility of retail interest rates were not a key factor in determining the viability of a real estate development. In some cases the loans were structured on interest only or bullet payment terms, further reducing the impact of interest costs on the investment decision.

Turning to the post crisis estimates, the coefficients for the *Foreign_b * Year_t* interactions from 2009 onwards indicate no significant difference between Irish and foreign owned retail banks in these years in terms of NFPS and NFC loan growth. However, for household lending, our prior assertion of a statistically significant difference between Irish and non-Irish owned retail banks is confirmed, at least for 2009 and 2010. In those years, and controlling for observed and unobserved bank specific and unobserved common demand factors, non-Irish owned retail banks had an additional contraction in loans to Irish households of 7.5 per cent (2009) and 9.6 per cent (2010) over and above that of Irish-owned banks.

Our analysis so far has merely confirmed a different response by non-Irish retail banks compared with Irish-owned banks during part of the crisis for household loans, but does not explain how robust this difference is and why it emerged. For example, were there other common characteristics across the banking groups in terms of their Irish loan portfolio, or parent banking group performance which when controlled for can explain the difference in household loan growth between foreign and Irish banks? Did home government support have any role in the different response of foreign and Irish banks, indicating the sovereign- bank nexus driving retrenchment from host markets? To shed light on these issues we control for other bank specific issues by estimating the following regression:

$$\begin{aligned} LoanGrowth_{bt} = & IntRate_{bt} + Foreign_b * Crisis_t + Recap_b * Crisis_t \\ & + Provisioning_{b2007q4} * Crisis_t + DepositStrength_{b2007q4} * Crisis_t \\ & + LeverageRatio_{b2007q4} * Crisis_t + Size_{b2007q4} * Crisis_t \\ & + Recap_b * Foreign_b * Crisis_t + Provisioning_{b2007q4} * Foreign_b * Crisis_t \\ & + DepositStrength_{b2007q4} * Foreign_b * Crisis_t \\ & + LeverageRatio_{b2007q4} * Foreign_b * Crisis_t \\ & + Size_{b2007q4} * Foreign_b * Crisis_t + fixedeffects + t + \epsilon_{bt} \end{aligned}$$

where *Crisis_t* is a dummy indicator for the crisis years 2009 and 2010 and, in addition to the variables already described, we add a number of interaction terms: *Recap* is a dummy variable which equals one if the bank received an equity injection from its home country government during the crisis and prior to end-March 2009; *Provisioning* is the ratio of provisions to gross assets in the Irish resident offices of each bank; *DepositStrength* is the ratio of Irish private-sector deposits to total liabilities of the Irish resident offices of each bank; and *Leverage Ratio* is the ratio of assets to equity for the ultimate parent banking group that each institution in our sample belongs to. To avoid endogeneity problems the *Provisioning*, *DepositStrength*, *Leverage Ratio* characteristics are measured at the end of 2007, the year before the domestic and international financial crises emerged. They also take the form of dummy variables, which are equal to one for banks which are above the median value for a given characteristic in our sample at end-2007, and zero otherwise.

The level of provisioning is used as a proxy for the riskiness of an individual banks loan portfolio, with an expectation that banks with relatively higher provisioning levels going into the crisis contracted their lending to a greater degree.

Deposit strength shows the importance of the Irish deposit market as a source of funding for both the Irish operations and the wider banking group of institutions in our sample. As shown in section 2, the net foreign position of the Irish and non-Irish owned retail banks changed significantly over the crisis period, with the net

¹¹ For a discussion on the role of informational asymmetries and distance in banking see Buch (2005) and De Haas and van Horen (2013)

position versus affiliates changing quite dramatically. A negative coefficient on this interaction term would indicate that banks were less likely to use their Irish deposit base to fund lending in their Irish operations during the crisis, instead they were more likely to use it to bolster group-wide activities (the internal liquidity channels of an ICM Cettorelli and Goldberg, 2011a, 2011b).

It is widely accepted that banks with higher leverage ratios fared worse during the financial crisis. The leverage ratio in our specification aims to capture the effect of relatively weak group balance sheets at the onset of the crisis on subsequent lending growth in the Irish market. A negative coefficient on the interaction term with this characteristic would indicate that institutions with relatively high leverage ratios at the onset of the crisis reduced their lending to Irish households more so than institutions with lower leverage ratios.

The impact of government support is of particular interest in this paper. Most capital injections by governments in support of banks headquartered in their jurisdiction during the crisis were accompanied by terms and conditions on credit allocation in their home markets, which in the context of an overall need to reduce the size of bank balance sheets could be accompanied by relatively aggressive contraction in credit to host markets.

We first run specifications including just the $Foreign_b * Crisis_t$, $Recap_b * Crisis_t$, $Provisioning_{b2007q4} * Crisis_t$, $DepositStrength_{b2007q4} * Crisis_t$ and $Leverage Ratio_{b2007q4} * Crisis_t$ interactions. The results are in Table 5. When controlling for the additional observed bank characteristics, the non-Irish owned retail banks are still shown to contract their lending to households by 12.8 per cent more in 2009 and 2010 compared to Irish-owned banks. Looking at the bank characteristics impact during the crisis years, we can see that banks which received capital injections from their home governments reduced their lending to Irish households more so than banks which did not during the crisis years. The only other bank-specific characteristic that enters as significant is size, whereby banks which were part of relatively larger banking groups by total assets at the onset of the crisis did not contract their lending to households in 2009 and 2010 to the same extent as relatively smaller banks.

Our final set of specifications incorporate the triple interaction term for foreign-owned, crisis year and bank characteristic (in terms of home government recapitalisation, provisioning, deposit strength, size and leverage ratio). This will allow us to see through which channels the foreign-owned differential for 2009/2010 operated.

Looking across these interaction terms we see that the $Provisioning_{b2007q4} * Crisis_t$ and $Leverage Ratio_{b2007q4} * Crisis_t$ interaction terms are significant and negative, showing that the Irish-owned banks with above median levels of provisioning and leverage before the crisis reduced their loans to households by more than Irish-owned banks with relatively lower levels of pre-crisis provisions and leverage. In contrast the $DepositStrength_{b2007q4} * Crisis_t$ is significant and positive, indicating that Irish-owned banks that relied more heavily on resident deposits in their overall funding did not reduce their lending to households to the same extent as Irish-owned banks that relied more on foreign and market based funding.

However the response is different during the crisis when comparing foreign banks and Irish banks with similar pre-crisis provisioning, leverage and deposit funding positions. Foreign banks with relatively weak pre-crisis balance sheets and relatively more risky Irish loan portfolios did not reduce their lending to Irish households during the crisis more so than Irish banks with similar characteristics - in fact in relative terms their loans to households increased during 2009/2010. This is offset by the response of foreign banks with relatively more reliance on deposit based funding in comparison to Irish banks with similar levels of deposit funding. Estimates for the $DepositStrength_{b2007q4} * Foreign_b * Crisis_t$ interaction term is negative and statistically significant, indicating that non-Irish owned banks that had an above median reliance on Irish deposits to fund their operations prior to the crisis reduced their lending by more than Irish-owned banks with similar pre-crisis deposit reliance. This suggests that non-Irish owned banks used their Irish deposit base to support their wider group liquidity situation to a greater extent than to fund their lending to Irish households during the crisis, similar to the results for the U.S. and advanced economy headquartered banks considered by Cettorelli and Goldberg (2011a, 2011b), but contrasts with the experience of banks operating in Eastern Europe and Near Asia as reported by Claessens and van Horen (2012) and Ongena et al (2013).

Table 5. Household loan growth by bank type and bank characteristics during the crisis

<i>Model</i>	<i>Bank characteristics</i>	<i>Bank characteristics and foreign</i>
<i>Independent variables</i>		
Interest rate	-0.028** <i>0.011</i>	-0.028** <i>0.010</i>
Crisis*Foreign	-0.128*** <i>0.039</i>	0.113 <i>0.067</i>
Crisis*Recap	-0.095*** <i>0.032</i>	-0.062* <i>0.032</i>
Crisis*Provisioning	0.044 <i>0.036</i>	-0.132** <i>0.063</i>
Crisis*Deposit strength	0.029 <i>0.035</i>	0.218*** <i>0.054</i>
Crisis*Leverage ratio	-0.055 <i>0.037</i>	-0.137*** <i>0.037</i>
Crisis*Size	0.073* <i>0.038</i>	-0.018 <i>0.031</i>
Crisis*Foreign*Recap		-0.183*** <i>0.053</i>
Crisis*Foreign*Provisioning		0.186** <i>0.069</i>
Crisis*Foreign*Deposit strength		-0.419*** <i>0.066</i>
Crisis*Foreign*Leverage ratio		0.168*** <i>0.044</i>
Crisis*Foreign*Size		-0.003 <i>0.053</i>
Constant	2.043*** <i>0.182</i>	2.019*** <i>0.186</i>
Bank fixed effects	Yes	Yes
Time	Yes	Yes
Number of observations	509	509
R-squared	0.707	0.704
<i>Notes: Robust standard errors clustered by bank are presented in italics. ***, ** and * indicates statistical significance at the 1, 5 and 10 per cent level, respectively.</i>		

From a policy perspective, the role of government support is of particular interest in this paper. Similar to the deposit funding variable, the $Recap_b * Foreign_b * Crisis_t$ interaction term is significant and negative. Foreign banks that received support from their home government reduced their lending to Irish households relatively more so than Irish banks that had been recapitalised by the Irish Government. This suggests that government support plays a role in retrenchment from host markets and that policies which break the sovereign-

bank nexus may be successful in offsetting the potential cost of systemic bank crises in terms of insufficient credit allocation.

It is noteworthy that the $Foreign_b * Crisis_t$ interaction term becomes insignificant for crisis years when we include the triple interaction terms for foreign-owned, crisis year and bank characteristic. Given the significance of the $DepositStrength_{b2007q4} * Foreign_b * Crisis_t$ and $Recap_b * Foreign_b * Crisis_t$ interaction terms, this suggests that the liquidity channel and government recapitalisation can explain the more negative response of non-Irish owned banks during the crisis years.

In summary, our results indicate that foreign ownership was a significant factor in explaining the relatively larger contraction in foreign banks lending to Irish households during 2009 and 2010 when compared to Irish banks. This remains the case when we control for a range of common and bank specific observed and unobserved factors. Our estimates suggest that group-wide liquidity issues and home country government recapitalisation were the main drivers of the difference between Irish and foreign banks. Policy developments at an EU level, in particular the establishment of the SSM, SRM and SRF have the potential to minimise such a foreign/Irish differential emerging in the context of systemic crises through these channels in the future.

6. CONCLUSION

In this paper we have provided an overview of developments in the banking system in Ireland during arguably its most turbulent decade. It has become increasingly useful to differentiate between distinct categories of banks operating in Ireland, particularly when analysing how the banking system contributed to and subsequently responded to the domestic and international financial crises. The excessive expansion of the domestically relevant banking system in Ireland in the early and middle part of the decade was reflected in vast credit growth funded by an increasing reliance on foreign funding. We show that the dynamics of this expansion were not significantly different across the Irish and non-Irish owned retail banks. This contributed to the banking system in Ireland being remarkably oversized relative to the economy as a whole, whereas the subsequent contraction since 2008 has brought the domestically relevant banking system as a proportion of GDP back below the euro area average for the first time since 2005. This adjustment has been reflected in a sharp contraction in foreign liabilities, as Irish-owned banks saw funding from non-affiliated depositors and debt market participants evaporate and non-Irish owned retail banks have become a net contributor of liquidity to their wider banking groups as opposed to a net recipient.

The pace and distribution of the adjustment following the domestic and international crises has been different across asset category and bank type. For the Irish-owned banks, foreign assets were reduced significantly in an effort to right-size their businesses. While lending to the Irish non-financial corporate sector has contracted at a similar pace to that of Irish households, it is in the latter where a notable difference between Irish and non-Irish banks emerged. Our empirical analysis has shown that when controlling for an array of common and bank specific demand and supply factors, non-Irish owned banks contracted their Irish household loan book proportionately more than Irish-owned banks during the crisis. We also show that liquidity management by the ultimate parent banking group and conditions around recapitalisation by home governments are most relevant in explaining the difference between Irish and non-Irish owned retail banks in this regard.

In broad terms, the retrenchment from household lending in particular highlights the downside of having a significant foreign-owned presence in an important retail credit market during an international financial crisis. Our results do not in and of themselves however, imply a direct de-stabilising influence of foreign presence in the market preceding the crisis - Irish owned banks grew their household loan books to the same proportion as non-Irish owned banks. The benefits of foreign participation in the market in the long run may well be greater than the 'cost' incurred by one or two years of retrenchment during a widespread crisis. This is in part conditional on the response of domestically controlled banks to foreign competition. A more harmonised cross-border approach to prudential supervision, such as that envisaged in the SSM in the euro area, may help avoid such a scenario re-emerging.

Our finding on the role of deposit based funding on credit provision by Irish and non-Irish banks during the crisis is interesting. Typically more stable deposit based funding is seen as more suitable from a financial stability perspective in promoting sustainable credit growth. Individual banks business models across the markets in which they operate can see them being predominantly a deposit taker in one market and a credit provider in another. A functioning and sustainable cross-border market operating in this fashion has long been regarded as an efficient and progressive way of allocating funds from savers to borrowers and provide necessary capital to promote investment and convergence across the EU. Whether our finding in this regard requires particular policy attention is not apparent, as policies to limit the home country bias in lending during crises

more generally may eliminate the difference in response between home and host banks in terms of the use of their domestic deposit base in funding lending in the Irish market.

More pertinent in terms of current policy developments is our finding on home government recapitalisation for host market credit provision. This is a consequence of a lack of unified supervisory and resolution regimes across the various national markets within which banks can operate. More centralisation of supervision for multinational and other significant banks in SSM is the first step in a more centralised assumption of responsibility for bank resolution in times of crisis. This implies less recourse to home country governments in times of crisis and potentially breaks the sovereign-banking sector nexus which has contributed to the fragmentation of European banking evident since the crisis. Whether the current design of the SRM and scale of the SRF is sufficient to meet this potential is a matter for further investigation and ultimately decision of Member State governments. The principle at least bodes well for eliminating instability in credit provision in host markets as a result of foreign bank presence. In this way the 'early' benefits of multi-national retail banks will be less likely to be outstripped by the 'later' costs of crises transmitted through them.

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APPENDIX

Bank level variables included in econometric analysis - definitions and sources.

<i>Variable</i>	<i>Definition</i>	<i>Source</i>
Loan Growth*	Log 4-quarter change in the notional stock of loans	Money and Banking Statistics, Central Bank of Ireland
Int Rate*	Agreed new business interest rate on household loans, average over the quarter	Retail Interest Rate Statistics, Central Bank of Ireland
Recap †	Dummy = 1 if the bank received a capital injection from the government of their home country	Various
Provisioning*	Dummy = 1 if provisions divided by total gross assets for the bank at end-2007 is higher than the median value for provisions divided by total gross assets in the sample at end-2007	Money and Banking Statistics, Central Bank of Ireland
Deposit strength*	Dummy = 1 if Irish private sector deposits divided by total liabilities for the bank at end-2007 is higher than the median value for Irish private sector deposits divided by total liabilities in the sample at end-2007	Money and Banking Statistics, Central Bank of Ireland
Leverage ratio †	Dummy = 1 if total assets divided by equity for the bank at end-2007 is higher than the median value for total assets divided by equity in the sample at end-2007	Thomson Reuters and banks own financial statements
Size †	Dummy = 1 if total assets at end-2007 is higher than the median value for total assets in the sample at end-2007	Thomson Reuters and banks own financial statements
Foreign	Dummy = 1 if ultimate parent is not headquartered in Ireland	
* Resident offices basis.		
† Consolidated group basis.		

VOTE OF THANKS PROPOSED BY ROSSA WHITE, NATIONAL TREASURY MANAGEMENT AGENCY

Honorary Secretary, thank you for this invitation to discuss this excellent paper by Frost, Goggin, and O'Brien: "Was the early food the late poison? Foreign banks and the retail credit market during Ireland's financial crisis". It augments the still-sparse literature on the Irish banking crisis. The paper adds to our understanding of the Irish banking crisis and indirectly complements the policy debate on capital flows in the monetary union. This is my first time addressing the society and I am honoured to do so.

I will begin with a discussion of the data itself, move on to address some possible issues with the empirical analysis and finish with some policy discussion.

It is important to understand that the paper is about net new credit flow: new credit minus repayments in shorthand. To do this a major data cleansing job is required. The authors adjust the subset of banking data for administered write-offs (mainly NAMA); securitisations and foreign-currency translation in line with the methodology used to produce Table A.10 of the Central Bank of Ireland's "Credit, Money and Banking Statistics". For further reading, see the illuminating paper by McElligott and O'Brien (2011).

The interest rate series in Figure 6 has some shortcomings. It does not adjust for or exclude restructured loans: as result the marginal rate is biased downwards. Certain borrowers have been given payment holidays or allowed a moratorium on repayments during the recession. For the empirical analysis, this could mean that the statistically significant effect of interest rates on credit flow may be understated.

The previous comments relate to household (mortgage) interest rates. But the non-financial corporate (NFC) interest rate series is not cleansed at all either for the sub-set of banks used. In any case, the Central Bank is yet to produce a pure series at an aggregate level. Many of the same issues with regard to non-performing loans will impact – and probably bias downwards - reported NFC interest rates on new lending. Perhaps NFC interest rates do not show up as significant in the empirical analysis because the series itself is flawed.

Foreign banks kept their interest rates much higher than domestic banks early in the crisis (Figure 6), which is an interesting result mentioned by the authors. And yet foreign banks' credit provision is shown to be statistically significantly higher than domestic banks in that window. This jars slightly: it appeals intuitively that rates were kept high as a deterrent to new lending. Foreign banks may not have wanted to lend at any price. Moving into the more detailed first round of the econometric results, the authors find that household lending was systematically cut more by foreign banks than by domestic banks in 2009 and 2010. This begs a couple of questions in particular:

- Why was lending to NFCs not cut as well? In other words, if foreign banks were retrenching why would they choose just to cut back on lending to households?
- Why does this show up only in 2009 and 2010? If they wanted to "get out" of the Irish loans market or out of Ireland entirely, this would likely be a multi-year process to avoid fire sales.

To explore one of the possible explanations for the first finding, we need to think about the design of the variable itself. Net new credit flow = new lending minus repayments. In the case of households, repayments continued in the majority of cases (the sharp rise in mortgage arrears as a result of the Code of Conduct and the "Justice Dunne" judgement etc. came later than in 2009 and 2010) and probably did not vary bank-by-bank. In other words, the arrears problem came later. There may, however, have been a different response with regard to new credit provision depending on bank ownership – as there was on the way up at the tail-end of the cycle in 2008.

For NFCs, the authors find that there was neither a distinction during the upswing nor in the downswing in 2009 and 2010. It is likely that all banks switched off new credit supply to NFCs – assuming that undrawn overdraft facility changes do not count – after the collapse of Lehman Brothers in September 2008. It is plausible that there was no difference in repayment behaviour of NFCs, particularly as these were dominated by property developers/ building contractors. Banks simply rolled up interest in myopic fashion in the early stages of the crisis and no pressure was put on builders to repay. If there was no new credit and no repayments, it is hard for a difference to show up between domestic and foreign-owned banks with regard to lending to NFCs.

This is a possible, although not entirely convincing explanation, for the variation in behaviour. Further research is required to defend the robustness of this conclusion.

Having found that foreign banks behaved differently to domestic banks in the early years of the crisis, the authors then explore the reasons. It is worth commenting on the variables used. Using provisioning as a proxy for riskiness as of 2007 is unconvincing. Banks' provisioning levels were low pre-crisis; and that provision decision was pretty arbitrary. To choose provisioning as the guide to riskiness is to choose between banks because of low and subjective provisioning levels that bore no relation to the level of non-performing loans later in the crisis. The authors might have chosen concentration risk – such as the share of the total loan book made to property developers – or the pre-crisis pace of asset growth. The probability of fast growing banks going bust tends to be higher than for those which expand more slowly.

The proxy for riskiness has relevance when it comes to the results of the empirical analysis. The authors find that riskier foreign banks did not reduce their lending to households more than Irish banks with similar characteristics; in fact they increased their lending in relative terms. This seems counter-intuitive: perhaps thanks to mis-specification banks that behaved in this way weren't riskier at all. This deserves further work. The final concern I have with regard to the second round of the empirical analysis relates to the crisis*foreign*leverage variable. The results suggest that highly leveraged foreign banks increased their lending to households relative to Irish banks. This seems difficult to believe, unless they really were gambling for survival.

Policy issues

This paper covers about a number of important policy issues, and invites further discussion about others. The authors posit that the new Euro area architecture may prevent future destruction of national balance sheets as a result of banking crises. The Single Resolution Mechanism (SRM) has been set up as part of banking union and it will have a new fund to help pay for the winding up of banks: the Single Resolution Fund (SRF). These are useful additions to the toolkit. Yet the new architecture may not be sufficient. At one level, if banks need to be wound up they will not be making future loans. We need to prevent banks ever getting to this stage: this should be feasible through proper oversight in a more concentrated market like Ireland compared with the US, for example, where the FDIC has been winding banks up for years in part because of fragmentation of the retail system.

A second question is whether the SRF or, perhaps more importantly, the European Stability Mechanism's (ESM) recapitalisation fund of €60bn is big enough. The recapitalisation of viable banks prevents them from reaching the stage where the SRF is required. I fear that a €60bn pot, to be used only when many hurdles are cleared, is not sufficient.

The authors make a valid point about leverage being important, even if their empirical results on this issue are somewhat counter-intuitive as discussed above. In this context, it is worth noting that the new leverage ratio (Tier I Capital/ Total Assets > 3%) will be imposed by January 1st 2018 under Basel III. I would argue that a 3% buffer is still far too low. Anglo Irish Bank, Irish Nationwide Building Society and Allied Irish Bank all burned far more than 3% of their loan books during the Irish banking crisis. There is also a strong argument for equity to be the numerator rather than Tier I capital that does not have to be purely equity. The financial system would feel a lot safer with an equity-based leverage ratio closer to 10%.

Irish banks were harmed both by their homegrown solvency problems and the massive liquidity squeeze during the global financial crisis. As noted in the paper, foreign funding of the domestic Irish-owned banks was plentiful in the mid-2000s. Because of the PCAR 2011 and associated deleveraging plans, Irish-owned banks have dramatically changed their funding mix. The loan books of Bank of Ireland and Allied Irish Bank are funded by deposits. It may be worth exploring loan-to-deposit limits, so that Irish banks never grow too fast or face a future liquidity squeeze thanks to a reliance on foreign-funding. Perhaps a limit of up to 120% would make sense.

The more fundamental question is: what type of banking system do we want? Is it one where we are fully open to foreign banks; where they come and will be regulated properly in future? Or do we want to restrict the system mainly to Irish-owned banks. It seems to me that it is near impossible to restrict foreign banks without upending the rules of the euro area. There have been unfortunate episodes of fragmentation in the recent euro area crisis - episodes where countries have been forced to use Emergency Liquidity Assistance (ELA) and capital controls in Cyprus – but one of the founding tenets of monetary union was free movement of capital. The answer is surely to trust in our revamped regulatory system, but certainly to monitor capital flows more rigorously to see if preventative action needs to be taken periodically.

The authors' results suggest that foreign banks were not relatively more aggressive pre-crisis. In a way, that misses the point. The entrance of foreign banks super-charged the competition, which meant that all banks became aggressive. Domestic banks did not want foreign banks stealing their lunch, so they cut the price of their credit offering to sustain market share. Halifax (Bank of Scotland Ireland) reduced its mortgage rates shortly after arrival, which was one of the catalysts for the madness that ensued towards the mid-2000s. The Irish banks decided to follow suit shortly afterwards.

In fact the question of foreign bank presence could be turned on its head. Why have there been no significant entrants post-crisis? The business done in recent years would have been the safest in the last 15-20 years (given starting low valuations for property) and easiest to transact (given the lack of domestic competition). Yet the dynamic in the marketplace is the reverse of the mid-2000s. No doubt lack of demand has been a constraint, as ECB bank lending surveys have showed. Yet competitive supply of credit begets some increased demand.

There are a number of reasons for the absence of new players:

- The ECB tacitly made it clear that countries should look after their own domestic-owned banking systems during the early phase of the crisis.
- Related to this is the political dimension: how can banks justify growing abroad when they have high-profile problems at home? Certainly, this would be a barrier for banks that were recapitalised by taxpayers.
- Basel III (and Troika Programmes) has enforced much higher capital requirements for banks generally. The trend in regulation too imparts a home bias.
- It is difficult to argue convincingly that full banking union has been created in the euro area, at least with regard to the backstops. Only €60bn is available for direct re-capitalisation and even then it comes with stringent conditions. That would not have gone far enough to pay for the Irish crisis alone (Ireland's ECB capital key is less than 2%). As a result, banks will be reluctant to take risks and tie up capital in markets that they are less familiar with.
- Finally, economic history teaches up that banks always behave pro-cyclically. Foreign non-banks - private equity funds, property funds and hedge funds - have acted counter-cyclically in refinancing vast swathes of the Irish back loan book as well as snapping up distressed assets since 2011 and more recently financing renewed development. The good news is that most of this has been financed by equity, not debt. Either way, if something goes wrong Irish taxpayers will not bear the burden this time.

References:

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DISCUSSION

Seán Lyons: To follow up on Rossa's query about why only lending to the household sector showed a significant difference for foreign banks during the crisis and not the other two sectors, I notice that all the foreign-year interaction terms are negative for the other sectors in that period. Some of the coefficients are large too, but they are found to be insignificant because the standard errors are also large. This suggests a foreign bank effect might have been present during the crisis period but the exact timing of reactions by different banks may not have been the same, or the sample size could be a bit too small to pick up annual effects. The authors might find a significant effect if they estimate the model with a crisisXforeign bank interaction variable for the whole crisis period rather than using individual year interactions.

John FitzGerald: I welcome the paper as a very useful aid to understanding the operation of the banking system in Ireland in recent years. It shows that foreign banks operating in Ireland after the crisis may have operated tighter lending than Irish owned banks. There is a major concern that, across Europe, as a result of the crisis, the single market in finance has disintegrated. Whereas before the crisis firms with a similar risk profile might have expected similar lending conditions from a bank in different countries that is no longer the case. For example, one of the largest Italian banks has to charge higher interest rates in Italy for an identical project that it might finance in Austria. This is because of the operation of the Austrian regulatory system. This must seriously impact on national competitiveness in countries where the cost of finance is particularly high. This loss of competitiveness will affect all companies even though their risk profile may be similar to those of companies in

a country with lower interest rates. This move away from a single market had a major potential cost for Europe. Barrell, et al., 2011¹ show that a set of national banks across Europe rather than an EU banking system would significantly affect growth in Europe. This highlights the need for banking union. There remain concerns that continuing national regulation could prevent Europe from reaping the full benefits of a move back to a single market in bank finance.

Noel O'Gorman: In reacting to Rossa White's remarks on the new EU arrangements, I would endorse the principle of encouraging competition, in the context of sufficiently strong rules, but see an important role for national authorities, alongside European bodies, in enforcing such rules. I commend the authors on the innovative analysis which underpinned the paper, and I draw attention to some important features of the 2003-2008 credit expansion by the Irish-owned banks based on the data in Tables 2 & 3. Underlying their total asset growth of 238% were quite divergent sectoral trends: Non-resident credit grew by 535%, loans to the resident non-financial companies grew by 218%, both far ahead of the 135% growth in lending to Irish households (+140% for house purchase & +117% for consumption). This picture revealed that the banking crisis was about a lot more than just mortgage lending.

Paul Donnelly: While recognising that the issue for Ireland of Brexit, or the UK's possible future exit from the EU, is a much larger issue than that covered by the current paper, do the findings of tonight's paper give indications, positive or negative, as to the likely impact of Brexit on Ireland's financial and banking system?

Noel Cahill: Thank you for the paper. The econometric evidence does not find any difference between Irish and foreign banks in terms of lending during the boom. However the descriptive statistics show a much higher growth rate in lending to households by foreign banks in the boom years. Could you please comment on this?

¹ Barrell, R., Fic, T., FitzGerald, J., Orazgani, A., Whitworth, R., 2011, "The Banking Sector and Recovery in the EU Economy" *National Institute Economic Review*, No. 216, April 2011, pp.R41-R52.