New Insights from the Enhancements to Quarterly Financial Accounts

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Abstract

Throughout 2015 and 2016, the *Quarterly Financial Accounts of Ireland* (QFA) will be expanded to reflect enhanced user requirements, the changing economic environment and the implementation of the latest European System of National and Regional Accounts (ESA 2010) manual. The enhancements to the data will include the publication of whom-to-whom data for deposits and loans for the first time in end-April 2015. Other notable features of the enhancements to QFA include a change to the definition of non-financial corporations (NFCs) and the publication of NFCs trade credit liabilities, which is an important source of funding for NFCs. Further enhancements to the data will be made during 2016. This article analyses some of the insights which can be gained from the enhancements to the QFA data. It finds that since the financial crisis intensified in Q3 2008, there have been significant inflows into government deposit accounts by households and outflows from monetary financial institutions (MFIs) deposit accounts. The change in definition of NFCs under ESA 2010 markedly reduced Irish NFC debt, but it still remains quite elevated. Nearly half of NFC debt was with non-resident lenders, most likely reflecting the activities of multinational corporations (MNCs). The enhancements to the QFA data will be particularly useful in assessing financial stability risks to the economy and the potential transmission of risks between the institutional sectors of the economy.

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1. Introduction

A number of enhancements have been made to the *Quarterly Financial Accounts of Ireland* (QFA) to reflect enhanced user requirements, the changing economic environment and the implementation of the latest European System of National and Regional Accounts (ESA 2010) manual. The new data will facilitate a more comprehensive analysis of all the institutional sectors of the Irish economy, particularly households, NFCs, insurance corporations and pension funds.

The expanded dataset will be extremely useful in addressing a number of data gaps identified by users during the financial crisis. For instance, one of the recommendations of the joint Financial Stability Board (FSB)/ International Monetary Fund (IMF) report on addressing data gaps highlighted by the financial crisis, was that data on inter-sectoral linkages should be developed (FSB and IMF, 2009). This recommendation is addressed by the publication of whom-to-whom data for deposits and loans which will provide greater detail on inter-sectoral relationships for financial flows and positions. This will allow users to more precisely observe each sectors' funding sources and also to identify potential contagion risks between sectors. While an institutional sector may look robust when examined at aggregate level, underlying vulnerabilities to other sectors may be masked. Assessing inter-sectoral linkages is particularly important in the case of credit institutions (Mathisen and Pellechio (2004)), as these entities are central to the distribution and transmission of risk in any economy. The transmission of contagion risks has been highlighted, in particular, during the financial crisis. For example, when property prices began to decline from 2007, credit institutions with significant property-related lending were exposed to substantial credit risk. The subsequent State interventions to support the banking sector during the financial crisis led to a transfer of risk from the banking sector to the government sector, adversely impacting sovereign bond yields.

The financial crisis has also underlined the problems posed by high levels of NFC debt coupled with a distressed banking sector. Whom-to-whom data provides a breakdown of NFC loan liabilities by counterpart sector. It allows users to better understand the alternative sources of funding available to NFCs. Furthermore, the change in definition of NFCs under ESA 2010 facilitates a more accurate evaluation of NFC indebtedness, by excluding passive holding companies. In addition, the specification of 'trade credit' separately from 'other accounts payable/ receivable' allows better monitoring of the various sources of private sector funding.

Moreover, the enhanced QFA series provides additional breakdowns of the financial sector of the economy. In particular, the publication of separate balance sheets for insurance corporations and pension funds will facilitate a better analysis of these sectors. This article describes these enhancements to QFA in relation to Irish households, NFCs, pension funds and insurance corporations. These enhanced data will be published by end-April 2015. Further enhancements including whom-to-whom data for securities, quoted shares and mutual funds will be published by end-2016.

Sections 2 and 3 examine the additional information available for Irish households and NFCs, respectively. Section 4 outlines the new data on insurance corporations and pension funds. Future developments to the data are discussed in Section 4. Section 5 concludes.

2. Greater Insights into Irish Households

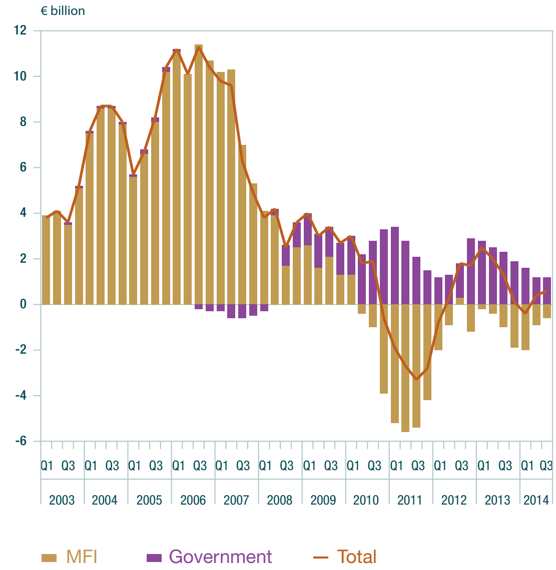
At end-April 2015, information on a whom-to-whom basis will be published for household loans and deposits for the first time. The series will be provided back to Q1 2012. These new data provide greater insights into the deposit and borrowing activities of households, including an improved understanding of the potential vulnerabilities and possible contagion effects to other sectors. Sections 2.1 and 2.2 analyse the additional insights which can be gained from the whom-to-whom deposits and loans data, respectively.

2.1 Household Deposits

Household deposits can have important implications for both the macro economy and for financial stability. Increased levels of household savings, of which deposits are an integral part[2], can either reflect or result in reduced consumption, assuming disposable income remains unchanged. However, as a relatively risk-free[3] and very liquid asset, deposits can also provide an important financial cushion for households during times of economic stress and/or uncertainty, or to smooth consumption over a person's lifetime. A stock of deposits may help to mitigate, to some extent, the adverse impact that economic downturns or shocks may have on consumption and/or household indebtedness. In Q3 2014, QFA data shows that 17.1 per cent of Irish household total wealth was held in the form of deposits. In addition, household deposits are an important funding source for both MFIs[4] and the Government. By September 2014, they represented 21.7 per cent of domestic MFI funding and 10 per cent of government funding. The financial crisis has clearly highlighted the problems that can arise when MFIs move from stable sources of financing, such as deposits, to potentially volatile sources of financing, such as wholesale funding.

Overall, household investment in deposits has declined considerably since the financial crisis began (Chart 1). This may partly reflect lower levels of disposable income and an increased focus on paying down high debt levels accumulated in the pre-crisis period. Disposable income fell by 14 per cent from its peak in Q4 2008 to Q2 2011, the lowest level reached since the start of the crisis. In addition,

Chart 1: Household Deposit Transactions with MFIs and Government



Source: QFA, Central Bank of Ireland.

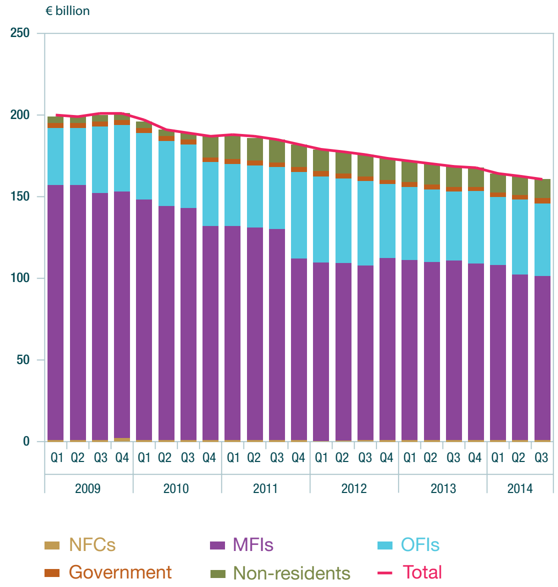
though household savings have been high in recent years, savings were predominately used to repay high debt levels rather than increase deposits (Cussen et al., 2011). The whom-to-whom information available from QFA provides information on the flows of household deposits into both MFIs and the State. The data shows significant inflows into government deposit accounts and outflows from MFIs by households following the intensification of the crisis in Q3 2008. These trends reflect a number of factors. For instance, the outflows from MFIs during 2011 may have reflected concerns about the stability of the banking sector at that time. McQuinn and Woods (2012) find in their analysis of the Irish deposit market that any deterioration in the financial soundness of a deposit-taking entity will have implications for its deposit-gathering capacity. This trend of a shift away from a distressed banking sector towards State savings products is particularly interesting, as the State was also

2 See Cussen et al. (2011) for an outline of the relationship between deposits, savings and disposable income.

3 Deposits held in banks, building societies or credit unions authorised by the Central Bank of Ireland are fully guaranteed under the Deposit Guarantee Scheme up to €100,000 per person per institution. While deposit accounts in most countries have some form of a guarantee, the terms and amount can vary across country. In addition, there is an exchange rate risk associated with deposits held in non-euro accounts.

4 Monetary financial institutions include credit institutions and credit unions.

Chart 2: Sectors of the Economy Holding Household Debt



Source: QFA, Central Bank of Ireland.

undergoing significant financial stress at this time and finding it difficult to access wholesale market funding. Furthermore, in recent years, the State issued new savings products and introduced a relatively more attractive tax treatment on interest earnings relative to banking deposits. These initiatives helped attract additional funding from households to government. Other factors influencing household savings behaviour may include the increase in cash buyers in the housing market in recent quarters (Central Bank of Ireland, 2015), as well as, a decrease in interest rates offered on deposit accounts.

2.2 Household Debt

The financial crisis has emphasised the risks associated both with high levels of private sector indebtedness, as well as the associated contagion risks to other sectors of the economy. Households can use debt to smooth their consumption levels over time and to invest in non-financial assets, such as housing assets. Very high household debt, however, can impede economic growth and can make households more susceptible to distress from increasing interest rates and declining incomes.

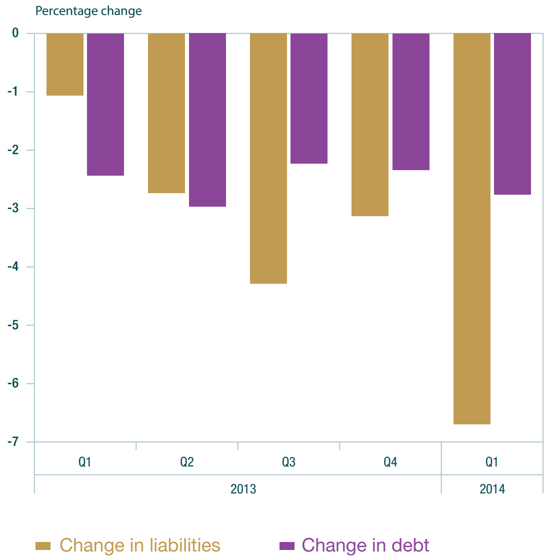
Traditionally, almost all Irish household debt[5] was held with Irish MFIs. This has changed significantly in recent years (Chart 2). In Q4 2005, 91.7 per cent of household debt was held by MFIs. By Q3 2014, this had fallen to 62.5 per cent, largely reflecting a number of different developments in the Irish mortgage market. The most significant development has been the increase in securitisations by Irish MFIs. Between Q4 2005 and Q3 2014, securitized mortgages increased from €4.7 billion to €36.1 billion. In the years of rapid credit growth preceding the financial crisis, Irish MFIs increasingly securitised loans as a means of exchanging illiquid long-term loans for more liquid assets. When the financial crisis intensified and access to funding became more difficult, retained securitisations were used by Irish MFIs to create eligible assets to be used in central bank refinancing operations.[6] Since the financial crisis intensified in September 2008, an additional €12 billion of household loans have been securitised. These securitised mortgages are held by financial vehicle corporations, which form part of the other financial intermediary sector (OFI). In most cases though, the servicer of the loans is also the originator. This is a potential limitation of the use of the whom-to-whom framework for analysing contagion risk, as although the securitised loans are no longer classified as part of the MFI sector, the credit risk remains with the credit institutions. A further breakdown of the OFI sector may therefore be useful for this type of analysis. The OFI sector also includes loans held by non-bank credit providers. In addition, as Irish banks have sought to restructure their activities in recent years, some have sold part of their mortgage books to asset management companies. By end-2014, loans held by non-bank credit providers and asset management companies totalled €7 billion[7]. The exit of Bank of Scotland

5 As households cannot issue securities, household debt only equals household loans.

6 Jackson and Godfrey (2011) provide a detailed overview of securitisation activity in the Irish mortgage market.

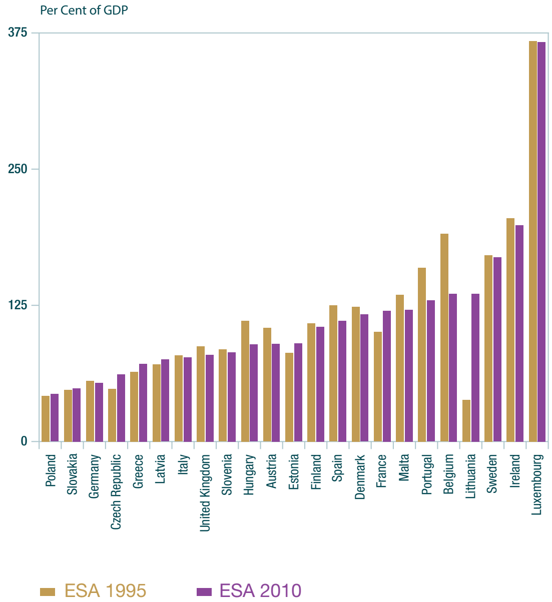
7 Household loans held by non-bank credit providers and asset management companies in relation to principal dwelling houses totalled €6.6bn at end-2014. See Cassidy (2015) for further details.

Chart 3: Impact of change in definition on liabilities and debt



Source: QFA, Central Bank of Ireland.

Chart 4: Comparision of NFC indebtedness by EU country, compiled under ESA 1995 and ESA 2010, Q1 2014



Source: QFA, Central Bank of Ireland.

from the Irish market meant their loans are now included in the holdings of household debt by non-residents. QFA shows the movement in household debt between sectors, with the whom-to-whom presentation identifying which sectors hold the credit risk associated with this debt.

3. Greater Insights into Irish NFCs

The enhancements to the Central Bank of Ireland's QFA also facilitate a better understanding of NFC indebtedness, funding sources and the contagion risk to other sectors.

3.1 Redefining NFC indebtedness

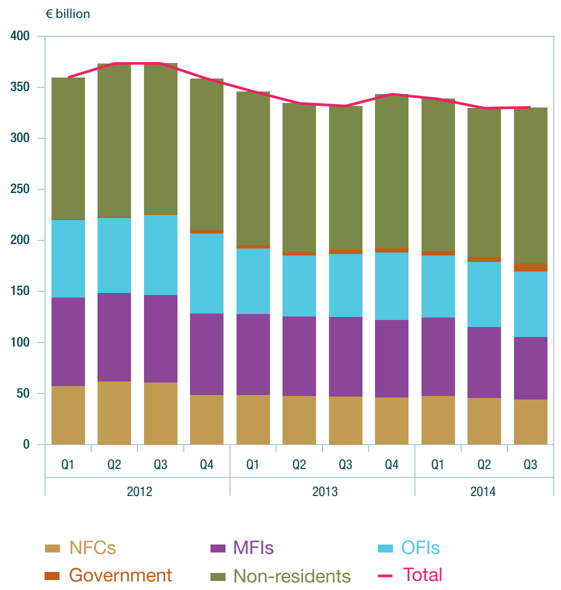
Under ESA 2010, the definition of NFCs has been amended. Holding companies, which passively hold the assets of NFCs, were classified as part of the NFC sector under ESA 1995. Under ESA 2010, however, these companies were reclassified to the OFI sector. This has been one of the biggest changes to QFA under the updated ESA manual[8]. The ECB (2014) expect that the impact of the change will be sizable in a number of euro area countries.

In the case of Ireland, the impact on the NFCs of the change in the manual is material. Chart 3 compares the difference in liabilities and debt[9] when compiled under ESA 1995 and ESA 2010. While it is important to note that the latest NFC data include changes not associated with the ESA 2010 implementation, this chart still provides a useful indication of the methodological impact of ESA 2010 on the NFC sector. Similarly, Chart 4 compares the impact of the change in the manual on NFC debt for Q1 2014 for a number of European companies. While data revisions also apply here, the change in definition appears to be particularly noticeable for Belgium, Portugal and Austria.

8 An overview of all the changes to Financial Accounts sector and instrument definitions under the ESA 2010 manual are available here: http://www.centralbank.ie/polstats/stats/qfaccounts/Pages/TheImplementationofESA2010.aspx.

9 NFC debt is defined as loans plus securities issued.

Chart 5: NFC Loans by Counterpart Sector



Source: QFA, Central Bank of Ireland.

While the change in definition allows a relatively more accurate picture of Irish NFCs, it is important to recognise the continued impact of large MNCs on Irish debt. Chart 4 shows that Ireland continues to have a highly indebted NFC sector compared to other euro area countries. As outlined in Cussen (2014), preliminary work carried out by the Central Statistics Office (CSO) suggests that Irish NFC debt would be substantially reduced by the exclusion of foreign MNCs. Work is ongoing in the CSO with a view to separating MNC debt from indigenous company debt.

3.2 Holding of NFC Loans

As outlined above, Ireland has one of the most highly indebted NFC sectors in the EU (Chart 4). It is, therefore, extremely important to monitor which sectors hold NFC loans[10], to assess possible vulnerabilities. The whom-to-whom data from the enhanced QFA facilitates this analysis.

Overall, Irish NFC loan liabilities have been quite volatile since the ESA 2010 series began in Q1 2012 (Chart 5). The most volatile component of NFC loans relates to funding by non-residents. This volatility largely reflects activities by MNCs, which can be very large relative to the size of the Irish economy. At Q3 2012, €152.7 billion NFC loans were held by non-residents. This represents nearly half of all NFC loans. MNCs' position with non-residents reflects their access to international funding sources such as capital markets and corporate treasuries, which for the most part are unavailable to indigenous Irish NFCs.

NFC loans held by OFIs were also relatively sizable by end-Q3 2014, amounting to almost €64 billion or 22 per cent of total loans. This reflects a number of different factors. During 2010, €74 billion of loans were transferred to National Asset Management Agency Investment Ltd. (NAMA-IL), with an average haircut of 57 per cent. OFI loans also include NFC funding from treasury companies, as well as loans with other financial vehicle corporations. In addition, in recent years MFIs have sold their loan books to non-MFI asset management companies. These companies are classified in the OFI or non-resident sectors depending on their residency.

NFC loans with MFIs represented just 18.2 per cent of total NFC loans by end-Q3 2014. Irish credit institutions' holdings of NFC loans have decreased substantially in recent years. At its peak in September 2008, credit institutions held NFC loans amounting to nearly €170 billion. By end-2014, this had decreased to €60 billion. Table A decomposes the channels through which NFC loans with credit institutions have been reduced. Overall, net loan repayments by NFCs have reduced debt by over €21 billion since October 2008. Between October 2008 and November 2010, revaluations (mainly provisions, write-downs and write-offs) accounted for €34.4 billion of the decline in loans to NFCs. A further €5.9 billion of revaluations (mainly write-offs) took place from December 2010 onwards. It is

10 NFC debt is comprised of debt securities and loans. Whom-to-whom information on NFC debt securities will not be available until January 2016. Almost 97 per cent of NFC debt is comprised of loans.

Table A: Decomposition of the Change in Stock of NFC Loans with MFIs, € millions

Time period	Change in stock	Transactions	Revaluations excluding NAMA (largely due to loan write-downs)	Transfers to NAMA	Other (including reclassifications and loan securitisations)	Methodological change introduced in Dec 2010[11]
Dec 2010 – Jan 2015 (gross basis)	-32,569	-16,356	-5,879	-11,720	-9959	10,022
Oct 2008 – Nov 2010 (net basis)	-75,231	-5,511	-34,175	-26,216	-10,534	

Source: Central Bank of Ireland.

important to note, in relation to the latter, that due to a change in methodology these revaluations do not include provisions for bad debts. The table also shows transfers to NAMA reduced NFC debt with credit institutions by nearly €38 billion. These NFC loans are now classified in OFIs. Other factors influencing the decline in NFC debt include securitisations and reclassifications. The latter was significantly impacted in 2014, when IBRC was removed from the list of Irish MFIs. Loans issued by IBRC were counterparted to the government sector as of Q3 2014.

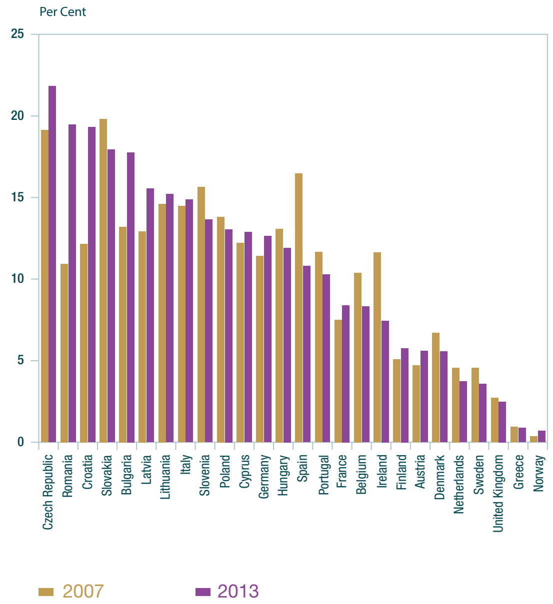
3.3 Alternative funding sources - Trade Credit

Since the financial crisis began, access to credit by small- and medium-sized enterprises (SMEs) has received considerable attention. Holton et al. (2014) provides an overview of the policy responses which have been introduced in Ireland since 2008 to improve credit flows to SMEs. Quantifying the use of trade credit by NFCs in Ireland as a source of financing is informative, given their role as an important source of financing. However, as the NFC balance sheet is only available at an aggregate level, it is not possible to assess the extent to which the activities of multinationals and other large NFCs may mask the activities of SMEs. Demirgüç-Kunt and Maksimovic (2001) find that in nearly every developed and developing economy, trade credit is the most important alternative to bank loans as a source of external funding for SMEs. In the United States, for example, trade credit provides almost as much debt financing to SMEs as bank loans (Berger and Udell, 1998).

The enhanced QFA data separates trade credit from 'other account payable/receivable', allowing a more in-depth analysis of this source of funding for Irish NFCs. Chart 6 confirms the importance of trade credit as a source of financing to Irish NFCs. The chart reveals that at 2013, 7.5 per cent of Irish NFC funding was derived from 'trade credit'. This represents a decline of 4.5 percentage points compared to 2007. The decline in trade credit received by Irish NFCs during the financial crisis is in line with the findings of McGuinness and Hogan (2014). They find, using a sample of large and small enterprises' balance sheets, that at an aggregate level Irish firms received less trade credit during the financial crisis. Their analysis also revealed, however, that trade credit received by small and medium sized companies from more liquid firms increased during the crisis. Similarly, Lawless et al. (2013) found that trade credit became a relatively more important source of finance for SMEs, since the financial crisis began. This is in line with Berger and Udell (1998) findings that trade credit is more important for smaller firms than large enterprises. A full understanding of the role of trade credit by Irish NFCs, would require a breakdown between the activities of MNCs and indigenous companies.

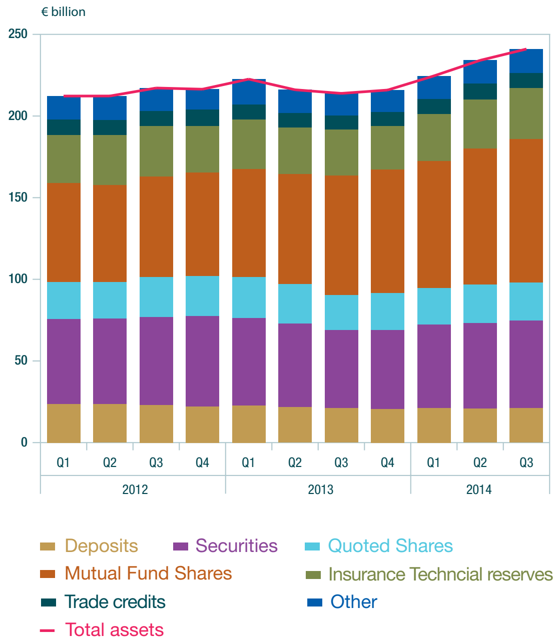
11 A methodological change was introduced in December 2010. Prior to this, loans were reported on a net basis with revaluations including provisions as well as write-downs. From December 2010, loans were reported on a gross basis, with provisions excluded.

Chart 6: Trade Credit as a proportion of total NFC liabilities



Source: Eurostat.

Chart 7: Financial Assets Held by Irish Insurance Corporations



Source: QFA, Central Bank of Ireland.

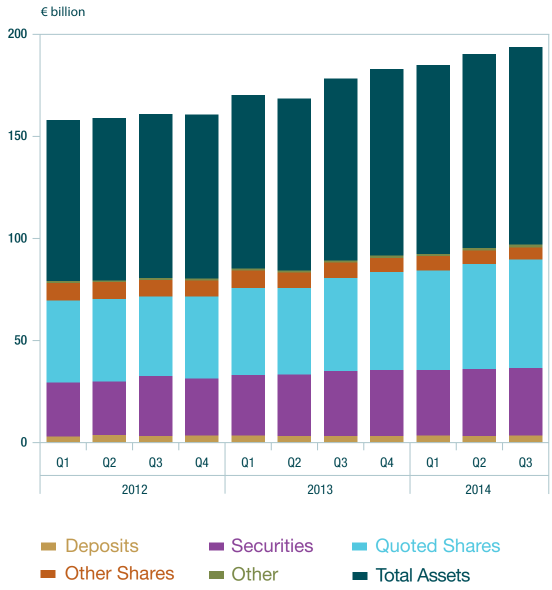
Chart 6 shows that overall the reliance of NFCs on trade credit varies considerably across Europe. Demirgüç-Kunt and Maksimovic (2001) find that the development level of a country's legal infrastructure and banking system predicts the use of trade credit. In addition, trade credit as a proportion of total financing also significantly declined for a number of other countries between 2007 and 2013. Spanish NFC ratio declined the most, falling by 6 percentage points.

4. Disaggregation of Insurance Corporations and Pension Funds

At end-April 2015, QFA will publish, for the first time, separate balance sheets and transactions for insurance corporations and pension funds. Both of these financial intermediaries play important roles within the Irish economy. The insurance industry allows households and non-financial corporations to reduce their exposure to possible risks. The pension fund industry helps households to prepare for retirement. The disaggregation of insurance corporations and pension funds in the QFA series will allow users to ascertain the main financial assets in which these financial institutions invest. This will enable users to identify possible risks, arising from valuation changes, and the implications for their insurance policies.

By end-Q3 2014, Irish insurance corporations held assets totalling over €240 billion (Chart 7). Most of these assets were held in the form of mutual fund shares. These represented 36 per cent of insurance companies' total financial assets. Debt securities were the next largest asset held, representing 22 per cent of financial assets. Irish pension funds held financial assets valued at €96 billion at end-Q3 2014 (Chart 8). Quoted shares represented 55 per cent of total financial assets, with debt securities accounting for a further 22 per cent. In January 2016, the publication of whom-to-whom data for securities, quoted shares and mutual funds

Chart 8: Financial Assets held by Irish Pension Funds



Source: QFA, Central Bank of Ireland.

will facilitate greater analysis of which sectors of the economy insurance corporations and pensions funds are exposed to.

5. Future further enhancements to QFA

Over the next two years, the QFA series will be further expanded to include additional breakdowns and to provide a consistent time series back to Q1 2002. The April 2015 QFA publication will include the whom-to-whom data for deposits, short-term loans and long-term loans for the first time. The financial sector will also be broken down further into 'insurance corporations' and 'pension funds' for the April publication. Moreover, by January 2016, whom-to-whom information will also be published for short-term securities, long-term securities and quoted shares.

In the April 2015 publication, the QFA time series will be published back to Q1 2012. During 2015 and 2016, additional backdata will be provided as they become available. By mid-2017, the QFA series will be extended back to Q1 2002.

6. Conclusion

The financial crisis highlighted the risks to financial stability associated with high private-sector debt, the transmission of these risks to other sectors of the economy, as well as, the risks associated with sectors using potentially volatile sources of funding. The enhancements to QFA described in this article will improve users' abilities to quantify and evaluate these risks. In addition, the disaggregation of insurance corporations and pension funds balance sheets will allow users to more accurately identify the financial assets in which these sectors invest and to ascertain potential vulnerabilities to these sectors arising from these investments.

The whom-to-whom deposits and loans information that will be provided as part of QFA from April 2015, will allow users to analyse possible contagion risks between sectors within the Irish economy. The tables will also provide users a greater understanding of the manner in which the sectors of the economy fund each other. From January 2016, the publication of additional whom-to-whom tables for securities, quoted shares and mutual funds will further add to this analysis. Castrén and Kavonius (2009) show how the transmission of shocks in particular sectors can be transmitted to other sectors of the economy using this whom-to-whom approach. Furthermore, the new definition of the NFC sector under ESA 2010 and the publication of NFC trade credit data, facilitate a better understanding of NFC debt levels and alternative funding sources.

The enhanced QFA data will obviously be useful for a number of purposes, including macroeconomic and macrofinancial analysis. However, it is clear that the data will be particularly useful for financial stability purposes, such as identifying contagion risks, and will fill a number of important data gaps. There are a number of issues which future enhancements to QFA could usefully address. For example, a disaggregation of NFCs by indigenous domestic NFCs and MNCs would be extremely useful in interpreting trends in the NFC series. In addition, a further disaggregation of OFIs would facilitate a more in-depth analysis of shadow banking activities. Furthermore, as described in Section 2.2, though in many cases credit institutions have securitised loans, the ultimate risk for these loans remain with the credit institution and not the financial vehicle corporation. This is a potential limitation of using the whom-to-whom data for analysing contagion risk.

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