New Data Collection on Special Purpose Vehicles in Ireland: Initial Findings and Measuring Shadow Banking

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Abstract

The non-bank financial sector has attracted increasing global attention in the years following the financial crisis of 2007-2008, particularly in the context of monitoring shadow banking activity. International organisations have highlighted special purpose vehicles (SPVs) as a significant area requiring more information sources, improved data coverage and monitoring, in order to identify risks. This focus has highlighted data gaps across jurisdictions, with very limited global data coverage of non-securitisation SPVs. For the purposes of this article, SPVs refer to vehicles that are primarily engaged in activities other than securitisation. This article provides first results and initial analysis of a new survey undertaken by the Central Bank of Ireland to enhance information on resident SPVs. The new database, which covers 822 SPVs with aggregate assets of €324 billion in Q4 2015, fills an important data gap and improves oversight of these vehicles. The initial findings point to the diversity and complexity of the activities undertaken in the SPV sector and the wide range of country and sector linkages. The new SPV data also allow for a more refined measurement of shadow banking activity in Ireland.

1 The authors work in the Statistics Division and the Markets Supervision Directorate of the Central Bank of Ireland. The views expressed in this article are solely the views of the authors and are not necessarily those held by the Central Bank of Ireland or the European System of Central Banks. The authors would like to thank Donald Maclean, Eduardo Maqui, Grainne McEvoy, Joe McNeill, Kitty Moloney and Gareth Murphy for their helpful comments.

1. Introduction

The years since the financial crisis of 2007-2008 have seen an increased focus on closing gaps in available statistical data on financial intermediation outside the banking sector. In particular, the lack of information on certain non-bank financial intermediaries highlighted gaps for financial stability analysis both on linkages within and between institutional sectors, and exposures to both domestic and foreign counterparties. In this respect, international organisations such as the International Monetary Fund (IMF) and the Financial Stability Board (FSB) highlighted three inter-related areas requiring more information sources, namely, the build-up of risk in the financial sector; cross-border financial linkages; and the exposure of the domestic economy to shocks (International Monetary Fund and Financial Stability Board (2009)).

Ireland is a globally significant location for non-bank financial intermediaries whose activities are mainly with non-residents. Financial vehicles engaged in securitisation and various other activities are an important component of this. The Central Bank has collected comprehensive data at a granular level on securitisation vehicles (known as financial vehicle corporations, or FVCs) since Q4 2009, following the introduction of Regulation ECB/2008/30.[2] However, information has been limited on special purpose vehicles (SPVs) engaged in activities other than securitisation.[3] These SPVs are often part of complex financial structures that span a number of countries, which creates particular challenges in developing a comprehensive database on their activities and structures.

SPVs are legal entities created by a sponsoring financial or non-financial entity in order to fulfil narrow, specific purposes, typically in the areas of taxation, risk management, funding and liquidity. These purposes can include tax neutrality, the isolation of risks or exposures from the sponsor, lower funding costs through issuing debt collateralised by ring-fenced assets, and improving liquidity management through the issuance of debt securities collateralised by non-liquid assets (such as trade receivables). Securitisation is a particular form of these activities, whereby contractual debt is re-packaged into debt securities to be sold on to investors.

Against this background, the Central Bank extended its FVC reporting requirements to SPVs in Q3 2015, with the objective of closing data gaps, enhancing information on exposures and identifying potential financial stability risks. The new SPV data also aims to enhance knowledge on the types of activities undertaken by these entities, including who sponsors them, and whether they are stand-alone entities or consolidated into larger group structures. The data also allows for a better estimation of the size of non-bank financial activity (and, within this, shadow banking) in Ireland. The SPV data collection builds on analysis carried out by the Central Bank using company accounts data for 2011-12 (Godfrey, Killeen and Maloney, 2015).

SPVs are often part of complex financial structures that span a number of jurisdictions. They can potentially pose risks to financial stability, and have consolidator and sponsor links across a wide range of countries and economic sectors. However, understanding these risks requires in-depth analysis, on a vehicle-by-vehicle basis, to understand the interaction of the SPV with the domestic economy and its linkages with financial markets overseas. The new SPV data reveals the initial SPV links to other jurisdictions but in order to get a more complete picture of SPV structures and their potential risks, further international data sharing and co-operation is necessary. This further analysis is in line with the Central Bank's strategic responsibilities in the areas of financial stability, policy development, and high quality financial statistics.[4]

2 https://www.ecb.europa.eu/ecb/legal/pdf/l_01520090120en00010013.pdf

3 SPVs are also known as special purpose entities (SPEs).

4 See "Our Strategic Responsibilities" on http://www.centralbank.ie/about-us/Pages/default.aspx

The SPV data also have important implications for the measurement of shadow banking in Ireland. The measurement of shadow banking activity has been led by the FSB, which defines shadow banking as "credit intermediation involving entities and activities outside of the regular banking system" (FSB, 2015). The FSB conducts an annual shadow banking monitoring exercise, where non-bank entities are included within shadow banking unless a clear rationale can be presented for their exclusion. Ireland took part for the first time in 2015, based on data up to end-2014. Statistics on Ireland's non-bank financial sector includes a significant residual, for which a component breakdown is not available. In line with the FSB methodology, this other financial intermediaries residual (or OFI residual) was included in its entirety in the FSB exercise. The new SPV data will facilitate better informed measurement of shadow banking according to the FSB definition in future exercises.

The remainder of the article is structured as follows: Section 2 outlines how these new data help to plug data gaps of international concern and our progress towards collecting the data. Section 3 focuses on the different types of activities of SPVs and their international and domestic links, while Section 4 presents three selected case studies. Section 5 analyses the implications of the new SPV data for measuring shadow banking in Ireland. Section 6 looks at next steps, and Section 7 concludes.

2. New data collection on Irish SPVs

The total assets of the Irish non-bank financial sector amounted to €3,848 billion at the end of 2015, or over 15 times Irish GDP.[5] These figures are based on balance sheet data compiled by the Central Statistics Office (CSO). The Central Bank collects granular data on major components of the non-bank financial sector, namely investment funds (IFs), money market funds (MMFs), FVCs and insurance corporations (ICs). A residual 'other' category, or OFI residual, remains after the known components of the non-bank financial sector are deducted from the CSO control total.[6] This residual amounted to €626 billion in terms of total assets at end-2015. This residual covers largely unregulated entities, including financial leasing firms, treasury operations of non-financial corporations, holding companies, as well as special purpose entities engaged in securitisation and other activities. Much of the OFI residual is derived using statistical techniques due to data limitations, with data on non-securitisation SPVs especially limited. The new Central Bank SPV reporting requirements represents a significant step in closing these data gaps.[7]

The new SPV data, collected for the first time in the Q3 2015 reporting period, covers 822 vehicles reporting assets of €324 billion at the end of Q4 2015. A key challenge to extending reporting requirements to these SPVs was in defining a reporting population for vehicles not engaged in securitisation activity. Various SPV definitions exist, but they are either very narrowly focused or straddle multiple types of financial activity.[8] A pragmatic approach was undertaken in

5 Calculated as total financial corporations minus banks and central bank from data available on the Central Bank website at: http://www.centralbank.ie/polstats/stats/qfaccounts/Pages/Data.aspx and http://www.centralbank.ie/polstats/stats/cmab/Pages/Money%20and%20Banking.aspx (Tables A.2 and A.4).

6 This residual sector is calculated by subtracting all known non-bank sectors (money market funds, investment funds, insurance, pension funds, broker dealers, securitisation vehicles) from the non-bank financial sector total.

7 The IMF called on Ireland to pursue this work in its recent Financial System Stability Assessment, specifically under key recommendation 7 *'Improve data coverage and monitoring of all special purpose vehicles', and more generally under key recommendation 4, 'Close data gaps on cross-border exposures, the non-bank financial sector, the commercial real estate market, and the non-financial corporate sector'.*

8 The European System of Accounts (2010) describes typical characteristics rather than requirements (http://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-02-13-269), the BIS focuses on securitisation (http://www.bis.org/publ/joint23.pdf) and the concept of bankruptcy remoteness features in the academic literature (Gorton and Souleles, 2007).

this light, confining the reporting population to all SPVs availing of 'Section 110' of the Taxes Consolidation Act 1997.[9] Securitisation vehicles (or FVCs) also qualify as Section 110 companies and already report to the Central Bank under Regulation ECB/2008/30.[10] The existing FVC reporting template was applied to the remaining Section 110 companies not meeting the criteria for reporting under the FVC Regulation. This approach provides a clear definition of what entities are included in the extended reporting framework. However, it is understood that some vehicles operate outside this designation, and are, therefore, outside the current reporting population.[11]

Each reporting SPV provides details on whether the vehicle is consolidated into another entity, the sponsor of the vehicle, and whether another entity has a noted interest in the vehicle.[12] This information is critical to identifying who creates and sustains the SPV, which is often not obvious from balance sheet information. Information from certain SPVs' financial accounts is also used in addition to the information reported to the Central Bank to get a clearer understanding of links and structures of resident SPVs, as analysed in the following sections.

3. Results

This section analyses SPVs according to two features. Firstly, SPVs are classified according to the primary activity undertaken by the vehicle. Secondly, linkages at the jurisdiction and sector level are examined, focusing on whether the SPV is consolidated into another entity, the sponsor of the SPV (sometimes known as the parent entity) and immediate balance sheet links to other entities, both globally and within Ireland.

3.1 Activities

A diverse range of activities are identified in the SPV sector (Table 1), often taking place within a chain of entities which facilitates intermediation activity elsewhere in the chain. Fourteen different types of activity are identified for SPVs, although the top three categories account for 70 per cent in terms of total assets, namely intra-group financing, external financing, and fund-linked asset management (Chart 1). Intra-group financing is dominated by non-financial sponsors, mostly reflecting the treasury operations of multinational corporations. External financing also reflect such activities while there is a sizeable presence of financial entities from emerging economies issuing debt through various stock markets, including the Irish Stock Exchange (ISE). Fund-linked asset management vehicles are used mainly by US and UK investment managers for investing in a range of different asset classes. Other activities involve repackaging illiquid assets or receivables to generate new funding sources. Among the considerations that might support the location of SPVs in Ireland are the highly developed servicing network, bankruptcy remoteness, and the double taxation agreements which are in place between Ireland and around 70 other jurisdictions.[13] This paper does not address the rationale underlying SPVs' decisions to locate in Ireland; instead it concentrates on the complexity and international linkages of resident SPVs.

Analysis of the SPV data can help assess any financial stability risks arising from the activities of resident SPVs. As an example, the activities of SPVs involved in loan origination and in bank-linked asset management could have potential financial stability implications. In this context, it is important to understand the specific features of SPVs set up by sponsors to extend loans, and whether these might be

9 See: http://www.irishstatutebook.ie/eli/1997/act/39/section/110/enacted/en/html

10 https://www.ecb.europa.eu/ecb/legal/pdf/l_01520090120en00010013.pdf

11 Industry contacts suggest that Section 110 vehicles cover the SPV population for the most part.

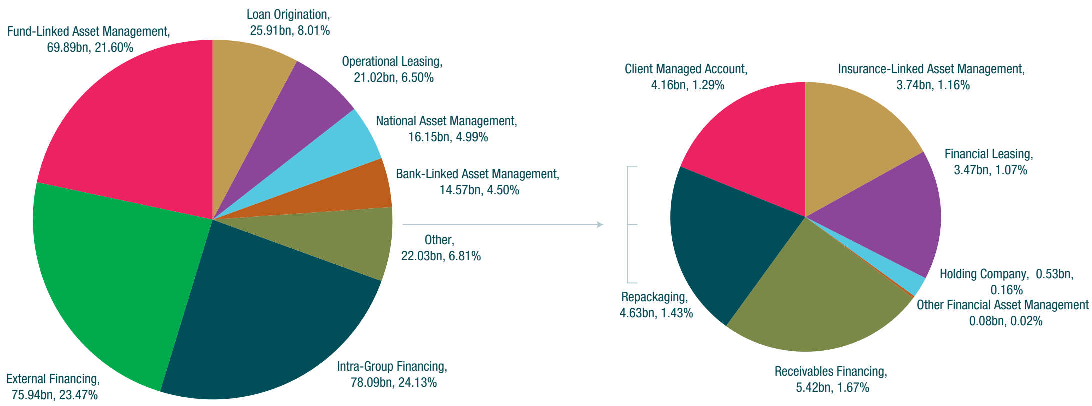
12 IFRS12 requires an entity to make disclosures about significant judgements and assumptions in determining whether it controls another entity and specific disclosure of interests in unconsolidated structured entities.

13 For more information on tax treaties, see: http://www.revenue.ie/en/practitioner/law/tax-treaties.html

Table 1: Identified Irish SPV Types and Activities[14]

Vehicle Type	Activity Description
Intra-Group Financing	Loan funding from, and to, intra-group companies
External Financing	Funding obtained from external sources and provided to the parent as a loan
Fund-Linked Asset Management	Linked to investment funds/firms, which hold debt, equity, loans, or other financial assets with the goal of capital appreciation, interest or dividend income
Loan Origination	Funding obtained from the parent and furthered to external sources
Operational Leasing	Hold fixed assets, such as plant and machinery, for the purposes of leasing them out
National Asset Management	Set up by national authorities to resolve insolvent financial institutions (incl. NAMA)
Bank-Linked Asset Management	Linked to deposit-taking corporations, which hold debt, equity, loans, or other financial assets with the goal of capital appreciation, interest or dividend income
Receivables Financing	Funding secured by trade/other receivables, furthered to the parent/external sources
Repackaging	The proceeds and/or capital gains/losses from the SPV's financial assets are structured so that investors obtain different exposure than had they simply purchased the assets
Client Managed Account	Set up by financial institutions on behalf of clients which hold debt, equity, loans, or other financial assets with the goal of capital appreciation, interest or dividend income
Insurance-Linked Asset Management	Primarily hold insurance-linked securities such as catastrophe bonds, or investments in life settlement policies
Financial Leasing	Engaged in lease-in lease-out agreements, or as a financial intermediary in a chain of vehicles in which the end vehicle is involved in the leasing of equipment or fixed assets
Holding Company	Owns enough voting stock in another company to control its policies and management and exists for this sole purpose
Other Financial Asset Management	Not linked to banks, client accounts, or investments funds/firms, but hold debt, equity, loans, or other financial assets with the goal of capital appreciation, interest or dividend income

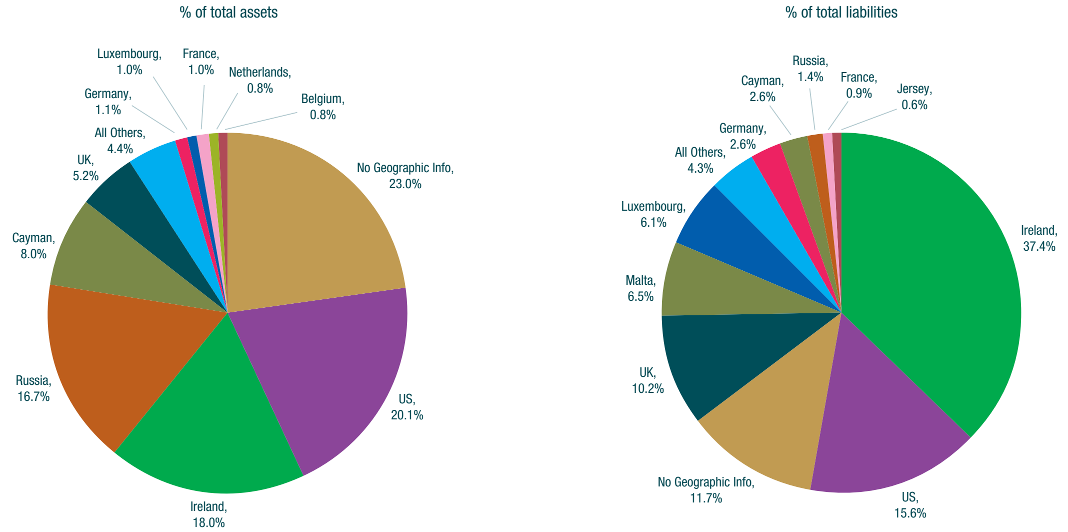
Chart 1: SPV Types by Total Assets (total €324 bn)



Source: Central Bank of Ireland.

14 The only instances where an SPV could undertake more than one activity is for the operational and financial leasing categories and, in these cases, the vehicle is assigned to the predominant activity in terms of assets held.

Charts 2a, 2b: Geographical Location of Irish SPV Assets and Liabilities



Source: Central Bank of Ireland.

vulnerable to sudden deleveraging in periods of market stress. Similarly, for bank-linked asset management, there is a need to understand the ultimate risk borne by the bank.[15] This type of analysis will be developed by the Central Bank as part of ongoing research, both domestically and in international forums, on enhancing knowledge of shadow banking activities.

3.2 Jurisdiction and sector linkages

3.2.a Global and sector linkages

Direct cross-border exposures for both assets and liabilities on SPVs' balance sheets simply provide the first link in a potential chain of geographical linkages, as many vehicles are part of complex multi-vehicle structures (Charts 2a and 2b). The main immediate asset and liability SPV links are with the US, the UK and Russia. Despite not featuring in consolidator or sponsor links, Luxembourg, the Cayman Islands and Malta also stand out in terms of immediate cross-border linkages of Irish SPV assets and liabilities.[16] While the balance sheets of resident SPVs show some direct links to Ireland, the consolidators and sponsors of these entities are largely outside the country. For example, an Irish SPV may be immediately linked to an Irish-resident fund, which in turn is consolidated into a foreign entity controlled by a fund manager.

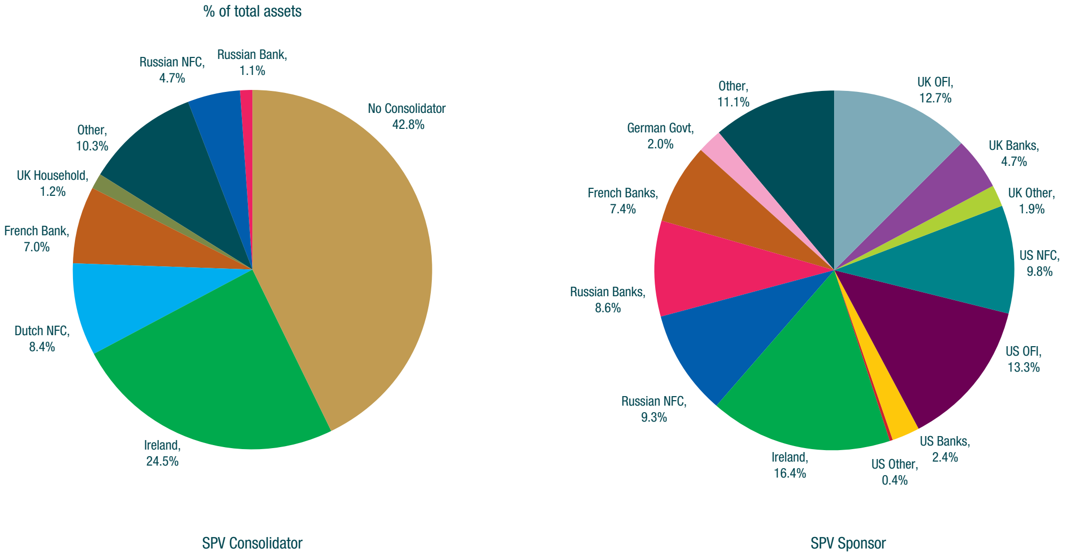
Consolidation data helps identify whether potential risks are attributable to stand-alone entities or to the parent vehicle in the case of consolidation. Unlike FVCs, which are generally non-consolidated vehicles, over half of Irish resident SPVs are consolidated into other entities.[17] The main external consolidator links are to the Dutch and Russian non-financial corporation (NFC) sectors and the French banking sector (Chart 3a). Links to Russian NFCs largely reflect external financing activity

15 The BIS recently completed a public consultation on the "Identification and measurement of step-in risk" for banks: http://www.bis.org/bcbs/publ/d349.pdf

16 The data only provide geographic linkages on a first counterpart basis.

17 Consolidation is defined according to IFRS10 or Local GAAP.

Charts 3a, 3b: SPV Consolidator and Sponsor by Country and Sector



Source: Central Bank of Ireland.

by energy and transport companies listing debt securities on various stock markets, including through the ISE, with the SPVs consolidated directly into the sponsor.[18] There are also linkages for the non-consolidated entities, with around one-sixth declaring a noted interest by another entity. The extent of the geographic and sector linkages are highlighted by the fact that the 'Other' sector in Chart 3a has 37 consolidator links to sectors in 22 countries, reflecting relatively small SPVs engaged in a diverse range of activities.

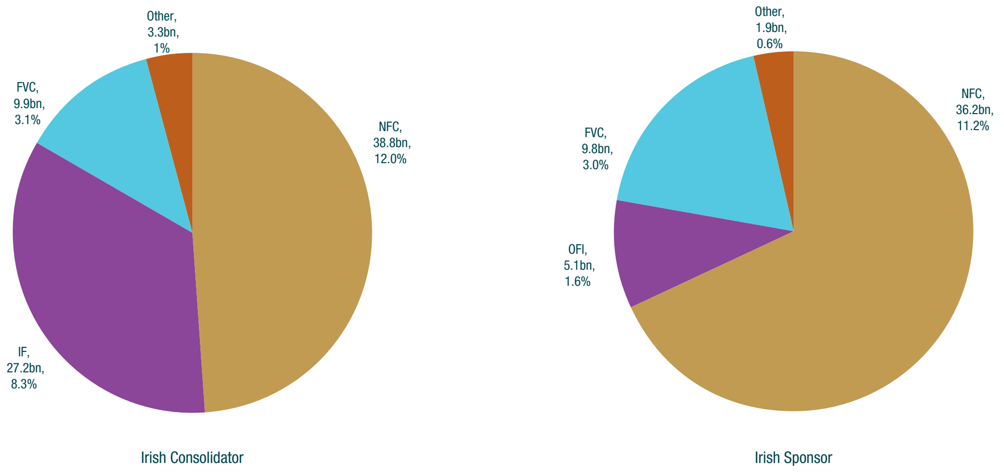
For sponsor links, four countries stand out, in terms of their percentage share of total assets, namely the UK, US, Russia and France. While the range of SPV sponsors is quite diverse (Chart 3b), typically the same type of sponsor tends to concentrate in similar activities. A broad overview of sponsor activity includes the following:

- Banks, OFIs and NFCs are the most prominent sponsors of SPVs;
- For Russian banks and NFCs, external financing is the predominant activity.[19] These SPVs obtain funding through European markets;
- For US OFIs and NFCs, intra-group finance is the largest activity, although this is heavily concentrated in a small number of vehicles;
- US OFIs are largely fund managers employing SPV structures;
- US banks mainly employ investment strategies for capital appreciation, interest or dividend income, though repackaging activity is also prominent;
- UK OFIs mainly engage in fund-linked asset management though these are often consolidated into other entities;
- UK banks engage in a diverse range of activities though the majority involve investments for capital appreciation or dividend income.

18 An SPV proposing to have debt securities admitted to trading on a regulated market, such as the ISE, or offer debt securities to the public within the European Economic Area must first have its prospectus approved by the Central Bank.

19 EU Regulation 960/2014, effective from the 1st of August 2014, sets out a list of entities for which aiding in the issuance of certain transferable securities and money market instruments is prohibited in the EU. Only entities expressly named in the Regulation are affected and we have found no evidence that any Irish SPV is in breach of these sanctions.

Charts 4a, 4b: SPV Consolidator and Sponsor by Irish Sector



Source: Central Bank of Ireland.

Finally the 'Other' sector in Chart 3b has 66 sponsorship links to sectors in 35 countries, a significantly larger number than for consolidation linkages.

3.2.b Linkages within Ireland

The contribution from domestic SPVs to Irish GDP is very limited. They are generally designed to be tax neutral and most are established as companies with Irish directors but no dedicated employees. Their contribution arises indirectly through fees to resident professional services, primarily in the legal and financial sectors. Estimates by the Central Bank suggest that fees paid in Ireland were less than €100 million in 2015.

Irish SPV exposures are mainly loan claims on NFCs and OFIs. While NFC loan claims largely reflect corporate financing activity, OFI loans often reflect multi-vehicle structures. Irish assets could potentially exist in non-resident vehicles or entities within these structures. However, as exposures are reported to the Central Bank on a first counterparty basis, these cannot be identified within the data.

Consolidation and sponsor links to domestic entities are primarily vis-à-vis NFCs, IFs, and FVCs (see Charts 4a and 4b). Irish NFC links largely reflect a small number of SPVs sponsored by multinational companies domiciled in Ireland as part of intra-group funding activities for their global operations. A significant portion of the remainder is accounted for by external financing activities carried out by large multinationals and SPVs undertaking operational leasing activities involving aircraft.[20] In most cases, the SPV is both sponsored by and consolidated into the Irish NFC. Links to the Irish investment fund industry reflect international vehicle structures, mainly sponsored by funds located in the US, Europe and Ireland. Finally, the link to the Irish FVC sector includes a large SPV which is part of the NAMA structure, highlighted in Charts 4a and 4b.[21]

4. Case studies

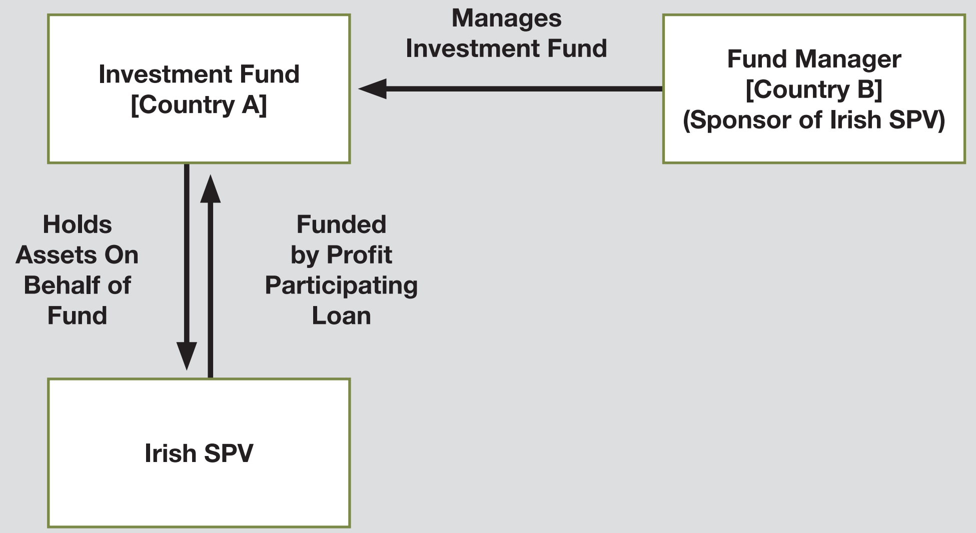
This section presents case studies of three typical categories of SPVs[22]: (i) fund-linked asset management; (ii) loan origination; and (iii) external financing. These case studies highlight the complexity of SPV structures. In order to fully understand these structures, further international co-operation is necessary given their extensive cross-border linkages.

20 Aircraft leasing is included with NFCs within Irish national and financial accounts statistics.

21 NAMA is a vehicle holding bank stressed assets following the crisis. It is structured so that vehicles dealing with specific areas, such as loan management, property management or management services are 100 per cent owned by a master vehicle.

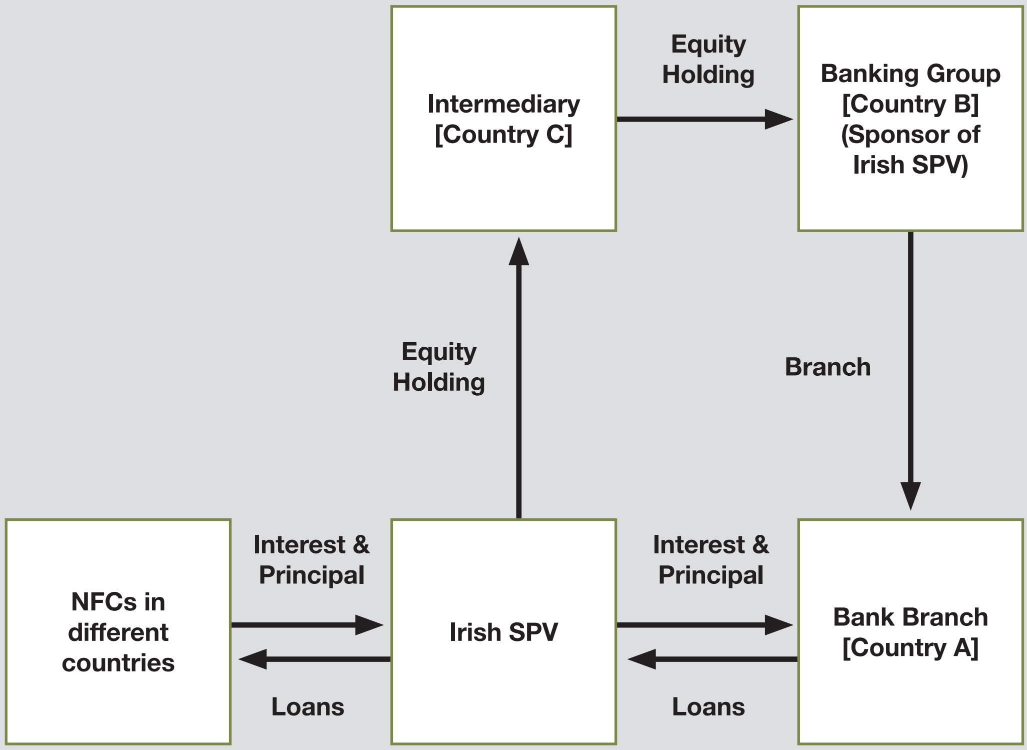
22 See Table 1 for categorisation of SPVs by activity.

Case Study 1: Fund-Linked Asset Management



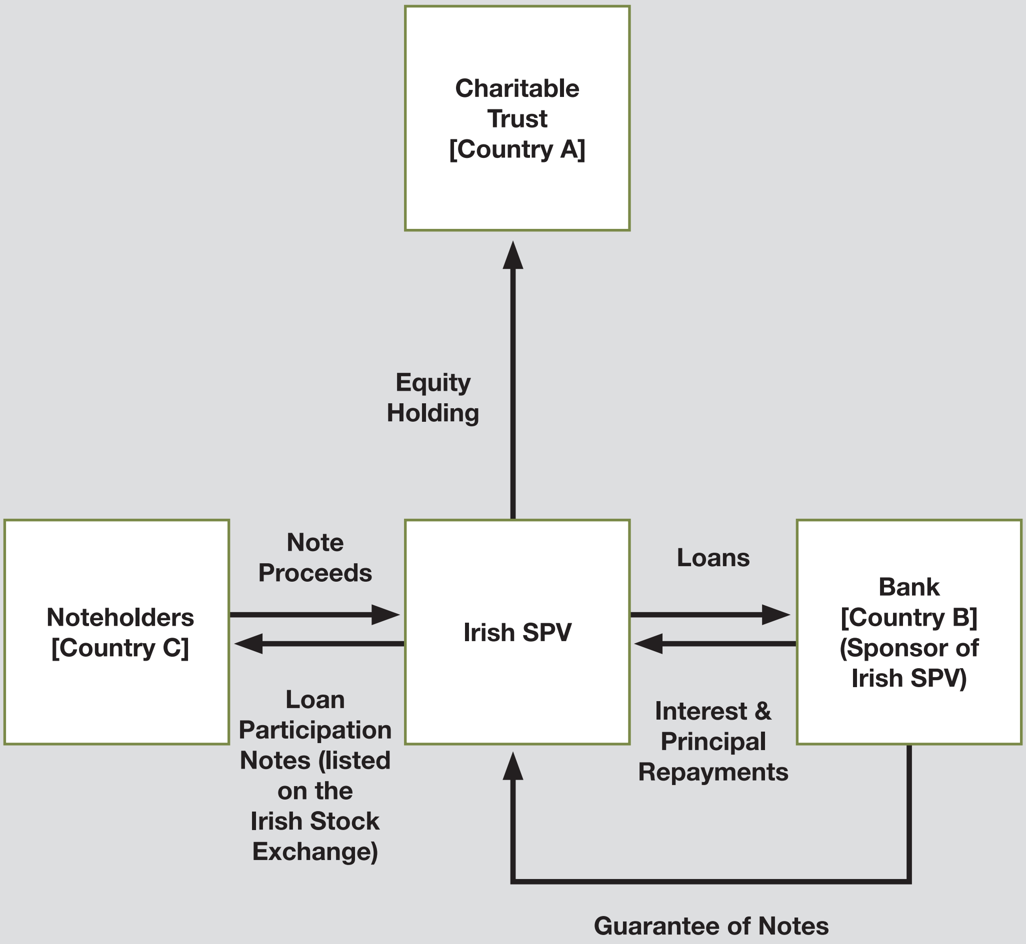
The sponsor of the Irish SPV is a Fund Manager in Country B, which sets up an investment fund in Country A. The Irish SPV funds itself through issuing a profit participating loan to the investment fund. With the proceeds, the Irish SPV invests in debt securities, bank loans, and other financial assets across a number of different countries and sectors. The investment fund's loan entitles it to any gains on the SPV's investments, through a method known as profit extraction. The Irish SPV is also consolidated into the investment fund's accounts, given the level of control the fund has over the vehicle.

Case Study 2: Loan Origination



The sponsor of the Irish SPV is a foreign banking group located in Country B. The SPV funds itself through loans provided by a branch within the banking group and uses these to issue loans to NFCs in a number of jurisdictions. The equity of the SPV is held by an intermediary in Country C, and this intermediary's equity in turn is held by the foreign banking group. As can be seen from the banking group's financial accounts both the SPV and the intermediary are ultimately consolidated into the group. All interest and principal repayments from these loans to NFCs would pass through as repayments on the loan received from the bank branch.

Case Study 3: External Financing



This case study outlines a structure which uses an Irish-domiciled SPV for the purpose of obtaining external funding for a foreign bank in Country B. The Irish SPV issues loan participation notes which are listed on the ISE. The proceeds of these notes are passed from the Irish SPV to the foreign bank as a loan. The foreign bank pays the interest and the principal repayments on the loan to the SPV, and this in turn is used to pay interest and principal on the loan participation note. The Irish SPV is an orphan vehicle as evidenced by the holding of its equity by a charitable trust. The Irish SPV is not consolidated on to the balance sheet of the foreign bank, although it does receive a guarantee from the foreign bank over its liabilities.

5 Enhanced measurement of shadow banking for Ireland

The FSB conducts an annual shadow banking monitoring exercise, where non-bank entities engaged in credit, are included within shadow banking unless a clear rationale can be presented for their exclusion. Ireland took part for the first time in 2015, providing results based on data up to end-2014. The FSB defines shadow banking as "credit intermediation involving entities and activities outside of the regular banking system" (FSB, 2015). Alternative definitions have been published in academic studies but for the purposes of this article, the FSB methodology is used.[23] The FSB's definition is based on shadow banking activities covering credit

23 McCulley (2007) refers essentially to non-bank financial institutions engaged in maturity transformation, where liabilities mature on average before asset holdings. Alternative academic definitions of shadow banking tend to focus more on specific areas, such as money market funds, wholesale funding, deposit taking or lending activity, securitisation products or securities financing (Pozsar (2014), Gennaioli, Shleifer & Vishny (2011), Gorton & Metrick (2012) and Claessens & Ratnovski (2014)).

Table 2: Irish SPV Shadow Banking Total Asset Estimates based on the FSB's 2015 Methodology

Consolidated? If Yes, consolidator by sector. If No, sponsor by sector.		Included in shadow banking?	(1) Total Assets of all Irish SPVs	(2) Total Assets of Credit SPVs	(3) Amount included in measure of shadow banking	(4) Amount excluded from measure of shadow banking
YES	Bank	NO	33.5	30.1	-	33.5
YES	Other financial corporation*	YES	57.9	46.2	46.2	11.7
YES	Non-financial corporation	NO	93.8	84.8	-	93.8
NO	Bank	YES	46.6	40.1	40.1	6.5
NO	Other financial corporation*	YES	70.7	65.4	65.4	5.3
NO	Non-Financial Corporation	NO	21.1	16.1	-	21.1
			323.6	282.7	151.7	171.8

Source: Authors' calculations.

Note: Figures in € bn.

* All SPVs linked to non-bank financial corporations are included in the adjusted shadow banking estimate following a prudent approach. It also includes a very small number of vehicles linked to non-profit entities that undertake similar activities to investment funds.

intermediation involving significant maturity/liquidity transformation, leverage or credit transfer. The FSB measure of shadow banking is part of an evolving process, which looks to improve the definition and methodology behind the FSB's measurement. These improvements are driven through co-operation and dialogue amongst the participating jurisdictions and the FSB.[24]

The new SPV data allow for a more comprehensive assessment of the contribution of SPVs to the FSB's measurement of the Irish shadow banking sector. The 2015 FSB shadow banking monitoring exercise estimated the Irish shadow banking sector at €2.25 trillion for end-2014, including the entire OFI residual (€498 billion at end-2014) (FSB, 2015).

As stated earlier, all Irish SPVs were included, under the OFI residual, on the basis that no breakdowns by type of activity were available. The new SPV data, including data on credit instruments (issuing/holding of debt securities or originating loans) and SPV consolidator and sponsor links, allow for a more refined approach to measuring shadow banking based on the FSB's 2015 methodology.

Table 2 provides estimates of the size of SPVs within the shadow banking sector in terms of total assets, based on the 2015 FSB methodology (Column 1).[25] SPVs are included where they are part of a shadow banking credit intermediation chain. This means that SPVs are excluded where the balance sheet contains no credit instruments, or where they

24 For example, to improve the 2015 methodology, the FSB introduced the classification of non-bank financial entities under five economic functions, namely, (i) mutual funds susceptible to runs, (ii) lending dependent on short-term funding, (iii) intermediation dependent on short-term funding or secured funding of client assets, (iv) facilitating credit creation, and (v) securitisation (FSB, 2015).

25 It should be noted, however, that the FSB definition is subject to refinement on an annual basis and estimates are based on the methodology used in the 2015 FSB shadow banking monitoring exercise.

are consolidated into a bank or linked to an NFC. The new data facilitates a more refined measurement after taking account of these adjustments. These adjustments reduce the measurement of shadow banking by €172 billion, as shown in Column 4 of Table 2.

6. Next steps

The diversity and complexity of the SPV population raises challenges in terms of further data development and analysis. On data development, work is ongoing within the Central Bank to build on the SPV database to further improve coverage of the residual non-bank financial sector. The Central Bank is liaising closely with the CSO to integrate the data within Ireland's macroeconomic statistics. The first challenge is to develop a comprehensive register of all SPV-type activities, including those not covered by Section 110.

Further analysis of SPVs is also planned to fully understand the rationale underlying SPV activities, with particular focus on those entities with potential financial stability implications, both domestic and international. Areas of particular focus include the potential to bypass controls on parent entities from regulations, or deficiencies in other oversight mechanisms. In particular, funding, liquidity, and loan origination provided by SPVs could dry up during periods of market stress, exacerbating existing stresses in these areas and increasing market uncertainty.[26] The work also feeds into international initiatives at the European Systemic Risk Board (ESRB), the FSB and the International Organization of Securities Commissions (IOSCO) to address data gaps. The Central Bank intends to assess the potential to link the new SPV data with existing regulatory information to derive better insights into shadow banking in Ireland and to inform international analysis on the global financial services landscape. However, given the cross-border nature of SPV activities, maximising these data for policy purposes requires close co-operation at an international level. In addition, the Central Bank intends to publish regular statistical releases and analysis of SPV activity in Ireland.

7. Conclusion

This article explores a new database of SPVs collected by the Central Bank and provides some initial findings and analysis. The database covers 822 SPVs with aggregate assets of €324 billion at end-Q4 2015, improving oversight of these vehicles and filling data gaps. Key findings point to the diversity and complexity of the activities undertaken in the SPV sector, and the range of geographical and institutional sector linkages. The analysis of the new SPVs database has resulted in a more refined measurement of the size of Irish shadow banking activities, with a €172 billion reduction in this measure arising from the new information on consolidation and linkages. Moreover, case studies developed in this article investigate a selected number of SPV models in-depth to draw out the typical complexity of the structures in which SPVs operate.

The new database addresses a significant data gap on SPV activities, and enhances the Central Bank's ability to assess any financial stability risks arising from these. The new data will also help inform discussions at international level, as the availability of granular data for non-securitisation SPVs is extremely limited. Irish resident SPVs are often part of multi-vehicle operations operating across borders. In this context, the need to co-operate across borders and to improve data sharing capabilities is essential to fully understand the rationale underlying SPV activities and any associated risks. The Central Bank is fully supportive of initiatives at international level to enhance data sharing. The new data also enhance information on Ireland's non-bank financial sector and the Central Bank is working closely with the CSO to integrate these within macroeconomic aggregates. While the new data represent a significant step forward, further work is required, both domestically and at international level, to develop a full understanding of SPV activities and to inform policy making in this area.

26 In terms of the potential risks within SPVs, BIS (2009) presents a comprehensive overview.

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