

Financial Stability Notes

Who invests in the Irish commercial real estate market?: An overview of non-bank institutional ownership of Irish CRE.

Dermot Coates, Pierce Daly, Enda Keenan, Gerard Kennedy, and Barra McCarthy Vol. 2019, No. 6

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Real estate markets are important to the financial sector and the economy as a whole, due to their size and interconnectedness. While data availability in respect of banks' real estate exposures and the risks involved in property-related lending by the banking sector have been examined extensively, the same cannot be said of the growing role of the non-banking sector in the property market. By drawing together a variety of internal Central Bank of Ireland sources with data published by external bodies, this Financial Stability Note aims to help address existing gaps in data and knowledge surrounding the involvement of non-bank entities in the Irish commercial property market. A detailed breakdown of domestic CRE ownership, along institutional lines is provided for the first time, showing the dominant role of real estate investment funds (REIFs), and to a lesser extent, real estate investment trusts (REITs), insurance corporations and pension funds. The funding profiles of REIFs and REITs are explored. This reveals that as much as half of their liabilities originates from abroad. Evidence surrounding the existence of interlinkages between REIFs, REITs and the Irish banking sector is also presented. Finally, potential financial stability risks arising from these connections, current ownership structures and funding practices, are briefly discussed.

1. Introduction

The size of national real estate markets and their level of interconnectedness with both the financial system and wider economy make them important from a financial stability perspective. Previous financial crises, including the Irish experience, have demonstrated how disorderly adjustments in property markets can have a damaging impact on financial stability. This is unsurprising as real estate investment and development is capital-intensive and traditionally, largely funded through debt.

To understand the risks and vulnerabilities inherent in the domestic commercial property market, it is important to appreciate its structure. For instance, who are the owners of physical commercial real estate (CRE) assets? How are the entities involved funded? What degree of interconnectedness (if any), exists between investors? What risks arise from particular business models/structures? An increase in the availability of data on banks' real estate exposures in recent years has enhanced our understanding of the risks associated with property related lending by credit institutions. The same cannot be said of the property market activities of non-banks however, where data provision has failed to keep pace at a time when these investors are becoming more prominent in Ireland and throughout Europe.

With this in mind, the aim of this Financial Stability Note is to help address some of the existing knowledge and data gaps surrounding the involvement of non-bank entities in the Irish CRE market. Specifically, we examine the role of institutional investors, such as real estate investment funds (REIFs), real estate investment trusts (REITs), insurance corporations and pension funds, in the financing and ownership of the invested (i.e. professionally managed) stock of Irish CRE.² Readers may also be interested in an accompanying FS Note

¹ Corresponding author: gerard.kennedy@centralbank.ie. We would like to thank Vasileios Madouros, Martin O'Brien, Kitty Moloney, Fergal McCann, Raymond O'Sullivan and attendees at an internal staff semina for helpful comments on earlier drafts. The views are those of the authors and do not necessarily reflect the views of the Central Bank of Ireland or the European System of Central Banks. Any remaining errors are our

While a consensus on the definition of CRE is yet to be reached at a European or international level, the definition used throughout this Note is closely aligned to that contained in a recent ESRB recommendation

The Note is organised as follows: Section 2 examines the flow of CRE investment transactions over the past decade or so, via largely publicly available data from estate agents such as CBRE, JLL, and Savills. Section 3 maps out the current Irish CRE landscape, making clear the distinction between the stock of professionally managed, income producing Irish commercial property assets (which are examined in closer detail throughout this paper), and the remaining segment consisting mainly of owner-occupied commercial premises, cultural buildings and other infrastructure (for which much less data are available). The institutional holdings of physical Irish CRE assets are set out in Section 4, and where possible detailed by sector. Commentary on the funding profiles and business models of these entities is also provided, where data are available. Notwithstanding the undoubted benefits which accompany a diversified investor base, greater involvement of overseas and nonbank entities may also give rise to potential financial stability risks and vulnerabilities. The respective pros and cons are outlined in Section 5. Section 6 concludes with a summary and suggestions for further work on this topic.

2. Commercial property investment flows

The Irish commercial property market has attracted substantial flows of investment expenditure from home and abroad in the years since the financial crisis and the Irish property crash. Property companies, private syndicates, wealthy individuals, REIFs, REITs and other major international institutional investors have been amongst the most active purchasers of Irish property in recent years, attracted by gains in capital values, the prospect of rental growth and the opportunity to diversify risk. In this section, we analyse a decade of largely published transactions data in order to ascertain the volume of CRE expenditure, some insight as to the origins of these investment flows and the market segments targeted.³

Volume of recent transactions

Cumulative transactions of approximately €22 billion of Irish CRE took place since 2008, according to published data from real estate agents such as CBRE and JLL. During this period, annual totals range from comparatively small amounts of less than €500 million prior to 2012, to yearly sums of ca. €4.5 billion in 2014 and 2016, when a number of high value assets (of greater than €100 million) were traded (Chart 1).⁴ There was a notable decline in the total value of CRE investment in 2017 (to approximately €2.5 billion), however the number of transactions held up and were comparable to some of the busiest years (i.e. 243 deals in 2014, 217 deals in 2016 and 210 deals in 2017 - CBRE)⁵ (Chart 1). The flow of expenditure on Irish commercial property picked-up once more in 2018, with a level of CRE investment in excess of €3.6 billion, the third highest annual total since 2008.

Role of foreign investors

In contrast to the prevailing situation prior to the Irish property crash, when domestic investors funded the bulk of activity in the sector, recent years have seen foreign investors assume a more prominent role in the financing of Irish commercial property, linking its performance to wider developments in international financial markets. Chart 2 details the extent of foreign engagement in the recent purchase of domestic commercial property assets. Despite some discrepancy between the sources, particularly in the early years of the sample, the general trend is quite similar across both. The share of investment flows, originating from overseas has

on closing real estate data gaps. The recommendation refers to, "income-producing real estate, either existing or under development, including rental housing or real estate used by the owners of the property for conducting their business, purpose or activity, either existing or under construction, that is not qualified as RRE property". In this way, traditional CRE sectors such as office, retail and industrial/logistics are covered, but so too is the institutionally owned private rental sector (PRS) which has become a significant component of the Irish property market in recent years. See ESRB recommendation (ESRB/2016/14)

³ It is important to note that these data have been gathered and defined according to the practices of the collecting firms, so they may differ from each other and from the definitions used by the Central Bank. In addition, as we are dealing with flow, rather than stock data, each transaction does not necessarily relate to an individual property, as many will have transacted multiple times throughout the period.

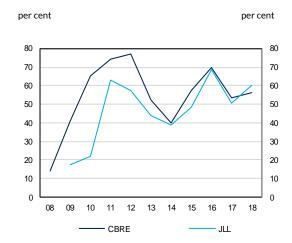
⁴A notable feature of investment in Irish CRE during some years, was the relatively high concentration at the upper end of the price distribution, e.g. in 2014, 18 individual deals of more than €100 million (7 per cent of all transactions by number that year), accounted for over 70 per cent of the investment turnover by value. Similarly, nine and five transactions of over €100 million that occurred in 2015 and 2016 respecti were responsible for almost half of the value of commercial property traded in those years.

 $^{^{5}}$ The equivalent number of deals according to JLL were, 220 deals in 2014, 218 deals in 2016 and 211 deals in 2017.

Chart 1: Annual Irish CRE investment flows

value of transactions (€ billions) no. of transactions 250 5.0 4.5 225 200 4.0 3.5 175 3.0 150 2.5 125 100 2.0 75 1.5 1.0 0.5 25 0.0 10 12 CBRE --- # of deals (JLL) # of deals (CBRE)

Chart 2: Foreign investment flows as a share of total expenditure on Irish CRE



Source: CBRE and JLL

risen considerably, from less than 20 per cent in 2008, to a peak of almost 80 per cent in 2012 according to CBRE, (and to over 60 per cent in 2011 according to JLL), before falling back a little in recent years to an average of over 50 per cent. It is important to acknowledge however, that the figures for foreign percentage share were at their highest at a time when, annual investment expenditure was still well below the €1 billion mark, unlike recent years (2013-18) where annual investment flows averaged €3.5 billion.⁶

According to Savills data, since 2012, investors based in North American (USA and Canada) account for the largest share of foreign investment flows (approx. 60 per cent), followed by investors from continental Europe (ca. 25 per cent). UK purchasers (including joint ventures with institutions based in the Middle East) tend to be less prevalent (under 10 per cent). Asian (Hong Kong) and South African investors are amongst the other nationalities identified in the relatively recent past.

The Irish market is not alone in experiencing this phenomenon. A recent ESRB report noted the increasingly important role played by foreign investors in many of Europe's CRE markets. Similarly, data from the Bank of England shows how foreign investment in the UK CRE has increased to almost 50 per cent from one-third a decade ago.8

Market segment

Source: CBRE and JLL

Commercial property investment in Ireland occurs across a number of sectors. Traditionally, the office and retail market segments have attracted the bulk of the capital invested, with a smaller portion going to industrial/logistical and mixed-use developments (typically some combination of office, retail and/or residential accommodation). Savills data from 2012 to 2018 indicate that this is still largely the case (Chart 3). After falling from 70 per cent in the early years of the sample, the flow of investment into office property has been steady in recent years; at around 40 per cent, ensuring it maintains its position as the most popular CRE asset class for investors. The sale of a small number of major shopping centres, (such as Blanchardstown and Liffey Valley), boosted the value of retail space transactions in 2016, and contributed to its average 27 per cent share of transactions since 2012. The increasing popularity of non-household investment in the residential property market, via multi-family units, is also evident from Chart 3. This is not too surprising given the housing shortage and the relative attractiveness of residential rental yields in the current low interest rate environment. Many of

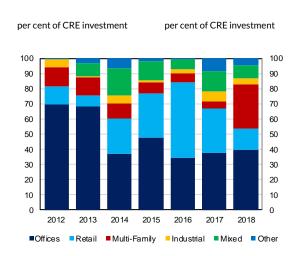
⁶It is also important to note, that the "foreign" investment flows referred to here are defined as such by private sector data sources, which is understandable as the investors and individuals involved are located abroad. In many cases however, the acquired property appears to have been purchased directly by, or soon after transferred to an Irish resident REIF owned by the overseas parent. For instance Central Bank analysis of 40 large transactions of > €100 million, between 2013 and 2018 (with a cumulative value of €8.6 billion), shows that there were 23 deals (worth €5.6 billion) nominally described as "foreign". Of these, 17 transactions worth just over €4 billion, can be linked to an Irish resident REIF.

See "Report on vulnerabilities in the EU commercial real estate sector", ESRB, November 2018

⁸ See (p. 27, Chart A.37 "Foreign investors make up a large proportion of UK CRE transactions"), "Financial Stability Report", Bank of England, June 2018

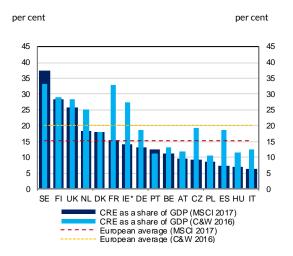
the multi-family and mixed-use deals, which have occurred, relate to the acquisition of large residential apartment blocks, for use in the private rented sector, particularly in the Dublin area, by REITs such as IRES or other international investors such as Kennedy Wilson.

Chart 3: CRE investment by market segment



Source: Savills

Chart 4: Estimated size of "invested" European commercial property markets as a share of GDP



Source: MSCI, Cushman & Wakefield, CSO, Eurostat and Central Bank of Ireland calculations. Note: Irish figures expressed as a share of GNI*, IE* based on

MSCI data for YE 2017. IE** based on Cushman & Wakefield data for YE 2016

3. The scale of Ireland's commercial property market

The lack of official, publicly available data detailing the value, ownership and funding sources of Irish commercial property has made it difficult to carry out a comprehensive analysis of the sector. In this section, we attempt to address some of these shortcomings by gathering information from a disparate range of internal and external data sources. Some estimates of the value of the invested commercial property market in Ireland have been obtained from private data providers. Central Bank of Ireland returns, such as the Monthly Money Market & Investment Fund (MMIF), Alternate Investment Fund Managers (AIFM) and Solvency II returns contain information on institutional holdings of real estate. Additional components of the Irish CRE investor base can be identified with the help of external filings such as audited financial statements, annual accounts (REITs) and Annual Reports (Pension funds).

"Invested" or "professionally managed" Irish commercial property market

For the purposes of this Note, it is helpful to divide the Irish commercial property market into two parts; the first, on which we focus, is made up of an "invested" or "professionally managed" component, containing CRE owned for the primary purpose of generating an income return (i.e. Figure 1, Circle A). The second, most likely larger part consists of the residual, i.e. owner-occupied commercial property in either the public or private sector held for non-investment purposes (i.e. Figure 1, Circle B). While no official figures specifying the size of the entire domestic CRE market exist, a couple of cross-country estimates detailing the scale of national invested commercial property markets, including Ireland, are available from market sources. 9

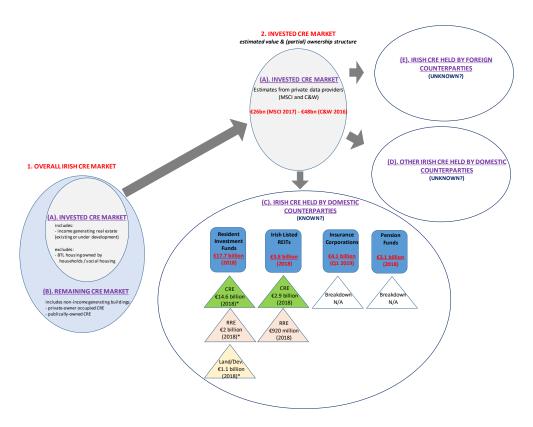
The first, from MSCI puts the value of the professionally managed Irish CRE market at approximately €26 billion at the end of 2017 (Figure 1, Circle A), up from €25 billion at the end of 2016 and €20 billion in 2013.

⁹ The CSO's figure for the capital stock of fixed assets (huildings and structures other than dwellings excluding roads) is a potential proxy for the value of the Irish CRF market. Given the exclusion of both the value of the land on which these units are built and the residential dwelling element of CRE (e.g. institutionally owned apartment blocks) from the calculations however, it is likely that this total substantially underestimates the true value of Irish commercial property assets. The value of this figure was €135.3 billion at the end of 2017.

According to the company's latest "Real Estate Market Size" Report, the increase of 3.2 per cent over 2017 was down to a combination of factors such as capital growth, additional capital expenditure on existing assets and new development. Cushman & Wakefield provide an alternative estimate of €48 billion, for the size of the invested Irish CRE market in 2016 - almost double the equivalent MSCI figure (Figure 1, Circle A). Though large, some of this gap may be explained by methodological differences in terms of data collection and coverage. 10

Given the variance between the figures, it is difficult to say which estimate of CRE market size is most reliable. Informal discussions with local commercial real estate agents on the topic suggest the upper-end of the range is more in line with their views. An alternative method of verification would be to try identifying the individual or institutional owners of this stock, in order to get a sense of the scale of the market from the bottom-up, which is the approach taken in Section 4.

Figure 1: Estimated value and ownership of invested Irish commercial property stock



Source: Central Bank of Ireland estimates, based on data from MSCI and Cushman & Wakefield, published company annual accounts/audited financial statements and Central Bank of Ireland returns.

Note: Resident investment fund data do not include Irish property holdings of non-Irish resident entities. Breakdown of REIF data for 2018 is estimated, based on equivalent shares of 2017 totals. No further breakdown of pension fund data are available - so it is not possible to tell the breakdown by sector or location.

Ireland's invested CRE market in a European context

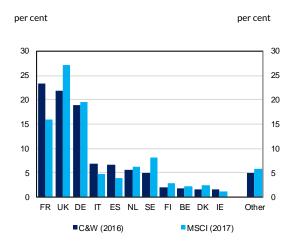
To assess the significance of individual CRE markets, at a national level and within the broader European context, we assemble a comparable sample of European cross-country data from both data providers. First off, we examine the value of each market relative to national GDP (and GNI* for Ireland). According to MSCI

¹⁰ According to MSCI, the real estate investment universe for each national market is defined as the aggregation of real estate assets that meet all of the following conditions: (i) they are held as in the purposes of delivering a mix of income and capital returns, (ii) they are professionally managed for the achievement of these purposes, either by the beneficial owners or by third party management businesses, (iii) they are structured as investment interests within portfolios. These direct real estate portfolios, managed on behalf of institutional or private investors, are financed via a mix of equity and debt. See Real Estate Marke Size, MSCI (2017) for more details. Cushman & Wakefield's data cover commercial real estate held for investment, assigned to one of four quadrants - public vs. private / debt vs. equity. On the debt side, sources of debt secured against CRE are examined – the private element includes traditional bank lenders, building societies, non-banks (funds and institutions) and bad-banks, whereas CRE bonds, CMBS and covered bonds are captured in the public category. The equity portion considers the net asset value of CRE held by investor groups, and can be thought of as the open market value less debt. The private equity part is broken down between funds institutions (pension funds and insurance companies), private companies and individuals. The public equity cohort includes listed companies, such as REITs and other listed vehicles. In theory, residential property is excluded, where it can be stripped out of the underlying figures.

data, the Irish figure (14.2 per cent of GNI*) is just below the European average of 15.1 per cent at the end of 2017 (Chart 4). The picture changes somewhat if the Cushman & Wakefield estimate is used, as Ireland is well above the European average (20.1) and places 5th in terms of countries with the largest relative domestic CRE markets (27.5 per cent of GNI* using end 2016 figures). Whichever measure is used, it is certain that Ireland amongst those countries where the commercial property sector is an important element of the domestic economy.

In terms of its overall status in a wider international context, at a little over 1 per cent using either MSCI or Cushman & Wakefield figures, Ireland represents a very small share of the professionally managed CRE market in Europe (Chart 5), and is a similar size to markets such as Austria, Belgium, Denmark, Norway, Poland and Portugal. Indeed these data demonstrate how a large part of the European CRE market is concentrated in a few large countries, with well over 60 per cent of the invested stock residing in just three countries, France, the UK or Germany. In contrast, the 11 smallest markets (including Ireland) in our sample account for approximately 20 per cent of the total (Chart 5).¹¹

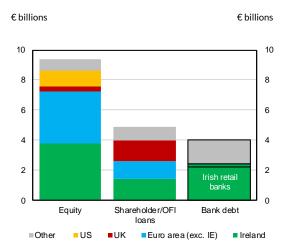
Chart 5: National professionally managed CRE markets as a share of European total



Source: C& W, MSCI, CSO, Eurostat and Central Bank of Ireland calculations

Note: Other is comprised of the cumulative shares of 9 addi-

Chart 6: Funding profile of resident investment funds with holdings of Irish property (YE 2018)



Source: Data taken from MMIF & AIFM returns and audited financial statements

Note: Irish equity figure may also include data from entities that are ultimately foreign-owned.

4. Institutional ownership of Ireland's invested commercial property market

Equipped with the estimates outlined in the previous Section, the next step, in so far as the data allow, is to identify the ultimate owners of this stock. The key holders of income generating commercial property tend to institutional investors such as investment funds, insurance corporations, pension funds and more recently REITs. While no centralised data register detailing the individual holdings of these entities exists, it is possible to piece together the ownership structure via an array of internal Central Bank statistical resources. 12 Data from external publications, such as the property holders' annual accounts and material from the Pensions Authority complement the analysis. To "sense check" our approach and assess the representativeness of the findings it may be useful to compare the results of this bottom-up exercise with the MSCI and Cushman & Wakefield figures from Section 3. From the outset, it is also important to highlight that the Central Bank of

 $^{^{11} {\}sf Medium\text{-}sized\ markets}, It aly\ {\sf and\ Spain}, account\ for\ the\ balance\ in\ our\ sample$

¹² These include Investment Fund, Alternative Investment Fund Manager (AIFM) and Solvency II returns, as well as access to the ESCB's Securities Holdings Statistical Database (SHSDB)

Ireland data used are collected on a residency basis, so will relate only to the Irish property holdings of entities resident within the State (i.e. Figure 1, Circle C). Further work is required therefore to address the data shortfall with respect to the Irish CRE possessions of Irish counterparties for which the Central Bank does not regulate / collect data on, e.g. Irish property developers or non-resident investors, including institutions, which are regulated abroad (i.e. Figure 1, Circles D and E).

4.1 Real Estate Investment Funds (REIFs)

The Central Bank of Ireland collects and publishes comprehensive data on Irish-domiciled IFs through the MMIF returns, on a quarterly basis.¹³ These returns include some information on the scale, composition, geographical and sectoral exposures of funds' assets and liabilities. Data relaying the activities of Irish authorised AIFMs are also gathered and are a useful supplementary source. In addition, a dataset constructed from the audited financial statements of property holding Irish resident REIFs, is used to analyse the sub-national and sectoral distribution of property assets held by these entities.

REIF holdings of physical property assets

REIFs were the largest holder of professionally managed Irish real estate at the end of 2018, having amassed €17.7 billion of property assets (see Figure 1, Circle C). 14 While this may be a substantial portion of the invested Irish property market, real estate assets account for less than 1 per cent of the total assets of all Irish-domiciled investment funds. According to an estimated breakdown of the 2018 data presented in Figure 1 (see Circle C), the sectors traditionally associated with the commercial property market, i.e. office, retail and industrial, account for the vast bulk of the Irish property assets held (€14.6 billion cumulatively), followed by residential real estate, such as PRS and student accommodation (€2.0 billion). ¹⁵ A further €1.1 billion was classified as "other" (mainly land and developments under construction).¹⁶

Dublin is home to approximately 90 per cent of these assets (according to estimated end 2018 data), down from a high of 98 per cent in 2014 (See Table 1). Cork comes next with 2 per cent of the total. Offices (€6.2 billion) and retail units (€4.7 billion) dominate in terms of the types of Dublin properties owned. Institutionally owned residential property has grown in steadily in popularity (€1.8 billion) since the series began in 2012. Retail (ca. €1.1 billion) is by far the most popular sector outside of the capital, with income-generating residential real estate (RRE) next (€220 million) and industrial at €110 million. Interestingly, offices make-up a comparatively small share of investment funds non-Dublin holdings at €70 million.

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Location	Office	Retail	Industrial	Residential	Other
Dublin	6,200	4,700	785	1,800	2,300
Non-Dublin	70	1,100	110	220	310

Source: Central Bank of Ireland IF returns.

Note: Other/unknown also includes land and development assets as well as an element of office, retail and industrial CRE that cannot be subdivided.

¹³ Data collected by the Central Bank does not include property holdings of foreign-domiciled funds and so cannot provide figures related to the additional Irish property assets held by these entities. Irish fund structures normally consist of an umbrella fund and a sub fund. Each umbrella will normally have many sub funds. Reporting occurs at a sub fund level, meaning the data and discussion presented in this section should be considered at that level.

¹⁴ Irish-regulated investment funds are exempt from Irish tax on income and gains derived from their investments and are not subject to any Irish tax on their net asset value. There are additionally no net asset, transfer or capital taxes on the issue, transfer or redemption of units owned by non-Irish resident investors (see Irish Funds - Taxation). In the case of real estate funds, The Finance Act 2016 imposed withholding tax (at a rate of 20 per cent) on the profits arising from the disposal of Irish property, to a party unrelated with the fund. The withholding tax applies to the occurrence of a taxable event in relation to investors that would otherwise be exempt from investment undertakings tax. Generally, this refers to non-Irish-resident investors. Certain classes of Irish resident exempt investors are potentially brought within the scope of the withholding tax. There are a number of exclusions from this, including certain Irish pension funds/PRSAs; Irish regulated investment funds; Irish life companies; EU pension funds/regulated funds/life Companies, and; Irish Section 110 companies. For further details on these changes see PWC - Tax Facts 2018, page 20.

¹⁵ A breakdown of REIF data by sector are not yet available for 2018. Instead, a breakdown of the 2018 total, where each component's share is kept the same as in the 2017 data, is provided.

¹⁶ Property investment at the sub-fund level tends to be quite varied. It is uncommon that a fund will have a mixture of commercial and residential property, though mixtures of different types of real estate do occur. Where mixing of residential and commercial property takes place, it is normally skewed heavily in one direction. Funds invest in all standard categories of property, such as office, retail, industrial, residential, land as well as alternatives like student accommodation, health, and energy infrastructure. Holdings of property can be limited to a single property or can number in the 100's. The former is more common for funds invested in office, leisure or retail property, while the latter tends to be seen in funds that invest in residential property

REIF funding profile

Some details relating to the liability-side of the aggregate REIF balance sheet can also be pieced together via the data gathered. Equity capital makes up the largest portion of domestic property holding REIFs funding. Aggregate data for end-2018 show that these entities had €9.3 billion worth of equity subscriptions, €4.9 billion of loans from shareholders and other financial institutions, while bank loans accounted for a further €4.0 billion of liabilities (Chart 6). Within those aggregate figures, there is a tail of small REIFs, who are more leveraged.

Though resident in Ireland, financing for Irish property holding investment funds may originate from a variety of locations. Indeed, the geographic diversity of funds' equity holdings is evident from the data. Irish resident holders, (including entities that are ultimately foreign-owned), account for €3.8 billion, holders from elsewhere in the euro area are responsible for \leq 3.4 billion, US holders for \leq 1.0 billion and UK holders a further €0.4 billion. The remaining €0.8bn consists mainly of other holders located in offshore financial centres (Chart 6).

The top three originating locations for the €4.9 billion in loans from shareholders and other financial institutions are the UK (€1.4 billion), Ireland (€1.4 billion) and the euro area excluding Ireland (€1.2 billion) predominantly Luxembourg in this case (Chart 6). Bank debt is the final category of funding examined, with the loans in question coming from Irish institutions in the main, (€2.4 billion from a total of €4.0 billion). A further breakdown of this figure reveals €2.2 billion was provided by Irish retail banks, a notable connection between the domestic banking and funds sectors. The remaining €0.2 billion relates to loans from Irish-resident nonretail banks. Non-Irish bank loans amount to €1.6 billion, and come predominantly from the US (Chart 6).

REIF structure/investment strategy

The concentration of equity ownership for REIFs stretches along a continuum. It ranges from the archetype of a mutual fund (i.e. many small investors pooling money together) to investment vehicles (i.e. one investor in the fund, who is often an affiliated party of the fund's investment manager). Investment vehicle style funds are generally set up by high-net worth individuals, institutional investors, large financial institutions or property investment companies. For such funds it is not uncommon for the equity of the Irish fund to be an asset held by a parent fund located elsewhere, which is investing across countries (US, Luxembourg, etc.).

In general, three main investment strategies are employed by REIFs: "hold and rent", "hold and sell", and "develop and sell/rent". "Hold and rent" is by far the most common strategy undertaken by the funds located here, accounting for a substantial portion of funds' Irish property transactions during the period 2012-2017. At the end of 2017 for example, around 119 funds with total assets of €14.6 billion employed such a strategy. To date, property has been rarely disposed of by these entities, with 89 of the 119 funds having never sold a property, 9 have only sold one, while a further 6 have a total of two sales to their name. The fact that properties have not been sold to date, however, does not mean that this might not happen in a severe stress, (see Section 5).

"Hold and sell", is a strategy practiced by funds who have purchased large portfolios of properties, often residential, whereby properties are sold-off individually or in smaller lots. These funds tend to only buy one large portfolio, and engage in few further purchases following this. There are only a couple of these funds, and it is estimated that they possessed ca. €172 million in assets at the end of 2017. Finally the "develop and sell / or rent" strategy was undertaken by 30 funds according to the 2017 data, with total assets of €1.9 billion, comprising of properties for both residential and commercial use. Under this strategy, a fund may buy land, sites or half-finished developments, begin a new project, complete the construction of a development or refurbish them. Properties are then either held and rented, or sold. The latter tends to be the more popular option.

4.2 Real estate investment trusts (REITs)

In this section, we use external data gathered from the published statements and annual accounts of Irish-listed REITs to assess the role played by the sector in the ownership of Irish CRE. REITs are publically listed companies that undertake a property rental business. These entities are not subject to tax on rental income or on capital gains arising from the disposal of assets of the property rental business. ¹⁷ REITs have been able to operate in Ireland since the introduction of the requisite legislation in the Finance Act 2013. To date, four Irish-listed REITs, with a focus on the domestic property market, have been established. Green and Hibernia REITs were set up shortly after the adoption of the REIT legislation in 2013. ¹⁸ IRES REIT followed with its own IPO in 2014. Yew Grove REIT is the latest market entrant having floated on the Irish stock exchange in June 2018. While it is possible for an Irish-listed REIT to hold non-Irish property assets, so far, all have tended to focus on the local market.

REIT holdings of physical property assets

Since its inception, the REIT sector in Ireland has assembled a substantial property portfolio, to the value of approximately €3.8 billion at the end of 2018 (see Figure 1, Circle C). It is a common strategy for individual REITs to target assets in a particular market segment. For instance, the focus of both Green and Hibernia REITs centres primarily on the acquisition of Dublin city offices, which account for about 90 per cent of their combined portfolio of 50 buildings covering well over 320,000 square metres of cumulative floor space. The former is the largest of the Irish-listed REITs by value of property assets, ca. €1.5 billion in 2018, compared to Hibernia's property assets of €1.3 billion. The smaller, and recently established Yew Grove REIT employs a slightly different strategy of investing in assets such as offices and industrial units, typically located across a wider variety of locations outside of Dublin city centre, and let to state entities, IDA-backed firms and large corporations. Yew Grove has built up a portfolio valued at ca. €78 million in 2018, consisting 14 buildings covering 44,400 square metres, 55 per cent of which is office space, 41 per cent industrial facilities and the balance comprised of retail units. In terms of location, almost half of Yews property assets are located outside of county Dublin.

In contrast, the approach of IRES REIT is to purchase, manage and develop multi-unit residential rental real estate. By the end of 2018, it had obtained almost 2,700 residential units along with associated commercial space and development sites, located in Dublin city-centre and suburbs, valued at €920 million. Consequently, the company has become one of the country's largest single owners of residential property. Outside of its residential property holdings, the associated commercial and development sites consist of about 11,000 square metres, three quarters of which is retail space. The involvement of Irish-listed REITs in the residential property market does not end with IRES however, as a further 320 Dublin based housing units are owned by of Hibernia REIT.

REIT funding profile

Though these companies are registered in Ireland, it is worth observing that non-resident institutional investors hold significant equity stakes in the Irish-listed REITs operating here at present, with US, mainland European, UK and Canadian investors featuring prominently according to published financial statements.

Equity finance has played an important role in funding the operations of the REITs listed in Ireland. By the end of 2018, the aggregate value of total equity in the sector was up 14 per cent on the 2017 figure, to over €3.1 billion (Chart 7), owing to an increase in retained earnings, other reserves and to a lesser extent a rise in the value of share capital and share premiums across the sector.²⁰ So what, if anything, can we say about the characteristics of shareholders in these entities?

¹⁷ See Coates, D. and A. Moloney, "Real Estate Investment Trusts and the Property Sector in Ireland", Central Bank of Ireland, Quarterly Bulletin 2, April 2016.

¹⁸ In April 2019, Green REIT announced that it was initiating a process for the sale of the company or its portfolio of assets. It was also announced that the company reserved the right to alter or terminate the proposed sales process at any time and in such case will make an announcement as appropriate.

¹⁹The remainder of Green's portfolio consists of industrial and logistics (6 per cent), mixed-use (4 per cent) and retail units (1 per cent). In addition to the office space it holds, 11 per cent of Hibernia's portfolio consists of residential property, with the remaining 2 per cent devoted to industrial and logistics stock.

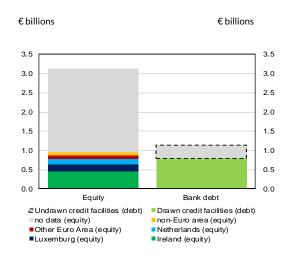
²⁰ At year-end 2018, share capital and share premium, retained earnings and other reserves accounted for 59, 39 and 2 per cent of the aggregate value of total equity in the sector, respectively.

Through the ESCB's SHSDB (Securities Holdings Statistics Database), it is possible to identify a portion of the Irish listed REIT investors by location. As of 2018Q4, the SHSDB contained granular information on almost €1 billion (ca. 30 per cent) of the aggregate value of total REIT equity. The data show that Irish residents held 50 per cent of the value of this subtotal of quoted shares. The next largest cohort of these shareholders were located in Luxembourg (20 per cent) and the Netherlands (13 per cent). A further 10 per cent were in the possession of a group of large institutional investors located in other euro area states, while 7 per cent were in non-euro area countries (Chart 7).

The SHSDB enables us to drill further into the ownership of the Irish-resident element of this sample of quoted share holdings. As a result, we find that resident investment funds are the largest group with equity holdings valued at more than €180 million. Irish based insurance corporations and households also feature strongly with identifiable equity of about €133 million and €117 million each, respectively. While these are useful insights to have and information which can be added to and built upon going forward, it is important to remember that approximately 70 per cent of the equity of Irish listed REITS is not covered by the SHSDB, meaning we have little or no information on it. Therefore, it would be incorrect to assume the data we do have are representative and one should bear in mind that the complete picture vis-à-vis equity shareholdings could look very different.

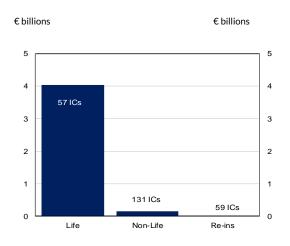
According to financial accounts, Irish listed REITs access about one fifth of their funding from bank debt (Chart 7). In aggregate, total revolving credit facilities of over €1.1 billion have been secured by the four REITs, the largest of which (€400 million) has been arranged by Hibernia.²¹ Financial statements list the Irish retail banks as institutions with which these relationships have been developed. By the end of 2018, approximately €780 million of the available bank debt had been drawn, a 2 per cent increase on the year before. IRES REIT had drawn down the largest portion of bank debt (€307.5 million, or 88 per cent of its agreed credit facility) followed by Green (€258 million, 72 per cent of its agreed credit facility), Hibernia (€212 million, 53 per cent of its agreed credit facility) and Yew Grove (€5.8 million, 29 per cent of its agreed credit facility). Despite the growing connections with the banking system, Irish listed REITs remain quite lowly geared, with an aggregate leverage ratio of 0.2.²²

Chart 7: Funding profile of Irish listed REITs (YE 2018)



Source: Annual accounts and SHSDB Note: Data refer to I-RES, Green and Hibernia REITs

Chart 8: Insurance corporation holdings of Irish property, by firm type



Source: Central Bank of Ireland calculations Note: ORIH = Office, retail, industrial and hotel properties. Last observation: 2019O1

 $^{21 \\} In addition, Green, IRES and Yew Grove have access to credit facilities of £360, £350 and almost £20 million respectively. \\$

²² Calculated as the ratio of aggregate total assets to aggregate drawn bank debt (€783 million / €3.99 billion). Naturally, there is some variation in individual REIT gearing ratios, which range from a low of 0.07 to a high of 0.33

4.3 Insurance corporations and pension funds

As of early 2019, 247 insurance corporations (ICs) were operating in Ireland. The principal business lines of these firms covered non-life insurance (131), reinsurance (59) and life insurance (57). The majority (80 per cent) have established a head office or subsidiary in Ireland, while the remainder set up as domestic branches resident in Ireland. The Central Bank of Ireland began collecting updated insurance statistics in 2016, under the Solvency II framework.

The collection of detailed statistical information on the pension funds sector (PFs), by the Central Bank of Ireland, will commence from 2019. Until then and in the absence of an alternative granular dataset, it is necessary to rely on the Pensions Authority annual aggregate statistics publication to get a sense of the value of property assets held by pension funds. ²³

Insurance corporation and pension fund holdings of physical property assets

Data on the cumulative value of the physical Irish property investments held by Irish-resident ICs are available up to the beginning of 2019, at which time they stood at approximately €4.1 billion (see Figure 1, Circle C).²⁴ These properties consist primarily (99 per cent) of direct office, retail, industrial and hotel real estate assets.²⁵ A mixture of residential real estate and works-in-progress make-up the remainder. At 1 per cent of total assets held however, income-generating property constituted a relatively small fraction of the insurance sector's overall asset portfolio.

Solvency II data make it possible to distinguish property holdings by IC type (Chart 8). The life-insurance sub-sector held property assets of approximately €4 billion (96 per cent of IC holdings). The non-life insurance sub-sector accounted for the remaining €154 million (4 per cent). Again investments in the traditional CRE sectors account for the vast bulk of life insurance property investments (99 per cent). An additional point to note are the indirect exposures of ICs to the Irish property sector, which amounted to €404 million at the start of 2019, consisting mainly of positions held in Irish real estate investment funds.

With regard to pension funds, the Pensions Authority provides data for 582 continuing schemes, with total assets of ≤ 65.6 billion, in its 2018 report. The asset allocation of these schemes' funds is also listed, according to which property is one of the smaller asset classes held (4.8 per cent of total assets), after EU bonds (33 per cent), equities (28.4 per cent) and other bonds (9.0 per cent). In monetary terms, this would equate to property holdings with a value of ca. ≤ 3.1 billion in ≥ 2018 (see Figure 1, Circle C). Unfortunately no further breakdown of this figure is given – making it impossible to decipher between traditional CRE and RRE assets and the proportion of the portfolio that consists of Irish property.

5. Initial assessment of risks and vulnerabilities

The analysis presented in the previous section shows that resident non-bank institutions held approximately €29 billion of professionally managed Irish property assets at the end of 2018. While closer to the MSCI estimate of the market's size, one should remember that this figure does not include the non-resident ownership of Irish commercial property as well as Irish investors that are not financial institutions. The inclusion of these assets would likely see the overall figure more closely resemble the Cushman and Wakefield approximation. As well as the significant part played by non-banks, the previous sections also speak to the growing role of international investors in the Irish CRE market. Between them, REIFs and REITs hold about 75 per cent of the resident financial sector's investment in Irish commercial property assets, with overseas institutions providing approximately half of the identifiable funding associated with these investments directly. While a greater level of foreign investor involvement in CRE markets comes with benefits, it may also give rise to increased vulnerabilities, a number of which are explored out in this section.

²³ Information pertaining to the assets and liabilities of defined benefit pension schemes are presented in this document

 $^{^{24} \}text{These figures solely relate to Irish insurance undertakings but do not include Irish property assets of branches of non-Irish resident ICs and the property assets of branches of non-Irish resident ICs and the property assets of branches of non-Irish resident ICs and the property assets of branches of non-Irish resident ICs and the property assets of branches of non-Irish resident ICs and the property assets of branches of non-Irish resident ICs and the property assets of branches of non-Irish resident ICs and the property assets of branches of non-Irish resident ICs and the property assets of branches of non-Irish resident ICs and the property assets of branches of non-Irish resident ICs and the property assets of branches of non-Irish resident ICs and the property assets of branches of non-Irish resident ICs and the property assets of the property as$

²⁵ The majority of insurance fund exposures to property are unit-linked (or index-linked). For unit-linked assets, policyholders rather than the insurer control investment decisions. Gains/losses on the investment directly taken by the policyholder.

 $^{{}^{26}\}text{See "Defined benefit schemes - Review of 2018 statistics"}, (The Pensions Authority, May 2019)$

A combination of capital value gains, rental growth, and the opportunity to diversify their own risk were among the primary factor attracting overseas investors to the Irish CRE market in recent years. The diversification of CRE financing sources outside the domestic banking system and across borders is positive for financial stability, as liquidity is increased and direct losses resulting from any future shock shared more widely. According to the ESRB, the presence of overseas investors may also help curtail booms driven mainly by domestic investors, and assist with recovery in the event of a crisis.²⁷ In particular, foreign financiers may withdraw from an overheating market sooner, thereby dampening a boom in commercial property prices. In addition, access to foreign banks and other credit providers can provide CRE investors with alternative sources of finance in a situation where the domestic financial sector becomes distressed. The arrival of capital inflows at such a point in time may therefore truncate any collapse in the market and facilitate a subsequent recovery.

Going in the other direction, there is a view that the presence of foreign investors, growing interconnectedness and the rise in cross-border flows to CRE markets can increase risks to financial stability by amplifying boom-bust cycles or exposing the domestic market to international financing conditions and overseas crises. The propensity for international investors to chase yields in real estate markets such as Ireland, particularly in the current low yield environment may see these markets become more synchronised with global CRE cycle.²⁸ With more globally synchronised CRE markets, effectively operating through non-bank entities, the potential for spillovers is higher and the scope for loss mitigation through diversification (for individual institutions, for the financial system, and indeed for the economy as a whole) is diminished.

A rise in market uncertainty or a change in global financing conditions, resulting in more favourable yield prospects abroad, may motivate foreign investors to remove their funds from CRE markets more quickly than domestic investors, increasing the volatility of the CRE cycle. A sudden stop or reversal in foreign investor demand would increase the probability of declines in CRE prices, which could be transmitted to domestic financial markets and the real economy through a number of channels. For instance a decrease in collateral values, could give rise to a tightening of credit by banks, which would likely have a negative macroeconomic impact, quite possibly in the shape of a reduction in investment, consumption and/or income, ultimately leading to a rise in loan defaults. A wealth effect, through reductions in the value of pension or investment funds and a downturn in real estate construction activity, commensurate with a drop in employment in the sector are other possible outcomes.

Given the market's increased exposure to the investment strategies of a relatively small number of overseas players, whose reaction to a general deterioration in market conditions is uncertain, it is important that domestic funders of commercial property have the resilience to withstand any declines in collateral values that may arise if there is a significant reversal in foreign investment flows. Even though domestic banks are not heavily engaged in the provision of substantial amounts of new CRE lending at present, (end 2018), the significance of their existing Irish commercial property loan book, (valued at approximately €12 billion, a significant portion of which was non-performing), would mean that any decline in CRE prices could negatively affect the financial system. 29

The analysis in section 4 has also shown that while the majority of funding for REIFs and REITs is equitybased or sourced from shareholder or OFI loans, a sizeable sum originates from banks. The growth, or otherwise, of such exposures must be observed closely, as these relationships constitute an alternative channel through which potential vulnerabilities in the commercial property market could spill over to the domestic financial system. For instance in cases where the funds involved form part of a larger portfolio of international property investments, the fund managers may sell Irish assets in order to cover losses or liquidity issues in other markets in which they operate, thereby influencing Irish CRE prices. As a result, Irish banks may be indirectly exposed to developments in overseas property markets.

In general, the growing presence of non-bank investors to the Irish CRE market is also welcome in terms of the diversification of funding sources; however, it too has the capacity to have a negative impact on financial stability. REIFs with high leverage or high liquidity mismatch may try to sell off their assets in times of stress.

 $^{27 \\ \}text{See "Report on risks and vulnerabilities in the EU commercial real estate sector" (ESRB, November 2018).}$

²⁸ See previous analysis on the volatility of international capital flows by Bluedorn, J., Duttagupta, R., Guajordo J. and Topalova, P. (2013), "Capital Flows are Fickle: Anytime, Anywhere", IMF Working Paper, No 183, August. Also see European Central Bank (2016), "Dealing with large and volatile capital flows and the role of the IMF", Occasional Paper Series, No. 180, September 2016.

²⁹ According to data from 2018Q4, Irish retail banks' CRE lending accounts for about 9 per cent of total outstanding lending. Approximately two thirds all outstanding commercial property lending is to the Irish market. Moreover, new lending to the Irish CRE sector has remained relatively subdued in recent years, dropping to €2.4 billion or 13 per cent of new Irish lending in 2018, from €2.8 billion a year earlier

Similarly, during periods of stress, funds with large liquidity mismatch may be required to sell assets quickly in order to fulfil redemptions. The crisis illustrated that large redemption requests in investment funds coupled with insufficient liquidity can give rise to fire sales of assets, negatively impacting asset values.³⁰ REIFs invest in highly illiquid property assets, however, the infrequent nature of redemption facilities offered by such funds substantial mitigates liquidity and redemption risks. We find that the majority of Irish-domiciled REIFs currently investing in CRE tend to be closed-ended funds or open-ended funds with limited liquidity.³¹ This cohort represent approximately 90 per cent of all REIFs, in terms of total assets. Open-ended funds offer more frequent dealing (e.g. on a monthly basis) and may be subject to redemption risk, however, these represent only 10 per cent of REIFs' total assets. Long notice periods are also generally in place for those investors wishing to redeem their investments.

Aside from the above redemption characteristics, the majority of REIFs also have recourse to a range of liquidity management tools, which can be imposed in the event of an increase in market stress. Previously, such tools have been successfully used in the other jurisdictions; for example, a number of daily dealing open-ended UK property funds' suspended redemptions due to an increase in outflows following the Brexit vote in 2016.³² Together with the relatively benign nature of Irish domiciled REIFs, the availability of these measures should serve to mitigate the risk to CRE values in Ireland in the event of a period of heightened market stress.

6. Summary and conclusion

The aim of this Note is to draw together and utilise a number of internal and external data sources in order to carry out a detailed assessment of the risks and vulnerabilities arising from the CRE sector's current ownership and funding model. More specifically, we place an emphasis on the invested commercial property market and profile, in so far as possible, the entities involved in the purchasing of Irish real estate assets. In the process, a variety of internal statistical returns from across the Central Bank, and external sources such as financial statements and transactional data provided by the country's largest CRE agents, have been drawn upon.

A detailed breakdown of CRE ownership, along institutional lines, is provided for the first time, showing the dominant role of REIFs, and to a lesser extent ICs, REITs and PFs. The funding profile of REIFs and REITs is also explored. We reveal how as much as half of their liabilities originate from abroad (identifiable liabilities, in the case of REITs). Evidence surrounding the existence of interlinkages between REIFs, REITs, and banks (Irish retail banks, in particular) is also presented. Some commentary outlining the risks that these characteristics might give rise to accompanies the analysis.

This Note is part of a series of national and international initiatives hoping to address CRE data gaps. While it is a useful first step, much more work is required in the period ahead. For instance, a detailed breakdown of institutional investors' Irish property assets and liabilities is required, as is a breakdown of the Irish property holdings of non-resident entities. Increasingly, the collection of such data feeds into the Central Bank's broad remit of monitoring financial stability risks and vulnerabilities which may emanate from the Irish property market.

³¹ Closed-ended Alternate Investment Funds (AIFs) are funds that do not allow subscription or redemption facilities over a specified finite period, outlined in a fund's prospectus. Open-ended funds with limited liquidity are funds that do not provide redemption facilities monthly (in case of Retail Investor AIFs) or quarterly (in the case of Qualifying Investor AIFs). REIFs are generally QIAIFs. In contrast, open-ended funds are hose, which provide redemption facilities to at least monthly. See more detail here: https://www.centralbank.ie/regulation/industry-market-sectors/fun-

 $^{^{32} \}text{See Williams, A. \& Evans, J. "Property funds in 'vicious circle of redemptions'", Financial Times, 8 \, July \, 2016 \, A. \, & \, Contract of the contra$

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