

Financing Europe's Investment and Economic Growth

The shortcomings of Europe's financial system must be addressed if investment and overall growth are to recover. Fixing the banks is not enough.



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Financing Europe's investment and economic growth

The shortcomings of Europe's financial system must be addressed if investment and overall growth are to recover.

- Fixing the banks is insufficient. A broader and more diversified financial sector is needed.
- Within that, providing a range of funding possibilities for SMEs and infrastructure investment is a priority.
- There is considerable scope, and much that can be learned from existing systems.
- Europe's capital markets warrant being developed, and non-traditional sources of finance tapped.
- Long-term investors need to play a greater, and in some cases a more direct, role.
- The banking 'sell-side' can do more to stimulate and underwrite long-term investment.
- Market-based credit intermediation will need to play a more prominent and stable role in financing.
- Securitisation warrants being both revived and expanded.

This paper is to be read in conjunction with the accompanying annexes document.

Introduction

Europe's financial sector flaws have become clear

The weaknesses in Europe's financial architecture were laid bare during the Global Financial Crisis (GFC) and its aftermath. Unless they are addressed, they risk constraining the strength of the recovery; and they would leave the financial system more vulnerable to future shocks than are systems in some other regions.

The purpose of this paper is to identify key shortcomings of the European financial system, and to offer broad policy recommendations that, put into practice, would contribute to more efficient, as well as potentially more secure, financing of investment.

After summarising the overall macroeconomic core of the issue, the argumentation is directed particularly at meeting the needs of small- and medium-sized enterprises (SMEs) and of financing investment in infrastructure – two of the most dynamic, but all too frequently constrained, seekers of external funding.

The paper has been prepared in collaboration with the Anglo-French Committee of the City of London and Paris Europlace. The target audience is senior European policymakers.

Salutary episodes

Financial sector defects can exert a heavy price ...

The past quarter-century has seen four episodes that offer lessons of fundamental significance when considering the desirable structure of a financial sector, whether in Europe or elsewhere.

Japan's 'lost generation' of the 1990s and beyond. Japan's remarkable initial post-WWII economic development was underpinned by its "main-bank system". The funding of major industrial groups was typically provided by a single dominant bank, which also held significant equity holdings in the companies in question. Resort to the capital markets for finance was limited, and bank loans were predominantly collateralised with real estate assets.

The collapse in asset prices and demise of the so-called 'Bubble Economy' in the early 1990s saw this system fall into a quagmire of shattered confidence, wholesale deleveraging, minimal growth, and increasingly-persistent deflation.

Moreover, the authorities' slow efforts to clean up the resulting mess in the banking sector, and the lack of alternative funding conduits for companies, meant that the crisis dragged on into this century. Japan became infamous for its 'zombie banks' and 'zombie companies'.

... as was demonstrated across Asia ...

The Asian crisis of 1997. This financial crisis produced economic and social trauma across Asia and beyond, and added greatly to Japan's already overwhelming problems. The consequences for Asian banks' liquidity and indeed solvency that resulted from their foreign-currency exposure, the collapse in national currencies, and hence their soaring domestic-currency obligations, were dramatic. Bank lending collapsed.

Crucially, as in Japan, there was no significant conduit other than the banks through which Asian savings could be channelled in quantity to meet investment demand. Hence, as bank lending fell away, so too did investment. As a consequence, economic activity plummeted.

Interestingly and importantly, however, Australia, notwithstanding its close trade links with the rest of the Asia-Pacific, experienced comparatively little contagion from the Asian crisis – probably due in significant part to its comparatively well-developed capital markets.

... after the LTCM episode ...

The Russian default and Long-term Capital Management (LTCM) crisis of 1998. These twin crises caused the US corporate bond market to seize up.¹ Price quotes were difficult to obtain, and positions could not be liquidated. For a period, not even investment-grade bond issuers could find reasonable takers. Bond issuance fell dramatically, to less than a third of its pre-crisis volume. And matters did not start to improve until early 2001, when yields fell sharply following aggressive easing by the Fed.²

Even more striking, however, is what did not happen. US business investment did not collapse. Alternative channels, most notably the banks, funnelled savings to investment. This was a more expensive way of financing corporate investment: but it worked.

Previously, in 1990, the process had worked the other way around: when the real estate collapse caused US banks to stop lending, the relatively-new mortgage-backed securities market kept mortgage credit flowing. But for this, the (mild) 1991 recession would almost certainly have been significantly deeper.³

... and during the recent global crisis

The 2008 Global Financial Crisis (GFC). Recovery from the GFC is proving fragile, hesitant, and uneven. Only in a minority of the advanced economies has real GDP surpassed its pre-crisis levels. Recovery has been particularly weak in Europe, where in many cases unemployment rates are at, or close to, record levels.

The feeble nature of Europe's recovery reflects the malign interaction of a number of financial and non-financial considerations. The GFC was an exceptional worldwide event from which few countries escaped, and certainly not many of Europe's major export markets. It was also followed, both within the region and beyond, by a period of deep-seated balance sheet adjustment that extends across the board from households to corporates, and from governments to financial sectors.

Although now advanced, this bout of violent deleveraging has still fully to run its course, and it has resulted in a number of secondary consequences:

- Private sector demand for credit is weak and animal spirits are subdued;
- Fiscal policy has been tightened everywhere, extending both to severe public expenditure restraint and more onerous tax burdens;
- Financial sectors have become smaller; and more fragile, fragmented, and risk averse;
- Monetary policy has become much less effective, and orthodox room for manoeuvre virtually exhausted; and
- Investment spending, both public and private, has fallen to a low ebb, threatening in the process to damage long-term growth potential.

Europe's banks are being fixed ...

A key element to overcoming this complex, debilitating malaise in Europe is a comprehensive structural overhaul of its financial sector. A clean-up of the banking sector, extending to greater balance sheet transparency, accelerated write-downs, large-scale recapitalisations, and the resolution of insolvent institutions, is now underway. This will no doubt, over time, promote a return to a safer and more sustainable configuration of banking activities that should in turn help to rebuild investor and consumer confidence.

Even as Europe's banks are being restored to health, however, the consequent downsizing of their balance sheets is raising the spectre – albeit not definitively experienced so far – of the largely bank-based, intermediation channel between savings and investment proving to be insufficiently extensive to support a full recovery of investment demand when finally it returns.

Europe's long-standing and, in the eyes of many observers, disproportionate, reliance on bank intermediation⁴ suggests that it would be wise to encourage a more wide-ranging and diversified financial system, better equipped to address a number of important micro issues.

Two implications

These episodes carry two basic implications for the development of Europe's financial systems:

... but the solution
does not end
there

- **First, *the security case* for multiple channels for financing investment.** When there is only one principal channel through which savings can flow to meet investment demand, an economy is acutely vulnerable to any blockage of that channel. And in turn such a blockage can easily lead to a collapse in borrowing, hence of expenditure, and thereby of economic activity, in a circle that, through financial market turbulence and collapsing confidence, can all too readily viciously feed upon itself.

Economies are much better served if there are multiple channels through which the intermediation of saving and investment can take place. Former Fed Chairman Greenspan has likened this to having a 'spare tyre'.

A broader-based
financial system is
required ...

- **Second, *the growth case* for multiple channels for financing investment.** Europe could usefully complement the revivification of its banks by reducing the risk of not being able to finance a proper recovery by developing new channels, and *widening* existing non-bank channels.

In so doing, Europe would adopt a number of the more positive aspects of other financial systems, not least that of the US, so as to achieve a financial system that has both an internationally competitive banking system and a greater degree of overall diversity. At the same time its regulatory architecture would have to evolve considerably in an effort to maximise the benefits and minimise the costs associated with this process.

Two key sectors

This general need for *wider* and *more diverse* channels of funding extends across the European economy as a whole. But the provision of adequate, competitively-priced, stable, long-term funding is particularly important in respect of two key sectors: small- and medium-sized enterprises (SMEs), and infrastructure – sectors that have been starved of credit not just since the crisis, but for some time beforehand too. Best practice here is far from uniformly applied across European countries, and often lags behind that of other parts of the world, including the US.

... especially if the
SME sector is to
be revived ...

Small and medium-sized enterprises. SMEs are in many ways the mainspring of the EU economy. They make up 99% of all European companies; they account for around two thirds of total value added and employment; and they are at the forefront of much of the continent's technological diffusion, entrepreneurial achievement, and innovative capacity. In acutely-depressed southern Europe, their importance is proportionately even greater.

Existing SME financing arrangements are limited largely to bank lending. Yet, especially in southern and peripheral Europe, the already-limited willingness or ability of banks to provide them with finance on reasonable terms has, since the GFC, been considerably reduced. Providing a diverse, flexible, and sustainable menu of financing options to this key sector would support its expansion and development over the medium term. (For more on SMEs, see the Annex.)

... and
infrastructure
amply supported

Infrastructure investment. Investment is always important, and in two ways: it contributes to final demand, and it has positive long-term effects on economic growth. But infrastructure investment has even greater beneficial effects, which extend beyond simply adding to the capital stock.

Infrastructure facilitates trade and the division of labour; competition; the efficient allocation of resources across regions; the diffusion of technology; better organisational practices; and access to new resources, both physical and human. And it also stands to be central in addressing the burgeoning global challenges of climate change and encouraging 'greening' of the economy.

However, with governments economising, the banks licking their wounds, and other regulatory uncertainties and market failures stymying the involvement of the private sector in many risky and illiquid projects, both public and private investment spending has fallen away over recent years.

In 2012 and 2013, total investment across Europe accounted for the lowest share in GDP since the 1980s. Enhancing investment in infrastructure will require a range of integrated policy

responses. In particular, there is a need for new and alternative sources of funding. (For more on infrastructure, see the Annex.)

Five recommendations

The solution is multi-faceted

Against this background, five overlapping and mutually-reinforcing proposals are suggested:

- I. Developing Europe's securities markets and non-traditional sources of finance;
- II. Encouraging and enabling a greater, more direct, role for long-term investors;
- III. Encouraging the investment banking 'sell-side' to do more to stimulate and underwrite long-term investment;
- IV. Enabling market-based credit intermediation to play a more prominent and stable role in financing; and
- V. Reviving and developing securitisation.

I. Developing capital markets and non-traditional funding

The challenge in Europe is to effect a transition towards a corporate financing model that is more evenly split between the traditional banking sector and more 'market-based' sources.⁵ Managing such a transition is a challenge for markets, policymakers, and investors alike. Meeting the challenge will require the cooperation and mobilisation of all relevant stakeholders spanning government, corporates, and the financial industry.

Capital markets must evolve, including ...

In the US, equity and bond financing are a major source of funding to the non-financial corporate sector. In continental Europe, although the equity and corporate bond markets have expanded considerably since the 1990s, they are still comparatively relatively underdeveloped. Bank loans and other advances account for more than 80% of the debt financing of Europe's non-financial corporate sector; corporate bonds account for less than 20%.

In the US, by contrast, corporate bond markets are a much larger share of total debt outstanding – some 50%.⁶ Moreover, within the US loans market, around half come from market-based sources such as finance companies.⁷ Altogether in the US, the 'formal' banking sector provides as little as 25% of non-financial corporate debt funding.

Stock market capitalisation, at around 65% of GDP in the EU, and 50% of GDP in the euro area, is much as in Japan (60% of GDP), but significantly lower than in the US (105%). The same is true of stock market turnover. The non-financial corporate debt market, at around 15% of GDP in both the EU and the euro area, is broadly the same (proportionate) size as in Japan, but only around half the size of its US equivalent.

Furthermore, European debt markets are dominated by the largest investment-grade corporates. High-yield corporate bond issuance in particular remains modest by comparison with the US. As it happens, 2013 was a record year in Europe, with €70bn of new issuance (equivalent to just under 1% of GDP) and over 200 bonds priced. Yet half of these issues were launched in the UK, Germany, and France. Moreover, the total paled into insignificance next to the \$300bn of issuance (around 2% of GDP) typically seen in the US in a single year.

Venture capital

... more venture capital ...

Europe's venture capital (VC) markets have not advanced as they have done in the US, and their development would help Europe to finance a pipeline of new innovative companies. The general rule of thumb is that new US firms raise twice as much in each round of financing as do European firms — and twice as fast.⁸ While VC investment is just under 1/5th of a percentage point of US GDP, in Europe's major economies it is generally less than one fifth of that. Seed, start-up, and early-stage investment is relatively low. Later-stage investment, in particular, is well below US levels. In Southern Europe, VC investment is low even by European standards. Later-stage investment is strikingly absent.

In some countries, for example Israel, with its strong links to US markets, early- and later-stage investment is much higher as a proportion of GDP than in European countries (and indeed the US itself). European companies too have benefitted from US investment; however dependence on US funding, particularly after the initial seed investment, implies much scope to develop European VC markets. Third or fourth rounds of funding are mostly, if not uniquely, provided by

US funds. NASDAQ listings are a reflection of this, as most competent public funds are based in the US. Perhaps around 15% of NASDAQ-listed companies backed by VC have been founded by French (5%), UK (5%), and German (5%) entrepreneurs.

There have been some more encouraging signs in recent years, however, with the activity of some European firms comparable with their counterparts in the more mature US market. (For more, see the Annex.)

SME equity markets

... more backing
for SME growth
markets ...

Enhancing existing SME equity markets is also a priority. There are at least 15 equity markets across Europe tailored specifically to the needs of SMEs. They are currently home to over 1,700 companies, valued at over €180bn. The new “SME Growth Markets” category created by MiFID 2 and initiatives such as the European Long-term Investment Funds could usefully be complemented by other measures to make it easier for SMEs to offer securities to a wider investor base at lower cost. Recalibrating the fiscal bias against equity would further reduce the cost of capital. Measures that boost the post-IPO profile and liquidity of quoted SMEs could also be helpful.

The private placement market

... greater resort
to private
placements ...

A potentially productive initiative, especially for mid-sized European corporates, would be the development of a larger, pan-European, private placement (PP) market.

The regulatory and informational requirements associated with private placements are less stringent than for public offerings, and so can be a simpler and less expensive way to raise finance, while allowing a company to develop a closer and enduring relationship with investors. More private placements would also appeal to entities such as insurance companies and pension funds which wish to match longer-term liabilities with assets with similar characteristics, and investors who are looking for additional issuer and sector diversity.

Approximately 25% of US insurers’ fixed income assets are in private placements, and currently the shortcomings of the European equivalent means that some European companies prefer to use the more mature and diverse US alternative. Indeed, in 2013 more than half of the \$50bn-odd of securities issued in the US private placement market were launched by non-US firms, of which European entities were responsible for the lion’s share.

Within Europe, where Germany has the most established private placement market, not least in the form of “Schuldschein” issues – fixed- or floating-rate notes ranging in size from €10mn to €500mn – it is noteworthy that some 30% of issuance was by non-German companies.

New markets are developing however, notably in France. The Euro-PP, launched two years ago under the auspices of the Banque de France, has drawn up a “code of best practice” with investors and industry groups, with a view to ‘industrialising’ the placing process, and ultimately creating the conditions for investors to buy and hold such assets.

The scheme was made possible by a change in the French Code des Assurances, and highlights the importance of a complementary, and secure, legal and regulatory framework. A total of \$3bn was raised by French companies in 2012 under the US PP scheme, and €774m under Schuldschein. Under the Euro-PP scheme more than €7bn has been raised – almost entirely for French companies, nominated by French banks, and funded by French insurance companies.⁹ It is estimated that €12bn could be raised, in line with Schuldschein issuance in 2012.

It would be worthwhile to learn from the US, German, and French experiences with private placements, and to develop more widely in Europe mechanisms to achieve the requisite scale, transparency, standardisation, and know-how to attract investors into the market and make it work both for them and those seeking capital over the long term.

Medium-sized-company debt

... more medium-
sized company
debt issuance ...

Another important initiative is the opening-up of the capital markets to the issuance and trading of more medium-sized company debt. In the UK, London Stock Exchange operates a retail fixed income market, the Order book for Retail Bonds (ORB). Since its launch in 2010 it has raised £4bn in 41 dedicated issues, and is establishing itself as a flexible funding source for companies with a typical ORB benchmark size of around £50-75 million. A number of trading platforms for medium-sized corporate bonds have also been initiated by various German exchanges, including Deutsche Borse’s *Entry Standard Anleihen*; Borse Dusseldorf’s *Mittelstandsmarkt*, and Borse Stuttgart’s

Bondm. Other countries could with advantage study the UK and German examples, and seek to adapt them to their own exchanges.

New infrastructures may be needed, not least because of balance-sheet constraints on sell-side activity, to ensure an adequate provision of liquidity – perhaps along the lines of the Cassiopeia “bond match” model.¹⁰

Evolving needs

... supported by
education

SMEs almost invariably need help to transition between different types of funding. As they grow, SMEs can use a combination of sources, ranging from seed capital, business angels, venture capital, bank debt, and private and public markets.

However, SMEs often do not know the range of growth-financing strategies that are available to them, nor may they have the confidence or indeed aspiration to explore them. They need practical help in terms of acquiring the industrial, financial, and organisational skills to enable them to attract the widest possible range of investors.

Programmes that fill these ‘education gaps’ and re-catalyse supportive advisory ecosystems of private, state and institutional investors, advisors, entrepreneurs, academics and science parks could therefore usefully be expanded. The European Commission has identified the ELITE growth coaching programme run by Borsa Italiana (with 150+ SMEs involved) as a model, and this has been imported into the UK.¹¹

II. Encouraging and enabling a greater role for long-term investors

Longer-term
investors must be
more involved

Insurance companies, pension funds, mutual funds, and similar investors, such as large family offices and sovereign wealth funds, have the potential to play a greater role in funding the real economy, both near-term and longer-term. In Europe, insurance and pension companies alone hold around €12tr of assets, equivalent to over 90% of EU GDP, yet they have little exposure to infrastructure or to SMEs.

There are a number of challenges. The first is to open up, or to deepen, more direct channels of intermediation between long-term investors and borrowers. The second is to develop additional indirect channels, for example through the use of simple securitisations or more complex financial instruments.

Moreover, and particularly as regards the development of more direct channels, it would be helpful to encourage more long-term investors to reach the requisite size, and acquire the necessary expertise, to enable them to allocate resources competently to key sectors such as infrastructure and SMEs.

Catalysing their greater involvement in these areas requires that various constraints be overcome, including:

- **The atomistic nature of pension and insurance industries** in many European countries, and the lack of requisite overarching authorities to stimulate or even oblige the pooling of assets;
- **Mark-to-market accounting, liquidity limits**, and a preoccupation with net asset value that often encourage short-termism;
- **Regulatory and political uncertainty** that promotes investor caution and procrastination;
- **The small scale and limited standardisation of many potential investments** – there is a dearth of investment grade debt offerings, for example – coupled with a lack of in-house analytical expertise and available third party advice, limits participation; and
- **Investment portfolios that have latterly been rebalanced** away from equities as a result of risk aversion and directives and guidelines designed to protect these institutions from a recurrence of the problems encountered during the 2008 crisis.

This will require
new government
initiatives ...

The extent of this list of constraints, and the idiosyncratic nature of the particular issues associated with infrastructure projects on the one hand, and SMEs on the other, requires that the authorities take a multifaceted approach.

At the national and pan-European level, it will be important to re-examine regulatory and legal standards, risk profiles, and market practices, including prudential rules for investors to be able to invest in these instruments.

As the banking sector restructures – although the final details are to date far from clear, not least as regards the separation, or not, of retail from investment banking activities – it will become increasingly important to avoid long-term investors becoming unduly constrained.

Outside the traditional banking sector, Solvency II and other major reforms, such as those recently announced in relation to pension funds, stand to be particularly important. Regulators may need to revisit how they assess risk, and how specific asset classes should be treated, both quantitatively and qualitatively.

That said, a greater involvement of pension funds, insurance companies, and other potential alternative investors in both infrastructure and SMEs would be encouraged particularly by more comprehensive government sponsorship and support. This could include the provision of more project guarantees and stand-by credits; greater efforts to consolidate small pension and insurance companies; the encouragement of aggregated investment funds drawing on the resources of smaller entities; the encouragement of securitisation (see section V below); greater consistency in government investment, macroeconomic, and regulatory policy; and a more supportive tax framework.

Equally, however, much could also be achieved through a series of relatively minor initiatives such as government efforts to develop common definitions for different categories of infrastructure or SME investment and specified industry benchmarks; the encouragement of better data collection and standardised performance metrics for risk and return in both of these areas; and an emphasis on improved pension fund and insurance company governance.

Recent national initiatives have been taken in France and the UK: these include the sovereign fund club of CDC; BPI France guarantee schemes, and the UK Business Bank.

National investment banks

... perhaps even
National
Investment Banks

There is an argument for putting all these initiatives under the co-ordinating umbrella of a series of ‘National Investment Banks’, mandated to deliver long-term policy and regulatory stability, and act as a common and easily-accessible repository for project, company, and financial expertise.

Were that to be done, any such institutions would need to be designed so as to avoid becoming unwieldy and inefficient quangos, being captured by narrow political interests, and crowding out private sector financing. Such an institution would have to be operationally independent of government: it could usefully have a charter along the lines of those of independent central banks, for example as regards clarity of mandate, and governance structure.

Naturally, any new institutions of this type would need to co-ordinate their activities with the European Investment Bank and the European Investment Fund.

III. Encouraging ‘sell-side’ activities

The banking sell
side can also play
a key role ...

By establishing, underwriting, and developing market structures, and promoting liquidity and price transparency, sell-side activities can potentially play an important role in stimulating investment in traditionally more risky and illiquid assets such as infrastructure and SMEs.

The financial sector sell-side has proven ability to;

- Bring together investors and end-users of capital;
- Encourage the requisite scale and standardisation of new financial instruments in order to create more investment grade opportunities;
- Assist in the management and diversification of new risks through, for example, the use of derivatives;
- Take the lead in the development of liquid secondary markets for these assets; and
- Expand in-house expertise in underwriting, listing, and the development of further innovative financing solutions.

... as long as
governments
allow it to ...

The investment banking community is clearly still in ‘recovery mode’ from the traumas of the 2008 crisis and its aftermath, but its willingness to take on these responsibilities can be expected to revive with time. Governments can, however, accelerate the process by refraining from heavy-handed regulation and taxation of the sector, and by generally making progress in the other four

key areas highlighted here. Care will be needed to ensure that any separation of retail and investment-banking activities is well balanced, taking due account of the coverage of existing regulations.

Despite their bad press, bankers often exhibit a striking entrepreneurial spirit, and like nothing better than to explore and exploit new ways to make money. Putting them in a position to do so will no doubt release their innovative qualities. This innovation should however be underpinned by increased incentives for the sell-side to provide and disseminate information in a range of areas. Such research would: contribute to making financial instruments more transparent; create a better understanding of how they function; and thereby contribute to a better analysis of performance and risk.

IV. Market-based intermediation

The size of bank balance sheets, and the risk concentrated on them, will be reduced over time. More 'market-based' sources stand to help fill the vacuum, and the so-called 'shadow banking' sector is set to grow substantially. Collateral is likely to be a key issue going forward. Central banks and other policymakers will need to adapt.

Non-traditional finance

Non-traditional
finance options
can be developed

Non-traditional forms of finance can provide a further adjunct to the securities markets, particularly for the smallest companies. In the UK, the 'alternative finance sector' has advanced further than elsewhere in Europe, spanning both debt- and equity-based funding initiatives to provide niche working capital to a range of small businesses.

Peer-to-peer lending, 'crowdfunding', and the like offer new, more flexible, and bespoke options that could mature into important alternatives to traditional financing channels. To date, such sources account for less than 5% of SME lending, but are likely to grow rapidly, if they can be satisfactorily regulated, and investor and consumer interests protected in such a way as to inspire confidence.

The so-called 'shadow banking' system

Shadow banking
has good and bad
elements

As former Fed Chairman Ben Bernanke put it, the shadow banking system:

"... comprises a diverse set of institutions and markets that, collectively, carry out traditional banking functions, but do so outside, or in ways only linked to, the traditional system of regulated depository institutions".

The system extends to securitisation vehicles, asset-backed commercial paper conduits, money market mutual funds, markets for repurchase agreements (repos), investment banks, and mortgage companies.

The size of the shadow banking sector in the euro area is probably somewhere between €11tn and €17tn, depending on how it is defined and measured. The shadow banking system is relatively large in the Netherlands, Luxembourg, and Ireland and, outside the euro area, in the UK. Taking the euro area and the UK as a proxy for Europe as a whole, the European shadow banking sector could be larger than that of the US.

As demonstrated over recent years, shadow banks can exert a profound effect on the overall liquidity and stability of financial markets, and provide a keynote alternative conduit for funding. Like the traditional banks, they intermediate credit both directly and indirectly, through maturity transformation, liquidity transformation, the creation of leverage, and by the transfer of credit risk.

These activities are funded mainly via secured funding markets through securitisation, securities lending, and repo agreements, which in turn depend on an adequate supply of good-quality collateral.

The constructive
elements can be
encouraged

The priority is to encourage the constructive aspects of this system while discouraging the more destructive aspects – not least the regulatory arbitrage and off-balance-sheet activities that generated such malign effects during the 2008 crisis.

Many shadow banking activities represent positive innovations, driven by specialisation and the comparative advantages that shadow banking entities offer over traditional banks. The alternative source of funding enables risk to be diversified away from the formal sector –

particularly important if, or when, traditional channels become impaired. The shadow sector can also offer access to finance for those not served, or served poorly, by the formal sector.

The key challenges are to improve the shadow banking sector's transparency and to define it more clearly, while ensuring that the evolving regulatory limits on its activities enhance rather than stymie its role as a powerful complement to the formal banking sector.

Collateral

Collateral
shortages need to
be overcome

There is a need in this context to ensure an adequate supply of serviceable collateral. In allowing extended re-hypothecation, good collateral is central to the functioning of the modern financial system. Indeed, it has become akin to high-powered money. Insufficiency can lead to funding stresses that reverberate across financial markets. Since the onset of the crisis in Europe, collateral has increasingly been required in order for both financial and non-financial institutions to be able to access private funding markets.

The primary problem that European policymakers face in this regard is that, as numerous sovereigns have been downgraded, the supply of triple-A-rated assets – the primary source of top-quality collateral – has been reduced. And this at a time when the demand for 'safe' assets has increased dramatically, not least because of new regulatory requirements for financial institutions' capital and liquidity.

This conundrum would be eased by improved public sector debt sustainability in the OECD economies, and the development of new and reliable stores of value in the still-immature capital markets of Asia and beyond. But in the interim the problem could be alleviated through a combination of more high-quality corporate debt; increased securitisation (see section V below); the development of a euro Treasury bill market akin to the US Treasury bill market;¹² and greater efforts to free up the existing silos of collateral that risk aversion has left inert. (For more on collateral, see Annex.)

V. Securitisation

Notwithstanding such success as may be achieved in opening access to the public capital markets, a number of small borrowers will always depend, to a large extent, on loans rather than debt or equity issuance. To attract long-term investors, and to spur loan origination by the (broadly-defined) banking sector, securitisation offers much potential.

Securitisation
warrants being
enhanced

The European securitisation market, at around €1.5tn, is less than a quarter the size of the US market. From 2000 until 2007, annual securitisation issuance in Europe averaged €265bn, compared with €2.3tn in the US. Furthermore, European securitisations have tended to be retained on bank balance sheets, rather than placed with third-party investors.

Since 2008, securitisation in general has shrunk. But whereas it has contracted by less than 10% in the US, in Europe it has declined by some 30%, and some 60% of 2013 issuance has been retained on bank balance sheets.

Enhancing Europe's securitisation market represents a major challenge, given public distrust and lack of market confidence. (For more on securitisation, see the Annex.)

There are two key related considerations in the development of the European securitisation market:

- **First, it needs to be refocused away from household mortgage finance.** Securitised loans are predominantly originated by the banks, and some 70% are offered to households, of which 60% are residential mortgage-backed securities. European SME securitisation accounts for just 8% of the current total.
- **Second, pooling and standardisation of SME loans is needed** to effect the market's reorientation. This in turn requires creation of a sympathetic institutional framework, and a greater willingness on the part of the investment banks to develop and underwrite these markets. Three innovative initiatives have recently been launched in France: *Fonds Novo*; *Triparty repo* with Banque de France, *Euroclear & LCH-C*; and *Titrisation de créances privées*. (For more on *Fonds Novo*, see the Annex.)

Conclusions

Breadth and diversity are the ultimate aims

Given European economies' extended travails, restoring faith in the formal banking sector as soon as possible is of paramount importance. At the same time, however, there is considerable scope, and much that can be done, to create a more diverse and comprehensive financial system, encompassing more market-based intermediation and a greater and more productive role for long-term investors, and which embraces the best practices of other jurisdictions, not least the US.

The outstanding policy agenda is multi-dimensional and challenging - see the comparative table: *Financial sector indicators: Europe, the US, and Japan*. But only by pursuing a broad-based and flexible approach will existing market failures in Europe be addressed comprehensively and satisfactorily, and the investment and overall macroeconomic potential of the region thereby realised.

Financial sector indicators: Europe, the US, and Japan

Relative to 2012 GDP, %	EU	EA	US	JAP	UK	FRA	NLD	IRL	DNK	DEU	SWE	BEL	ESP	ITA	PRT	GRC	Source:
1 Bank assets	308	287	91	208	438	362	347	546	377	255	156	275	321	159	309	179	IMF GFSR 2014
2 Assets of banks domiciled in	-	303	96	344	801	366	370	-	-	274	-	-	313	241	-	-	FSB 2013
3 Assets of non-bank financial intermediaries	-	184	166	64	354	96	565	-	-	72	-	-	72	40	-	-	FSB 2013
4 Bank credit to private sector	136	134	55	105	188	116	105	198	208	209	136	93	204	122	192	118	CPB 2013
5 Bank credit to non-financial companies	46	54	18	81	31	44	35	61	64	58	53	31	80	57	68	53	CPB 2013
6 Assets of pension funds and insurers	93	80	-	-	178	102	242	180	178	78	107	80	36	36	44	7	Eurostat
7 Stock market capitalisation	65	48	104	61	137	64	84	51	77	46	111	62	43	25	33	18	IMF GFSR 2014
8 Stocks traded	44	28	132	61	101	43	57	6	34	36	72	21	81	38	13	6	World Bank
9 All (public / private) debt securities	189	179	217	246	233	173	297	571	292	127	148	152	183	193	186	96	IMF GFSR 2014
10 Non-financial corporate bonds	15	18	35	17	14	26	25	7	4	13	16	13	3	20	25	4	CPB 2013
11 Securitisation market	12	11	51	-	23	2	44	24	0	3	0	21	18	11	22	14	afme
12 SME securitisation	0.9	1.2	-	-	0.3	0.1	1.3	0.0	0.0	0.2	0.0	4.7	3.7	1.8	3.2	3.7	afme
13 Venture capital	0.02	0.01	0.17	0.03	0.04	0.03	0.03	0.05	0.03	0.02	0.05	0.02	0.01	0.01	0.01	0.01	OECD

Notes: Variables 2 and 3 use FSB definitions of the bank and non-bank sectors. Variable 2 refers to all deposit-taking institutions. Variable 3 refers to all financial institutions that are not classified as banks, insurance companies, pension funds, public financial institutions, or central banks (see FSB, 2013 for more). Variables 4, 5, and 10 are taken from CPB (2013) and are for 2011, with the euro-area average calculated as the simple average of euro-area countries. For variables 10, 11, and 12 European averages are GDP-weighted averages.

Well above European average(s)
Above European average(s)
Around European average(s)
Below European average(s)

Proposal

The analysis warrants being deepened ...

This paper has set out the basic case for the introduction – both to increase security and to fund growth – of a range of policies in respect of financing both SMEs and infrastructure investment. What is needed next, it is suggested, is to examine the range of existing policies, including in France, Germany, and the United Kingdom, in detail.

The purpose would be to:

1. Establish the key features of each policy; and identify specific problems in their functioning;
2. Consider difficulties that might arise in transferring existing policies to other countries in Europe;
3. Suggest detailed strategies that, modified as appropriate, could be transferred from one country to another; and to
4. Outline additional targeted policies that would fill clearly identified but unaddressed gaps.

... by a high-level EU-backed working group ...

To this end, it is suggested that an EU-backed international working group would be appropriate, comprising Europe-based specialists who collectively bring knowledge of:

- France, Germany, the United Kingdom, the US, and perhaps Japan;
- The investment banking, commercial banking, and shadow banking sectors;
- Central banking and/ or regulatory practice; and
- SMEs and pension / insurance companies.

... to develop specific policy proposals

The OECD, which has been conducting a multi-decade programme of research into SMEs, and has also recently written extensively on infrastructure funding, could be an important source of information, and perhaps participation.

The first two phases, it is suggested, could be completed fairly quickly, if the working group was adequately and appropriately constituted. While the third and fourth phases could take somewhat longer, experience with the first phase, together with the previous experience of members, should enable progress to be made fairly rapidly. ■

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Endnotes

¹ For more detail, see for example Greenspan (1999), BIS (1999), or Wall Street Journal (1998a, b).

² Greenspan (1999) observed that *“The problems in our markets appeared too deep-seated to be readily unwound solely by a cumulative 75 basis point ease in overnight rates. Arguably, at least as important was the existence of backup financial institutions, especially commercial banks, which replaced the intermediation function of the public capital markets. As public debt issuance fell, commercial bank lending accelerated, effectively filling in some of the funding gap. Even though bankers also moved significantly to risk aversion, previously committed lines of credit, in conjunction with Federal Reserve ease, were an adequate backstop to business financing, and the impact on the real economy of the capital market turmoil was blunted. Firms were able to sustain production, and business and consumer confidence was not threatened. A vicious circle of the initial disruption leading to losses and then further erosion in the financial sector never got established.”*

³ See for example Greenspan (1999.)

⁴ Of total non-financial corporate debt outstanding in 2011, bank loans and other advances accounted for 85% in the euro area and the UK; non-financial corporate bonds just 15%. In the US, by contrast, corporate bond markets are a much larger share of total debt outstanding – some 47% – with bank loans and other advances accounting for the remaining 53%. Note that the US is also commonly cited as having a 70:30 split between corporate bonds and bank loans in total nonfinancial debt outstanding. This is due to the exclusion of the farm and small-unincorporated sectors of the economy. Using the broader definition gives the 50:50 split quoted in the text. See Barclays (2012) and S&P (2012) for more information.

⁵ Defined broadly, this includes public and private equity and debt markets and more market-based credit intermediation, including importantly collateralised (or secured) funding markets.

⁶ The US is also commonly cited as having a 70:30 split between corporate bonds and bank loans in total nonfinancial debt outstanding. This is due to the exclusion of the farm and small-unincorporated sectors of the economy. Using the broader definition gives the more even split quoted in the text. See Barclays (2012) and S&P (2012) for more information.

⁷ Source: IMF (2014) GFSR

⁸ Source: The Economist. <http://www.economist.com/blogs/schumpeter/2013/09/venture-capital-europe>

⁹ Source: FT. <http://www.ft.com/cms/s/0/337c1dc8-a2f6-11e3-ba21-00144feab7de.html#axzz31b2abCrd>.

¹⁰ The objective is to provide liquidity and transparency through: an order book with firm orders; pre- and post-trade reporting; and clearing and settlement solutions.

¹¹ European Commission Communication on Long Term Financing of the European Economy, March 2014, section 5 page 11

¹² The Treasury bill market in the US amounts to some 10% of GDP. Expanding the euro area market to a similar size would create some €900bn of additional safe assets.

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The shortcomings of Europe's financial system must be addressed if investment and overall growth are to recover. Fixing the banks is not enough.

ANNEXES

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Annex 1: Small- and medium-sized-company finance

Banking dysfunction and Europe's economic dynamo

Small- and medium-sized enterprises (SMEs) are in many ways the driving force of the EU economy, especially in the continent's hard pressed southern periphery. The SME sector makes up more than 99% of all companies, and so-called 'micro firms' (those with fewer than ten employees and/or turnover of less than €2m) account for between 70% and 95% of the total. SMEs are also responsible for two-thirds of private sector employment, and 60% of gross value-added and investment; they create 80% of all new jobs; and they are source of much of the economy's innovative capacity.

It follows, therefore, that the provision of a diverse, flexible, and sustainable menu of financing options would be advisable to support the expansion and development of the sector over the medium term.

Unfortunately, however, existing SME financing arrangements are largely limited to bank lending (in Europe, and in the UK, for example, banks provide over 80% of SME financing), and SMEs are not well served by the 'universal banking' model. For reasons of economies of scale, and latterly risk aversion, the banks have increasingly prioritised the provision of a full range of services to large companies. Meanwhile, even for relatively mature and sizeable medium-sized operations, access to the capital markets is strictly limited.

SMEs are a heterogeneous group

SMEs are a diverse group that operate across all sectors of the economy. It is hard to identify a 'typical' SME. Small businesses or 'start ups', for example, are very different from medium-sized companies, while the diversity within the 'small' and 'medium-sized' segments is considerable. In the 'small' sector, as well as fast-growing businesses, there are also 'lifestyle' businesses that choose not to prioritise further growth because the owners are content with their existing configuration and/or the incomes and work/life balances they bring. In the 'medium' sector, business can vary from so-called 'gazelles', which resemble the rapidly-expanding high-tech businesses on the US west coast, to the steadily-expanding, family-owned, mittelstand companies often associated with Germany.

These different categories of firm operate diverse development strategies, and have very different needs for business partners, access to finance, government support, and so on.

Improved data on the operations of firms, not least to clarify the extent and the nature of market segmentation, would encourage a better understanding of the sector by potential investors, and help policymakers to prepare a menu of more sympathetic initiatives. To this end, the encouragement of credit ratings services, particularly for mid-market companies, is desirable.

Securitisation is underdeveloped

It has also long been understood that the development of securitisation could go a significant way towards addressing the financing difficulties of the SMEs. Loans to the household sector currently dominate the European securitisation markets, with more than half of all such products accounted for by residential-mortgage-backed securities. SME loans account for just 8% of the outstanding total of securitised advances.

The pooling and standardisation of SME loans is vital to the process of development. This in turn requires the creation of a sympathetic institutional framework, and a greater willingness on the part of banks and investment banks to develop and sustain these markets and, in the process, attract longer-term investors.

Some innovative schemes have emerged, notably in France. The NOVO fund, launched in July 2013, 'bundles' together loans originated by banks, creates an un-tranched "whole-loan" un-rated bond security, and sells this to insurance companies. The simple structure means minimal financial engineering and maximum transparency; and banks retain a minority interest, thereby maintaining some 'skin in the game'. The government has given policy support to NOVO, including by changing the law to allow insurers to invest up to 5% of their balance sheet in unrated bonds.

Boosting the private placement market

Another potentially productive initiative, especially for mid-sized European corporates, would be the development of a larger pan-European private placement (PP) market.

Private placements offer a fixed rate of interest, and tend to be long-term investments (typically around 7 years). The smallest loans are typically around €12m. The regulatory and informational requirements being less stringent than for public offerings, private placements can thereby be a simpler and less expensive way to raise finance, while allowing a

company to develop a closer and enduring relationship with investors. More private placements would also appeal to entities such as insurance companies and pension funds which wish to match longer-term liabilities with assets with similar characteristics, and investors who are looking for additional issuer and sector diversity.

The US and Germany have the largest and most developed private placement markets. Annual issuance was €40bn and €14bn respectively in 2012, having doubled over the previous few years. Approximately 25% of US insurers' fixed income assets are in private placements, and currently the shortcomings of the European equivalent means that some European companies prefer to use the more mature and diverse US alternative. Indeed, in 2013 more than half of the securities issued in the US private placement market were launched by non-US firms, of which European entities were responsible for the lion's share. As much as 20% of financing volume in the US market is accounted for by UK companies alone.

Within Europe, where Germany has the most established private placement market, not least in the form of "Schuldschein" issues (fixed- or floating-rate notes ranging in size from €10mn to €500mn), it is noteworthy that some 30% of issuance was by non-German companies. In France, the market has also been developing quickly, albeit from a low base. The UK market, by contrast, remains relatively undeveloped.

The priority here therefore appears to be to learn from the US, German, and French experiences, and to develop the mechanisms necessary to achieve the requisite scale, transparency, standardisation, and know-how to attract investors into the market and make it work both for them and for those seeking capital over the long term.

New bond trading platforms

New infrastructures for issuing and trading corporate bonds are also being developed, and this may open up access to markets, for SMEs at least. In the UK, London Stock Exchange has launched the *Order book for Retail Bonds* that offers primary access to corporate issuers (both large and small cap) and secondary trading to retail investors. To date it has raised £4bn, but faces regulatory headwinds from the UK Listing Authority, which is perceived by the industry to be gold plating requirements of transparency and disclosure under EU regulations. A number of new trading platforms have been also opened by the German exchanges, targeting medium-sized companies, such as Deutsche Börse's *Entry Standard Anleihen*, Börse Düsseldorf's *Mittelstandsmarkt*, and Börse Stuttgart's *Bondm*. Targeted companies are not required to have a listing or comply with normal accounting rules. Issues range from €25-225 million, and 60-75% is held by institutional investors. So far, however, both issuance and trading volumes remain relatively small. France too has created a retail bond market aimed specifically at smaller companies (the IBO market), but volumes thus far are negligible.

Developing venture capital markets

Developing venture capital (VC) markets would help Europe to finance a pipeline of new innovative companies. The general rule of thumb is that new US firms raise twice as much in each round of financing as European firms — and twice as fast.¹ While VC investment is just over 1/5th of a percentage point of US GDP, in Europe's major economies it is generally less than one-fifth of that. In Southern Europe, venture capital investment is low even by European standards.

There have been some encouraging signs in recent years however, with the activity of some European firms comparable with their counterparts in the more-mature US market. Last year, three such examples were profiled in the Economist:

- **Seedcamp**, a London-based early-stage micro seed investment fund which is also an 'accelerator', or start-up school, has invested \$5.5m in 93 companies since its creation in 2007. These companies were then able to raise a further \$120m from other sources, an average of \$1.3m per start-up, impressive even by US standards.
- **Passion Capital**, also based in London, is a combination of seed-stage venture funds and a start-up 'incubator'. Since its launch in 2011, it has invested around \$9m in 34 companies that have gone on to raise an impressive \$56m from other venture-capital funds.
- **Earlybird**, a more traditional VC fund based in Munich, has invested in 100 start-ups since 1997 and currently has a portfolio of 27 companies with combined revenues of \$1 billion. Earlybird has enjoyed some notable success, as evidenced by six major IPOs across four different stock exchanges and fourteen trade sales.

Tapping more non-traditional finance

Finally, there is the development of non-traditional finance sources, an area where the identification and co-ordination of best practice offers considerable potential, and the UK may be setting an important example for other countries to follow.

Leasing and invoice discounting, two important sources of ‘alternative’² finance for SMEs in the UK, have grown by 5-10% annually in the past few years. In 2012, they were worth more than €40bn (equivalent to around 2% of UK 2012 GDP). Key to this has been that such finance is well collateralised, whether by the equipment being leased or the underlying invoices. Moreover, such finance is available to even the smallest companies.

A number of web-based sources are developing too. A report by the Centre for the Study of Financial Innovation (CSFI) identified around 50 internet-based non-bank sources of funding for smaller companies incorporating ‘peer-to-peer lending’ and ‘crowdfunding’. The report also documents internet-based attempts to provide on-line hedging, to use debentures for sustainable energy projects, and even to restart the market for bills of exchange. And, behind many of these initiatives, there are equally-innovative data collection tools that could quicken the credit process.

The conduits identified by the CSFI offer new, more flexible, and bespoke options that could mature into important alternatives to the traditional bank lending channel. Examples include debt-funding initiatives such as *Funding Circle* and *Thincats*; and equity-based alternatives such as *Crowdcube* and *Seedrs*. So-called ‘business angel’ initiatives include *Angels in the City* and *Ideas Factory*. Niche working-capital providers include *Marketinvoice*, *Manufacturers’ Capital*, *Orbian*, and *Demica*.

Overall, such ventures currently account for a small share of SME lending. No doubt, some of them will fail; but assuming that others survive and that they can be appropriately drawn into the regulatory net so that both investors and consumers are adequately protected, their influence will expand.

Annex 2: Infrastructure

A key role in any economy

A country's infrastructure is central to the functioning of its economy and to the welfare and development of its population. A broad definition of infrastructure extends to both physical (tangible) and non-physical (non-tangible) assets. Infrastructure can be thought of as the economic arteries and veins that enable people, capital, manufactured goods, commodities, water, energy, information, and more to move efficiently both within, and into and out of, the country. It includes the assets that underpin the economy's networks for transport; energy generation, distribution, and storage; communications; waste management; and water distribution and treatment.

Arguably, the most important elements extend to major roads, railways, airports, seaports, power lines, pipes and wires; electricity and gas; electronic communications, including broadband; water, sewerage and waste; flood defences; and intellectual capital. Most economists would also include 'social infrastructure' in the list, namely housing; hospitals; schools; universities; the legal system; government research institutions, and more.

From the institutional investor's point of view, there is little doubt that 'social infrastructure' should indeed be included in the definition. For such investors it is the associated long-dated cash flows that matter most, and 'social infrastructure' is just as capable of delivering these.

Infrastructure facilitates the delivery of goods and services that promote prosperity and contribute to quality of life; and it adds to the productive capacity of the economy. But empirical analysis suggests that it can also have effects on economic growth over and above those arising from simply adding to the capital stock. It also facilitates:

- Trade and the division of labour;
- Competition in markets;
- More efficient allocation of activity across regions;
- The diffusion of technology;
- Better organisational practices; and
- Access to new resources, both physical and human.

And infrastructure can also help to address the burgeoning global challenges of climate change, and encourage the 'greening' of the economy.

Infrastructure's financial characteristics

Infrastructure projects have a number of distinct characteristics. In particular, such projects:

- Produce cash flows that are determined by a regulatory regime set by government, or sponsored by a government or quasi-governmental body;
- Frequently are monopolistic or quasi-monopolistic;
- Require a large initial capital outlay;
- Have to satisfy the double imperative of ensuring financial sustainability and meeting user needs and social objectives;
- Involve contracts that are complex and of long duration;
- May even offer extended duration, stretching to 25 or 30 years, and in some cases even longer; and
- May provide inflation protection, in that the associated revenues are often combined with an inflation adjustment mechanism, whether via regulated income clauses, guaranteed yields, or other contractual guarantees.

Given these characteristics, two broad options are available to investors: debt (bonds) and equity (which in turn can be subdivided into geared pooled investor funds and non-geared direct investor funds).

Most infrastructure projects can be highly geared, and subdivided into 85-90% debt and 10-15% equity financing, depending on the project.

Debt. The debt financing is generally:

- Investment grade;
- Secured on physical assets or contracts;

- Issued by states, municipalities, utility companies, other large corporates, or Special Purpose Vehicles (SPVs); and
- Offers returns that may be linked to inflation and/or to project revenue.

Where individual projects are of sufficient scale to warrant public-debt financing a public-listed bond can be issued. Often this will be the cheapest form of debt financing, because investors put a value on the liquidity of a public bond that can be traded in the secondary market. The bonds are usually issued only once the initial construction stages have been completed and the associated risks have declined.

For smaller projects, private debt deals can be arranged. These can take the form of loans, and be sold to individual debt investors or clubs of debt investors.

Equity. Listed shares can be bought in large companies, and in particular those in the larger utility, energy, and transport sectors. Investor funds can be bought from managers with in-house expertise who can finance individual projects and who may hold the equity of smaller infrastructure projects that are not listed. Such assets yield:

- Stable and predictable long term cash flows that can support significant leverage; and
- Returns that are predictable, inelastic, and relatively uncorrelated with the business cycle.

Macro constraints on private financing

Since the Global Financial Crisis (GFC), the options available for the private financing of infrastructure have been severely curtailed, in large part the result of the pressures exerted on the banks.

The banks' difficulties have also affected Public Private Partnerships (PPPs), whereby project risks are shared across the private and public sectors. The government (often local or municipal) typically specifies the quantity and quality of the service it requires from the private partners, which are coalesced into a consortium, and which capitalises an SPV with varying recourse to debt and equity. The consortium is tasked with the design, construction, financing, operation, and management of the infrastructure asset, as well as delivery of the resulting service, whether to the government or to the public. The group may benefit from some equity contribution from the public sector sponsor, but it will also receive either a stream of payments from the government or user charges levied on end users, or a combination of both.

With the banks under duress, and much more cautious in their approach, there is a need for new and alternative sources of funding for infrastructure, such as pension and insurance companies.

Pension and insurance company assets are equivalent to more than 90% of 2012 GDP across the EU, and around 80% of GDP in the euro area. Relative to own-country GDP, the largest pools are in Luxembourg (309%), the Netherlands (242%), and Ireland, Denmark, and the UK (each around 180%). Pension fund and insurer assets in Southern European countries are generally much smaller than in the rest of Europe.

Currently, in most countries, pension and insurance funds typically carry some exposure to the infrastructure sector. This is predominantly indirect, via equity and corporate debt issued by the infrastructure project or company, and traded in listed markets. Some investments are made through financing vehicles such as SPVs or private equity funds but, in the main, and certainly beyond the largest pension funds, direct investment asset allocations to infrastructure remain limited.

The risks associated with the illiquidity of the equity-financed portion of infrastructure projects are one of the major constraints on pension and insurance fund involvement, especially for the smaller entities. But on the other hand, the more secure and predictable stream of income flows that infrastructure assets can provide, via fixed-income instruments and other conduits, is attractive in terms of liability matching. And this is particularly so given the consequences of resort over recent years to unconventional monetary policy, which has depressed bond yields and thereby widened pension fund deficits.

A number of important hurdles need to be overcome before more of these entities can consider taking a significant direct exposure to infrastructure investment. In order of importance these are: investment opportunities; investor capability; and the conditions for investment.

Investment opportunities

Limitations on opportunities at present include:

- The small number, and sporadic nature, of projects – including a lack of privatisation programmes;
- A shortage of political commitment to particular projects over the long term;
- Regulatory instability;

-
- Fragmentation of the market across different and uncoordinated levels of government;
 - High initial bidding costs – partly due the absence of a clear, consistent, simple bidding process; and
 - Other risks – including constructional, operational, business, gearing, legal, and environmental.

Investor capability

A number of other limitations also inhibit investors. These include:

- Lack of investor expertise in infrastructure; and consequent dependency on the due diligence of third parties, such as private equity funds, that may prove difficult to oversee;
- Size of investment fund – smaller pension funds face particular issues;
- Regulatory barriers – e.g. moves to risk-based solvency standards; and
- A culture of investor short-termism.

Conditions for investment

Furthermore, understanding of infrastructure investment is also a limitation. Misperceptions may derive from:

- Failure to appreciate the value of infrastructure – deriving from novelty and general unfamiliarity;
- Lack of transparency in a sector and/or a scarcity of data needed to assess risk and return profiles of projects, or separate project tranches; and
- Financial processes that are run by banks and geared to banks' products.

Particular problems faced by small pension funds and insurance companies

Some European pension and insurance industries are quite fragmented. Smaller entities face some especially-thorny issues in investing in infrastructure:

- They lack the necessary expertise, and often depend on third-party advice;
- They are reluctant to invest in illiquid assets, especially when they can be confronted by short-termism and the possibility of buy-out, with all its uncertainties over price, within a few years;
- The focus of private equity funds on a 7-year investment horizon and the growth- or return-seeking parts of investment portfolios are ill suited to smaller pension funds seeking secure long-dated credit-like assets; while
- Private equity governance and fee structures such as the 2+20 model are a further disincentive. However, fees have fallen since the GFC.

The recently-created UK Pensions Investment Platform (PIP) is intended to overcome at least some of these issues. Established by the National Association of Pension Funds (NAPF), which represents some 1,200 entities, with assets of £800bn, and the Pension Protection Fund (PPF), it is designed to be an aggregated infrastructure fund “for pension funds, managed by pension funds”.

The UK PIP was modelled on Australia's Industry Funds Management (IFM). It aims to pool pension assets and invest them directly in infrastructure projects, with a view to generating long-dated, low-risk, inflation-linked returns of the order of inflation plus 2-5% on relatively low leverage. The complexities of coordinating the views of such a large number of players with limited experience and resources should not be underestimated, however, especially when decision times can be a key factor. A target size of £20bn in ten years has been set, and can already boast 10 pension funds as founding members. However, thus far it has raised just £2bn. A similar idea has been proposed in France by Amafi and others, and is now being considered by the French government. The main difference between these initiatives is the greater emphasis placed on direct government involvement in the French example.

Policy responses

Enhancing investment in infrastructure will require a range of integrated policy responses. For the largest, most complex, projects, there is a need for a (government) sponsor, even though the bulk of the financing may come ultimately from existing public markets. Government cannot avoid planning, delivering, and to some extent partially financing, such projects, at least in their early stages.

For smaller projects too, such as individual hospitals, schools, or renewable energy plants the government is also important, albeit for somewhat different reasons. Historically, equity for a small infrastructure project, such as a PPP

deal, came from the sponsor and potentially the constructor, with the debt component supplied largely by the banks. But with the banks now deleveraging, this financing component is in short supply, even though the potential equity providers are still present. Hence to encourage equity funds and capital market conduits in general there is a burgeoning need for Government to involve itself in:

- Developing appropriate new legal frameworks for such projects;
- Managing the procurement process so as to ensure that the debt is delivered to (non-bank) investors in a suitable form, and with feasible timelines in respect of pricing and delivery of funds;
- Developing risk transfer systems, such as guarantees and stand-by lines of credit; and
- Incorporating into the overall financing assessment the setting of tariffs and user charges for which it is responsible, whether directly or indirectly.

In terms of governance, a stable and accessible long term programme of infrastructure investment implies the need for:

- Co-ordination across different departments and levels of government;
- Avoidance of frequent policy reversal and prevarication over key decisions;
- Regulatory stability (especially in sectors such as energy and utilities); dovetailed with
- Ability of construction firms to supply the necessary resources to do the job.

A vibrant PPP sector could help in the latter regard.

To facilitate all this, infrastructure would need to be elevated in the political debate, and there is also much to be said for cross-party buy-in. Infrastructure investment needs to be more disengaged from the electoral cycle, and with greater acceptance of an unavoidable, and sometimes large, role for government, especially in the initial stages of projects when risks are highest.

Investor responses

The capability of investors needs to improve too. Here also there is a role for government, in creating the necessary preconditions for the development of the institutional sector's capabilities. In practice this includes:

- Developing a regulatory, supervisory, and tax framework that allows or encourages private sector entities to acquire necessary expertise and professionalism;
- Improving pension fund governance through better pension trustee composition; and
- Fostering resource-pooling and collaborative strategies through the consolidation of smaller pension funds and the merging of fund resources to create entities of sufficient scale to be able to offer more effective risk management systems and implement a broader investment strategy.

Further broader initiatives that would bolster investor capability include:

- Developing the regulatory framework to reduce the focus on short-term performance;
- Encouraging transparency in business models; and
- Reforming funding regulations for defined benefit schemes.

Such measures would in total help to improve the alignment of interests between the pension funds and the infrastructure industry, particularly through the provision of a prudential framework more attuned to long-term investment.

Conditions for investment could be further enhanced by:

- Specifying common definitions for types of infrastructure project;
- Encouraging the independent and objective collection of hitherto scarce, largely proprietary, data;
- Developing common performance metrics for risk and return, such as specified industry benchmarks.

Universities and the OECD could be tapped for expertise on infrastructure. And the creation of an independent association of infrastructure investors to bring forward institutional investors' interests, together with a formal platform for dialogue between them, the finance industry, and government could also be beneficial.

The way ahead – three ideas

The manifest importance of infrastructure spending to Europe's economies, both as regards immediate prospects and long-term development, together with the equally obvious shortcomings in the way that this core aspect of investment is planned, funded, and regulated, lead to the question of what is the best way forward to address these issues.

Arguably, even a piecemeal approach, embracing some of the suggestions in the previous section, would be better than doing nothing. But much better would be a comprehensive long term strategy that put in place an improved institutional framework for the future delivery of infrastructure, and which helped to create a stable and more sympathetic investment environment.

Accordingly, three proposals are offered below. Each differs in degree of breadth and concentration. None is mutually exclusive. All could in principle be capable of delivering a greater degree of coherence to the solution of Europe's infrastructure investment conundrum.

'Invest and sell' asset transfers

This is a demand-side proposal, which would provide a public-expenditure-related stimulus at a time, such as the present, when there is significant excess capacity in most of Europe's economies; the monetary policy stance is easy; yet public finances are under duress and there is sensitivity about any initiative that might frighten the markets or the rating agencies. It also offers up new opportunities for investment by the private sector in the latter stages of infrastructure projects, when the related cash flows are more stable and dependable.

The proposal is that the government should borrow an additional sum, say 1% to 2% of GDP, to directly finance investment expenditure in projects that stand to produce marketable output, with the stated intention of subsequently selling these assets, either partially or wholly, when times are better. Potential examples include railway lines, sea ports, airports, bridges, toll roads, perhaps even social housing. The expectation, based on evidence such as France's network of high speed trains (TGV), is that such schemes would, in due course, induce the private sector to spend more.

To deal with potential market and/or rating agency concern at near-term increases in public borrowing, it is suggested that national accounts be re-presented such that they make clear the fundamental distinction between public debt that is backed by saleable assets, and general public debt that is not. This makes explicit the idea that not all debt is created equal; that not all debt is quite the dead weight on the economy that it is sometimes presented as being.

Given that it takes considerable time for a major infrastructure project to reach its high-expenditure phase, it is necessary that planning – including public enquiries, the design of contracts, land procurement, and so on – be undertaken well in advance. This would mean that one or more projects could, when necessary, be launched at relatively short notice, and even subsequently be switched on and off in accordance with the balance of aggregate supply and demand, both regionally and across the economy as a whole.

Invigorating PPPs

For PPPs, the vexed issue of bank financing is unlikely to disappear until banking sector recapitalisation and reform is complete. Beyond fixing the banks, however, more could be done to reanimate PPPs, not least by recalibrating them towards investments in energy, broadband, and transportation. Other potential initiatives include: governments taking a minority stake-holding in project firms and then siphoning off some of the profits; efforts to accelerate delivery by setting a limit on the tendering phase for projects, and moving towards centralised government departmental funding; efforts to bring greater transparency and accountability to PPP financing; and the publication of private sector equity returns.

Perhaps the key consideration with PPPs, however, is the need for governments to be willing to shoulder more equity risk, often by the provision of guarantees, in the early phase of a project's lifespan.

A National Investment Bank

By far the most comprehensive, as well as potentially controversial, option would be the creation of a series of National Investment Banks (NIBs) or funds. This would in essence represent the creation of a single vehicle to address the majority of the government policy and other issues raised in previous sections.

Moreover, a NIB could in principal be used to offset some of the short-termism of industry and politicians, encourage the rebalancing of the European economy via a focus on competitiveness, help to foster green investment, help SMEs,

and be an important mechanism to tap pension and insurance funding. What it would not do is swell the public sector deficit unsustainably.

A NIB could in essence operate in two ways:

- First, it would provide a partial or full guarantee to support the initial equity cost of project finance where the private sector is reluctant to invest, or a partial or full guarantee on the repayment of bonds issued directly by investment projects themselves. In this way it would assume some or all of the risks of projects, especially in their early stages, and reduce funding costs.
- Second, it would lend to finance investment projects and raise funds for lending from the capital markets by issuing ‘national investment bonds’, which could be expected to carry a modest premium over the interest rate on government securities. These would be attractive fixed income investment instruments for pension schemes, both large and small, and offer a set of benchmark interest rates for infrastructure.

However, a NIB would also set out to deliver long-term policy stability, and ensure that the supply of credit would dovetail with the pipeline of projects. It would build confidence in individual projects, and it would act as a focal point for project preparation and management. It could help to develop financial (e.g. risk management) and other expertise pertinent to the sector; provide a repository of objective information and quality data; and aim at simplifying planning procedures.

Naturally the establishment of a NIB would not be without risks, and its interventionist ethos could prove politically concerning. It would be important that it not merely become an unwieldy and inefficient quango, at risk of being captured by narrow political interests, or indeed ending up crowding out private sector financing, if not cannibalising the entire market for infrastructure. Safeguards would have to be put in place.

A NIB would need to be operationally independent of government, perhaps in the manner of a central bank, yet have a strategic link to government set in published mandates in order to perform something of a countercyclical macro stabilisation policy role.

It would need a high credit rating, and therefore a quality loan portfolio, and be run on the basis of sound banking principles. This in turn means that the chief executive or other senior officials would need to be government-appointed, and accountable to Parliament.

There would need to be a conservative ratio of lending to funding, and no explicit government guarantee on loans. The NIB would also have to be prohibited from undertaking any form of current spending.

In short, the NIB’s activities would need to be confined to the financing of investment in productive assets that generate a long term return. Its initial capital could be raised either by government bonds to be bought by the market or the central bank, or perhaps from the proceeds of privatisation. It could also usefully aim at making a small profit that could be used to accumulate reserves.

Annex 3: Collateral

Collateral offers protection against the credit exposures associated with secured lending, repurchase agreements ('repos'), and derivatives transactions. Depending on the nature and risk of the particular transaction being covered, collateral can take many forms, ranging from cash and liquid government securities to corporate bonds, equities, loans originated by banks (mortgages in particular), and even gold. However, government bonds are the most valued and important source of collateral.

Collateral has become central to the functioning of modern financial systems. It is a key component in the increasingly-complex networks linking the formal banking sector (not least the investment banks), the shadow banking sector, and asset managers.

Hedge funds, pension funds, insurance companies, and the like provide source collateral (collateral 'mines') for the shadow banking system, with the formal banking sector obtaining funding through the re-use of the pledged collateral. Securities lending and repo markets lie at the core of collateral-based systems; and the asset-management complex has increasingly displaced households as key creditors to banks.

The velocity of collateral, re-hypothecation, and collateral re-use

Re-hypothecation refers to the right of a market participant to re-pledge, reassign, or invest the collateral that it has received to secure a financial transaction.

In the US, re-hypothecation is capped at 140% of a client's debit balance. In the UK there is no limit on the amount of a client's assets that can be re-hypothecated, except if the client has negotiated an agreement that includes a limit or prohibition.

That said, 'haircuts' on collateral impose effective limits on its on-pledging, in the same way that a bank's reserve ratio constrains expansion of a bank's balance sheet. Haircuts are normally set by asset recipients, and are used to account for variations in the credit quality, volatility, and liquidity of pledged assets.

The most valuable collateral is that which is subject to limited default risk, low haircuts, and can be re-used time and again. The re-hypothecation of pledged collateral creates credit in a way that is analogous to the more traditional money-creation process based on bank reserves.

The 'velocity of collateral' in turn is akin to the 'velocity of circulation of money'. Collateral reuse is a function of confidence, which in turn will be influenced by the dynamics of the business cycle. As such, there is an element of procyclicality in re-hypothecation.

More extended and more complex chains of intermediation tend to develop in cyclical upswings as sentiment becomes more positive, risk appetite increases, and negotiated haircuts are scaled back. This can encourage the build-up of excessive leverage, which will ultimately undermine the stability and resilience of the financial system.

On the other hand, however, in a cyclical downswing, perceptions of what constitutes good quality collateral will become more pessimistic in the face of credit-rating downgrades and increases in risk aversion and volatility. This can be just as damaging. It will impair the functioning of key secured funding markets, and reduce the effectiveness of monetary policy transmission, especially in more market-based financial systems.

Collateral suppliers and users

The key providers of primary or source collateral are hedge funds and securities lenders such as the custodians acting on behalf of pension funds and insurers. The collateral pledged is typically received by the central collateral desk of the fourteen large global dealer-banks. They, in turn, use it for themselves or make it available for others to provide funding, settle trades with other dealers, hedge counterparty risks on OTC derivatives, and much more besides. The central collateral desk of these global dealer banks is thus a vital node in these institutions' structure, linking everything from demand for funding and collateral to investment strategies and trading flows.

Collateral developments since the crisis

At the end of 2007, the largest banks globally received about \$10tr of pledged collateral. Primary source capital was about \$3.4tr (\$1.7tr each from hedge funds and securities lenders), implying a velocity of collateral of around three.

Since the Global Financial Crisis (GFC), however, global collateral flows are estimated to have fallen by around \$3-4tr, with the velocity of collateral dipping to around 2.2 at the end of 2012. Market tensions, risk aversion, and question marks over the health of bank balance sheets have all contributed to reduced onward-pledging of collateral. And with fewer trusted counterparties in evidence, this has led to stranded pools of liquidity, incomplete markets, shorter

collateral chains, idle collateral, missed trades, and deleveraging. This has had important consequences for the cost and availability of credit.

In the euro area, the decline in the velocity of collateral has coincided with a pronounced shift from unsecured to secured funding for banks, as well as the fragmentation of the money markets along national lines. There has also developed a wide dispersion in banks' access to funding, with banks in countries where sovereigns are under pressure facing major constraints in accessing both unsecured and secured funding.

The shift from unsecured towards secured funding has caused European banks increasingly to suffer from asset encumbrance, or the effective removal of assets from their balance sheets. Asset encumbrance ranges from [15-35%] of total bank assets in those countries that have endured prolonged sovereign and banking sector issues and across the sixty largest EU banks, the median encumbrance ratio is around 20%. Asset encumbrance remains particularly elevated where there is continuing heavy reliance on official liquidity facilities, due to the relatively strict "over-collateralisation" requirements associated with them.

However, historical developments also play a role in relatively high levels of encumbrance in Europe. In countries including Denmark, Germany, and Spain there is a history of legislation supporting mortgage lending through covered bond issuance. In the US, mortgage lending is primarily based on RMBS issuance, which relies on the originate-to-distribute model.

A 'structural' shortage of good quality collateral

The demand for good-quality collateral is rising much faster than supply, producing a chronic imbalance, not least in Europe. In southern Europe, the shortage of good quality collateral is likely to be particularly acute.

A number of structural factors are important.

First, the number of "Triple-A" rated sovereigns is now, according to S&P, reduced to just a handful of Northern European countries, plus Australia, Canada, Hong Kong, and Singapore. This group includes a number of very small economies (Luxembourg, Lichtenstein) and/or economies that issue scarcely any debt. Moreover, the tendency towards downgrades has extended to sovereign credits outside the top tier.

Second, the annual issuance of AAA-rated securitisations has fallen considerably, both in Europe and in the US. Perhaps the only source of good news of late for the supply of high-quality financial assets is that AAA-rated corporate bond issuance has been on the rise.

Third, new regulations are also likely to reduce the effective supply of collateral. The Financial Stability Board is considering changing the rules on securities lending and repo activities, as well as the reuse of collateral posted as part of derivatives transactions.³ Re-hypothecation will be impacted by the increased resort to segregated customer accounts to prevent money being used for the wrong purpose, and to allow easy identification of funds in the event that anything untoward happens to a financial entity. And the introduction of a Financial Transaction Tax (FTT) could further exacerbate collateral issues.

It is not just the supply of high quality assets that is the problem, however. There is also demand to consider.

Emerging market central banks and sovereign wealth funds have, since the Asian Crisis of the late 1990s, been accumulating reserve assets at a rapid rate, while increasingly diversifying into less familiar markets in the search for safe havens.

Meanwhile, new regulations are encouraging financial institutions to improve their capital and liquidity bases, increasing the requirements for high-quality assets. Over the coming five years or so, the demand for high-quality collateral related to new regulations may well increase by €1.5-3tr globally, a large part of which will emanate from Europe. This will derive in particular from the move to central counterparty clearing for OTC derivatives (€80-550bn); the necessity to collateralise non-centrally-cleared transactions (€700bn); and the Basel III Liquidity Coverage Ratio (€0.9-1.8tr).⁴

Finally, the pool of global savings continues to expand, and with it the demand for recognised stores of value. This is especially the case in Asia, where it has been expanding at about \$10tr per year.

Solutions

There are a number of things that can be done to alleviate collateral constraints. These include:

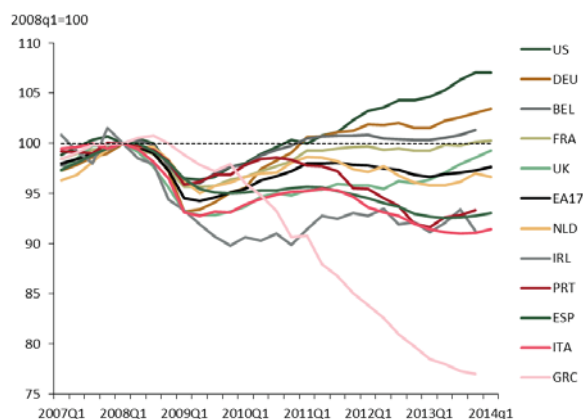
- Greater fiscal continence in those economies that have been the focus of the recent sovereign crises.
- Eschewing unduly tight fiscal stances in some of the stronger OECD countries.
- Developing a euro T-bill market akin to the US market.

-
- Encouraging more investment-grade corporate bond issuance.
 - Issuing more European project bonds.
 - Reviving and developing investment-grade securitisation.
 - Assisting collateral custodians/depositories to connect with the central security depositories (CSDs) and encourage them to release dormant collateral from 'silos'. E.g. the key hubs for euro collateral such as Euroclear.
 - Developing the financial sectors of high-saving economics, in Asia in particular.

Annex 4: Charts

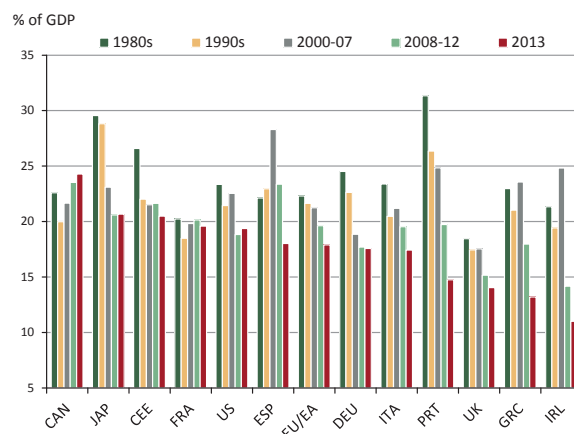
Picture book: Background

Real GDP levels , 2008q1=100



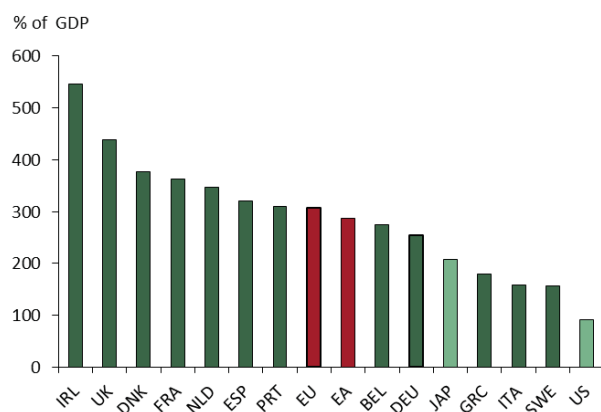
Source: Eurostat and Consensus Economics

Investment, public and private



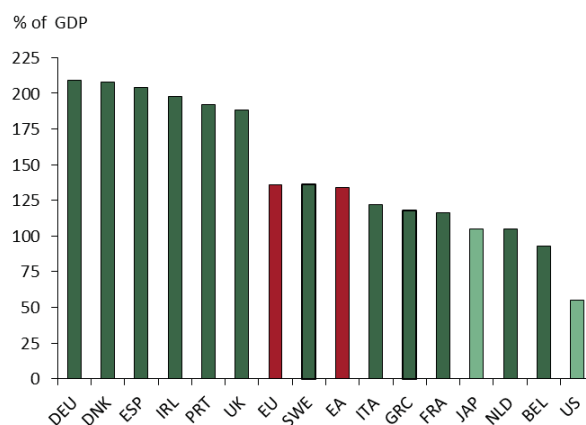
Source: IMF WEO 2013

Bank assets (IMF definition)



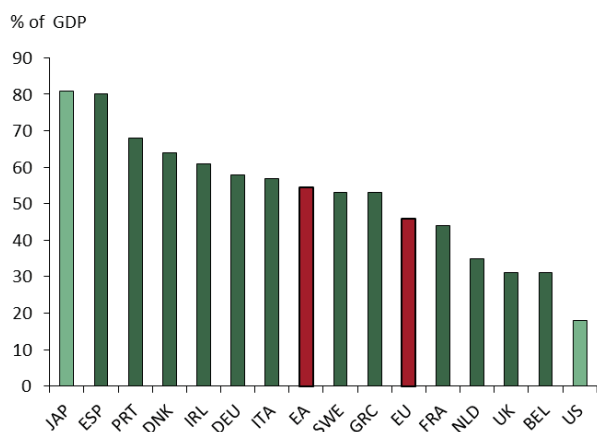
Source: IMF GFSR 2014
Note: relative to 2012 GDP.

Bank credit to corporate sector



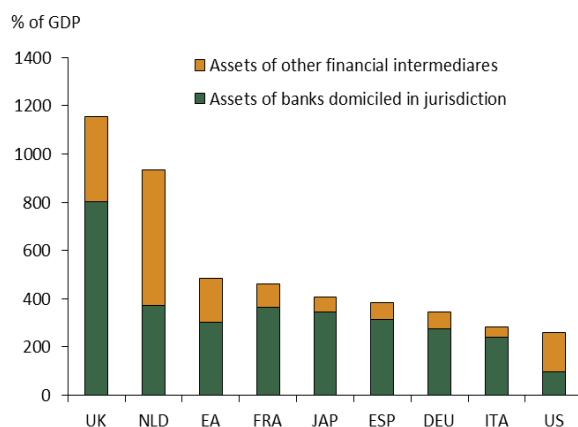
Source: CPB (2013)
Note: relative to 2011 GDP.

Bank credit to non-financial corporate sector



Source: CPB (2013)

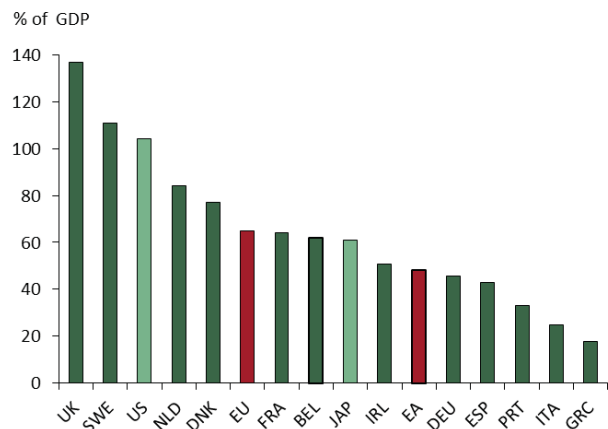
Financial intermediary assets, banks and non-banks (FSB definitions)



Source: FSB (2013)

Picture Book: Capital markets and long-term investors

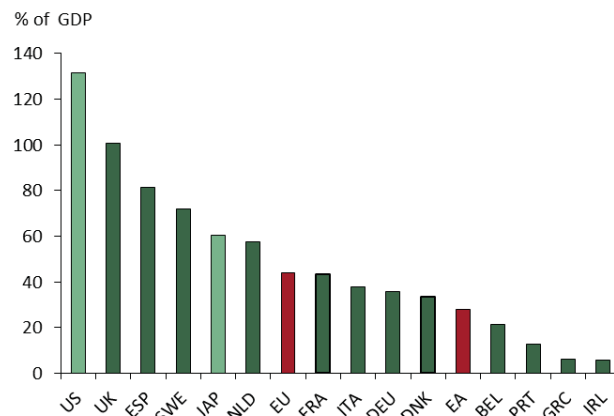
Stock market capitalisation



Source: IMF GFSR 2014

Note: relative to 2012 GDP.

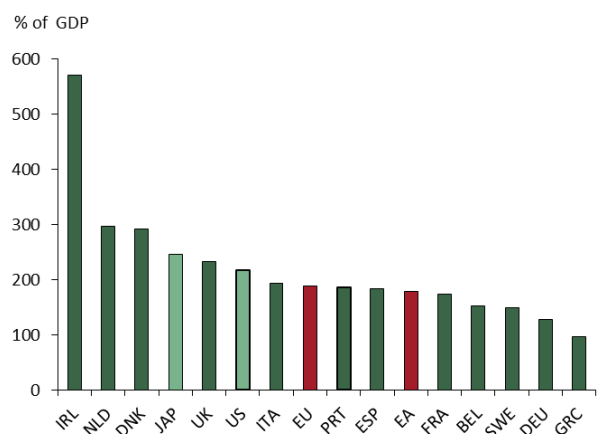
Stocks traded



Source: World Bank

Note: relative to 2012 GDP.

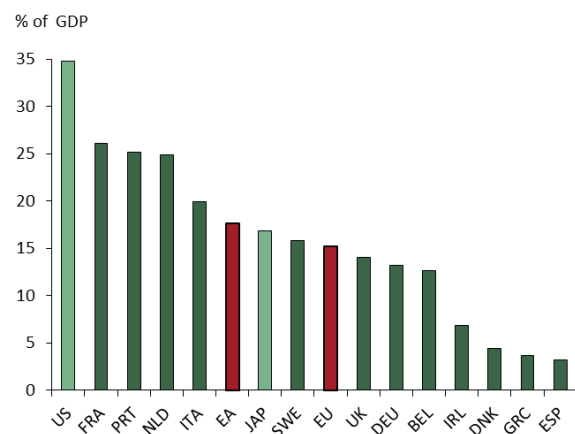
All public/private debt securities



Source: IMF GFSR 2014

Note: relative to 2012 GDP.

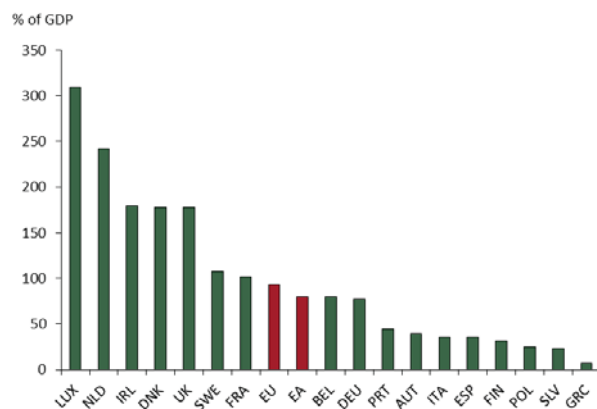
Non-financial corporate bond market



Source: CPB (2013)

Note: relative to 2011 GDP.

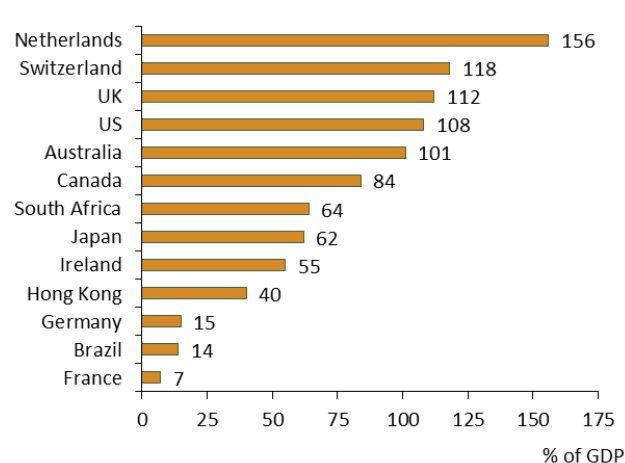
Pension fund and insurer assets



Source: Eurostat

Note: relative to 2012 GDP.

Pension fund assets

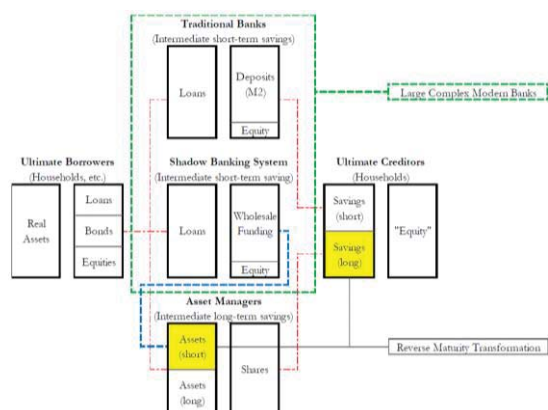


Source: Pension Insurance Corporation and Llewellyn Consulting

Note: relative to 2012 GDP.

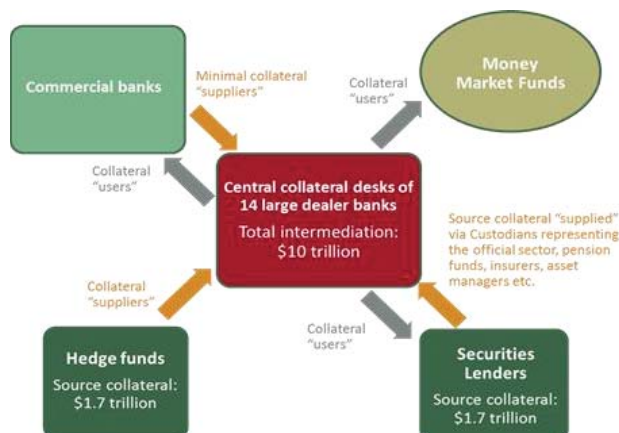
Picture book: Market-based credit intermediation

A simplified depiction of modern credit intermediation



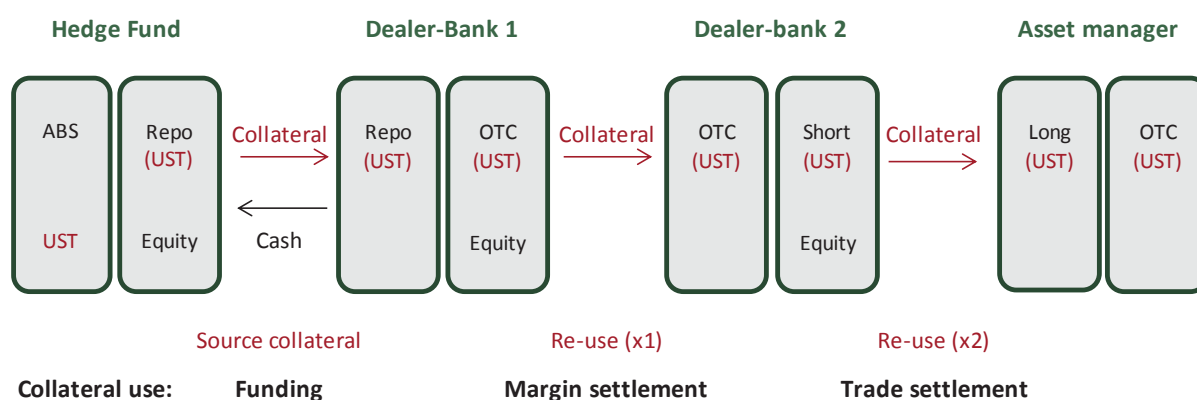
Source: afme (2012), from Pozsar and Singh (2011)

Collateral suppliers and users



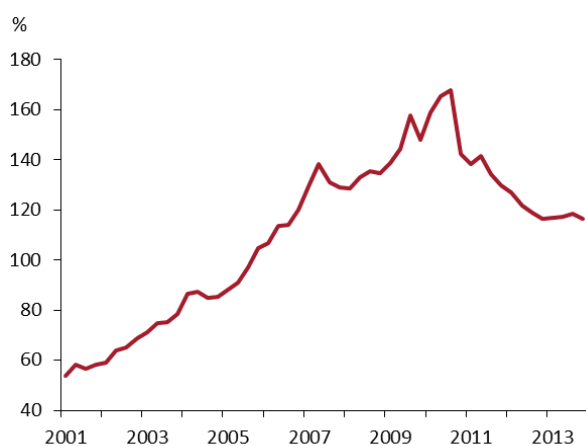
Source: Llewellyn Consulting based on Singh (2011)
Note: 2007.

An illustrative example of collateral re-use and dynamic chains of intermediation



Source: Llewellyn Consulting based on Pozsar and Singh (2011)

Non-bank loans to US corporations as a percentage of bank loans



Source: IMF GFSR 2014
Note: data on non-financial corporations.

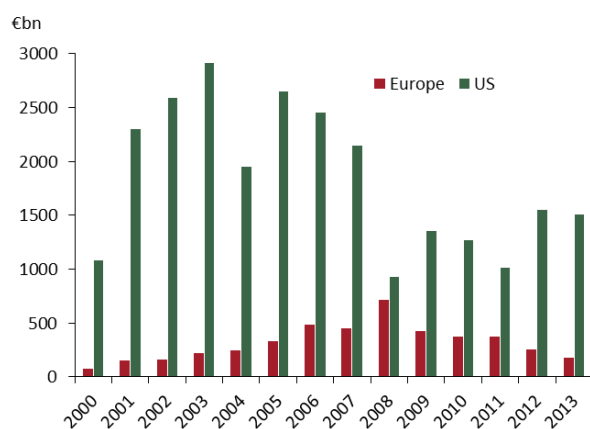
The changing collateral space, structural factors

Changes in supply		Changes in demand	
Broadening eligibility criteria for collateral (e.g. at CCPs)	↑	Basel III (e.g. the Liquidity Coverage Ratio)	↑
Long term sovereign financing needs	↑↓	Management of foreign exchange reserves (e.g. Asia)	↑
Limits on rehypothecation and reuse of collateral	↓	OTC derivatives reforms	↑
Long-term private financing needs	↑	Increase in market transparency	↑↓
Collateral transformation and other financial innovation	↑	Decline in unsecured money market activity	↑

Source: Llewellyn Consulting based on Cruz Lopez et al. (2013)

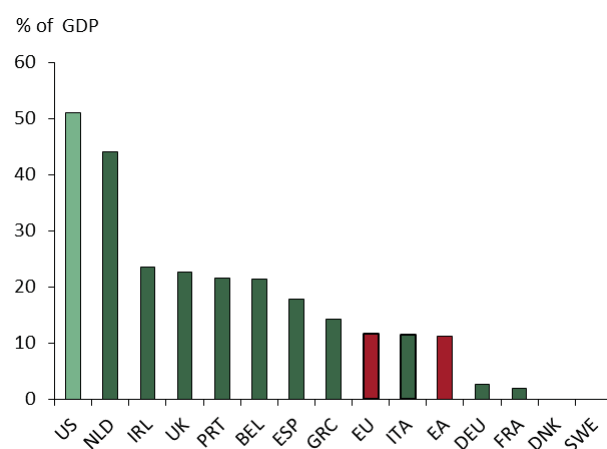
Picture book: Securitisation

Securitisation issuance, Europe and the US



Source: afme

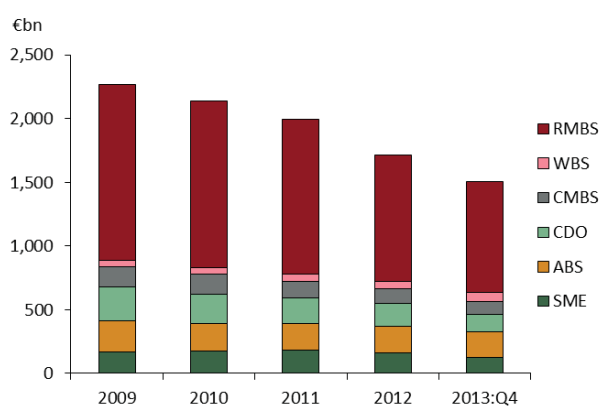
Securitisation outstanding, Q4 2013



Source: afme

Note: relative to 2012 GDP.

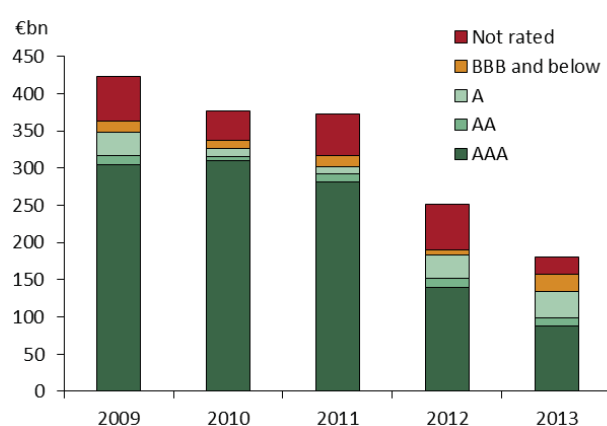
European securitisation outstanding by type of collateral



Source: afme

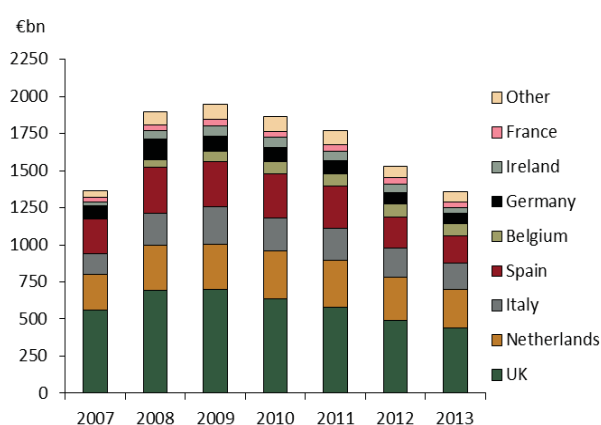
Note: WBS is whole business securitisation.

European securitisation issuance by rating



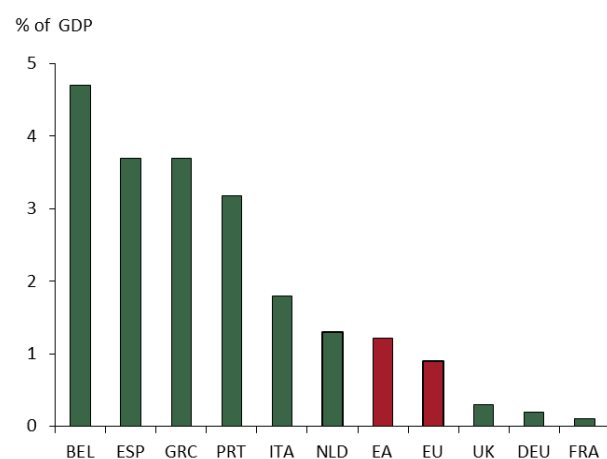
Source: afme

European securitisation outstanding by country



Source: afme

SME securitisation outstanding, Q4 2013

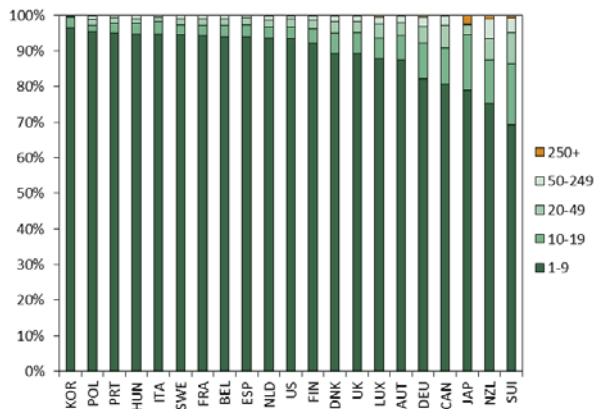


Source: afme

Note: relative to 2012 GDP.

Picture book: Small and medium-sized enterprises

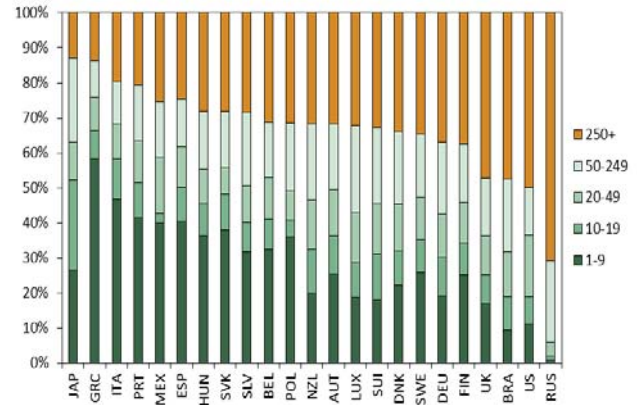
SMEs as a percentage of total enterprises



Source: OECD

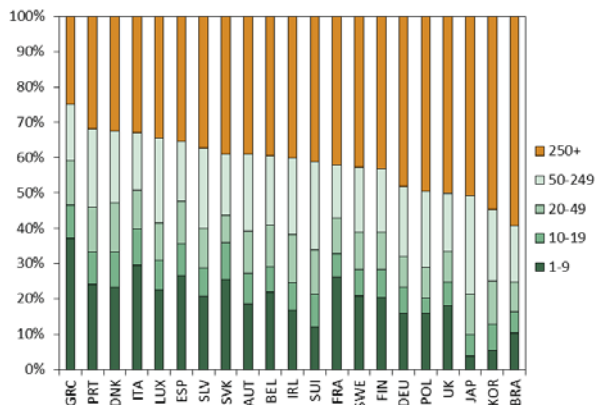
Note: Legend shows number of employees.

SMEs as percentage of total employment



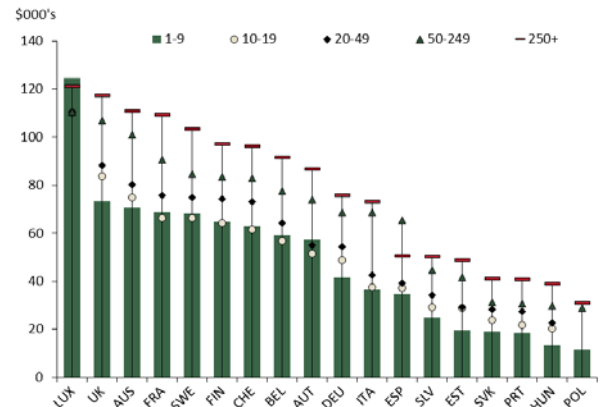
Source: OECD

SMEs as a percentage of total value added



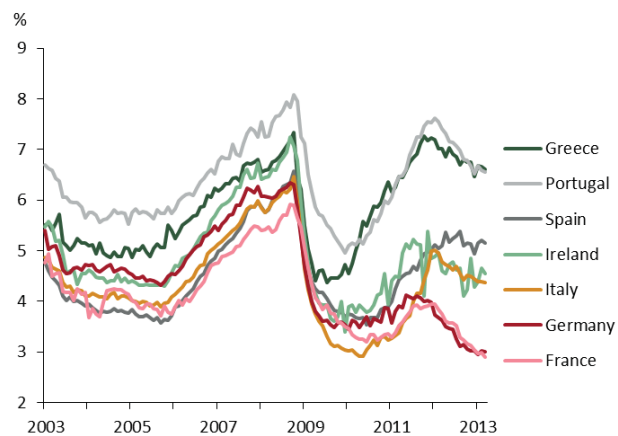
Source: OECD

Productivity by size of enterprise



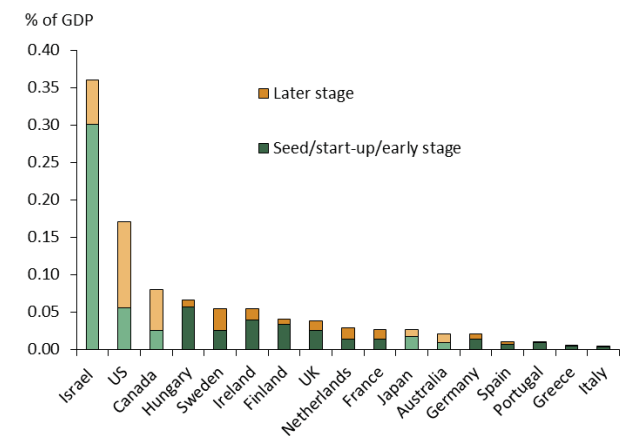
Source: OECD

Borrowing costs, loans up to €1m, selected euro area economies



Source: Eurostat

Venture capital investment

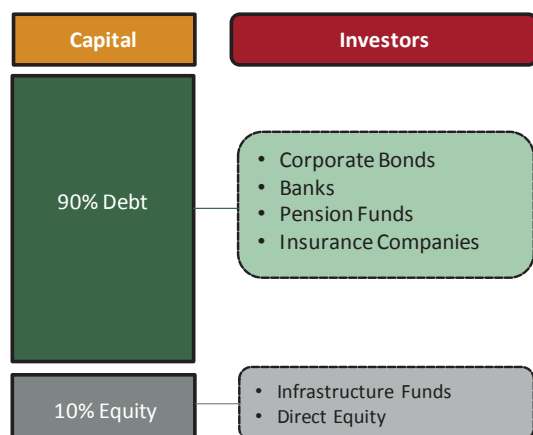


Source: OECD

Note: relative to 2012 GDP.

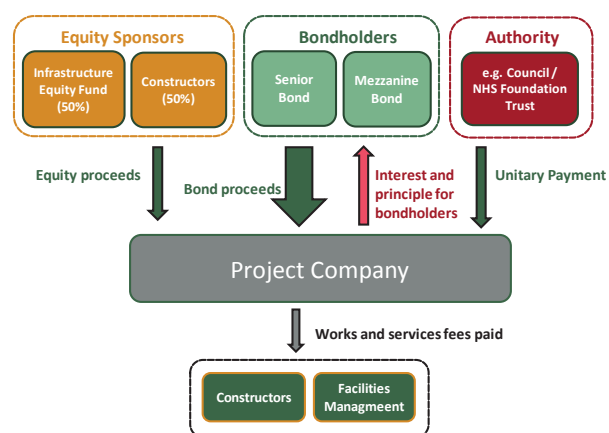
Picture book: Infrastructure

Typical infrastructure project capital and investor structure



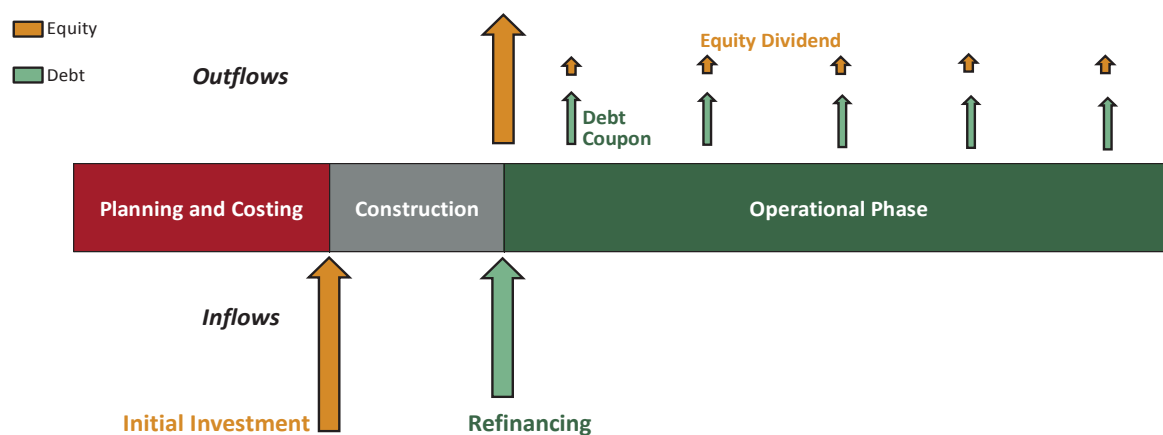
Source: Pension Insurance Corporation and Llewellyn Consulting

Roles of key participants in a typical infrastructure/PFI deal



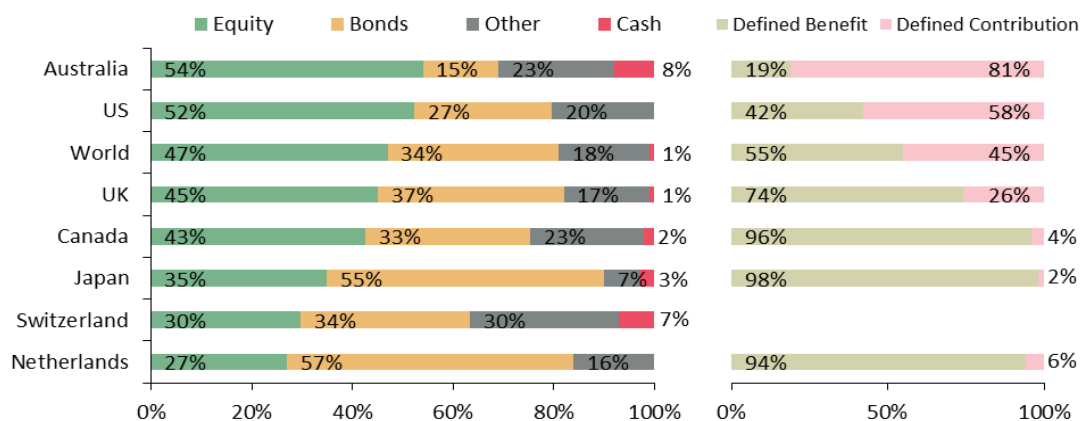
Source: Pension Insurance Corporation and Llewellyn Consulting

Infrastructure project timeline and investor cashflow



Source: Pension Insurance Corporation and Llewellyn Consulting

Pension fund asset allocation and defined benefit and defined contribution split



Source: Pension Insurance Corporation and Llewellyn Consulting, from Global Pension Assets Study 2013, Towers Watson

Note: DC assets in Switzerland are cash balances, and are excluded.

Endnotes

¹ Source: The Economist. <http://www.economist.com/blogs/schumpeter/2013/09/venture-capital-europe>

² Alternative to the more traditional unsecured lending by banks.

³ See FSB (2013). *Strengthening Oversight and Regulation of Shadow Banking*

⁴ Source: Cruz Lopez et al. (2013). *The Market for Collateral: The Potential Impact of Financial Regulation*.

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LlewellynConsulting
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Financing Europe's Investment and Economic Growth

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