

3.0. Introduction

Although estimates of the financing needs for the economic, social, and environmental dimensions of sustainable development are necessarily imprecise, studies conclude, without exception, that needs are extremely large. While the fulfilment of all ODA commitments remains critical, including the commitments by many developed countries to achieve the target of 0.7 per cent of GNP for ODA, it is clear that financing needs far outpace public sector resources.

Nonetheless, estimated financing needs still represent a relatively small portion of global savings. Annual global savings are estimated to be around \$17 trillion, as of 2012 (IMF, 2012a) with global financial assets at around \$218 trillion, as of 2011. Furthermore, despite turbulent markets following the world financial and economic crisis and deleveraging across the developed world, global financial assets have grown at least 10 per cent overall since the end of 2007 (McKinsey, 2012). Although reallocating the pool of global financial assets

Table 1
Sample expected risk and return characteristics in ‘gap’ sectors

	Social investments	Other Global
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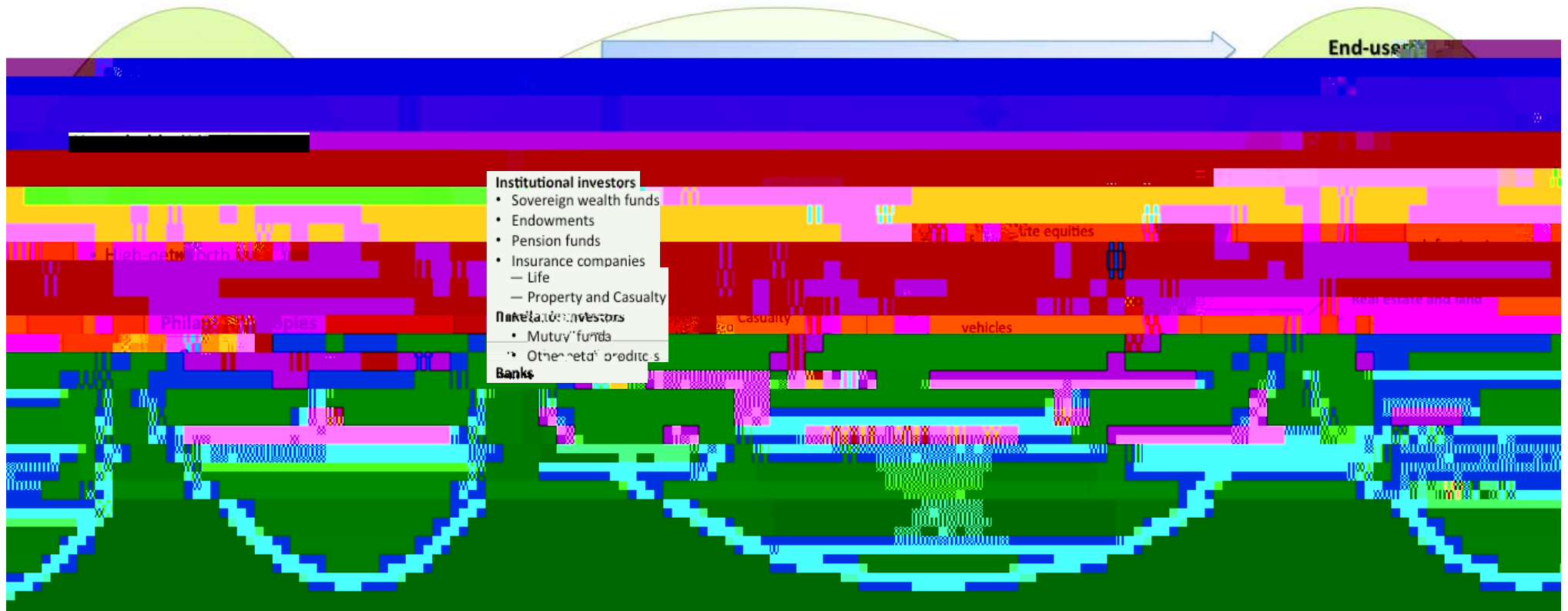
countries (World Bank, 2012). According to the World Bank, 108 economies implemented 201 regulatory reforms in 2011/12 making it easier to do business. Specific reforms depend on the local context and may take different shapes given the different levels of development and policy priorities. To facilitate access to credit and bank lending, basic regulatory foundations for property rights are important. These include a framework for business registration, a system that provides unique identification to companies, and a framework that permits registering and enforcing interests in collateral to secure credit. In addition, an effective bankruptcy regime can help ensure access to credit, as there is evidence that banks lend more to firms if strong debt resolution mechan

A mapping of financing and investment flows

The financial system is made of a complex web of sources of capital, creditors and investors (such as banks and institutional investors), financial sector instruments (such as bonds, equities, etc.), and end investments (such as real estate, infrastructure, etc.). Figure 1 maps out the flow of financing from sources of capital to end users.

Savings are either channeled through intermediaries, which can either be financial instruments (such as stocks or bonds) or intermediary institutions (such as banks or institutional investors), or invested directly in end-uses (such as foreign direct investment, (FDI) by transnational corporations (TNCs).) For clarity, institutional investors are divided into two categories. Both categories – ‘primary’ and ‘secondary’ – invest through capital market instruments and/or directly in end-uses. Primary institutional intermediaries (e.g. pension funds, sovereign wealth funds, and insurance companies) also invest through ‘secondary’ intermediaries (such as PE and hedge funds), whereas secondary intermediaries tend to be more specialized and rarely invest through other institutions.

Figure 1
 Schematic mapping on flows of financing from sources to investments of end-uses



Source: UNTT Working Group. Note: Arrows only represent investment flows from the pool of resources to the groups of intermediaries and end uses, not necessarily to specific institutions, instruments or end-uses. For the purpose of this paper, Governments are included as financiers of SWFs, which are considered to be an institutional investor, as well as providers of social capital. For simplicity, the full flow of finances between government and the economy is not shown.

Figure 2

billion. ‘Primary institutional investors’ have relatively long duration liabilities that are suitable for long-term investment (See Table 2).

A recent study (World Economic Forum, 2011) found that pension funds distribute around 40 per cent of their assets within 10 years, and 60 per cent within 20 years, so that, to match liabilities, they could hold 60 per cent of their assets in relatively long duration instruments. Similarly, life insurances need to distribute about 60 per cent of their assets to beneficiaries within 10 years, and 40 per cent within 20 years. Many SWFs are meant to preserve and transfer wealth to future generations, with few short-term liabilities.

Infrastructure investment should be particularly attractive to some primary investors, such as pension funds, because of its low risk and stable real return profile, which also matches pension funds’ ‘real’ liabilities (in that many funds pay pensioners a return over inflation). Sustainable or green investments, in theory, should be attractive to SWFs from an asset-liability perspective, since the risks associated with climate change can be seen as a potential liability to nation states (Bolton et al., 2010). On the other hand, other gap sectors, such as SMEs, which require significant resources in terms of credit analysis for many small firms, would be less attractive to these investors.

Despite long-term liabilities, most primary intermediaries have traditionally held relatively liquid portfolios. SWFs, many of which are funds of developing countries, hold the bulk of their funds in liquid financial assets in the mature economies, with less than 5 per cent in direct investments (UNCTAD, 2013). For the insurance sector, regulations such as Solvency II, which impose higher costs for riskier holdings based on maturity and credit rating, penalize both long-term investment and investment in riskier assets. The majority of insurance assets are liquid securities, with 70 per cent in bonds and 10 per cent in equities in the United States (NAIC, 2011), and 90 per cent in bonds, and 7% in equities in Europe (Deutsche Bank, 2011). Similarly, pension funds have traditionally held the majority of their assets in such liquid assets.

Table 2

Primary institutional intermediaries: Pension funds, Sovereign Wealth Funds (SWFs), Insurance companies, and Endowments

Institutions	Assets under management	Asset allocation	Liabilities
Sovereign Wealth Funds	\$5.2 trillion (TheCityUK, 2012)	<ul style="list-style-type: none"> • 70% liquid investments in developed countries • Direct 	

		investments 61%;	
Pension funds	\$33.9 trillion (TheCityUK, 2013)	<ul style="list-style-type: none"> • Traditionally dominated by liquid equities and debt instruments; • Increasing allocations to alternatives from 5% in 1995 to 19% in 7 largest pension markets (Towers Watson, 2013) and around 7% overall (Prosser, 2013). • 39% of alternative investment in real estate, 20% in infrastructure funds, 14% in hedge funds 	<ul style="list-style-type: none"> • 12-15 years for Defined-Benefits plans; • 40 per cent of their assets within 10 years, and 60 per cent within 20 years; (WEF, 2011)
Insurance companies	\$24.4 trillion (TheCityUK, 2012)	<ul style="list-style-type: none"> • Life companies more likely to invest in long term bonds; • Majority of assets in fixed income securities: U.S.: 70% bonds, 10% equities Europe: 90% bonds, 7% equities, 3% real estate (Deutsche Bank, 2011) 	<ul style="list-style-type: none"> • Average life insurance duration 7-15 years; • 60% of assets distribution within 10 years, 40% within 20 years (WEF, 2011)
Private Equity Funds	• \$1.3 trillion (E&Y, 2013)	• PE funds include: 3 %	r e a l

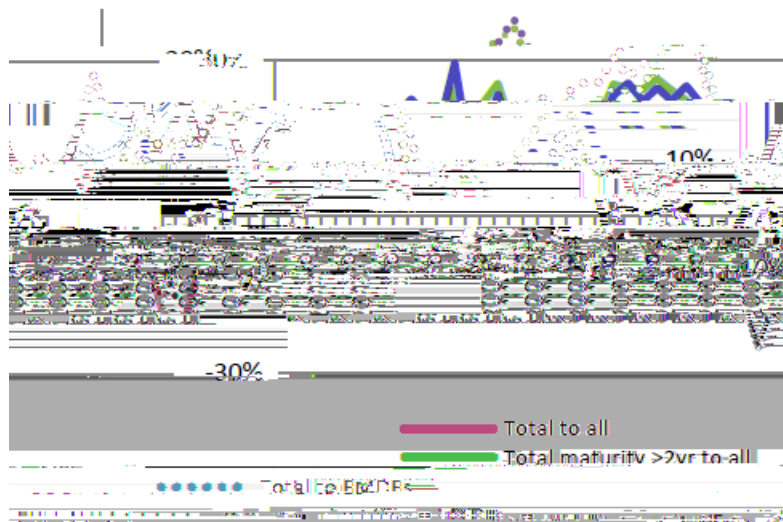
Hedge Funds	\$2.05 trillion (TheCityUK, 2012)	Varies by strategy	<ul style="list-style-type: none"> • Refinancing risk and mis-match risk due to high leverage; • Periodical withdrawals (quarterly, semi-annual, or annual)
Mutual Funds & Other Asset Managers	• \$27.86 trillion;	17% money market funds, 41% equity funds, 2% bond funds, 12% balanced/mixed funds and 4% unclassified (ICI, 2013)	<ul style="list-style-type: none"> • Open-ended mutual funds short-term liability; closed-end funds have much longer-term liability; • Institutional asset periodical redemption
Banking	• \$101.6 trillion (*1000 largest banks, TheCityUK, 2012)	Bank lending accounts 59% to 71% of external financing for long-term investment in major European economies; 75% of financing in China; 19% in U.S.	<ul style="list-style-type: none"> • Maturity mismatch; • Short-term deposits

Source: FfDO/UNDESA.

Since the financial crisis, however, an important trend has been a substantial increase in institutional investor allocation to less liquid alternative investments, particularly for pension funds, as discussed above. Allocations to alternative asset classes increased from around 5 per cent in 1995 to around 19 per cent in 2012 in the largest pension markets (Towers Watson, 2013) and around 7 per cent overall (Prosser, 2013), with this trend expected to continue. However, much of this increase is being outsourced to secondary financial intermediaries, such as private equity firms and hedge funds. Those intermediary funds, many of which were designed for high net worth individuals willing to take high risks, are not necessarily well aligned with either the interest of the investors, or with public goals. In particular, many have shorter-term liabilities and/or incorporate a greater degree of short-term incentives in compensation, neither of which is conducive to long-term sustainable investment.

Many hedge funds, in particular, are often highly levered, with quarterly, semi-annual, or annual redemptions, and are not well-suited for long-term investment.⁶ Private equity funds are longer-term, and typically feature a maturity of ten years with two optional one-year extensions. However, the private equity investment approach is generally built around an ‘exit strategy,’ based on buying risky assets, transforming them, and selling them to investors who might have been unwilling or unable to take the initial high risks. While this can play an important role in financing the economy, it is not clear that these are appropriate as long-term investment vehicles, especially given the relatively low risk tolerance of pension funds and other primary intermediaries. An example of this is found in infrastructure funds. While infrastructure in developed countries is generally more stable and less correlated with market indices than private equity, a recent study (Bitsch, 2010⁷) found that infrastructure *funds* are not more stable and are, in fact, correlated with market indices. This is likely partially attributable to the effect of the exit strategy, which links returns on the fund to the exit price, making the returns susceptible to market sentiment, though more research needs to be done.

Figure 3
Growth International Claims of All Banks
(Percentage change, year-on-year, 2001 Q1 – 2012 Q2)

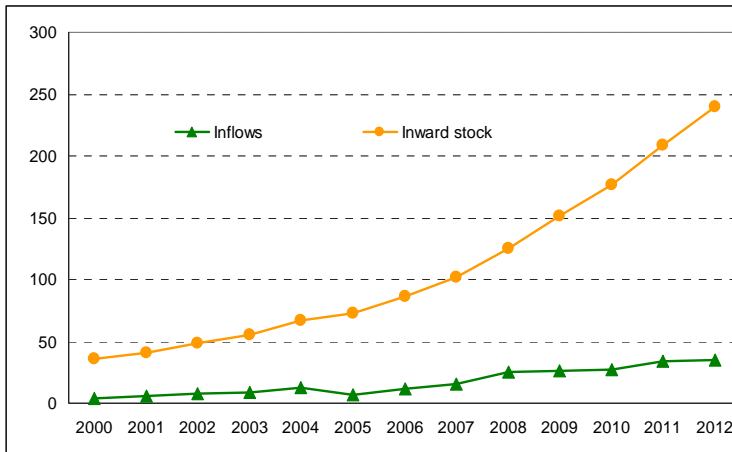


Source: BIS.

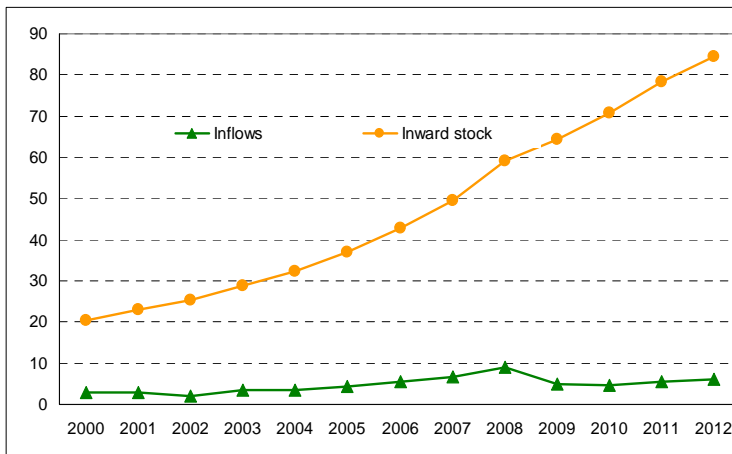
While Basel III is in the early stages of implementation, there have been some debates on the extent to which new requirements will raise funding costs and impact global growth. While there is no uniform view on the magnitude of the cost of implementing Basel III, a recent paper (Santos and Elliott, 2012) indicates that interest rates are estimated to increase by 8 basis points in Japan, 17 basis points in Europe, and 28 basis points in the United States, with only a small effect on economic growth.

However, there is also concern that the tighter capital and liquidity standards could further reduce the availability of long-term financing, as the higher relative risk weightings associated with long-term finance leads to a shift to lower cost lending as the tighter requirements are implemented. In other words, while risk weightings strengthen the capitalization of banks, there is a trade-off between access and safety and soundness, which

Yet, despite growing financing needs for sustainable development, long-term investment by international investors appears to have been declining. Globally, FDI decreased by around 18 per cent from 2011 to 2012, though the largest drop in inflows was to developed countries.



SIDS



There has recently been a renewed focus on corporate responsibility and sustainable development. Yet, despite some signif

anticipate and prevent potential negative impacts on the environment and society. UNEP FI has also developed a range of partnerships to facilitate research, awareness and capacity-building.

The Long-Term Investors Club (LTIC), founded in 2009, was the first initiative dedicated to long-term investing. The Club, which is composed of 19 large institutional investors, has a set of long-term investment principles aimed at promoting long-term finance, and collaborating with the main international financial, economical, and political governance bodies. They recognize the importance not only of long-term investment horizons, but of taking ESG concerns into account, based on the premise that “long-term investment must support social and environmental improvement.” In addition, these and other investor groups offer informal settings for investors to discuss investment possibilities. Several co-investments have been arranged at these meetings. For example, at recent meeting of an investment group, the Institutional Investors Roundtable, several pension funds agreed to a \$300 million co-investment in a clean energy company, thus by-passing ‘secondary’ intermediaries (Popper, 2013).

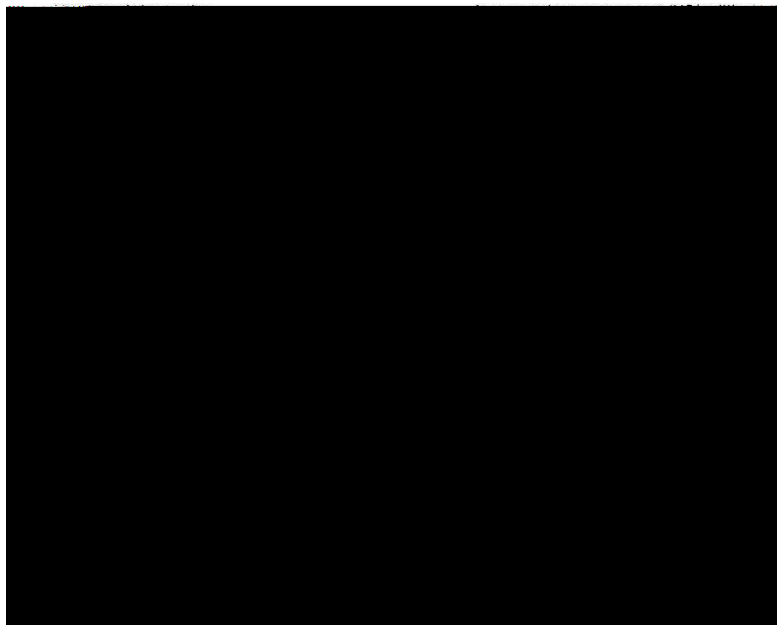
There have been two significant achievements in sustainable insurance in recent years. These include the launch in 2006 of the ClimateWise initiative encompassing nearly 40 insurance companies signing the ClimateWise Principles, focused on climate change risk. The Principles for Sustainable Insurance (PSI) Initiative, launched by UNEP FI in Rio in 2012, provide a global sustainability framework for the insurance industry. Currently, some 60 leading insurers, reinsurers and related institutions from around the world have adopted the Principles.

Sustainable investment initiatives include the Principles for Responsible Investment (PRI) Initiative, launched in 2006. The PRI has since become the largest investor organization (See Figure 5.)

Figure 5

Growth in PRI signatories and Assets under Management

(Close to 1,200 signatories representing USD \$34 trillion AUM)



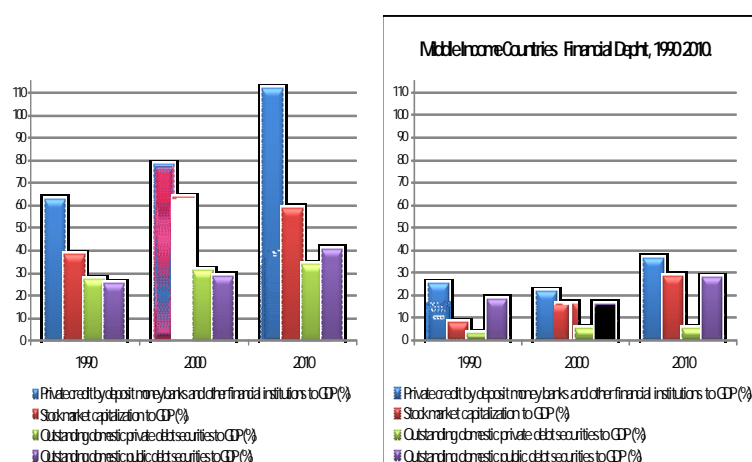
Source: United Nations Global Compact.

Apart from promoting the integration of ESG considerations through all asset classes, and along the whole investment chain, the PRI has created an academic research portal and Clearing House where signatories can inform and invite other parties to engage on ESG issues.

The Global Real Estate Sustainability Benchmark (GRESB) creates a benchmark against which institutional investors may assess new real estate investments around the globe. Sustainable Investment Forums (SIFs) are nati

regulatory restrictions. The recent subprime mortgage crisis and the subsequent world financial and economic crisis

Figure 6
Depth of selected financial system components by income groups, 1990-2010¹³
(Percentages)



Source: ECLAC, Financing for Development Division on the basis of Global Financial Development Database, World Bank, April 2013.

As shown, higher income countries have deeper and more complete financial systems. In higher income countries public bonds outstanding stood at a level of 40 per cent of GDP on average as of 2010, while private bonds are at 34 per cent of GDP. By contrast, in middle income countries bond markets are clearly dominated by sovereign bond issues, and are little used as a funding source by most private companies. Public bond markets stood at almost 30 per cent of GDP in 2010, while private debt securities reached only 5 per cent of GDP with no substantial increase over the last two decades.

In general, it is accepted that the development of public bond markets is a prerequisite for the later development of private bond markets —among other reasons because public securities constitute a lower risk asset that serves as a benchmark for the cost of funds, so that in underdeveloped markets public bond markets can ‘crowd in’ private borrowing. Nevertheless policy should be attentive to the possibility of the private sector being crowded out by the public sector, especially as markets become more developed. In addition, in some countries banks have large holdings of public securities as assets, at the expense of lending to the private sector.

As of 2010, the depth of equity markets in high income countries stood at nearly 60 per cent of GDP, while in middle income countries and lower income countries it stood at only 28 per cent and 20 per cent of GDP respectively, revealing that the stock market in these two groups of countries is not a common option for raising capital by most firms. Nonetheless, in low-income countries, the depth of equity markets, as measured by stock market capitalization to GDP, is greater than the depth of the bond markets (which is close to zero), and even of private credit by deposit money banks and other financial institutions. This could reflect the point that the stock market is one of the only mechanisms available to raise longer-term financing.

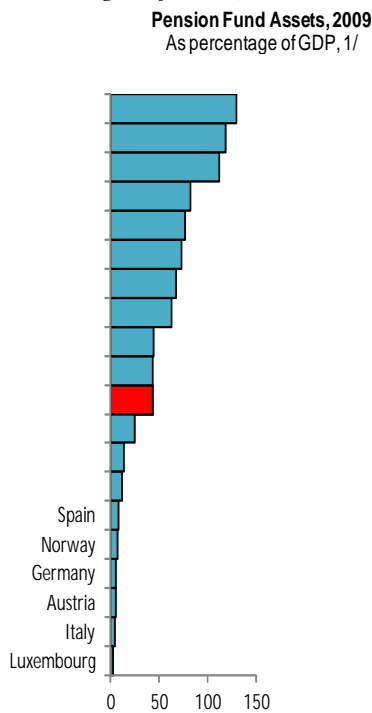
Furthermore, these numbers mask differences across countries. Figure 6 shows the range of stock market capitalization across countries (with the median depicted by the red line.)

¹³ The banking system depth is measured as the stock of private credit (by deposit money banks and other financial institutions) in percent of GDP, the equity market depth is measured by the stock market capitalization with respect to GDP and the domestic bond market depth is measured by the stock of outstanding domestic public and private debt securities, as a percentage of GDP.

Similar to capitalization, stock market turnover is significantly lower in developing countries. Turnover is a measure of market liquidity, and as such is often considered an important indicator of the development of local markets. However, high turnover numbers can also indicate extreme short-termism in investor outlook. While turnover remains low in the median developing country, it has been increasing exponentially in some developing countries with

A domestic institutional investor base, including domestic pension funds, could provide a more stable source of investment. The presence of institutional investors in developing countries is still significantly lower than in high-income countries. However, as shown in Figure 8 there are important exceptions, such as South Africa's insurance market or Chile's pension fund market, though penetration in these countries is still below levels in major developed country markets, which range from 70 per cent to over 100 per cent of GDP (World Bank, 2013) in pension markets and 25 to 50 per cent in insurance markets. In most developing countries, building an institutional investor base will require upgrading expertise and skills, as well as reforms in licensing, portfolio requirements and changes to security laws (Sheng, 2013).

Figure 8
Pension Fund Assets and Insurance Penetration in Developed and Developing Countries
(Percentages of GDP)



Source: OECD Global Pension and Insurance Statistics, country authorities, and IMF staff calculations.
 1/ End 2007 data for India.
 2/ Insurance penetration defined as total gross insurance premiums as percent of GDP.
 3/ End 2008 data for Argentina, Austria, Denmark, Russia, South Africa, and United Kingdom.
 Note: Figures for Emerging also include Newly Industrialized Economies

This implies that having institutional investors that manage large volumes of savings is not enough to ensure the channeling of such savings towards productive development in the domestic economies. Moreover, even in developed markets, institutional investors, including pension funds, do not necessarily invest with a long-term investment horizon, as discussed above. Public policy actions should aim to provide financial institutions and markets the incentives to allocate resources toward development finance.

More broadly,¹⁶ deepening of financial sectors is generally associated with greater investment and stronger economic performance (Levine, 2005). Nonetheless, there are important caveats. Excess market liquidity can increase financial market volatility and risk, particularly when markets are short-term oriented. Although research is preliminary (Cecchetti and Kharroubi, 2012; IMF, 2012b), it appears that for countries with shallow financial markets, a larger financial system implies greater productivity growth, but in more developed markets this relationship is unclear, with financial instability increasing with financial sector depth (Cihak et al., 2013). One possible explanation for this is that the growth in credit is not sufficiently directed toward productive investments. This is, again, linked to the short-term nature of capital flows and reinforces the notion that productive investment is not just important for

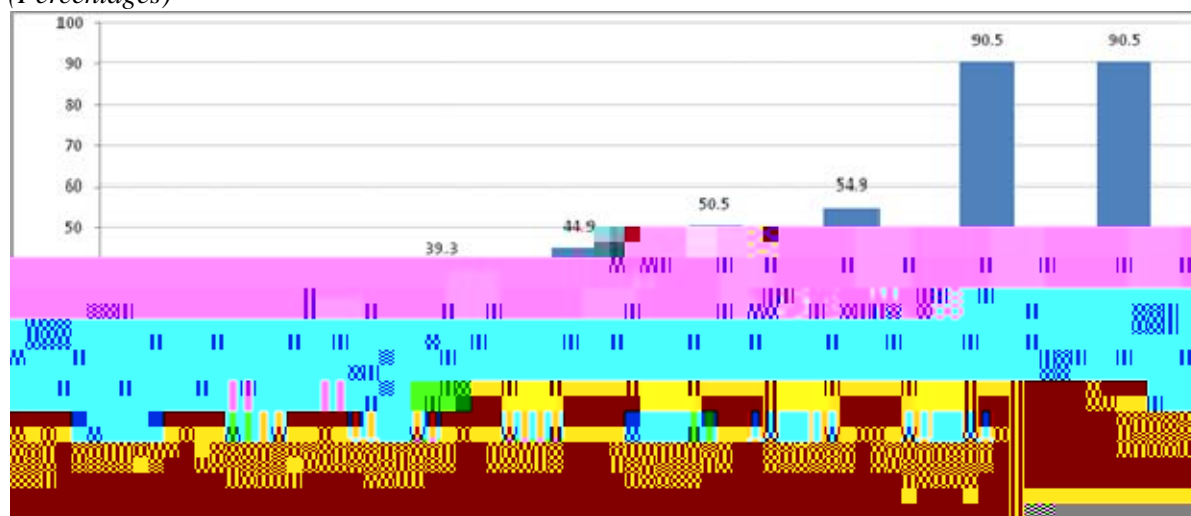
(32 firms), utilities (22 firms), industrials (17 firms) and electricity (10 firms). However,

3.5. Inclusive finance and financing of SMEs¹⁹

A second ‘gap area’ where private sector financing remains insufficient given sustainable development needs, is financing for SMEs and other aspects of inclusive finance. The benefits of financial systems that are inclusive —meaning that they provide access to financial services to large shares of individuals and firms— rest on the belief that financial access tends to reduce inequality and poverty. In non-inclusive financial systems it is normally small firms and poor individuals that do not have access to finance. This reinforces inequalities since the latter will need to rely only on their own resources in order to get educated, to open up a business, to invest or to take advantage of promising business opportunities for instance (World Bank, 2013).²⁰

Financial systems in developing countries exhibit problems of segmentation, and often exclude broad segments of the productive sector, such as SMEs, as well as individuals in the lower end of the income scale. An indicator of access to financial services by individuals is the proportion of adults in an economy that report having an account at a formal financial institution. For high income OECD countries and for the Eurozone on average this indicator is at more than 90% implying that access is almost complete. In developing regions by contrast, the access indicator stands at much lower levels —less than 55% of adults report to have an account in all developing regions of the world— (See Figure 9).

Figure 9
Population (>15 years) with an account in a formal financial institution, 2011
(Percentages)



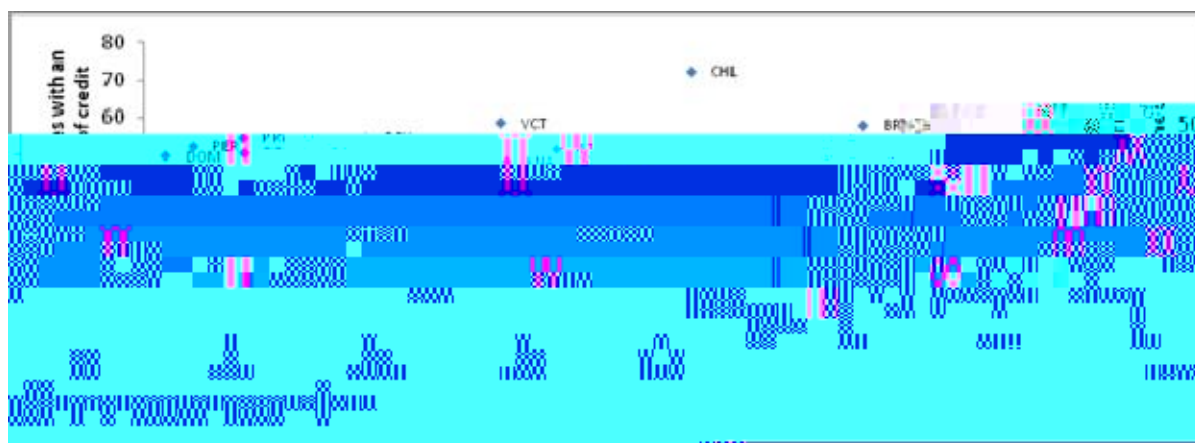
Source: ECLAC, Financing for Development Division on the basis of World Bank, 2012.

Access to finance by small and medium-sized enterprises (SMEs) constitutes a key policy concern among economies across the world since these enterprises are critical for sustainable growth and development at the worldwide level. SMEs consistently report having severe obstacles in their access to finance in comparison to larger firms. They account on average for 67% and 45% of total formal employment in the manufacturing sector of high income

¹⁹ Based on input 2.3: Local Financial Market Development and Inclusive Finance, prepared by ECLAC with contributions from ESCWA, UNCDF, ILO, Secretary General’s Special Advocate for Inclusive Finance for Development (UNSGSA), and additional inputs from the IMF.

²⁰ Recent empirical evidence surveyed by the World Bank (2010) indicates that access to basic financial services such as savings, payments, and credit can make a substantive difference in the living conditions of poor

countries and developing countries respectively as well as contributing to sizable shares of GDP (World Bank, 2010).



Source: ECLAC, Financing for Development Division on the basis of Global Findex Database, World Bank, April 2013.

The way forward

Improving access to finance for small and medium-sized enterprises and for low income households is critical for achieving sustainable development. Banks are best suited to fulfill this role, but in many developing countries, both SMEs and the poor remain excluded, requiring additional action both by the private sector and policy makers.

The challenge lies in designing institutions and defining policies that foster the development of financial intermediaries and provide access to basic financial services (saving/deposit taking and lending) to the large segment of the population that is currently excluded. There are ample examples of programs, within different institutional settings, that have been instrumental at financing SMEs. In the United States, the Small Business Administration provides loans and expertise to SMEs. Banking structures that include cooperative banks and savings banks have historically tended to go hand in hand with a thriving SME sector. In some countries, these types of institutions still provide the bulk of SME financing. Some low income countries are in the process of emulating such examples (for example, the establishment of Savings and Credit Cooperatives in East Africa.) In the transition countries of Eastern Europe and the former Soviet Union, the EBRD, often together with other partners such as IFC or industrial countries' national development banks, has successfully fostered the establishment of small business lending programs (Russia) or the creation of small business banks (Bosnia, Kosovo).

Some hedge funds have recently designed structured products that invest in extremely diversified portfolios of SME loans purchased from banks.²¹ The idea is that by diversifying risks, individual credit screening is less important. Similarly, new diversified SME funds have been launched under the rubric of 'impact investing', which incorporates both social and financial objectives into the investment decision. However, as discussed above, there are risks associated with securitization, such as those that were highlighted during the financial crisis with regard to mortgage backed and other structured products, which need to be taken into account. One important point in this context is that to reduce moral hazard associated with banks putting their weakest loans into securitized portfolios, the new mechanisms should be based on risk sharing, and not on an originate-to-distribute model. This would entail banks holding on to a significant portion of each loan they originate (say 50 per cent), as well as

²¹ See Section 1 entitled "Mobilizing resources: Stock-taking on the pros

other safeguards that are already in use in several structures. In addition, to reduce systemic risks banks should hold potential exposure to on-balance sheet (whereas prior to the financial crisis many banks maintained exposure off balance-sheet.).

Furthermore, these new initiatives remain relatively small compared to financing needs. As discussed above, there is an important role for public policy here. Support for SME financial inclusion has been in countries' agendas for decades. Governments around the world have used a range of instruments to promote SME's access to financial services (World Bank, 2010). Development Banks (DBs) can also play an important role through risk-sharing mechanisms.

3.6. Conclusions

The private sector will need to play a critical role in meeting the large financing needs for sustainable development. In particular, institutional investors have been looked toward as having the greatest potential to finance sustainable development. However, to date, many factors impede sufficient private sector investment in 'gap sectors', including regulatory uncertainty and weak governance on a country level, imperfect information and other market failures. In addition, especially for clean technologies and other investments that incorporate elements of public goods, there is a need to create a market and make projects commercially viable. At the same time, mis-aligned investor incentives and institutional factors in the flow of private sector financing present impediments to long-term investment.

The mapping of institutional investors has shown that changes in the institutional framework of financial intermediaries will be necessary before financial investors can fully contribute to financing needs for sustainable development. This will likely include both top down public and bottom up private sector responses, at the international and national level. A key question is whether largely voluntary initiatives can change the way financial institutions make decisions. However, public pension funds, SWFs, endowments and insurance companies – representing enormous pools of capital – could also put pressure on intermediary institutional investors to alter compensation structures, to include long-term clawbacks that remain invested in the fund. At the same time, management fees could be set to cover all operating costs, so that performance fees are, indeed, seen solely in the context of long-term returns.

It remains an open question however whether the market on its own can develop changes to better align intermediaries with the goals of their long-term providers of capital. This could imply a role for government, as partners, or through regulations - - through reducing risks, sharing risks, and helping to better align incentives.

Policymakers at both the national and international levels could work to create regulatory frameworks that facilitate sustainability in the global financial sector. This could include regulations that make mandatory some of the voluntary practices financial institutions may adopt, such as guidelines for making business operations more sustainable at all levels. Stock exchanges may also promote sustainability among their listed companies, or even make ESG disclosure part of their listing requirements.

On a domestic level, policymakers could encourage the development of a long-term investor base, focused on 'gap sectors' and illiquid asset classes such as infrastructure and renewable energy, which incorporate ESG criteria. It is important for countries however to design a strong macro-prudential regulatory framework, potentially in conjunction with capital-account management, to prevent short-term bubbles.

To attract FDI in infrastructure in particular, the provision of an adequate institutional and regulatory framework is critical. Establishing clear rules for investors and making sure governments are better prepared for engaging in specific projects will help *minimize* risks for all parties. In addition, *risk-sharing* measures by home countries and international organizations can help mobilize private financing in infrastructure projects in developing countries. Finally, countries can take measures to *better align private sector incentives* with longer-term investment goals, such as new direct co-investments for primary intermediaries, or new financing instruments which would be more attuned to the long-term investment needs of infrastructure, as discussed above.

Lastly, to improve access to finance for SMEs and for low income households, the challenge lies in designing institutions and defining policies that foster the development of financial intermediaries and provide access to basic financial services to the large segment of the population that is currently excluded. There are a range of policies, initiatives and institutions in place at the country level, such as savings and credit cooperatives or national development banks. So far however, they remain relatively small compared to financing needs, and there is an important role for public policy to expand them.

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