

Outlook for Global Development Finance – Excess or Shortage?

BACKGROUND RESEARCH PAPER

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This paper reflects the views of the author and does not represent the views of the Panel.

It is provided as background research for the HLP Report, one of many inputs to the process.

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HIGH LEVEL PANEL OF EMINENT PERSONS

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Background Paper

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Introduction

Since emerging from the Great Recession at the turn of this decade, the global financial community is still struggling with what the future of finance should look like. Three immediate trends are discernible:

- (i) First, as excessive leverage and the shadow banking system have been identified as the major causes of instability in the financial system, policy makers and regulators are preoccupied with putting in place stringent standards and regulations to prevent another financial crisis;
- (ii) Second, massive quantitative easing programs by the central banks in the four reserve currency zones (G4 or US, Eurozone, United Kingdom and Japan) to restore financial stability and stimulate economic growth are flooding world capital markets with liquidity, thus keeping interest rates at historic lows and

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placing in jeopardy the viability of pension funds and individual savings because of a prolonged period of negative returns; and

- (iii) Third, the emerging markets are struggling with high capital inflows, rising asset prices and also declining commodity prices and export-led growth even as the advanced economies slow.

In the wake of deleveraging of the global banking system through new regulatory rules on banking and shadow banking (still under discussion), there is a risk that the world may enter into a period of synchronised recession. Developing countries will be trapped in a situation where the lending capacity of the Bretton Woods institutions is constrained due to reluctance of the advanced countries to allow the growing role of emerging markets in the world economy to be reflected in their voting power. At the same time, the advanced countries are unwilling to extend more aid due to their ongoing financial crisis and their large debt overhang.

It is therefore timely that the United Nations has convened a High Level Panel of Eminent Persons to seek a new model for reducing the dependence of the developing world on ODA (Official Development Assistance) and determine how to engage their domestic financial systems to assume a central role in the intermediation of finance for private-sector-led development.

As part of this effort, a new narrative for development finance is needed. This new narrative will move away from official aid dependence and focus on building up the domestic financial systems of developing countries to intermediate alternative sources of financing for private sector-led growth. It will also give emphasis to infrastructure financing in developing countries and the role of foreign flows.

As a Background Paper to this effort, it would be necessary to provide a perspective on the current state of global finance and to examine what are the changes necessary in developing

countries' financial systems that will enable them to assume a bigger and more innovative role in development finance into the future.

This background paper is divided into six sections:

- (i) Section 1 sets the context and reviews the relationship between financial depth and economic development;
- (ii) Section 2 assesses the current state of global financial markets and its implications for development finance;
- (iii) Section 3 analyses the savings and investment flows in the G4 and rest of the world, using the flow of funds approach to determine which sectors of the financial system have absorbed the surplus global savings between 2004 and 2011. Drawing on the latest forecasts on global savings and investments by the World Bank², and by extrapolating such growth on the financial balance sheets of emerging markets, this paper attempts to reinforce the message that it is imperative to strengthen the financial system in order to deploy scarce savings effectively to fund efficient, sustainable, inclusive and stable development. This section is not a forecast, but an attempt at looking at alternative scenarios;
- (iv) Section 4 examines the lessons of the Great Recession and considers how the financial sector in the emerging markets may need to change in four areas:
 - a. to serve the real sector;
 - b. to overcome the three mismatches inherent in financial systems (the maturity mismatch, the foreign exchange mismatch and the structural mismatch);
 - c. to promote social inclusivity and a green environment; and

² The World Bank, Global Development Horizons, *Capital for the Future: Saving and Investment in an Interdependent World*, Washington D.C., May 2013.

d. to improve access to finance across geographical barriers by leveraging on ICT (information, communication and technology).

This section also looks at the alternatives sources of funding for development that are discernible in emerging markets and advanced economies.

- (v) Section 5 focuses on how financial regulation will have to evolve in order to shape the standards, incentives, processes, structures and infrastructures within the financial system in order to support real sector growth with stability, efficiency, social inclusivity and environmental sustainability. It also discusses the impact of technology on financial systems and how global financial regulation may have to adjust to this new paradigm in the conduct of payments and settlements; and
- (vi) Section 6 concludes the paper with a call for a holistic, back-to-basics approach to development finance.

As this paper was being finalized on 17 May 2013, the World Bank published its forecasts for savings and investment to 2030. By 2030, the population of the world would grow from the current 7 billion to 8.5 billion. Using two alternative scenarios, the key prognosis of the Bank is that: *“in spite of pressures from population aging, the world will not face a shortage of saving in the future, and yields on capital are expected to remain fairly stable through 2030.”*

However, there will be a significant shift in composition. The Bank projects that *“by 2030, developing countries will account for around two-thirds of every dollar saved and invested (compared with about half today) and around half of the stock of global capital will reside in the developing world, compared with less than one-third today. This implies a huge challenge for financial intermediation in developing countries.”*

The Bank’s conclusions coincide with the first broad conclusion of this paper that barring any global conflicts and serious natural disasters, there is enough evidence to suggest that with

proper governance, there is sufficient savings domestically and globally to finance development.

The fact that advanced economies are currently dependent on emerging markets' savings suggests that a number of emerging markets have demonstrated that with the right policies and governance, the demographic dividend or resource endowment can be effectively used to generate domestic resources to fund long-term growth, thus breaking out of the poverty trap. The opening up of the world to free multilateral trade and the liberalization of capital flows and ideas were important pre-conditions for success in development, although not all countries adopted the open export trade model.

The second broad conclusion is that the change in the composition of saving and investment flows was really due to a few examples of emerging markets "graduating" towards advanced country status, because they were able to develop the mindsets and governance structures that equipped them to break out of the middle-income trap. If more of the "bulge bracket" of middle-income countries were to improve their governance and domestic productivity, more emerging markets will join the ranks of advanced economies in the next two decades, thus increasing the global pool of savings.

The corollary of the above conclusion is that there will not be any shortage of savings in the global economy to finance development, but this is neither ordained nor inevitable. It hinges on having the right governance models and allowing market forces to determine interest rates and asset prices to balance supply and demand.

The third conclusion is that going forward, the relationship between the emerging world and the advanced world will become more symbiotic and interdependent. The developing world is vulnerable to the fragilities of the current global financial architecture that is primarily underpinned by the advanced country financial systems. Any disruption to the free flow of

capital can be destabilizing; hence, the need to reform the global financial, investment and trade architecture.

Many of these issues are beyond the scope of this paper, which focuses on how intermediation in emerging markets can be improved so that the increased savings can be mobilized for development.

BOX 1: The Millennium Development Goals

In 2000, 189 UN member countries made a pledge to free the world's population from extreme poverty and other deprivations. This pledge became known as the eight Millennium Development Goals (MDGs):

1. Eradicate extreme poverty and hunger;
2. Achieve universal primary education;
3. Promote gender equality and empower women;
4. Reduce child mortality;
5. Improve maternal health;
6. Combat HIV/AIDS, malaria and other diseases;
7. Ensure environmental sustainability; and
8. Develop a global partnership for development.

In July 2010, the UNDP report on "What it will take to achieve the MDGs" pointed to disparities in MDG achievement, both within and between countries. The report found that "the know how necessary to achieve the MDGs exist, but progress requires a focus on proven strategies, policies and interventions and making a radical break with those that do not work."

The focus of this background paper is on the role of development finance in achieving the MDG aspirations.

Section 1. Financial Depth and Economic Development

The role of the financial sector in economic development has been the subject of much study. A question that arises is the efficiency of current financial institutions and financial markets in mobilizing global savings into productive investment and economic development.

A National Bureau of Economic Research (NBER) Working Paper in April 2013 on Financial Development in 205 Economies, 1960 to 2010,³ has gathered substantial evidence that financial institutions (such as banks and insurance companies) and financial markets (including stock markets, bond markets, and derivative markets) exert a powerful influence on economic development, poverty alleviation, and economic stability [Levine (2005)]:

- (i) By screening borrowers, banks identify firms with the most promising prospects and help allocate resources efficiently, expand economic opportunities, and foster growth;
- (ii) Similarly, by mobilizing savings from households to invest in promising projects, banks and securities markets also foster economic development;
- (iii) In monitoring the use of investments and scrutinizing managerial performance, banks help to boost firms' efficiency and reduce waste and fraud;
- (iv) In enabling the diversification of risk, equity, bond, and derivative markets encourage investment in higher-return projects that might otherwise be shunned; and
- (v) By lowering transactions costs, financial systems facilitate trade and specialization—fundamental inputs to technological innovation [Smith (1776)].

But, when financial systems perform these functions poorly, they tend to hinder economic growth, curtail economic opportunities, and destabilize economies. As Jorda, Schularick and Taylor concluded after studying 140 years of financial history, “*our overall result is that credit growth emerges as the single best predictor of financial instability.*”⁴

The major contribution of the NBER paper was to construct improved measures of the

³ Chihak, Martin, Asli Demirguc-Kunt, Erik Feyen, and Ross Levin, *Financial Development in 205 Economies, 1960 to 2010*, NBER Working Paper Series 18946, Cambridge, MA 02138, April 2013.

⁴ Jorda, Oscar, Morten Schularick, and Alan Taylor, *Financial Crisis, Credit Booms and External Imbalances: 140 Years of History*, IMF Economic Review, Washington D.C., 2011.

functioning of financial systems covering:-

- (1) the size of financial institutions and markets (**financial depth**),
- (2) the degree to which individuals can and do use financial institutions and markets (**access**),
- (3) the efficiency of financial institutions and markets in providing financial services (**efficiency**), and
- (4) the stability of financial institutions and markets (**stability**).

A comparison of the advanced and EME world's measures of these eight characteristics of financial institutions and financial markets are shown in Table 1 below:

Table 1: A Comparison of Financial Systems in Advanced and Developing Economies

Financial Institutions (Mean)	High income	Upper middle income	Lower middle income	Low income
Depth	84	44	28	13
Access	55	32	19	5
Efficiency	86	75	61	42
Stability	35	38	40	35

Financial Markets (Mean)	High income	Upper middle income	Lower middle income	Low income
Depth	51	27	16	10
Access	53	58	69	29
Efficiency	45	19	20	21
Stability	53	60	53	44

Financial Institutions (Mean)	High income	East Asia and Pacific	Europe and Central Asia	Latin America and the Caribbean	Middle East and North Africa	South Asia	Sub-Saharan Africa
Depth	69	43	37	37	33	32	17
Access	43	23	35	30	14	16	10
Efficiency	80	70	65	62	83	81	51
Stability	42	52	20	35	57	38	32

Financial Markets (Mean)	High income	East Asia and Pacific	Europe and Central Asia	Latin America and the Caribbean	Middle East and North Africa	South Asia	Sub-Saharan Africa
Depth	43	38	12	21	24	17	20
Access	46	80	56	40	50	85	77
Efficiency	29	40	17	8	24	49	7
Stability	66	60	43	64	81	56	54

Source: NBER Paper Series 18946, Table 11, calculations based on the Global Financial Development Database.

Notes:

Financial Institutions:

Depth: Private Credit/GDP (%);

Access: Number of Bank Accounts per 1,000 Adults

Efficiency: Net Interest Margin;

Stability: z-score.

Financial Markets:

Depth: (Stock Market Capitalization + Outstanding Domestic Private Debt Securities)/GDP;

Access: Percent Market Capitalization Outside of the Top 10 Largest Companies (%);

Efficiency: Stock Market Turnover Ratio (%);

Stability: Asset Price Volatility.

Overall comparisons by income levels and by region as shown in Table 1 suggested that high income economies have more financial depth, wider financial access, higher financial efficiency, but not necessarily better financial stability than lower income economies.

For example, financial market stability is higher in upper middle-income economies than high-income economies. By region, East Asia and Pacific financial institutions scored low on depth and access, but relatively high on efficiency and stability.

A major conclusion of the NBER paper is that financial systems and institutions are multi-dimensional in character and their overall performance has to be analysed holistically against all the benchmarks. Overall, emerging markets' financial systems have room for improvement in terms of more efficient savings mobilization and resource allocation, improved price discovery, risk management, and stronger corporate governance for better credit discipline.

In other words, improved financial intermediation boosts profitability, promotes growth and therefore raises savings for development. The challenge is to move into a virtuous circle of high savings for high growth.

Data from the World Bank⁵ confirm the above trends. Over the decade 2000-2010, financial depth has increased, with bank private credit rising from 26.6 percent to 40.8 percent of GDP. This was true also in terms of stock market capitalization, outstanding debt to GDP ratio and international debt to GDP ratio.

In terms of access to financial services, the number of bank accounts rose from 10 per 1,000 adults in 2000 to 812 per 1,000 in 2010, with bank branches rising by eight-fold from 2.4 per 100,000 adults to 16.6 per 100,000 adults.

⁵ The World Bank, Development Policy and the Development Data Group, *The Little Data Book on Financial Development 2013*, Washington D.C., 2013.

To sum up, the emerging markets have considerable room to improve financial deepening to mobilize resources for development, although there is sufficient evidence from the experience of advanced economies that beyond a certain point, financialization can be counterproductive.

Section 2. The Current State of Global Finance

The global financial crisis has generated much debate on the need to reform the international financial system to promote sustainable economic growth and financial stability. In June 2009, the Stiglitz Report⁶ noted that “*As the world focuses on the exigencies of the moment, long standing commitments to the achievement of the Millennium Development Goals (MDG) must remain overarching priorities.*”

Fast forward to 2013, the global financial system is still trapped in a situation where the prospects for advanced country commitments to development aid and finance are not encouraging for the following reasons:

1. *The advanced countries are still deflating* and contending with the conflicting pressures of quantitative easing on the one hand, and the impact of interest rate repression on savings and returns on investment on the other. Their financial systems are deleveraging as part of the process of meeting Basel III requirements and are expected to continue to do so for the next 5 years (at least) as G4 countries attempt to shed their accumulated fiscal debt burden;
2. *Financial globalization has also faltered.* Cross-border capital flows, which include lending, foreign direct investment and purchases of equity and bonds, rose to a peak of

⁶ United Nations, *Report of the Commission of Experts of the President of the U.N. General Assembly on Reforms of the International Monetary and Financial System*, New York, 24 June 2009.

\$11.8 trillion in 2007, primarily due to the acceleration in interbank lending with a smaller share being the flow of funds to real economy borrowers⁷. According to a McKinsey Global Institute (MGI) study, as of 2012, cross-border capital flows had declined by 61 percent from the 2007 peak to \$4.6 trillion. Most of this reduction was in intra-European flows, thus raising the share of global capital flows to emerging economies to 32 percent in 2012 (\$1.5 trillion) from 5 percent in 2000. Capital flows out of developing countries rose to \$1.8 trillion in 2012;

3. *Global financial markets are at an “inflection point”*. The MGI report suggested that one path leads to “*a more balkanized structure that relies primarily on domestic capital formation and concentrates risks within local banking systems.*” Another points to a “*healthier model of financial globalization that corrects the pre-crisis excesses while supporting more robust economic growth.*” It is this second outcome that will be examined.
4. *Cross-border flows are still volatile*. Currently, MGI statistics point to 40 percent of cross-border flows being in the form of foreign direct investment, which are indeed more stable and beneficial to emerging market economies (EMEs). Much of the decline in capital flows was due to reduced cross-border lending in the Eurozone, but portfolio flows to EMEs are still significant, particularly with recent depreciation of the Yen increasing the opportunities for leveraged carry trades. Such capital flows put heavy pressure on EME financial systems that are bank-dominated and their capital markets lack financial depth and liquidity.

As shown in Table 2, the depth of the financial system in EMEs is still low (with total financial assets accounting for only 179 percent of GDP), compared with the global average

⁷ McKinsey Global Institute, *Financial Globalization: Retreat or Reset?*, March 2013.

of 370 percent of GDP and a range of 424-786 percent of GDP in the advanced economies. The IMF data also confirms the stylised facts that the financial system in EMEs remains dominated by the banking sector (100 percent of GDP). In contrast, EME capital (stock and debt) markets, at 75 percent of GDP, are significantly less developed than those in the advanced economies (range of between 200-500 percent of GDP).

Table 2: Selected Indicators on the Size of the Financial Markets, 2011

(In trillions of U.S. dollars unless noted otherwise)

	GDP	Total reserves minus gold	Stock market capitalization	Debt securities	Bank assets	Bonds, Equities, and Bank Assets	Bonds, equities, bank assets in % of GDP
World	70.2	10.7	47.1	98.4	113.7	259.2	369.1
EU	16.4	0.5	8.5	31.5	43.5	83.5	509.1
US	15.1	0.1	15.6	33.7	14.6	64.0	424.4
Japan	5.9	1.3	3.5	15.4	13.5	32.4	549.5
UK	2.4	0.1	3.3	4.8	11.0	19.1	786.4
Emerging markets	25.5	6.9	9.8	9.2	26.5	45.5	178.9

Source: IMF Global Financial Stability Report, April 2013, Statistical Appendix, Table 1.

Clearly, the European economy has a financial depth of 509 percent of GDP, and with the bulk of such depth being credit through either the banking system and debt markets, it was vulnerable to a liquidity crisis. While there is general recognition that excessive financial depth (above 500 percent of GDP) appeared to make the financial system vulnerable to fragility, the reality is that financial depth is not always leverage. That part of financial depth that is not leverage is equity market capitalization. Taking a stock market capitalization/ debt (bank + debt), as a crude proxy for the equity cushion against leverage, it is noted that the US

has an equity/debt ratio of 32.3 percent, compared with 28.2 percent for EMEs and 11.3 percent for Europe. By having the lowest equity/debt ratio, Europe was clearly vulnerable to exposure to high debt incurred through the banking system and on the sovereign debt front in some of the European Union members.

The broad conclusion is that EMEs have considerable room for financial deepening, but in terms of priority, developing depth in the equity markets and long-term institutional investors may enhance the capacity of the financial system to strengthen the capacity of the real sector to absorb financial sector shocks from excess debt. In other words, the lower the leverage, the greater the resilience of the borrowers and the financial system to both endogenous and exogenous shocks.

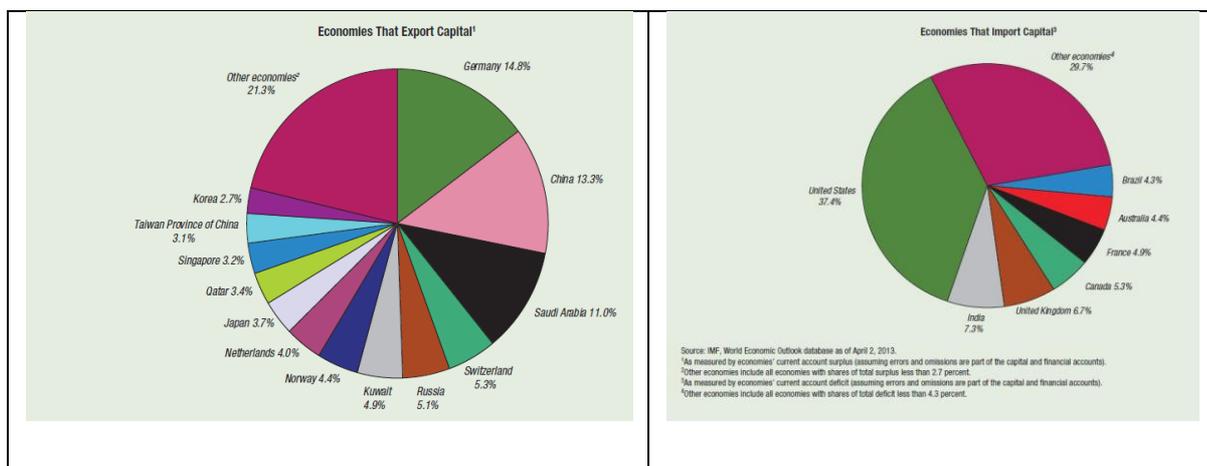
Since financing for investment is a key precondition for economic growth and a principal factor for job creation, there is awareness by the Group of 20 (G20) that the levels of various types of investment have declined significantly. The G-20 attempts therefore to foster an environment that would be more conducive to financing for investment and to identify new sources for long-term investment in the current global economic landscape, in order to contribute to strong, sustainable and balanced growth.

For example, the Russian Presidency of the G-20 in 2013 is planning to explore possible ways and practical steps to increase the amounts and effectiveness of financing for investment. It has stated that the G-20 Summit in September 2013 will examine the role of private-public partnerships (PPPs) and non-traditional sources of long-term financing, debt and equity markets, as well as foreign direct investment (FDIs). The G-20 efforts will examine the impact of the financial regulatory reforms on financing for investment, banking sector capabilities and barriers, multilateral and national development banks, international reserves, among others. Together with other major international organizations (such as the World Bank, IMF, OECD, FSB, and the UN) the G-20 Summit will examine a host of policies and

regulatory issues. These will be discussed in detail in Section 4 of this paper.

As shown in Figure 1 below, the emergence of China and a number of the emerging markets in the last 20 years as major savers and surplus economies has turned traditional economic prognosis on development funding on its head. Instead of looking to advanced countries as the primary source of development funds for emerging market economies (EMEs), the EMEs themselves have become major lenders to the advanced countries. In 2012, EMEs, particularly China, Saudi Arabia and other emerging markets accounted for 45.6 percent of total capital exports, whereas the advanced economies, such as the US, UK, Canada, France, Australia accounted for 58.7 percent of total capital imports.

Figure 1: Net Exporters and Importers of Capital in 2012



Source: IMF. Global Financial Stability Report: Old Risks, New Challenges, April 2013.

However, given the fact that emerging markets accounted for about 80 percent of global population and about 40 percent of world GDP in 2010⁸, there is general consensus that the favourable demographic profile of the emerging markets, with better access to technology, trade and investment under current multilateral rules, will continue to be the main engines of

⁸ The Economist Magazine, *The emerging world begins to seize the lion's share of global markets*, 4 August 2011. <http://www.economist.com/blogs/dailychart/2011/08/emerging-vs-developed-economies>.

growth. This of course depends on finance being made available to the real economy in the appropriate mix of equity and debt with maturity tenors that match the assets profile, so that there is no liquidity stress and fragility in the system as a whole.

Hence, the fundamental thesis is that for most emerging markets, financial deepening has played a central role in socio-economic development. There is little controversy over the importance of policies that support financial deepening, but the proper sequencing and implementation of appropriate policies, financial structures and institutions, including the necessary property rights infrastructure, remain somewhat contentious. There is perhaps no “one-size fits all” sequence and model, because different low income and middle income economies have different starting conditions, historical legacies and institutional structures that require different paths of development.

A stylized fact about financial development in EMEs is that the system is dominated by the banking system, which suffers from a structural maturity mismatch, since bank deposits are by nature short-term, whereas bank loans in mortgages and infrastructure funding are long-term in nature. If the EME financial system is to become more development-oriented, funding will have to come from nurturing long-term institutional investors, such as pension and insurance funds, sovereign wealth funds and private equity funds that are able to take long-term portfolio risks. These funds are grossly under-developed currently and the potential for their development is considerable, as the following sections will show.

Section 3. The Future Path for Development Finance: Two Growth Scenarios⁹

3.1 Flow of Funds (FoF) Analysis

The study of the role of finance in the development process as well as an analysis of the intersectoral flows of savings and investment is best captured by a flow of funds taxonomy (Figure 2). The flow of funds illustrates both the sources and uses of funds within an economy, which is essentially intermediated through the financial sector through changes in its balance sheet. On the liabilities side, the sources of funds are the savings of the real sector (household, non-financial enterprise, government and rest of the world). These are saved in instruments or financial products such as deposits, equities, bonds, and mutual funds. The financial sector uses (lends or invests) such funds back to the real sector through instruments such as loans, leasing, bonds, debentures and foreign exchange.

The FoF table is divided into two parts – the annual flow and the stock at the end of the year – balance sheet (from which the flows are derived). The flow of funds tables are matrices where the rows and column are identities, balanced through a statistical discrepancy.

The United States has one of the most comprehensive and detailed data series studies, which are published by the Federal Reserve Board¹⁰. Unfortunately, flow of funds data, because of its complexity, are not readily available for most developing countries.

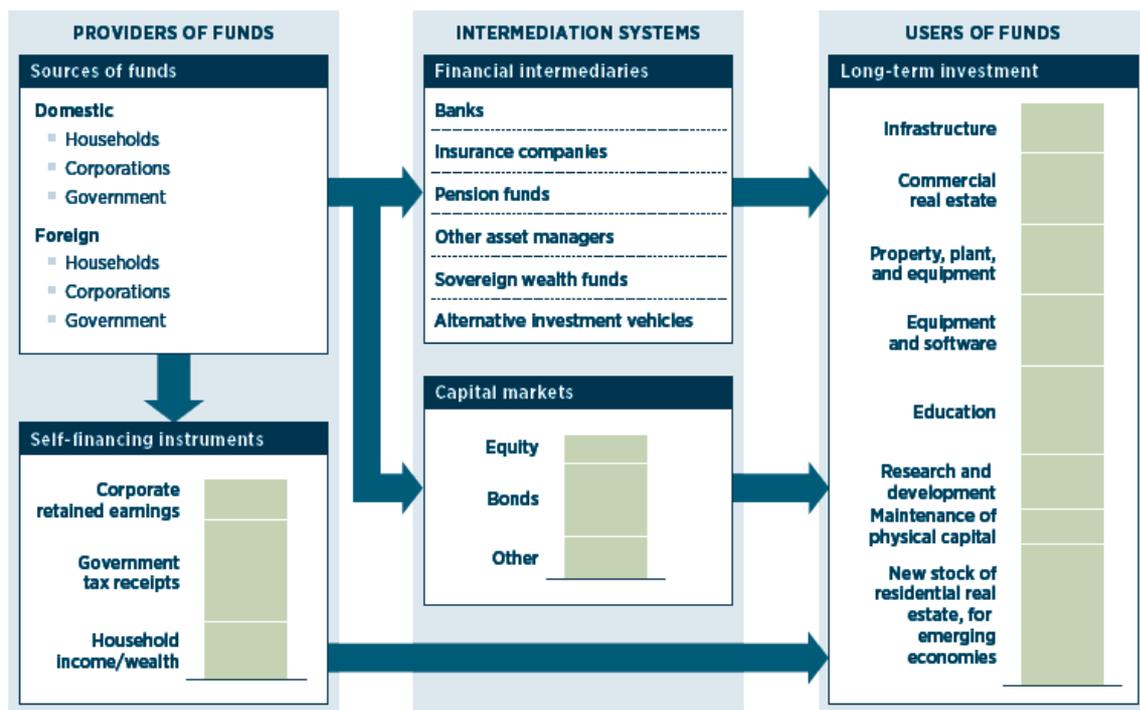
In light of its importance to the HLP study, this paper has attempted to establish broadly how the global financial system has intermediated global savings in the run-up to the Great Recession and thereafter. This involves a multi-step methodology using different sets of source data to quantify the savings and investment flows from stock data in the balance sheets

⁹ I am particularly grateful to Dr. KT Kwek, Dr. Cho Cho Wai, Eva Yi, Ma Jing and Jodie Hu for analytical work in this section.

¹⁰ Federal Reserve Board of Governors, *Flow of Funds Accounts of the United States - Z.1*, <http://www.federalreserve.gov/releases/z1/>.

of the banking institutions and the non-bank financial intermediaries and disaggregating them into the sources and uses of funds by the household sector, the banks, the pension funds, the insurance companies, mutual funds and other sectors as a residual group. The Flow of Funds account of the United States in 2010¹¹ served as the basis to simulate the likely outcomes for G4, G20 and the Rest of the World (ROW). The 2004-2011 data series were derived from the selected indicators of the Global Financial Stability Report of the IMF¹². The projections to 2030 are simple linear estimations, with all the caveats as to their reliability.

Figure 2: Taxonomy of Flow of Funds



SOURCE: McKinsey Global Institute.

¹¹ Federal Reserve System, *Flow of Funds Accounts of the United States, Flows and Outstandings*, Third Quarter 2011, Federal Reserve Statistical Release z.1., March 2013.

¹² International Monetary Fund, *Global Financial Stability Report*, Washington D.C., April 2013.

The methodology for building an economy's flow of funds out of the flows in the national accounts, the public sector accounts, the balance of payments and the balance sheets of financial institutions, is in itself conceptually demanding. The next step of tracking how the sources of funds are intermediated by financial institutions and financial markets into consumption and different forms of savings and investment is also complex. A series of tables have been developed to understand the structure of the flow of funds in the United States, and to use it as a baseline model for generating comparable structures for G4, G20 and emerging markets. As these tables are highly technical in nature, they are described in greater detail in Appendix A.

Briefly, the United States FoF accounts is being used as the basis for understanding the broad flows of saving and investment patterns in advanced economies.

GDP growth is driven by gross investment and the net changes in the financial assets or liabilities in the balance sheet of the real sector. The link between the finance and the real sectors is through the following identity:

$$\text{Gross Investment} = \text{Capital Expenditures} + \text{Net Financial Investment (NFI)}$$

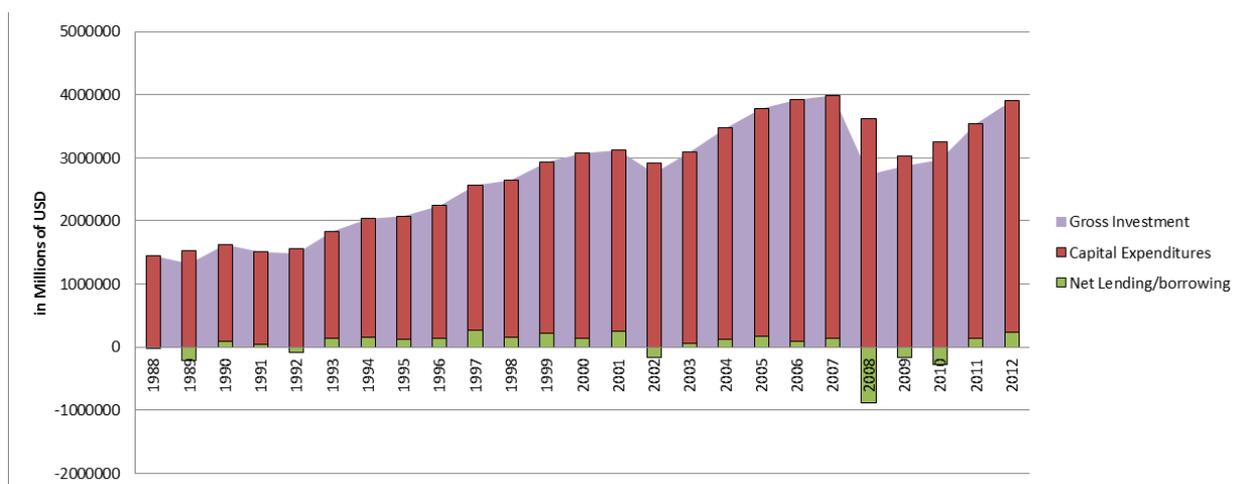
$$\text{where NFI} = \text{Net Acquisition of Financial Assets} + \text{Net Increase in Liabilities}$$

Figure 3 shows that a large component in the gross investment flows comes from capital expenditures. Since funding for investment comes from the *gross* intermediation through the financial system, a low NFI indicates a normal intermediation process. The *quality* of the intermediation would require decomposition of the types of intermediation by product

(between credit instruments and equity instruments at the gross level), which would suggest whether the system as a whole is moving towards higher leverage or not.

In 2008, capital expenditure remained high, but NFI turned sharply negative due to the deleveraging of the financial system, resulting in lower gross investment (Figure 3). This indicated a malfunction of the financial system that required substantial assistance by the public sector. In effect, the financial crisis was dealt with by shifting part of the debt of the financial system to the public sector. Gross investment and capital expenditure were reduced sharply in the next few years to 2012, with knock-on impact on growth.

Figure 3: Decomposition of Gross Investment Flow in the U.S. (1988 -2012)



Source: Z.1 Flow of Funds Accounts, Federal Reserve Bank, various issues.

The World Bank Global Development Horizons (2013) report¹³ also gives support to the view that the share of global investment from advanced countries had declined steeply after 2000, before which they accounted for nearly 80 percent of total investment. In the run up to the global financial crisis (2008-2012), the share dropped to half (Figure 4). The report's

¹³ The World Bank, *Capital for the Future: Saving and Investment in an Interdependent World*, Washington D.C., May 2013.

projections to 2030 suggest that by then, the advanced countries' share of investment would drop to 40 percent, whilst the developing countries' share would rise to 60 percent.

Using two speed growth assumptions, the report had the following broad conclusions:-

- *The world will not run out of savings in the future, and global investment rates, saving rates, and yields on capital will remain fairly stable through 2030;*
- *The distribution of the global stock of capital will shift toward the developing world, but wealth may remain concentrated among high-income households in developing economies;*
- *China and India will account for the majority of global investment, and investment will shift toward the services sector, especially in infrastructure;*
- *Developing countries will account for a greater share of gross capital inflows and outflows in the future;*
- *Developing countries will represent more than half of global capital stocks by 2030 in the gradual convergence scenario, compared with about a third in 2010 (Figure 5).*

Using the growth rates of GDP adopted in the two-speed scenarios adopted by the World Bank report, this paper attempts to project the growth in financial assets for the advanced and developing countries to 2030. The two growth scenarios for the global financial markets and Gross Domestic Product at current prices are (i) rapid average annual growth of 3 per cent for the world as a whole and (ii) gradual growth of 2.6 percent per year during the next two decades. The developing world's growth will average an annual rate of 4.8 percent in the gradual convergence scenario and 5.5 percent in the rapid one. With gradual convergence, the contribution of developing countries to global growth will rise from 73 percent around 2015 to 87 percent by 2030. With rapid convergence, developing countries' contribution will reach 93 percent by the end of the period. In both scenarios, developing countries'

employment in services will account for more than 60 percent of their total employment by 2030, their share of total expenditure on food items will be halved, and they will account for more than 50 percent of global trade.

Using the above growth rate assumptions, the methodology for this paper's projections on financial asset size are based on those adopted for the Asia Development Bank study on Asia 2050 (2011)¹⁴. The "financial assets" definition used in this paper comprises bank assets, bond market size, and stock market capitalization based on the definitions used in the IMF Global Financial Stability Report. That study suggested that by 2050, Asia would account for roughly half of global GDP and half of global financial assets.

These projections were based on two *ceteris paribus* conditions. The first *ceteris paribus* condition is to assume an optimal scenario where the share of financial assets (FA) to GDP (FA/GDP) for Asia plus Japan, the U.S. and EU would remain around 500 percent respectively (roughly current levels) by 2050. The second condition is that by 2030, the ratio of FA/GDP for Asia would still be lower than that of the advanced economies, that is about 400 percent.

¹⁴ Asian Development Bank, *Asia 2050: Realizing the Asian Century*, Manila, 2011.

Figure 4: Share of Global Investment - High Income countries versus Developing Countries

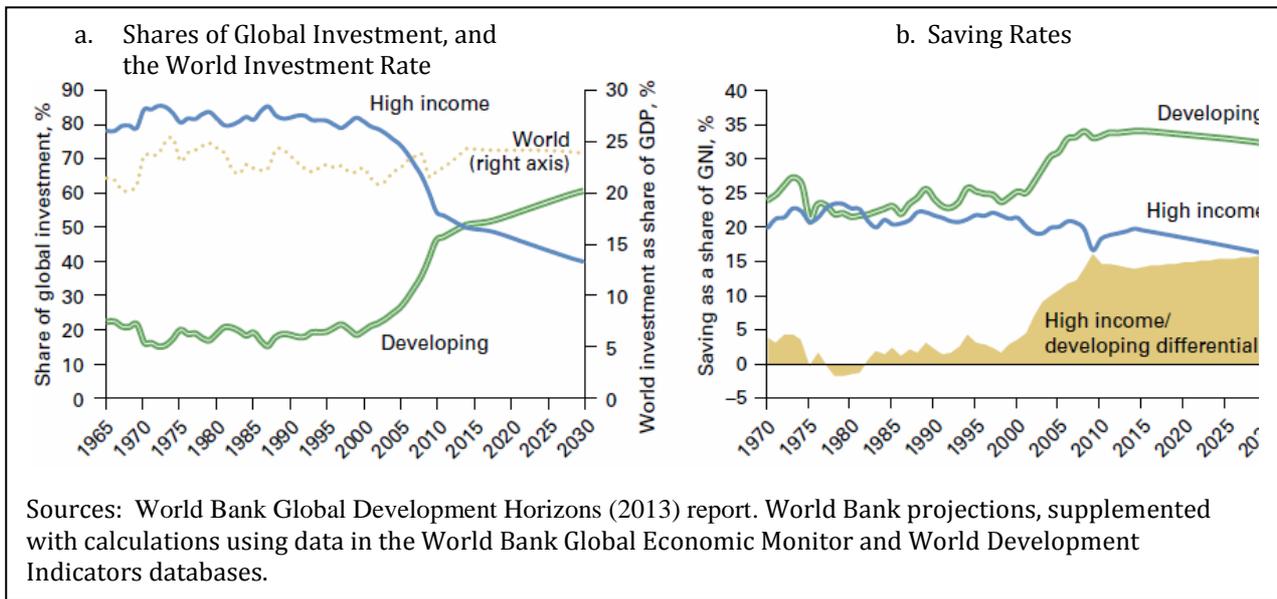
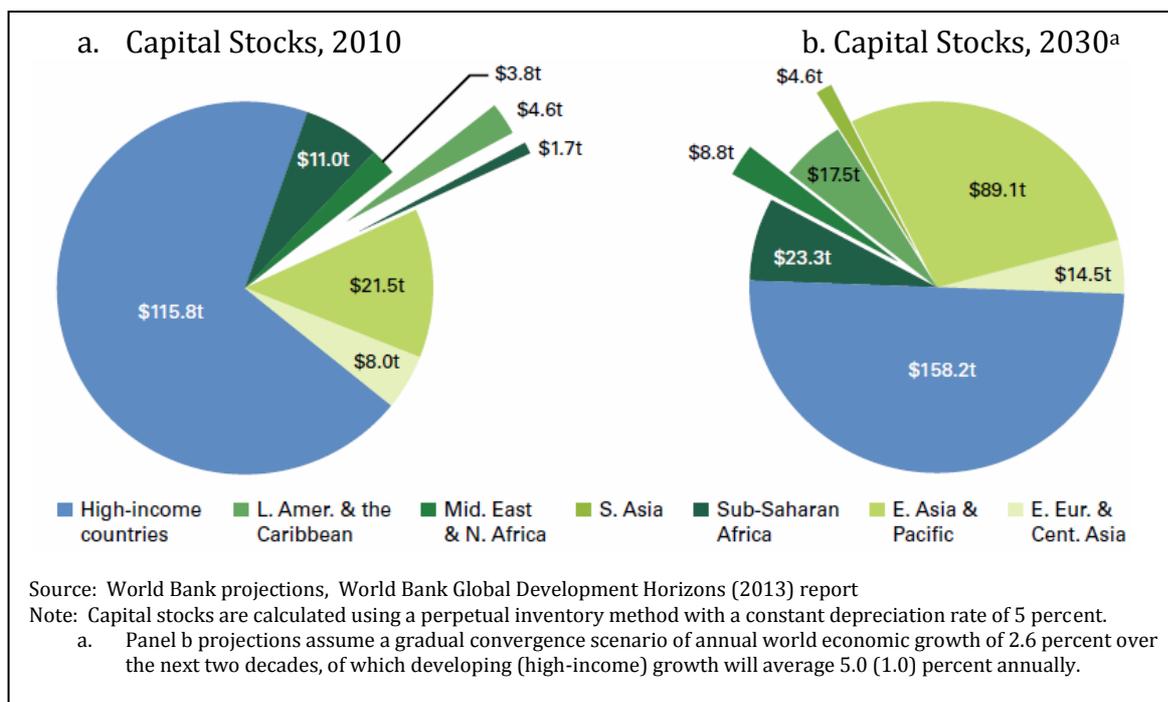


Figure 5: Developing Countries will account for more than half of Global Capital Stocks by 2030.



3.2 Scenarios for Financial Assets

The two projected profiles for the financial sector and GDP (Table 3) suggest that:

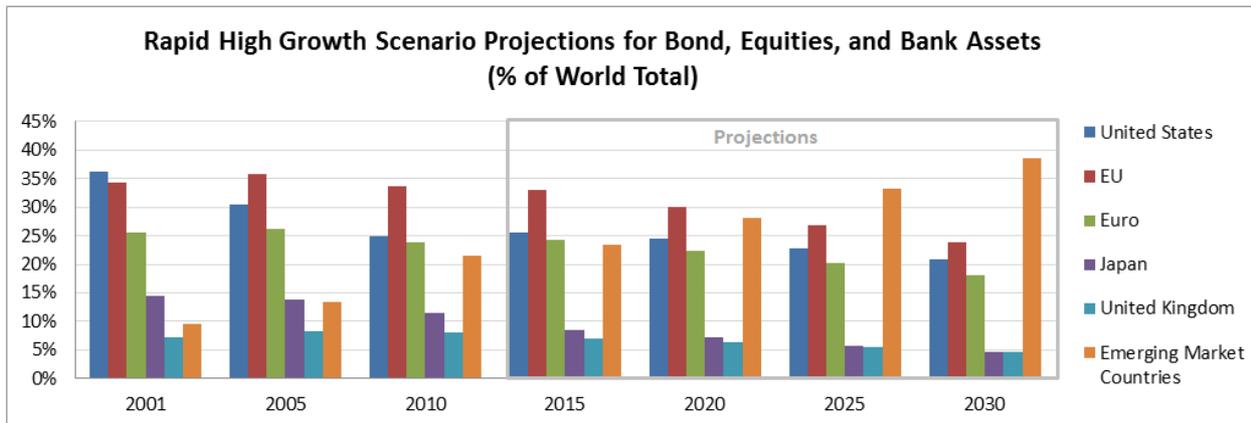
- (i) In the rapid growth scenario, the EMEs would have a higher growth trajectory in the financial markets. In 2010, the share of the EMEs in the world financial assets was 22 percent, but by 2030, the EME share may rise to 39 percent of world financial assets. Also see Figure 6 and Table 5 for projections in percent and US dollar.
- (ii) In the gradual low growth scenario, EMEs has a relatively constant growth path; that is by 2030, the EMEs share of global financial assets would increase to 28 percent from 22 percent. Also see Figure 7 and Table 5 for projections in percent and US dollar.

The projections for the share EMEs as percent of world GDP are 36 percent and 45 percent in a gradual low growth and rapid high growth scenarios respectively.

Table 3: Projected EME Shares of World Financial Assets and GDP

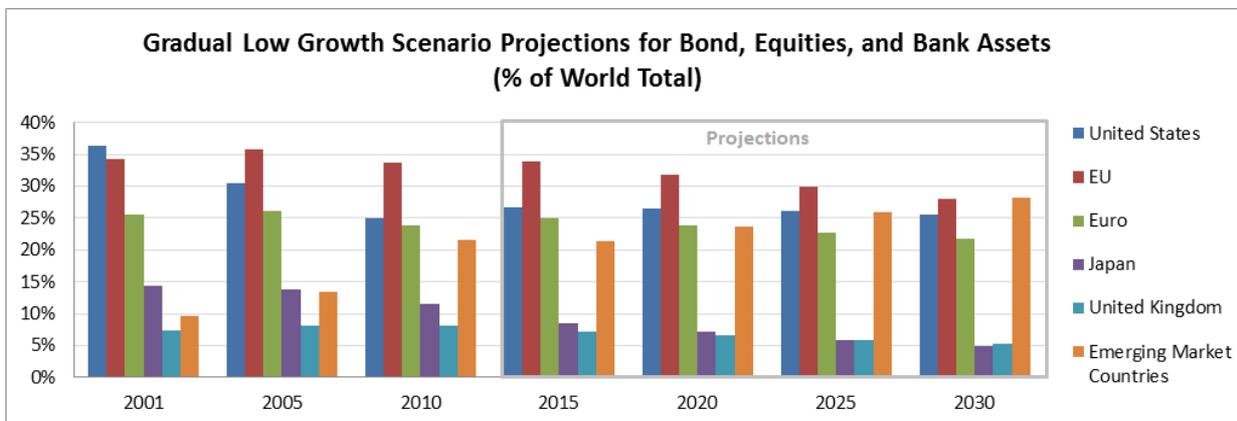
	Financial Assets			GDP		
	2010	2030	2030 \$trn	2010	2030	2030 \$trn
Rapid Growth	22%	39%	\$223.9	37%	45%	\$58.8
Gradual Growth	22%	28%	\$156.4	37%	36%	\$45.6

Figure 6: Projections for Financial Assets under Rapid High Growth Scenario



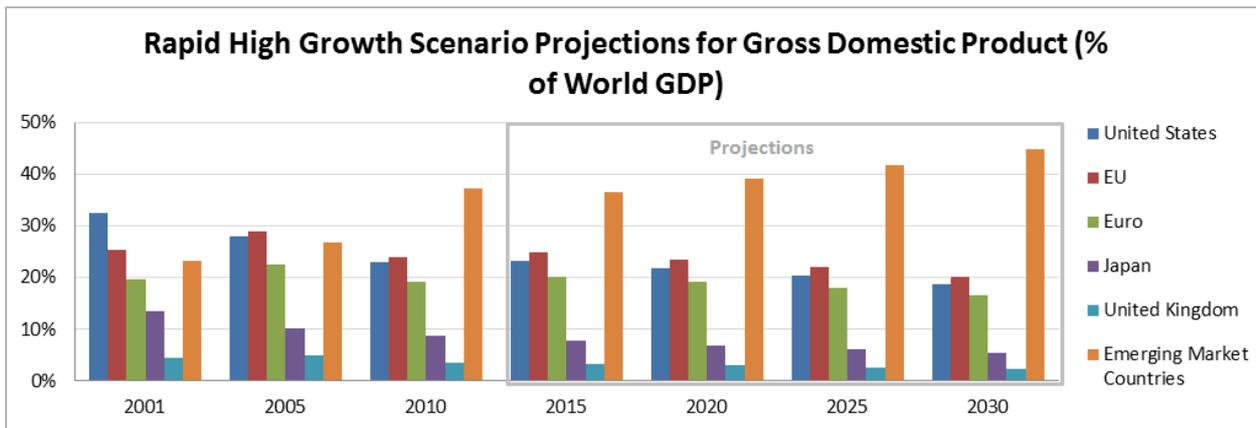
Source: Author's projections, based on *Global Development Horizons*, World Bank (2013), and ADB (2011) assumptions and growth rates.

Figure 7: Projections for Financial Assets under Gradual Growth Scenario



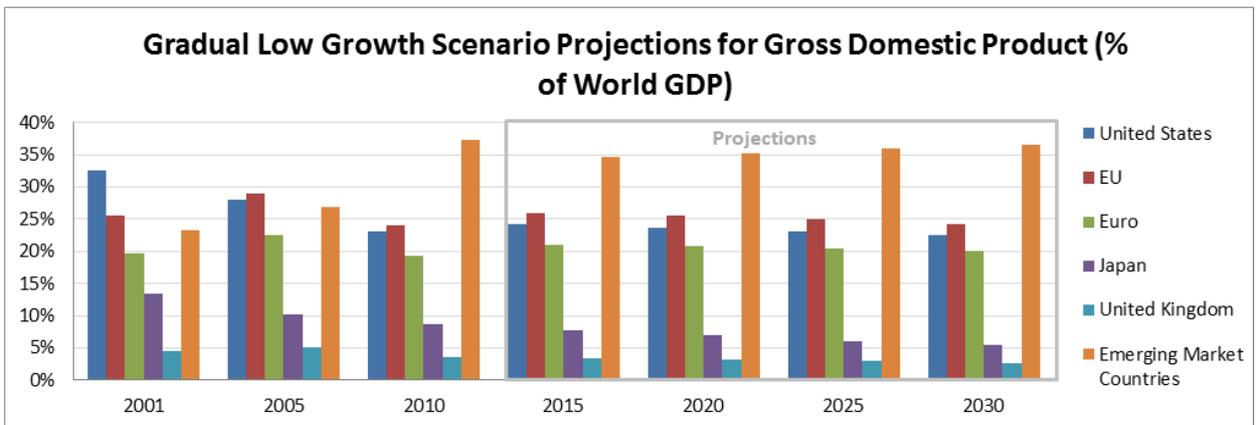
Source: Author's projections, using *Global Development Horizons*, World Bank (2013), and ADB (2011) assumptions and growth rates.

Figure 8: Projections for GDP under Rapid Growth Scenario



Source: Author's projections, using *Global Development Horizons*, World Bank (2013), and ADB (2011) assumptions and growth rates.

Figure 9: Projections for GDP under Gradual Growth Scenario



Source: Author's projections, using *Global Development Horizons*, World Bank (2013), and ADB (2011) assumptions and growth rates.

3.3 Projection Analysis for Financial Assets and GDP

Based on the World Bank scenario projections for the GDP, this study applied these growth rates to the GDP data compiled by the Global Financial Stability Reports. Table 4 summarizes the projections of Emerging Asia countries and advanced countries in the Euro

area, the U.S., and Japan. In a rapid high growth scenario, the EMEs are expected to grow to 45 percent of world GDP, in contrast to 36 percent of GDP in a gradual low growth scenario. In both scenario projections, it is clear that the advanced economies will have slower growth while EMEs will outperform them (Table 4).

Table 4: Projections for GDP under Rapid and Gradual Scenarios

GDP (In billions of U.S. dollars)	Rapid High Growth (In billions of U.S. dollars)						
	2001	2005	2010	Projections			
	2015	2020	2025	2030			
World	30995	44595	63075	71287	86178	105570	131182
United States	10082	12456	14527	16548	18888	21560	24609
EU	7907	12879	15172	17805	20327	23225	26557
Euro	6113	10031	12134	14360	16518	19012	21894
Japan	4165	4557	5488	5570	6025	6518	7051
United Kingdom	1423	2231	2263	2410	2622	2852	3103
Emerging market countries	7212	12014	23533	26076	33698	44198	58771
	Rapid High Growth (Percentage)						
	Projections						
As a Percent of World GDP	2001	2005	2010	2015	2020	2025	2030
United States	33%	28%	23%	23%	22%	20%	19%
EU	26%	29%	24%	25%	24%	22%	20%
Euro	20%	22%	19%	20%	19%	18%	17%
Japan	13%	10%	9%	8%	7%	6%	5%
United Kingdom	5%	5%	4%	3%	3%	3%	2%
Emerging Market Countries	23%	27%	37%	37%	39%	42%	45%

GDP (In billions of U.S. dollars)	Gradual Low Growth (In billions of U.S. dollars)						
	2001	2005	2010	Projections			
	2015	2020	2025	2030			
World	30995	44595	63075	71159	85306	102902	124956
United States	10082	12456	14527	17180	20233	23828	28061
EU	7907	12879	15172	18470	21750	25644	30273
Euro	6113	10031	12134	14928	17741	21103	25124
Japan	4165	4557	5488	5501	5889	6304	6748
United Kingdom	1423	2231	2263	2467	2737	3036	3367
Emerging market countries	7212	12014	23533	24675	30114	36944	45553
	Gradual Low Growth (Percentage)						
	Projections						
As a Percent of World GDP	2001	2005	2010	2015	2020	2025	2030
United States	33%	28%	23%	24%	24%	23%	22%
EU	26%	29%	24%	26%	25%	25%	24%
Euro	20%	22%	19%	21%	21%	21%	20%
Japan	13%	10%	9%	8%	7%	6%	5%
United Kingdom	5%	5%	4%	3%	3%	3%	3%
Emerging Market Countries	23%	27%	37%	35%	35%	36%	36%

Source: Author's projections, using *Global Development Horizons*, World Bank (2013), and ADB (2011)

assumptions and growth rates..

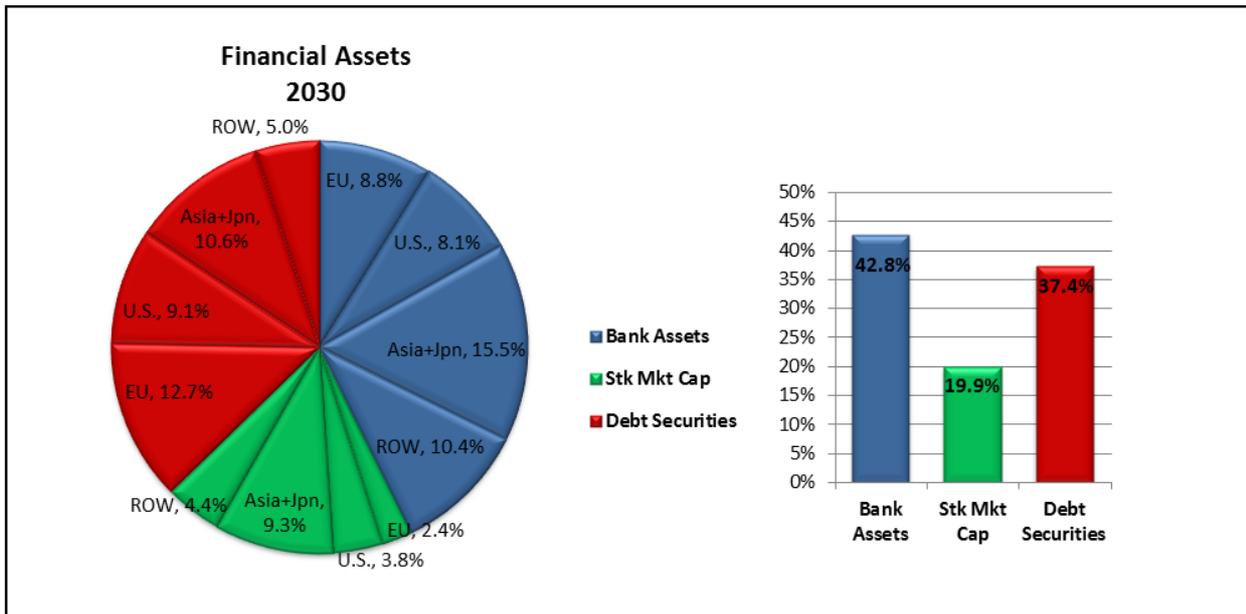
Table 5: Projections for Financial Assets under Rapid High and Gradual Low Scenarios

Bond, Equities, and Bank Assets (In billions of U.S. dollars)	Rapid High Growth (In billions of U.S. dollars)						
	2001	2005	2010	Projections			
	2015	2020	2025	2030			
World	150069	165130	256901	290553	358316	451167	580362
United States	54488	50398	64000	74146	87370	102952	121313
EU	51546	59229	86557	96203	107652	121447	138251
Euro	38233	43159	61272	70686	79958	91370	105563
Japan	21628	22835	29426	24887	25507	26143	26794
United Kingdom	10982	13509	20978	20414	22446	24681	27138
Emerging market countries	14357	22067	55385	68297	100820	149641	223886
	Rapid High Growth (Percentage)						
	Projections						
As a Percent of World	2001	2005	2010	2015	2020	2025	2030
United States	36%	31%	25%	26%	24%	23%	21%
EU	34%	36%	34%	33%	30%	27%	24%
Euro	25%	26%	24%	24%	22%	20%	18%
Japan	14%	14%	11%	9%	7%	6%	5%
United Kingdom	7%	8%	8%	7%	6%	5%	5%
Emerging Market Countries	10%	13%	22%	24%	28%	33%	39%

Bond, Equities, and Bank Assets (In billions of U.S. dollars)	Gradual Low Growth (In billions of U.S. dollars)						
	2001	2005	2010	Projections			
	2015	2020	2025	2030			
World	150069	165130	256901	290910	356322	441851	554573
United States	54488	50398	64000	77443	94624	115616	141265
EU	51546	59229	86557	98856	113572	132077	155724
Euro	38233	43159	61272	72806	84801	100271	120533
Japan	21628	22835	29426	24867	25468	26085	26716
United Kingdom	10982	13509	20978	20884	23403	26226	29389
Emerging market countries	14357	22067	55385	62168	84433	114830	156369
	Gradual Low Growth (Percentage)						
	Projections						
As a Percent of World	2001	2005	2010	2015	2020	2025	2030
United States	36%	31%	25%	27%	27%	26%	25%
EU	34%	36%	34%	34%	32%	30%	28%
Euro	25%	26%	24%	25%	24%	23%	22%
Japan	14%	14%	11%	9%	7%	6%	5%
United Kingdom	7%	8%	8%	7%	7%	6%	5%
Emerging Market Countries	10%	13%	22%	21%	24%	26%	28%

Source: Author's projections, using *Global Development Horizons*, World Bank (2013), and ADB (2011) assumptions and growth rates..

Figure 10: Share of Financial Assets 2030



Source: Author's projections, based on ADB (2011) study.

Figure 10 gives the decomposition of the projected global financial assets by 2030 in terms of bank assets, stock market capitalization and debt securities by region. By 2030, it is projected that the global financial assets would comprise mainly 43 percent in bank assets.

Section 4: The Scenarios for Financing Development

Sections 2 and 3 have already suggested that there is unlikely to be any global shortage of savings to fund investment. The real bottleneck or constraint is the *quality* of intermediation, at both the domestic and international levels, rather than the *quantity*. Indeed, one of the problems of modern finance is that if the spread (between the lending rate and the cost of funds) declines due to competition and the lowering of transaction costs through technology, the financial business needs to expand transaction volume and book size in order to maintain the same level of profit. Hence, in the face of increasing competition and decline in spreads,

the volume of transactions has gone up, the size of the largest players rises with scale expansion and concentration, and risks intensify as leverage increases. In other words, speed and scale plus complexity added to system fragility.

There is awareness that system stability and resilience depends on the *quality* of financial intermediation. If the quality of intermediation suffers from the three mismatches – liquidity, foreign exchange and structural - and there is insufficient exercise of credit discipline and hard budget constraint (the exit of insolvent and inefficient institutions), then the financial sector will embark on “financialization of credit for its own profit”, thus creating unsustainable bubbles and ultimately financial crash.

This was the fundamental flaw of the current banking and shadow-banking model, whereby the banking industry created credit (and shadow credit) through moving leverage off-balance sheet and off-shore to escape the regulatory net and increasing transaction volume through proprietary trading. As advanced country regulators did not pay sufficient attention to this leverage, the financial system as a whole became skewed by leverage and the chase for yield. This has contributed to the widening inequality, since there was less attention paid to inadequate financial access by under-privileged groups, lending to SMEs and lending to finance infrastructure and other development projects with long gestation.

This section examines the current and future sources of development finance, focusing on both products and institutions, particularly long-term institutions capable of funding development. There are, of course, other sources of funding from the foreign sector, through capital flows, and also sources of domestic funding.

Future sources of development finance:

As discussed in Section 2, financial depth in the EMEs is still low, as out of total financial assets/GDP ratio of 179 percent of GDP, the banking sector accounted for 100 percent of GDP or roughly 55 percent of total financial assets. This dichotomy is evident in China, for example, where banking assets accounted for 241.6 percent of GDP, whereas pension, insurance and mutual funds accounted for 19 percent of GDP. In contrast, banking system assets accounted for only 22.8 percent of total financial assets in the United States. In particular, there is significant room for further deepening of EME capital (stock and debt) markets, which currently represent only 75 percent of GDP. Capital market development, especially of the equity market - as opposed to the debt market - will have the added advantage of helping to deleverage the real sector and promote more sustainable growth.

Foreign Sector: As indicated above, foreign capital in the form of foreign direct investments (FDI), foreign portfolio investments (FPI) and foreign aid are traditionally important sources of development funding for EMEs. There are, however, limits to foreign borrowing, because excessive reliance on foreign funding makes an economy vulnerable to foreign exchange liquidity risks when there is a sudden exodus of funds. Studies of the Asian financial crisis indicated that Asian crisis economies became vulnerable when their net foreign exchange liabilities exceeded 50 percent of GDP¹⁵. Another indicator of foreign exchange vulnerability is embedded in the Maastricht criteria, which specifies that the current account deficit must not exceed 3 percent of GDP, since current account deficits require foreign exchange funding. In 2012, the US had a current account deficit of -3.0 percent of GDP, and a net international investment position (net foreign exchange) deficit of 27.9 percent of GDP¹⁶.

¹⁵ Sheng, Andrew, *From Asian to Global Financial Crisis*, Cambridge University Press, 2009, Table 2.1, page 69.

¹⁶ US Bureau of Economic Analysis, *Net International Investment Position*, Fourth Quarter 2012. <http://www.bea.gov/newsreleases/international/intinv/2013/pdf/intinv412.pdf>.

The recent McKinsey Global Institute (MGI) study on Financial Globalization (2013) suggests that while EMEs have received a larger share (32 percent) of global capital flows in 2012, compared with 5 percent in 2000, these sources of saving may be declining as the advanced markets begin to age. Global current account imbalances have begun to narrow, as there was a 30 percent reduction in current account deficits in terms of GDP.

The good news is that 40 percent of cross border flows are in the form of foreign direct investment (FDI), the more stable form of capital flows. However, because advanced market interest rates are near zero, leveraged carry trade take advantage of interest rate arbitrage and generate large amounts of hot money flows that can be destabilizing.

The MGI study observed that capital flows to and from developing countries have actually rebounded since the sharp decline in 2008-09. In 2012, an estimated \$1.5 trillion in foreign capital in the form of South-South and North-South loans, FDI, equity and bonds flowed into emerging markets. Reflecting the surpluses of capital exporting EME countries, capital flows out of developing countries rose to \$1.8 trillion in 2012. Central bank foreign reserves accounted for roughly 45 percent of the total stock of foreign assets. Another \$1.9 trillion of these foreign assets are in other emerging markets or what is referred to as South-South investment.

These trends indicate that at the global level, the EMEs are not short of funds for foreign development, but since they are themselves surplus economies, substantial development finance can be obtained by increasing the efficiency of domestic intermediation and paying attention to the macro-prudential aspects of financing so that the whole economy will be more stable, with greater efficiency as well as financial inclusivity.

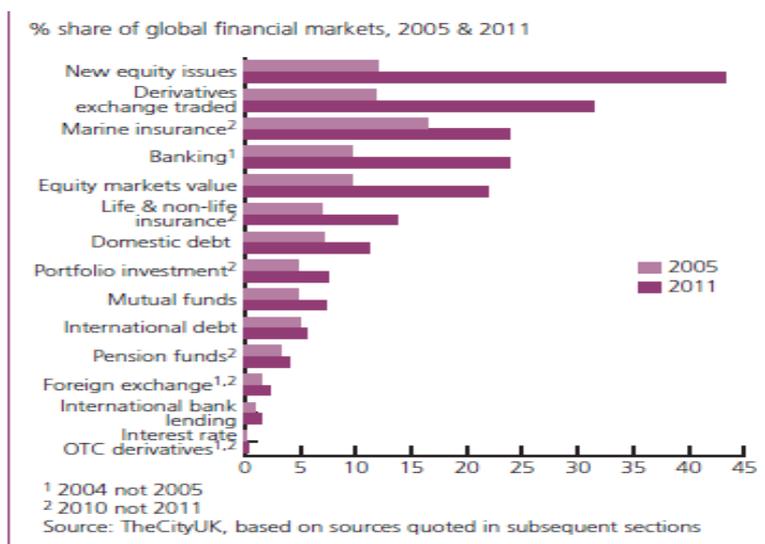
Data from TheCityUK show that while emerging economies still lack a presence in global financial market activity, (holding only 19 percent of world financial assets), their combined share in all the financial markets has been rising in recent years, particularly in equity

markets, derivatives exchange trading, banking and insurance¹⁷.

Emerging economies' share of global financial assets in 2011 (Figure 11) comprise:

- Equity markets capitalisation (22%).
- New equity issues (43%).
- Derivatives exchange trading (30%).
- Global banking assets (24%).
- Life and non-life insurance (14%).
- Domestic bond markets (11%).
- Value of international portfolio investments in EMEs is increasing (7.6%).

Figure 11: Emerging Economies' Share of Global Financial Markets



Because savings remain high in EMEs, financial asset growth has been fast relative to GDP growth, with the single exception of pension assets. Between 2005-2011, nominal GDP in EMEs rose by 131 percent, and other than slower pension asset growth, the rate of growth in

¹⁷ TheCityUK, *Financial Services in Emerging Economies*, Economic Trend Series, UK, July 2012.
<http://www.thecityuk.com/research/our-work/reports-list/financial-services-in-emerging-economies-2012/>.

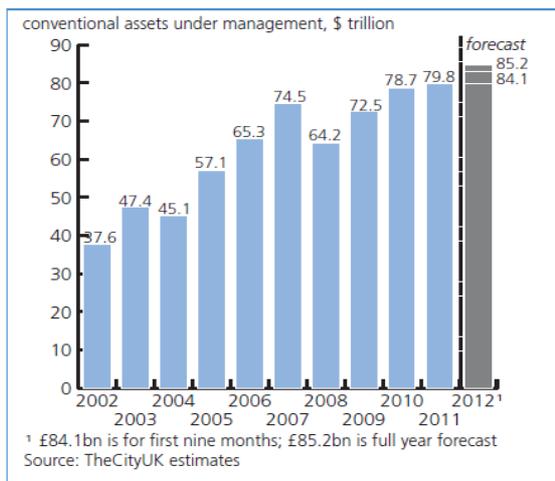
mutual fund doubled. Growth in domestic bonds, insurance premiums and equity market capitalization increased by between two and a half and three times. Bank assets increased more than four times and contracts traded on derivatives exchanges grew by more than sixfold between 2005 and 2011.

Domestic sector development: Another recent study by TheCityUK showed that conventional assets under management of the global fund management industry have increased to a record \$80 trillion in 2011 (Figure 12)¹⁸. In relative terms, the total fund management industry managed roughly 31 percent of total global financial assets of \$259 trillion at the end of 2011. TheCityUK estimates that funds increased by a further 5 percent in the first three quarters of 2012 to \$84 trillion and are likely to grow to around \$85 trillion by end-2012.

Pension assets account for nearly 40% of total funds with the remainder split almost equally between mutual funds and insurance funds. Together with alternative assets (sovereign wealth funds, hedge funds, private equity funds and exchange traded funds) and funds of wealthy individuals, assets of the global fund management industry amount to around \$120 trillion. These figures again support this paper's assessment that going forward, there are sufficient long-term sources of funds to finance development, including the MDG agenda.

¹⁸ TheCityUK, *Fund Management Report 2012*, London, UK, November 2012.
<http://www.thecityuk.com/research/our-work/reports-list/fund-management-2012/>.

Figure 12: Global Conventional Assets under Management



According to The CityUK estimates, total assets under management (AUM) as of end of 2011 amounted to \$79.7 trillion. The advanced economies accounted for the bulk (95.6 percent) of total, whereas the EMEs accounted for \$3.5 trillion or 4.4 percent only. In terms of AUM to GDP, the advanced economies were much more sophisticated, accounting for 157.7 percent of GDP, whereas EMEs had a comparable ratio of only 16.3 percent of GDP.

This analysis indicated two trends. The first is that the advanced economies have superior asset management skills, since they also manage much of the savings of the EMEs. The second is that there is considerable potential for the asset management industry in the EMEs to grow.

The corollary of this observation is that EMEs must put priority to develop the asset management industry in order to beef up the available resources for development finance.

However, the future of development finance can only be sustainable within the following four parameters:

1. Finance must serve the real sector, with surplus savings being used to finance consumption and investment that meet the needs of the community in an inclusive way.

2. Finance should have lower leverage and must assist the real economy in achieving high net worth and solvency. The financial system must have the ability to absorb the risks and uncertainties from external shocks and from the internal dynamics that create fragility.
3. Finance must have channels to help engineer financial inclusivity and green growth.
4. Finance is responsive to the adoption of innovation and technology to improve access by the under-served sectors of the economy.

Essentially, the future of development finance has to embark on three paths:

- First, deepen capital markets to reduce the current overdependence on banks for short-term financing and deepen equity markets to reduce the leverage of creditors;
- Second, develop long-term institutional investors like pension funds and insurance companies that invest long-term funds to finance long-term projects such as infrastructure and conservation of natural resources (e.g. rainforests and marine resources); and
- Third, harness the growing resources that are being built up in sovereign wealth funds, private equity, and venture capital to absorb higher risks and support innovative investments that promote long-term growth.

Path 1. Deepening capital markets in EMEs:

As the banking sector continues to dominate the financial system in many EMEs and developing countries, a key area of reform is to reduce the double mismatch problem (maturity and currency mismatch) that arise from using short-term domestic bank deposits and short-term foreign currency loans to finance long-term local currency investments.

In the absence of effective domestic capital markets in the past, excess savings from current account surpluses in EMEs were parked as foreign exchange reserves in the G4 countries. By advancing the pace of capital market development, EMEs can rechannel some of the surpluses toward development finance in the developing world. It will also provide a conduit for long term financing that meets the needs of institutional investors, such as insurance, pension funds, asset management and equity funds, and sovereign wealth funds. The development of asset securitization markets would also be important, including secondary mortgage corporations to create secondary mortgage markets for promoting more affordable home ownership.

It is understood that developing long-term institutional investors will be a long-term effort, requiring not just expertise and skills (such as actuaries and asset managers), but also major reforms in licensing, portfolio requirements and changes to labour and social security laws.

Path 2: Meeting the strategic objectives of institutional investors:

In order to develop long-term institutional investors such as pension funds and insurance companies to better intermediate EME savings to fund long-term development finance, there is a need for a multi-prong approach to address existing barriers to long-term financing. The Group of 30 (G-30) Working Group on Long-term Finance¹⁹ cited four principles to support the growing need for long-term finance and address regulatory changes, market developments, issues of international coordination, and the creation of new institutions:

- The financial system should channel long term savings to meet the growing investment needs of the real economy.
- Long-term finance should be supplied by entities with committed long-term horizons.

¹⁹ Group of 30, Working Group on Long-term Finance, *Long-term Finance and Economic Growth*, Washington D.C., 2013.

- A broad spectrum of financial instruments should be available to support long-term investment,
- An efficient global financial system should promote economic growth through stable cross-border flows of long-term finance, supported by appropriate global regulations.

As noted in the G-30 report, ensuring an adequate supply of long-term finance to match the needs of the global economy as it emerges post-crisis is a major challenge. In particular, there is an urgent need for sufficient long-term finance. The solutions are not simple: they are complex, multifaceted, and multidimensional. No single authority can drive change in this arena. But the findings of the G-30 report make clear that strengthening the provision of financing for long-term investment will be critical to the building of a solid foundation for economic growth and job creation and the achievement of the MDG agenda in the years to come.

Institutional investors or non-bank financial intermediaries (led by pension funds, insurance companies, mutual funds, sovereign wealth funds, hedge funds and private equity funds) represent a segment of the financial system that is rapidly catching up with the banking system. Assets of the global fund management industry have accelerated from \$13.8 trillion in 1990 to \$60.3 trillion in 2009²⁰, with CityUK estimates placing the figure at \$80 trillion in 2011. Including alternative assets, which would include investments in commodities and real estate, the crude estimate is that global assets under management amounted to roughly \$120 trillion in 2011. In comparison, global banking assets amounted to \$113.8 trillion in 2011²¹.

In other words, the asset management business is becoming more important than banking business, especially if such asset managers are able to improve on the risk-reward tradeoff of

²⁰ International Monetary Fund, *Global Financial Stability Report*, Washington D.C., September 2011. Chapter 2, Long-term investors and their asset allocation: Where are they now?

²¹ Sources of data: IFS, OECD and IMF staff estimates.

providing higher returns relative to risks than short-term bank deposits. Given the aging profile of both advanced economies and parts of the EMEs, higher returns to savers would help alleviate poverty and address social inequalities.

Given the low yields arising from quantitative easing and low interest rate policies in the advanced markets, the asset allocation strategies of private and official institutional investors have changed since the global financial crisis. They have become more risk conscious, especially with respect to liquidity and sovereign credit risks, but at the same time, amid a low interest rate environment, they are seeking new asset classes that have positive long-term growth prospects and yield positive returns. In fact, institutional investors' allocations to emerging markets are already on a rising trend. EMEs should therefore position themselves to capture the rise in investment capital to emerging markets by developing their domestic capital markets based on the eight cornerstones of efficient markets, namely:

1. Common values, beliefs and ownership
2. Defined property rights, resources and low transaction costs
3. Information, knowledge, technology, wisdom/experience
4. Common standards
5. Codes, rules and laws
6. Processes and procedures
7. Structure, architecture, hierarchy
8. Incentives and governance

The remainder of this section examines the institutions that EMEs should foster in order to deepen their financial systems.

a) Pension Funds:

Pension funds are among the largest institutional investors in both advanced and developing countries with global assets under management (AUM) estimated at \$32 trillion in 2011 or 40 percent share of global AUM (TheCityUK estimates). Pension funds have traditionally invested significantly in equities (average of 50 percent according to IMF data) and bonds (32 percent in 2003). Other assets include real estate, private equity, commodities and hedge fund products.

In 2012, The CityUK estimated global pension assets to have grown to \$33.9 trillion²². In 2008, the industry suffered a 16 percent drop in pension assets. The largest pension markets in the world are in the U.S. (56 percent of assets), the U.K. (10 percent), Canada (7 percent), Japan (4.7 percent) and Australia and the Netherlands with 4 percent each. These countries have pension assets in excess of \$1 trillion each.

Pension assets of \$30.5 trillion in 34 OECD (advanced) countries accounted for 97 percent of the end-2011 global total. The OECD weighted average asset-to-GDP ratio for pension funds increased from 67.3 percent of GDP in 2001 to 72.4 percent of GDP in 2011²³. EMEs accounted for less than 3 percent of total global pension assets, therefore suggesting they have significant potential to grow, given their faster GDP and saving rates. The larger EME pension markets include Brazil (\$308 billion); South Africa, South Korea, Mexico and Chile with between \$100-200 billion each. By comparison, the weighted average pension asset-to-GDP ratio for selected non-OECD markets was only 15.1 percent.

Policy makers engaged in the reform of financial systems in EMEs also recognize the prudence of mobilizing long-term pension funds for long term investments in emerging

²² TheCityUK, *Pension Markets 2013*, London, March 2013. <http://www.thecityuk.com/research/our-work/reports-list/pension-markets-2013/>.

²³ OECD, *Pension Markets in Focus*, Paris, September 2012, pg.16. <http://www.oecd.org/daf/fin/private-pensions/PensionMarketsInFocus2012.pdf>.

markets, such as in infrastructure financing (Asia alone will need a total of \$8 trillion over the period 2010-2020).²⁴ Pension funds are also active investors in domestic bond markets and also investors in alternative investments that take long-term risks within an economy.

In the advanced economies, the onset of a prolonged period of monetary easing, low interest rates and consequent fall in government bond yields, have diluted the returns on pension funds portfolios, leaving them with growing financing gaps, especially in Europe. An anticipated trend among pension fund managers is to seek new models to address their funding gaps that will not preclude investing in emerging markets if there are opportunities for higher returns.

In contrast, the current state of development of EME pension funds still lags that of the advanced economies. Given their nascent stage of development, EME pension funds have a huge potential for future growth that will help to open up an untapped source of development finance. The potential is especially significant amid the rapidly expanding EME economies, young demographic profile and growing labour force. In the case of China, for example, assets under management by pension funds have increased five-fold from US\$8 billion in 2005 to US\$41 billion in 2010. But they represent only 0.7 percent of GDP, compared with the global average of 46 percent of GDP.

Even a small increase of Chinese pension funds to say, 10 percent of GDP would add significantly to social security and provide an additional source of long-term funding for developing the domestic debt and equity markets.

The Central Provident Fund in Singapore, and the Employees Provident Fund in Malaysia are models of how employee savings have been successfully recycled to finance home ownership and funding of government expenditure on social infrastructure.

²⁴ Asian Development Bank Institute, *Infrastructure for a Seamless Asia*, Tokyo, 2009.

The above discussion suggests that the sizeable reserves of EME pension funds can help meet the much needed financing for development. Development of long-term pension funds will also address the maturity, foreign exchange and structural mismatches of the banking system, and hence promote financial stability. By participating in long-term finance, pension funds and insurance funds will also be able to preserve and enhance their fund position and reserves. This will contribute to promoting inter-generational equity, and provide a relatively more stable rate of return.

The potential for EME pension funds to provide long-term funds for development will, however, require policy action to create an enabling environment for their growth. In particular, institutional reforms and an appropriate governance structure are important to facilitate the growth of EME pension funds.

b) Insurance Companies:

The insurance industry is both an important risk intermediary as well as an important source of long-term funds and active institutional investor in capital markets. According to IMF and OECD estimates, insurance companies had asset holdings of \$20 trillion or 57.7 percent of total global AUM in 2009. TheCityUK data estimated that insurance assets have increased further to \$24 trillion by the end of 2011. Insurance companies hold the highest proportion of their assets in fixed-income instruments (about 50 percent in domestic bonds and another 10 percent in foreign bonds), and the balance mainly in domestic and foreign equities. As a result, the returns on insurers' investment portfolios have suffered because of persistent low bond yields. In this low interest rate environment, life insurance companies are badly affected because they typically cannot reprice their policies, which could involve tenures of 30 years or more. In framing the future of finance in EMEs, insurance companies could invest more in long-term development finance projects, such as in infrastructure, in order to match their

long-term liability profile. Given their long-term liabilities profile, insurance companies are also important investors in alternative investments, including taking equity in projects with social impact.

The CityUK estimated that global insurance premiums amounted to \$4.6 trillion²⁵. Premiums dropped by 1.1 percent in advanced countries and increased by 1.3 percent in emerging markets.

Advanced economies account for the bulk of global insurance premiums. The top four groups account for over half of total premium income, with Europe the most important region, followed by North America, and Asia, of which Japan was the most important. The U.S. and the U.K. account for only 7 percent of world population, but take up over a third of world insurance premiums. Emerging markets accounted for over 85 percent of the world's population but generated only around 10 percent of premium revenue.

As in the case of pension funds, the EME insurance industry is also less well developed compared with the advanced economies, but constitutes one of the fastest growing segments of the financial system. Reflecting a combination of low penetration rates, strong fundamentals and rapid economic growth, the insurance industry in China, for example, expanded by 4 times, from US\$171 billion in 2005 to US\$720 billion in 2010. But this only accounted for 12 percent of GDP in 2010, compared with a global average of 39 percent of GDP. Similar patterns of under-insurance occur in other EMEs.

Efforts to encourage EME insurance companies to assume a greater role in providing long-term development finance will not only address the industry's search for long-term assets to match their long-term liabilities, they will also promote greater liquidity in the capital market and reduce overreliance on the banking sector for long-term finance, thereby facilitating

²⁵ TheCityUK, *Insurance 2013*, London, January 2013. <http://www.thecityuk.com/research/our-work/reports-list/insurance-2013/>.

greater financial stability.

c) Sovereign wealth funds:

Sovereign wealth funds (SWFs), which are special purpose investment vehicles that are owned by governments to increase the yields on their surplus investments have the potential to become a major source of long term development finance in EMEs. SWFs were commonly established out of balance of payments surpluses, official foreign currency operations, privatization proceeds, fiscal surpluses and revenues from the mineral wealth of oil exporting countries. SWFs have the mandate to employ a wide range of investment strategies with a medium- to long-term timeframe. Large surplus economies like Norway and oil economies like Abu Dhabi and Qatar have sovereign wealth funds that invest in both advanced and emerging markets. The Singapore, Chinese and Malaysian sovereign wealth funds have also become major investors in emerging markets, taking long-term equity positions and investing in infrastructure projects in Asia and Africa.

SWFs are the fastest growing new financial institutions with long-term strategic aims. In 2003, their total size was estimated at only \$500 billion²⁶. By 2012, The CityUK estimated that SWFs increased to a record \$5.2 trillion. Including an additional \$7.7 trillion held in other sovereign investment vehicles, such as pension reserve funds, development funds and state-owned corporations' funds and \$8.4 trillion in other official foreign exchange reserves, The CityUK projections suggest that governments of SWFs, largely those in emerging economies, have access to pools of funds exceeding \$20 trillion²⁷.

²⁶ Truman, Edwin M, *Sovereign Wealth Funds: Threat or Salvation*, Peterson Institute of International Economics, Washington D.C., September 2010.

²⁷ TheCityUK, *Sovereign Wealth Funds 2013*, London, May 2013. <http://www.thecityuk.com/research/our-work/reports-list/sovereign-wealth-funds-2013/>.

Generally, SWFs have three main dimensions in their objectives, namely stabilization, developmental and intergenerational.

- Stabilization funds smooth out the effects of the key national income generators (e.g. oil or copper) on the national economy and budget, focusing less on getting superior returns. These funds may not participate in long-term investing as they need to provide large capital funding particularly in times of stress. Hence, their assets are mainly cash and high-grade fixed income.
- Developmental funds channel economic surpluses into the long-term promotion of the national economy, making long-term investments.
- Multigenerational funds provide financial support for future generations and have a long-term investing mandate. These funds aim to improve intergenerational equity, smoothing revenues generated and improving welfare for the next generations. Their assets are more diversified with greater exposure to risky assets.

SWFs represent potential long-term investors and they will likely become the largest contributor of long-term capital in the future. The world needs patient capital for stable, long-term economic growth. Their investment, if properly made, will help fund future social obligations of ageing populations. They need to transform their resources into sustainable and stable future income, creating broader social benefits.

Considering their size, SWFs have the ability to protect the economy from destabilizing fluctuations and avoid boom/bust cycles if the funds are well managed. They can also take on the shock-absorbing role in global financial markets, at least in terms of reducing short-term market volatility. When the global financial crisis unfolded, SWFs had provided the crucial capital to economies in urgent need of new funding. Since they are often the only part of the government bureaucracy that understands markets, they play an important educational role in the formulation of public policy. Even though they can be a source of stability, it should be

noted that they also represent a possible conflict of interest since SWFs compete with the private sector in market activities.

The EMEs are likely to increase their investments in SWFs arising from their surplus saving in order to obtain higher returns and deploy such investments more efficiently. Given their long-term resources and with their stable capital base, SWFs have natural first mover advantage to take on the role to support these imperatives. Operating within an appropriate governance framework and good institutions, SWFs can play their role to contribute to the global public good through 'real' money contracts and non-casino-based capitalism.

d) Other institutional investors:

As can be seen in Figure 13, total funds under management other than pension and insurance funds, comprise mutual funds (\$23.8 trillion), hedge funds (\$1.9 trillion), private equity funds (\$2.2 trillion), exchange traded funds (ETF or \$1.4 trillion). These represent a substantial pool of funds of another \$30 trillion that are in search of investment in quality assets that generate good returns.

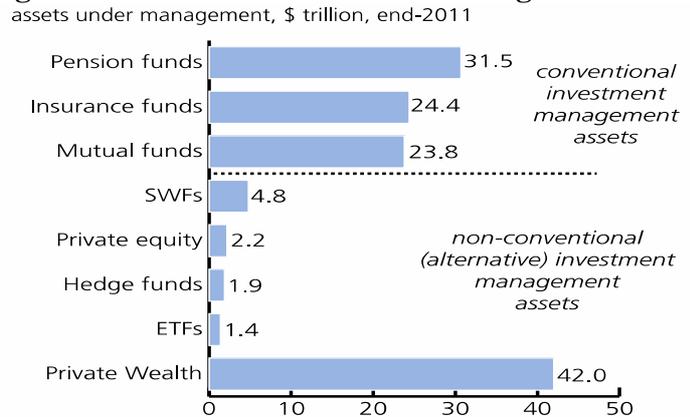
This paper has excluded discussion over money market funds (\$23.8 trillion AUM) and Exchange Traded Funds (\$1.4 trillion AUM) because they are essentially short-term instruments that do not contribute substantially towards long-term development finance.

In addition, private wealth alone accounted for an estimated \$42 trillion or 59.8 percent of global GDP in 2011. For example, the World Economic Forum/Oliver Wyman²⁸ Report estimated that in 2009, the family offices (private management of family wealth) managed \$1.2 trillion and foundations/endowment funds managed another \$1.3 trillion. As EMEs move into the middle income stage, the size of such funds is likely to grow significantly,

²⁸ World Economic Forum and Oliver Wyman, *The Future of Long-term Investing*, Geneva, 2011.

relative to their counterpart funds in the advanced markets.

Figure 13: Global Assets Under Management



¹ Around one-third of private wealth is incorporated in conventional investment management
Source: TheCityUK estimates

The academic literature on development finance has tended to pay less attention to the evolution of new, long-term investors that are increasingly playing a major role in the development of financial markets. Although there has been considerable attention on the speculative role of hedge funds, in recent years there has emerged different long-term investors with the capacity to hold illiquid assets for a long time, and with the capability to get themselves involved in the management of such assets, including in the governance framework.

As discussed above in the case of sovereign wealth funds (SWFs), other funds, such as Private Equity, Venture Capital, Family Offices, Endowment Funds, and the like have long-term horizons, and are able to withstand short-term illiquidity and asset price volatility in order to realize long-term value. The tradeoff between liquidity and time horizon is shown in Figure 14 below.

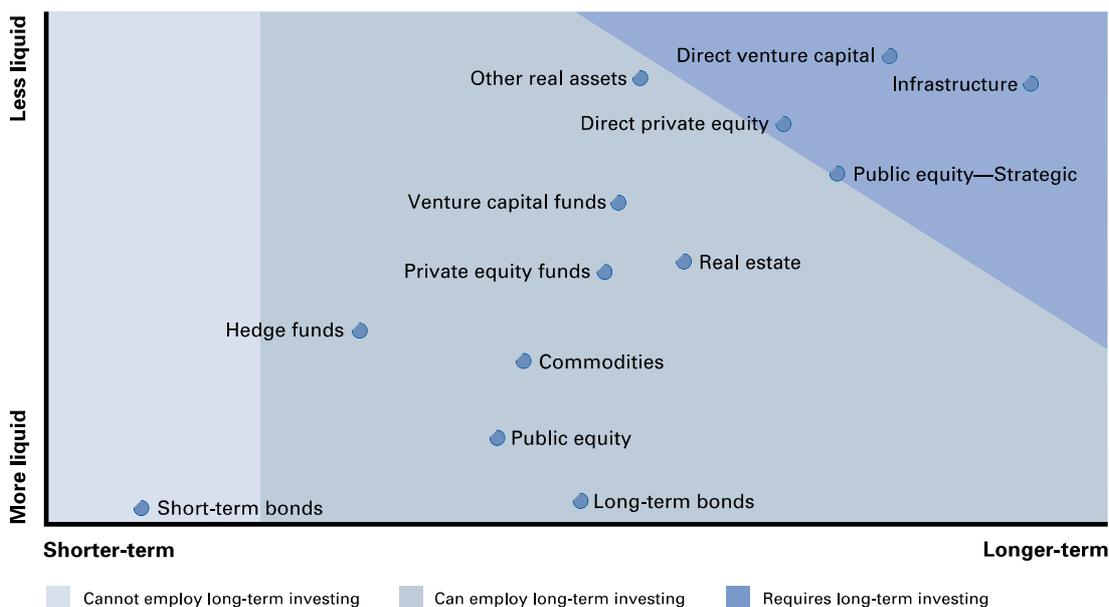
These funds very quickly build up specific expertise, such as infrastructure funds or real estate investment trusts, that have the capacity to identify, implement, manage and realize value through traditional markets. They arose because the traditional or conventional investment products, such as bank deposits, mutual funds, fixed income debt and listed equity

are by nature short-term and do not provide sufficient yield. At the same time, the traditional institutions, such as the banking industry, are heavily regulated and are not able to take long-term investor risks.

The combination of huge demand for infrastructure investments in both the advanced and emerging economies mean that this trend of alternative investment vehicles can only grow relative to the traditional financial institutions, such as banks. McKinsey has argued that part of the reason for the recent high level of saving relative to investment is that there was under-investment in the advanced economies to the tune of \$20 trillion²⁹.

Figure 14: Fund Management trade-offs between liquidity and maturity

Asset-class liquidity vs. time horizon



Source: World Economic Forum-Oliver Wyman, *The Future of Long-term Investing*, 2011.

e) Islamic Finance:

²⁹ McKinsey Global Institute, *Financial Globalization: Retreat or Reset?*, March 2013.

Islamic finance is an example of equity-based financing that has been neglected for a long time, because the saving of the Muslim community (where there is a prohibition on usury or payment of interest) was not tapped. In recent years, pioneered by Malaysia and the Gulf economies, Islamic finance has grown in size to roughly \$1.6 trillion in size, mostly through the development of Islamic banking (80 percent) and the issuance of sukuk or Islamic bond products (14.6 percent)³⁰. Between 2007 and 2011, Islamic banking assets grew at a compound annual growth rate of 21.1 percent.

With the creation of the Islamic Financial Services Board, the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) and the multilateral central banking facility for Islamic finance, the framework for Islamic finance is ready to take off, as the global Islamic population amounted to 1.6 billion, residing in economies that are natural resource rich stretching from parts of Africa, Middle East, Central and South Asia to Indonesia.

Since Islamic Finance encourages financing for the real sector using real commodities, the scope for Islamic insurance projects (Takaful) as risk-sharing instruments carries great promise. As these long-term institutions begin to grow, alternative sources of development finance are being cultivated to suit specific needs.

f) Financial Inclusion and Green Growth:

Financial inclusion is defined as the delivery of financial services, at affordable costs, to sections of disadvantaged and low-income groups segments with little access to financial services. Financial inclusion became important as policy makers became aware that tackling poverty requires the poor to learn how to help themselves, but they must first have equal

³⁰ Kuwait Finance House Research Ltd, *Global Islamic Banking 2013*, Kuala Lumpur, Malaysia, February 2013.

access to funding and financial services.

In many EMEs, such as India, financial inclusion and financial literacy go hand in hand, because the poor must be educated to learn how to do business and how to use modern financial services. The policy action is to reduce transaction costs for the poor or under-privileged, and empower them through technology, better bank branch networks and provision of services that are more user-friendly. These include, no-frills accounts, relaxation on know-your-customer (KYC) norms, including Unique Identification numbers for the poor, using agent banking to reach the poor, adoption of mobile technology to increase coverage, adoption of simple electronic banking, credit cards for small trade payments, and encouragement of bank branches in unbanked rural areas.

In Indonesia, for example, wet-market banking through mobile bank units have been particularly successful in providing instant credit to small farmers and traders in wet markets. While these forms of micro-credit, often provided jointly through non-governmental organizations (NGOs), may have been successful in providing short-term credit, they have not been able to increase the capital base of SMEs to allow them to invest for the future.

The rise of charitable foundations and family offices has given rise to a new form of development funding, especially in green growth and anti-poverty programs. The foundations have the resources to provide seed-capital for farmers to deal with environmental problems, such as forest conservation, marine stock replenishment etc, whereas long-term institutions, such as policy banks, can help supplement resources by funding the infrastructure for such green growth projects to be implemented.

The area of “impact investing”, in which endowment foundations and family offices attempt to incubate social entrepreneurs to engage in development is still very new. But this area of funding is growing fast and could be another source of development funding that warrants closer attention.

Path 3. Innovating the Financing of Investment

There is increasing awareness that development is not just about finance, but about governance, institutional incentives, developing property rights infrastructure and the international environment. Increasingly, EMEs must be able to innovate in order to generate growth with resource constraints. This means investments in hard and soft infrastructure, specifically in the property rights infrastructure that protect property rights for markets to function more effectively.

Education and knowledge skills can be imported, but mistakes can be made in adopting policies that do not fit local conditions or distort incentives that worsen system efficiency, social equality or environmental sustainability. For example, the import-substituting policies that were fashionable in the 1950s proved to be protective of inefficient industries and encouraged rent-seeking that were ultimately corrosive on development.

This section examines the specific issues related to funding for investment in infrastructure and small and medium enterprises (SMEs). Investments that contribute to social inclusiveness would include the financing of housing for the low and middle- income groups. Investing in a green environment is for the future welfare of the next generation.

a) Investment in infrastructure:

In the early 1990s, 70 percent of total infrastructure investments in EMEs were publicly financed, 22 percent were privately funded and the balance of 8 percent was funded by ODA. Given the constraints on public funding and ODA from the advanced markets, the composition of infrastructure funding is likely to change, with greater private sector financing

of infrastructure and this implies a bigger role for deep and liquid capital markets in EMEs to provide long term financing, preferably with back-end loaded amortization schedules.

Although long-term infrastructure has been traditionally implemented and funded through the public budget, the capacity of many EME bureaucracies to design, implement and fund such complex projects is increasingly constrained by a lack of professional talent, bureaucratic red-tape and complexities.

In recent years, based on the U.K. experience, large-scale infrastructure projects have moved toward adopting a public-private partnership (PPP) approach. The PPP basically involves a contract between a public sector authority and a private sector party to invest in developing a public good, typically in transportation, water, health and education, with risks and funding shared between the public and private sectors.

PPPs have been tested in Europe and the advanced countries and over the past two decades, more than 1,400 PPP deals were signed in the European Union, involving a capital value of €260 billion. Investment through PPPs has slowed down due to the global financial crisis, whilst in some EMEs, PPPs have been subject to public criticism due to allegations of corruption, lack of effective supervision and uneven implementation. The lesson here is not to reject PPPs wholesale, but to learn from recent experience how to overcome the implementation gaps in the different approaches of PPP, improve transparency, such as in the bidding and enforcement, that will improve not only the policy design but also the PPP governance and management.

b) Investment in SMEs (Mezzanine Capital):

Mezzanine capital is rapidly emerging as an innovative source of financing for SMEs. Originally from Europe, it has now spread to Asia. Mezzanine capital is a broad term

covering hybrid, flexible financing instruments that lie in-between (mezzanine) pure equity and pure debt financing. It is attractive to SMEs because no collateral is needed and investors provide part-equity and part long-term financing with repayment upon maturity. Mezzanine capital investments are typically for improvement of balance sheet structure/equity ratio, or to help the SMEs to grow by injecting capital to expand the business or to fund buy-outs. Mezzanine capital can help SMEs to compete more effectively and graduate to become the next generation of companies with the track record and scale to be publicly listed. The current model of financing investment through IPOs (initial public offerings) is more suited to local corporate champions and global multinationals.

As indicated above, newer and long-term institutional investors like Private Equity (PE) firms are proliferating due to opportunities in nurturing promising and innovative SMEs in emerging markets. But PE and venture capital firms also need exit mechanisms, so that they can cash in on their mezzanine investments and re-invest the proceeds in newer ventures.

There is greater awareness that there is an intermediary step between formal stock markets, which are favourable for capital raising for larger enterprises and the market for capital by SMEs. In China, for example, there are now informal property rights exchange markets at the local (city) level, which started off as information exchange platforms for trading in illiquid shares in SMEs or State-Owned Enterprises (SOEs) that are not listed.

Increasingly, these property exchanges are becoming mezzanine trading platforms for the exchange of equity in SMEs, the regulation of which has not been formalized. These exchanges are still nascent and their future is as yet uncertain, but they illustrate an example of where institutional innovation can evolve to meet market needs.

c) Investment in rental housing:

Investment in low cost housing is typically undertaken by the public sector. Countries that have established secondary mortgage corporations are seeking to make home-ownership more affordable for the lower and middle-income groups. There is now new thinking that another niche to meet the ever rising demand for housing among the low and middle income groups because of urbanization pressures is for institutional investors to invest in large scale rental housing.

To the individual, renting with an option to buy at the end of a period is more affordable than the substantial capital outlay required in the conventional approach to house ownership via a bank loan. The Australian Housing and Urban Research Institute (AHURi) concluded that institutional investment was “the most desirable source of finance to achieve long-term growth in supply of rental housing...”³¹. The main barrier to this scheme is that rental housing is an unknown asset class with no track record of performance. However, if institutional investors in current times are including low-risk investments in their portfolio, those investors that have socially responsible investment programs would see rental housing as “ a stable low-risk, low-return asset that adds an “infrastructure flavour” to investors’ portfolio.

The G-20 Development Strategy:

The strategy of fostering a conducive environment for financing of investment and identifying new sources for long-term investment in the current global economic landscape already has been adopted by G-20.³² The key issues raised by the Russian Presidency in 2013 and the stance of this paper on the policy and implementation issues are summarised below.

³¹ AHURi, *Financing rental housing through institutional investment*, Volume 1: Outcomes from an Investigative Panel, March 2013.

³² G-20, *G20 Russian Presidency Report*. http://www.g20.org/docs/g20_russia/outline##6.

1. G-20 “Wish List”	Policy Objectives	Approach in HLP paper
Strengthening public policy and improving PPP in terms of promoting financing for investment	Quality of development finance in infrastructure	The reality on the ground is that the problem with Public-Private Partnership is the governance, transparency and contractual enforcement. Too often, opaqueness of PPP contracts and execution results in corruption, contract dispute, changes in terms mid-stream and delays in project implementation that results in acrimony and frustration. Major barriers to PPP execution are land acquisition and state-centred relations in revenue and burden sharing in project implementation.
2. Addressing governance issues in financing and development	Overarching pre-condition for financial institutions, markets and governments	Good corporate governance begins with good credit culture, regulatory discipline, monetary discipline and fiscal discipline. These are key functions of the state.
3. Elaborated measures to support investments in small-and-medium enterprises and start-up businesses	Improve financial access by SMEs to generate employment and innovation	Improving access by SMEs require regulatory flexibility to allow banks to innovate in credit schemes, and to leverage on technology to reduce transaction costs, improve monitoring of credit quality and enable borrowers to have access to sound financial and business advice.
4. Public policy on inclusivity and access	Social equity and inclusivity for under-privileged	Technology can broaden the access and also deepen financial service through mobile technology and smart phones. The state can help improve physical and property rights infrastructure that would reduce transaction costs for those without access, improve their knowledge and skills and reduce regulatory barriers to business and social services.
5. Measures to meet capitalization needs of global banks	Global financial stability	The priority is to implement macro-prudential measures at national level, with strong cooperation with foreign regulators and standard settings to improve monitoring capital, liquidity and other risks of domestic and foreign banks
6. Macro-prudential measures for financial	National financial stability	The priority must be to identify what are the vulnerable points in

stability		the domestic financial system – where the mismatches exist and weak links in financial network. There is no one-size-fit all solutions, but a multi-prong systemic approach for system stability
7. Recommendations on regulatory changes that would bring about change in banking business models towards funding the real economy	Alignment of incentives between domestic banks and national interests	Priority should be to have tripartite discussions between regulators, financial sector and stakeholders (investors, borrowers, customers) to identify where and what are the issues that create barriers to systemic stability and need for trade-off between efficiency, fairness and system-wide stability.
8. Analysis of the role of possible sources of financing for investment (institutional investors, equity markets, government guarantees)	Deepening of capital markets to ameliorate liquidity, foreign exchange and structural mismatches, including overall leverage	There must be balance between development of the banking system and the capital markets, with balance between serving the needs of large enterprises and SMEs. Institutional and product innovation is often blocked by excessive licensing constraints, turf conflicts and inability to tap informal sources of savings. As indicated in this study, the quantity of saving for development may be available, but not at the quality and accessibility desired.
9. Public policy on institutional setup and incentives for long-term funding	Improving pension and insurance funds for long-term social security objectives	These two sectors have been grossly under-developed in EMEs due to obsolete portfolio restrictions and insufficient policy attention to the long-term benefits of social security from both sectors. These sectors deserve policy priority for development.
10. Analysis of FDI trends, patterns and impact to maximize their growth enhancing capacity	Importing foreign capital, long-term stable funding and access to foreign technology, markets and skills	FDI clearly has priority over short-term portfolio flows. Within the fund managers, SWF, infrastructure funds and those who have long-term horizon should be welcome
11. Policy to attract equity funding and push for long-term projects	Encouragement of long-term institutional investors as a source of development finance	Tax incentives should be considered for such investors
12. Recommendations	MDBs help to	Since MDBs are constrained by

on how to increase Multilateral Development Banks' (MDBs) lending capacity. Institutional setup on strengthening MDB lending	strengthen project financing with advisory skills	their capital, employ co-financing project financing and design with local financial institutions
13. Expansion of Sovereign Wealth Funds (SWF)	Improving long-term funding in domestic infrastructure projects	SWFs and state-owned policy banks have become important providers of long-term capital and credit. Currently, the China Development Bank (CDB) lends annually more than the World Bank. The rules regarding investments by SWFs should be transparent and subject to Santiago?
14. Mobilise long-term equity funds from relevant sources, e.g. Islamic Finance, etc.	Provide for sector needs, e.g. Islamic finance as a potential source of development finance	May need specific legislation for development of such finance.

2. The Impact of Technology on Development Finance:

No study on the future of development finance can ignore the impact of technology because it offers new channels, products, services and modes of thinking and behaviour for the web-empowered consumer/investor. Traditional analysis of financing development has not taken into consideration, for example, the massive impact mobile phone technology alone can have on the financial intermediation and credit provision process.

Technology will influence finance in the following areas:

- a) *Technology is able to disintermediate the traditional channels in banking and the capital markets by reaching out directly to the stakeholders.* China has demonstrated that it is not necessary for emerging markets to go through the sequential order of financial deepening in order to grow, previously understood to mean moving upwards from less complex money markets to foreign exchange markets, treasury bills and

bond markets, towards more complex markets for corporate bonds and equity and ultimately, asset-backed securities and financial derivatives. Technology will enable emerging markets to leap-frog and develop different financial markets in parallel or in reverse order. For example, the Taobao e-commerce and payments platform in China allows consumers to be sellers, buyers and investors at the same time.

- b) *Technology lowers transaction costs.* Technology has enabled the creation of Alternative Trading Systems to bypass stock exchanges to avoid unnecessary friction costs and other barriers to the free flow of capital. Technology has also enabled e-commerce, e-payment and e-banking to flourish through the use of mobile phones and tablets. In e-commerce, SMEs can actually raise capital directly from small investors provided the trust factor can be resolved.
- c) *The “clicks” have an edge over the “bricks”.* The borderless clicks (e-banking) have lower transactions cost and high information content that reach out to a massive network of users not limited by geography; the location-bound bricks (bank branches) are weighed down by high overheads, staff, rules, regulations and traditional mindsets. Examples where mobile phone operators have successfully by-passed banks by providing new forms of mobile banking are in Kenya, India, China and Pakistan. In Kenya, small payments in rural areas are made through mobile phone transfers, rather than cash, thereby enhancing financial inclusion. In Pakistan, the number of people who have mobile phones make up 85 percent of the population as against only 12 percent of the population who have bank accounts. These numbers on the predominance of mobile phone users in a community, combined with the rapid upgrading of mobile technology to smartphones and smart applications can only mean a continuous innovation in the delivery of financial services and products that will change the entire financial intermediation game.

What is clear is there will be creative destruction because traditional banks will lose customers to new lifestyle platforms that provide e-commerce, e-payment and e-banking like Taobao, Paypal and Tencent.

In summary, technology brings about both opportunities and challenges to development finance. On the one hand, it can provide alternative sources of liquidity and channels for financial inclusion. On the other hand, it creates its own governance issues. By moving payments systems into non-banks, which are thriving because they are customer-centric, the biggest challenge faced by the regulator is how to bring the “shadow banking” in both informal markets and cyberspace into a framework where systemic risks can be monitored, how to prevent fraud, manipulation and abuse of the law and how to ensure trust. There should be new levels of regulation to ensure a level playing field.

Section 5. Managing the Institutional Change Processes

1. The cornerstones of sound financial systems

Ultimately, the availability of development finance depends on finance serving the real sector. Finance is the means to an end, not an end in itself. The ultimate objective is to raise global living standards and eliminate poverty, underpinned by a strong and efficient real sector, with social inclusivity and environmental sustainability. Ideally, finance supports the achievement of such social objectives of People, Planet and Profits.

In recent months, there has been a series of reports analyzing the on-going financial crises and recommending further financial development. The latest is a World Bank (2013) report on Development Finance that outlines its views on redefining the role of the state in financial

development³³.

The World Bank has moved to a more balanced, but cautionary stance. On the one hand, the Bank is aware that the state has to be actively involved in the financial sector to maintain economic stability, drive growth, and create jobs. Specifically, the state has an important role in providing supervision, ensuring healthy competition, and strengthening the financial infrastructure.

On the other hand, there is evidence that there are potential longer-term negative effects. The real problem lies in the conflict of interest between the state as owner, regulator, market participant, judge and protector of property rights. The key recommendations of the World Bank Report are:

- *Incentives are crucial in the financial sector.* The main challenge of financial sector policies is to better align private incentives with public interest without taxing or subsidizing private risk-taking.
- *In regulation and supervision, the importance of getting the “basics” right first.* That means specifically, effective, timely, and anticipatory supervisory action, complemented with market discipline. In EMEs, this implies priority on building up supervisory capacity, less complex regulations, more effective enforcement and better monitoring by stakeholders.
- *The state needs to encourage contestability through healthy entry of well-capitalized institutions and timely exit of insolvent ones.* With good regulation and supervision, bank competition can help improve efficiency and enhance access to financial services, without necessarily undermining systemic stability. Priority should be to address distorted competition from state-owned financial institutions and monopolies,

³³ The World Bank, *Global Financial Development Report 2013: Rethinking the Role of the State in Finance*, Washington D.C., 2013.

improve transparency, and strengthen enforcement of a level playing field.

- *State-owned banks can help to stabilize aggregate credit in a downturn, but they can also lead to resource misallocation and deterioration in the quality of intermediation.*

The risks are that state-owned banks can become “Too Big to Fail” and introduce resource allocation distortions.

- *Useful role for the state in promoting transparency of information and reducing counterparty risk.*

The main messages of the World Bank Report as outlined above are non-controversial, but they are not easy to implement, given the lack of knowledge and experience of many bureaucracies in the EMEs to implement these pre-conditions.

Former World Bank Chief Economist and later US Treasury Secretary Larry Summers stated that there were three factors relevant to growth: *“their ability to integrate with the global economy through trade and investment; their capacity to maintain sustainable government finances and sound money; and their ability to put in place an institutional environment in which contracts can be enforced and property rights can be established³⁴.”*[Summers, (2003)].

In other words, institutions and governance matter. But how does governance matter in the area of cultivating strong and stable financial institutions that serve the real sector?

In recent years, drawing upon the experience of China and other successful emerging markets, there is growing recognition that financial sector reform is about the need to create systemic change that is holistic and system-wide. A narrow “silo-based” view of reform sometimes exacerbates problems because different parts of the network have complex, non-linear interactions and interdependencies that are not obvious to the reformers. The result often is

³⁴ Summers, Larry, *Godkin Lectures*, Harvard University, Kennedy School of Government, 2003.

the law of unintended consequences, with large spillover effects that can even negate the reform policy initiatives.

In other words, if the economy and financial system is “unbalanced, uncoordinated and unsustainable” at the national level, it is also unbalanced, uncoordinated and unsustainable at the global level. Restoring balance to the economy and the financial system will require the efforts of many parties at the national level, and also cooperation at the global level. However, the interaction between national interests and global interests are reflexive, in the sense that action at the national level may impact on global trends and vice versa. Hence, reforms at the EME level cannot be divorced from reforms at the advanced country level. This has not been easy to achieve.

In other words, there is a need to move away from technical solutions to reform problems of political economy – how does the global community get out of collective action traps, because the benefits of reform are often unknown, the costs are uncertain, and if others are non-cooperative, the reforming nation or faction finds itself the biggest loser?

There are forces in train that are difficult to change. These are the complex set of rules and regulations being imposed in the advanced economies that will have a profound impact on the financial landscape. Individually, these measures may look reasonable and sensible. They include the Basel III rules to increase capital, liquidity and broadly encourage banks to deleverage, the US Dodd-Frank legislation, the European reform initiatives to achieve a banking and fiscal union, IOSCO and IAIS standards, FATCA and anti-money laundering rules etc. None of these rules have yet to take into consideration the raft of rules and regulations governing shadow banking, which is still under discussion.

No one has calculated the cumulative effect of the implementation of these rules and regulations on the real economy, let alone on the financial systems of emerging markets. Since the rules are designed to deleverage the banking system, and as EMEs adopt these

standards, there is a risk that even the EMEs may begin to slow down because the banking system still dominates the credit scenario, while the capital markets and institutional investors will take time to replace the banks in the provision of long-term funding for development.

Given limited resources and implementation capacity (as well as scarce political capital), the financial reform agenda to improve financial intermediation must be practical and realistic, based on common sense. *Given the diversity of different institutional background, levels of development, resources, knowledge and skills, there can be no “one-size-fit-all” solutions for financial reform at the global level.* Indeed, it can be argued from long systemic experience that mono-culture creates fragility, whereas diversity and competition between standards and behaviour is much more stabilizing and innovative for adaptation to rapidly changing environments.

There are therefore certain general principles which would help to guide effective financial reform, particularly for EMEs:

- Resist temptation to do too much, too fast;
- Simplicity is preferred over complexity, so that the reform agenda is easily understood, easily implemented and transparently accountable and garners support from all stakeholders;
- At the global level, regulation should be principles-based, so that national regulators understand how to adapt these rules to local conditions, on the proviso that their changes do not have adverse international spillovers; and
- Priority is to fix the big problems or imbalances, and then pay attention to the details that block effective implementation.

For finance to serve the real sector, there is a need to return to the basic four institutional functions of financial systems: efficient resource allocation; good price discovery; sound risk management and good corporate governance. Financial regulation will have to evolve and

adapt the rules, standards, incentives and processes to suit a different pattern of development where EMEs will have to rely more on domestic resources: -

- The need to shift the financial mindset to move from short-termism towards long-term stable and sustainable growth with inclusivity.
- Last but not least, flawed financial regulation cannot compensate for flawed policies based on flawed theory. Ultimately, finance is about disciplining creditors, including the state.

The market economy is about free entry, competition on a level playing field and exit for those who become insolvent. The recent crisis demonstrated that if exit mechanisms are not in place, and there is no hard budget constraint to deal with insolvent players, be they sovereign governments, too big to fail financial institutions or corporations, then financial crisis is inevitable from the moral hazard engendered within the system.

Consequently, governments and private sector leaders must face up to and abide by the principles of hard budget constraints. The financial sector must not only exercise its credit discipline on its borrowers, but also exercise internal discipline on itself. As Rodrik, North³⁵ and others have pointed out, there is sufficient evidence that successful EMEs move along an adaptive, experimental and institutional framework of “developing through learning and adapting”. In particular, Rodrik emphasized that while the quality of institutions is key, good institutions can be acquired and “often requires experimentation, willingness to depart from orthodoxy, and attention to local conditions”^{36 37}. An encouraging observation is that economic take-off does not require ambitious, deep and extensive institutional reforms, as imaginative “short-cuts” can avoid the problems of a partial and gradual approach. The same

³⁵ North, Douglass C., *Understanding the Process of Economic Change*, Princeton University Press, 2005.

³⁶ Rodrik, Dani, *In Search of Prosperity*, Princeton University Press, April 2003.

³⁷ Rodrik, Dani, *One Economics, Many Recipes: Globalization, Institutions and Economic Growth*, Princeton University Press, New Jersey, 2007.

is true of financial deepening. In other words, there is no one-size-fits-all approach to financial development.

2 *Strengthening South-South Investment*

A report to the United Nations General Assembly on The State of South-South Cooperation ³⁸ points to the emergence of a global consensus in support of South-South and triangular cooperation to harness growing opportunities to meet the Millennium Development Goals.

As of 2008, developing countries accounted for round 37 percent of global trade and nearly three-quarters of global growth, with South-South flows contributing to half of the total. By 2030, these South-South interactions are expected to be one of the main engines of growth, accounting for 57 percent of global GDP.

Since the global crisis, developing countries have increasingly attracted private investment and capital. Net private capital flows increased from \$110 billion in 2008 to about \$386 billion in 2009 and further to an estimated \$659 billion in 2010, thus surpassing ODA levels of about \$14 billion in 2008. This is an encouraging trend as global factors such as climate change, food security, and health issues amongst others indicate an increasing need for South-South and triangular efforts. Institutional building has become another focus of South-South initiatives that have the support of the Group of Twenty. In support of the private sector role in South-South investment, the report called upon Governments to step up efforts to create an enabling environment, both national and cross border, that include the provision of effective physical regulatory and legal infrastructure.

³⁸ United Nations, General Assembly, *The state of South-South cooperation, Report of the Secretary-General*, New York, 2011.

The potential for development finance has been enhanced due to the growing resources available to EME policy-based banks, such as policy-based banks in China (China Development Bank), Brazil, South Africa and also regional banks, such as the announced BRIC development bank. The China Development Bank alone has a balance sheet three times larger than the World Bank and lends more than the World Bank's annual credit disbursements globally.

Consequently, there are alternative development resources available, some of it tied to projects or suppliers, which can enhance the capacity of EMEs to accelerate their development and achieve the MDG agenda.

Section 6. Conclusion – A Holistic “Back to Basics” Approach to Development Finance

This background paper proposes a more systemic and holistic approach to understanding and charting the direction for achieving the new Millennium Development Goals in the context of recent trends in development finance. By considering the micro, macro, meso (institutional) and meta (values) aspects that cut across the rapidly changing real sector and financial system, the paper has looked into the diverse and complex mega-trends that drive the policy options on how development finance may evolve.

At the macro level, the paper examined savings and investments trends and the flow of funds at institutional, country, regional and global levels with indicative projections to 2030. At the micro-level, much depends on how finance will continue to serve the real sector based on how incentives are shaped through regulation, enforcement and corporate governance. Advances in technology, in particular mobile phone technology, are already transforming the intermediation of development finance.

At the institutional (meso) level, which links the macro-trends with the micro-behaviour, the paper examines the substantial resources that institutional investors (led by pension funds, insurance companies, sovereign wealth funds and private wealth) can bring to bear on long financing of infrastructure, health, housing, education, and other socially inclusive development projects. They are different from conventional sources in that they also bring direct management expertise into the funding and management of projects. Finally, the paper advocates a return to the fundamental principles, values and assumptions (the meta) that underlie the effective operations of the financial system and this is about the restoration of fiduciary principles, good corporate governance, trust and credit culture. Finance must serve the real sector and therefore the state has an important role to prevent it “financializing” its own interests through increasing leverage without limits. This has created an imbalance of over-reliance on short-term banking, and an under-emphasis of long-term institutional investors like pension, insurance and alternative investment funds that can help fund long-term development.

The answer to the question: is there enough savings to finance development, must be yes. There are enough resources, globally, regionally and domestically for long-term investment in development. Globally, institutional investors have assets under management amounting to \$120 trillion in 2011, larger than global banking assets, and still growing.

Although the global financial crisis has led many long-term investors to reassess their liability profile, investment beliefs and risk appetite, the 2011 study by Oliver Wyman in collaboration with the World Economic Forum (WEF)³⁹ indicated that certain “*asset classes have gained increased attention post-crises along a spectrum from generating returns in growth markets to protecting core capital from downside risks.*” More than 40 percent of defined pension

³⁹ World Economic Forum and Oliver Wyman, *The Future of Long-term Investing*, Geneva, 2011.

funds anticipate to increase their allocations to emerging markets equity⁴⁰ and there is also an emerging trend for long term investors (like large sovereign wealth funds and pension funds) to co-invest together. By keeping investment horizons too short (as in bank deposits), the financial sector has not yielded positive real returns for savers and investors to protect their interests. Hence, the financial sector can serve the real sector best by taking a long-term sustainable approach that delivers higher real returns commensurate with the risks. This calls for higher quality of financial intermediation, especially in assets under management.

The second message is that there must be good corporate governance and appropriate regulation that aligns the investment framework and governance processes with their obligations and their long-term investing mandates from stakeholders. To restore balance between banking and capital markets, the financial policy-makers would have to use a combination of structural reforms (such as encouraging long-term institutional investors through tax and licensing incentives), institutional reforms (such as creation of asset securitization markets, strengthening clearing and settlement platforms and enhancing exit mechanisms) and appropriate portfolio restriction rules that enable better alignment of interests between investment judgement and returns to investors.

The third message is about technology changing the delivery and access processes in development finance. By broadening the base for access to finance, through new technology that lowers transaction costs and enables trade and investments in real-time, EMEs can leapfrog financial development through technological and institutional innovation. To further this objective, all stakeholders, including regulators, should be open to new forms of financial intermediation.

⁴⁰ Pyramis Global Advisors, *Global Defined Benefit Survey*, 2010.

To sum up, the Group of Thirty's study⁴¹ suggested four fundamental principles governing the provision of long-term finance:

1. The financial system should channel long term savings to meet the growing investment needs of the real economy.
2. Long-term finance should be supplied by entities with committed long-term horizons.
3. A broad spectrum of financial instruments should be available to support long-term investment,
4. An efficient global financial system should promote economic growth through stable cross-border flows of long-term finance, supported by appropriate global regulations.

These four principles of the Group of Thirty reinforce the narrative of this background paper. The developing world today has the means, the resources and access to know-how to mobilize development finance to shape its own future.

Hong Kong and Penang,

22 May, 2013.

⁴¹ Group of 30, Working Group on Long-term Finance, *Long-term Finance and Economic Growth*, Washington D.C., 2013.

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Appendix A. Flow of Funds Analysis

A.1 Conceptualizing the Flow of Funds (FoF)

The flow of flow of funds is constructed by taking the balance sheets of the flow of funds over time t and $t-1$.

The flow for source of funds is defined as $\text{Source}_t = \text{Liabilities}_t - \text{Liabilities}_{t-1}$,

and the flow for uses of funds is defined as $\text{Uses}_t = \text{Assets}_t - \text{Assets}_{t-1}$.

The total sources of funds must equal the total uses of funds, that is

$$(\text{Sources of Funds}) = (\text{Uses of Funds})$$

However, the construction of the flow of funds is actually a compilation of the conceptual flows in different economic accounts, namely, (i) the National Accounts, (ii) Balance Sheets of the public sector, private sector and the banking system, and (iii) the Balance of Payments accounts. An example of how these flows are compiled is shown in Table A.1 on Malaysia's Flow of Funds.

Table A.1: Malaysia's Flow of Funds, 2001

	National Accounts	Domestic Economy			Rest of the World	Sum
		Public Sector	Private Sector	Banking System		
A. Disposable Income	-300.8	96.4	204.4			0
Consumption	193.5	-42.9	-150.6			0
Investment	83.3	-48.8	-34.5			0
Change in Stocks	-3.8		3.7			0
B. Exports of Goods and Non-Factor Services	389					0
Imports of Goods and Non-Factor Services	-328					0
Net Factor Payment Abroad	-26					0
Net Transfers	-8.2					0
Non-Financial Balance	0	4.7	23	0	-27.7	0
C. Foreign Financing						
Direct Investment			1.1		-1.1	0
Net Foreign Borrowings		7.1	-24		16.9	0
Net Change in Foreign Assets						
Bank Negara Malaysia				-3.7	3.7	0
Banking System				1.0	-1.0	0
D. Domestic Financing						
Change in Credit		-1.5	20.3			0
Change in Money Supply, M3		-14.3	-13			0
Net Borrowings from Non-Bank Sector		4	14.3			0
Net Errors and Omissions		4	-21.7	8.5	9.2	0
Sum		0	0	0	0	

Source: Bank Negara Malaysia, Annual Report 2002

From the table, the variables from the national accounts summarize the disposable income that consists of consumption, investment and changes in stocks. The balance of payments provides data for exports of goods and non-factor services. The balance sheets of the public sector, the private sector and the banking system provide information on domestic and foreign financing.

A.2 The U.S. Flow of Funds: Baseline Model (2010)

Compiling the flows from the various economic accounts provides a platform for tracking how the sources of funds in an economy are intermediated into various uses by the banking system and the financial intermediaries and financial markets. This section summarizes the United States flow of funds (FoF) matrix and uses the 2010 FoF as a baseline model for projecting U.S. savings and investments until 2030. The U.S. intersectoral framework is then simulated for G4 and non-G4 economies, in order to build a global scenario for 2030. The growth rates used in these projections to 2030 are based on the latest saving and investment projections of the World Bank⁴².

The primary structure of the U.S. flow of funds consists of three major components:-

1. Gross Saving (GS)
2. Gross Investment (GI)
3. Discrepancy (D)

Table A.2: Primary Structure of the U.S. Flow of Funds, 2010 (in \$trillion)

	Uses	Sources
1. Gross Saving (GS)		3.311
2. Gross Investment (GI)	3.082	
a. Capital Expenditure (CE)	3.317	
i. Capital Expenditures Consumer Durables	1.016	
ii. Capital Expenditures Residential	0.348	
iii. Capital Expenditures Nonresidential	1.886	
iv. Capital Expenditures Inventory change	0.067	
v. Capital Expenditures Nonproduced Nonfinancial Assets	0.000	
b. Net Financial Investment (NFI)	-0.235	
i. Net Acquisition of Financial Assets (NAFA)	1.964	
ii. Net Increase in Liabilities (NIL)		2.198
3. Discrepancy (D)	0.229	
GS = GI + D	3.311	3.311

⁴² International Monetary Fund, *Global Financial Stability Report*, Washington D.C., April 2013.

Lines 1 and 2 show gross saving (GS) and gross investment (GI). GI is separated into two major forms: capital expenditures (line a) and net financial investment (line b). Net financial investment is calculated as the net acquisition of financial assets (line b.i) less the net increase in liabilities (line b.ii). The discrepancy between gross saving and gross investment is due to incomplete data or data errors and omissions. Overall, there is a savings surplus of \$0.23 trillion (line 3).

Table A.2 gives the primary flow as a percentage to Gross Domestic Product (GDP). It shows that in 2010, gross saving accounts for nearly 23% of GDP, while the gross investment accounts for 21%. Discrepancies account for 1.5%.

Table A.3: Primary Structure of the U.S. Flow of Funds, 2010 (in % of GDP)

	Uses	Sources
1. Gross Saving (GS)		22.79%
2. Gross Investment (GI)	21.22%	
a. Capital Expenditure (CE)	22.83%	
i. Capital Expenditures Consumer Durables	7.00%	
ii. Capital Expenditures Residential	2.39%	
iii. Capital Expenditures Nonresidential	12.98%	
iv. Capital Expenditures Inventory change	0.46%	
v. Capital Expenditures Nonproduced Nonfinancial Assets	0.00%	
b. Net Financial Investment (NFI)	-1.61%	
i. Net Acquisition of Financial Assets (NAFA)	13.52%	
ii. Net Increase in Liabilities (NIL)		15.13%
3. Discrepancy (D)	1.58%	
GS = GI + D	22.79%	22.79%

A further decomposition of the U.S. FoF by domestic players shows saving of \$2.5 trillion made available by Households, Nonfinancial Business, and Government, as against slightly higher investment of US\$2.7 trillion. The shortfall of \$0.2 trillion in domestic savings was covered by foreign funds from the rest of the world (ROW). The financial system played a

key role in intermediating the sources and uses of funds showed the financial system has a net borrowing of US\$0.1 trillion.

Table A.3 shows the deployment of funds in investment. Out of \$3.1 trillion investments by the domestic non-financial sector, roughly \$1 trillion was invested in consumer durables, \$1.7 trillion in non-residential capital expenditure and \$0.3 trillion in residential real estate.

Table A.4: Decomposition of U.S. FoF: Flow of Sources by Players and Flow of Uses by Investment Sector in 2010 (\$ trillion)

Gross Saving (Gross Flows)		Domestic Financial Sectors (Gross Flows)				Gross Investment (Gross Flows)	
A. Domestic Non-Financial Sectors	Sources	B. Domestic Financial Sectors	Uses	Sources	A. Domestic Non-Financial Sectors	Uses	
1. Households and Nonprofit Organizations	1.945	Gross Investment/Saving (Financial Sectors) =	0.08	0.30	a. Capital Expenditure (CE)	3.1302	
2. Nonfinancial Business	1.586	Net Flows			i. Capital Expenditures Consumer Durables	1.0162	
3. Government	-0.998	Financial Markets			ii. Capital Expenditures Residential	0.9431	
Total (A = 1 + 2 + 3)	2.533	1. Interbank claims	-0.107	-0.186	iii. Capital Expenditures Nonresidential	1.704	
C. Rest of the World	0.480	2. Deposit	-0.130	0.382	iv. Capital Expenditures Inventory change	0.0669	
Total (A + C)	3.013	3. Money Mutual Funds	-0.122	-0.114	v. Capital Expenditures Nonproduced Nonfinal	0	
Total (A+B+C)	3.311	4. Credit Market Instruments	0.423	-0.975	b. Net Financial Investment (NFI)	-0.3841	
Note: A = Domestic Non-Financial Sectors		5. Mortgages and Consumer Credit	-0.685	-0.045	Total (A = a + b)	2.746	
B = Domestic Financial Sectors		6. Corporate Equities	0.001	0.190	C. Rest of the World	0.254	
C = Rest of the World		7. Life Insurance and Pension	0.000	0.225	Total (A + C)	3.000	
		8. Others (Net)	-0.119	-0.112	Total (A+B+C)	3.082	
		Total Financial Uses/Sources	-0.739	-0.634	Discrepancy (D)	0.229	
		Domestic Financial Sectors Net Lending (+)/ Net Borrowing (-)	-0.105		Total (A+B+C) + D =	3.311	
			-0.62	-0.523	Note: A = Domestic Non-Financial Sectors		
					B = Domestic Financial Sectors		
					C = Rest of the World		

In terms of GDP, the U.S. had domestic savings of 17.4 percent of GDP, supplemented by 3.3 percent from the rest of the world, in order to invest domestically 18.9 percent of GDP within the US and 1.8 percent of GDP abroad, giving rise to a gross investment of 20.7 percent of GDP (Table A.4).

Table A.5: Decomposition of U.S. FoF: Flow of Sources by Players and Flow of Uses

by Investment Sector in 2010 (in % of GDP)

Gross Saving (Gross Flows)		Domestic Financial Sectors (Gross Flows)			Gross Investment (Gross Flows)	
A. Domestic Non-Financial Sectors	Sources	B. Domestic Financial Sectors	Uses	Sources	A. Domestic Non-Financial Sectors	Uses
1. Households and Nonprofit Organizations	13.39%	Gross Investment/Saving (Financial Sectors) =	0.56%	2.05%	a. Capital Expenditure (CE)	21.55%
2. Nonfinancial Business	10.92%	Net Flows				
3. Government	-6.87%	Financial Markets				
Total (A = 1 + 2 + 3)	17.44%	1. Interbank claims	-0.74%	-1.28%	i. Capital Expenditures Consumer Durables	7.00%
C. Rest of the World	3.30%	2. Deposit	-0.90%	2.63%	ii. Capital Expenditures Residential	2.36%
Total (A + C)	20.74%	3. Money Mutual Funds	-0.84%	-0.79%	iii. Capital Expenditures Nonresidential	11.73%
		4. Credit Market Instruments	2.91%	-6.71%	iv. Capital Expenditures Inventory change	0.46%
		5. Mortgages and Consumer Credit	-4.71%	-0.31%	v. Capital Expenditures Nonproduced Nonfinal	0.00%
		6. Corporate Equities	0.01%	1.31%	b. Net Financial Investment (NFI)	-2.64%
		7. Life Insurance and Pension	0.00%	1.55%	Total (A = a + b)	18.90%
		8. Others (Net)	-0.82%	-0.77%	C. Rest of the World	1.75%
		Total Financial Uses/Sources	-5.09%	-4.37%	Total (A + C)	20.65%
		Domestic Financial Sectors Net Lending (+)/ Net Borrowing (-)	-0.72%		Total (A+B+C)	21.22%
			-4.27%	-3.60%	Discrepancy (D)	1.58%
					Total (A+B+C) + D =	22.79%
Total (A+B+C)	22.79%				Note: A = Domestic Non-Financial Sectors	
Note: A = Domestic Non-Financial Sectors					B = Domestic Financial Sectors	
B = Domestic Financial Sectors					C = Rest of the World	
C = Rest of the World						

Table A.5 decomposes the balance sheet of the different sectors. The total assets at the end of 2010 amounted to \$148 trillion, of which \$88 trillion are real assets and \$65 trillion are financial assets, less \$5 trillion statistical discrepancy. The largest holders of assets are the household sector (\$49 trillion), followed by non-financial business sector (\$18 trillion) and government (\$4 trillion). The U.S. owes the rest of the world gross liabilities of \$17 trillion, but has foreign assets of \$14 trillion.

Table A.6: Decomposition of Balance Sheets 2010 - Assets and Liabilities by Players (in \$ trillion)

Gross Saving (Liabilities)		Domestic Financial Sectors			Gross Investment (Assets)	
A. Domestic Non-Financial Sectors	Liabilities	B. Domestic Financial Sectors	Assets	Liabilities	A. Domestic Non-Financial Sectors	Assets
1. Households and Nonprofit Organizations	13.901	Gross Investment/Saving (Financial Sectors) =			64.36	64.84
2. Nonfinancial Business	40.230	Financial Markets				
3. Government	14.830	1. Interbank claims	1.020	1.092	1. Households and Nonprofit Organizations	49.245
C. Rest of the World	14.215	2. Deposit	1.058	10.792	2. Nonfinancial Business	17.689
Total (include ROW)	83.176	3. Money Mutual Funds	3.481	10.690	3. Government	4.202
Total (A+B+C) = 148.018		4. Credit Market Instruments	37.288	14.153	C. Rest of the World	17.163
Note: A = Domestic Non-Financial Sectors		5. Mortgages and Consumer Credit	0.656	0.955	Total (include ROW)	88.299
B = Domestic Financial Sectors		6. Corporate Equities	11.500	4.332	Total (A+B+C) = 152.659	
C = Rest of the World		7. Life Insurance and Pension	0.000	14.332	Discrepancy (D) = -4.641	
		8. Others (Net)	9.358	8.497	Total (A+B+C) + D = 148.018	
		Total Financial Uses/Sources	64.360	64.843	Note: A = Domestic Non-Financial Sectors	
		Domestic Financial Sectors Net Lending (+)/ Net Borrowing (-)	-0.483		B = Domestic Financial Sectors	
					C = Rest of the World	

Source: Flow of Funds Matrix - Z.1 Table

Table A.7: Decomposition of Balance Sheets 2010 as Ratio to Gross Domestic Product (in % of GDP)

Gross Saving (Liabilities)		Domestic Financial Sectors			Gross Investment (Assets)	
A. Domestic Non-Financial Sectors	Liabilities	B. Domestic Financial Sectors	Assets	Liabilities	A. Domestic Non-Financial Sectors	Assets
1. Households and Nonprofit Organizations	0.957	Gross Investment/Saving (Financial Sectors) =			4.43	4.46
2. Nonfinancial Business	2.769	Net Flows				
3. Government	1.021	Financial Markets				
C. Rest of the World	0.979	1. Interbank claims	0.070	0.075	1. Households and Nonprofit Organizations	3.390
Total (include ROW)	5.726	2. Deposit	0.073	0.743	2. Nonfinancial Business	1.218
Total (A+B+C) = 10.189		3. Money Mutual Funds	0.240	0.736	3. Government	0.289
Note: A = Domestic Non-Financial Sectors		4. Credit Market Instruments	2.567	0.974	C. Rest of the World	1.182
B = Domestic Financial Sectors		5. Mortgages and Consumer Credit	0.045	0.066	Total (include ROW)	6.078
C = Rest of the World		6. Corporate Equities	0.792	0.298	Total (A+B+C) = 10.509	
		7. Life Insurance and Pension	0.000	0.987	Discrepancy (D) = -0.319	
		8. Others (Net)	0.644	0.585	Total (A+B+C) + D = 10.189	
		Total Financial Uses/Sources	4.430	4.464	Note: A = Domestic Non-Financial Sectors	
		Domestic Financial Sectors Net Lending (+)/ Net Borrowing (-)	-0.033		B = Domestic Financial Sectors	
					C = Rest of the World	

Source: Flow of Funds Matrix - Z.1 Table

In terms of asset-to-GDP ratio (Table A.6), the household sector owned assets equivalent to 339 percent of GDP, whereas the financial system intermediated the equivalent of 446 percent of GDP.

What these FoF tables indicate is that the role of financial sector in intermediating saving has become larger and larger in gross terms, but the net impact is relatively small. The risk is that the composition of financial intermediation has changed from long-term intermediation (through pensions and insurance etc) towards larger share of intermediation through credit instruments. This increased the vulnerability of the financial system to liquidity and systemic shocks.