Winter is coming:

The perfect storm that now confronts institutional investors and what they should do about it

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Foreword

Norfund is Norway's instrument for private sector development in the poorer regions of the world. Our mandate is to invest on commercial terms to grow profitable enterprises that offer employment and pay taxes to sustain a growing public sector in developing countries. One of the fund's main missions is to remain catalytic in order to mobilise private capital that would not otherwise have been available for commercial investments in poor countries. We do that by opening up markets as first movers, buying down risk by offering equity or loans to invest alongside private investors, and by informing potential investors about markets and opportunities.

We have so far succeeded in mobilising some, but still too few Norwegian financial investors. The Norwegian life insurance company KLP is an outstanding example of an actor that has made investments in microfinance, renewable energy and banking sector in developing countries, with reasonably good returns to their owners and clients, while at the same time contributing to creating a better world.

Only a few years ago we expected private investments to grow rapidly in the emerging as well as the developing world. Also, according to economic theory, we expected rising savings for pensions in rich economies with ageing populations and moderate growth to seek investment opportunities in the real economy in developing countries with high growth and a desperate need for capital. Currently, capital markets in the West are characterised by hyper-liquidity and interest rates close to zero, partly due to quantitative easing by central banks in the U.S. and in Europe. However, the paradox is that very little of this capital finds its way to rapidly growing and developing parts of the world, where capital is scarce.
In fact, to the contrary, developing countries are experiencing strong headwinds from the Western world's financial sector. Western banks are pulling out of Africa, despite long-lasting good returns on their investment, bank-lending is contracting and the poorest countries are falling outside the global flows of foreign direct investments.

To understand more why and how this is happening, we asked Sony Kapoor, Managing Director of the international think tank Re-Define, to write this report. The report proves that some long-term investors are doing better by developing strategies and governance models that make them long-term oriented, focusing on infrastructure, alternative asset classes, developing and emerging markets. The report shows that there are ways forward!
Norfund is one out of a number of government-owned investment funds and development banks – called Development Finance Institutions (DFIs) - which are growing rapidly in size and importance. To be successful in fighting poverty and creating jobs for a rapidly growing population, DFIs will take up an even more important role in the future, since private capital markets in the West are so reluctant to allocate capital to poor countries. Given their dual mandate, specialised knowledge of developing and emerging economies and expertise in private unlisted investments, DFIs will play an increasingly important role in catalysing private capital flows into growth-enhancing economically productive sectors. This will involve a rapid scaling-up of DFI co-investments alongside long-term private investors.

Enjoy reading!

Kjell Roland

Abstract

Winter is coming - at least for the institutional investors of the world. A combination of extremely low interest rates, poor growth prospects, rising political tensions and ageing demographics means that investors in much of the rich world face a bleak winter of falling returns and rising risk.

This report, which focuses in particular on long-term institutional investors such as pension funds, insurance firms and sovereign wealth funds, will start in Chapter 1 by digging deeper into many of the fundamental factors behind the depressing outlook.

Chapter 2 identifies the huge challenges that are confronting the pension fund and insurance industries at this time and the difficulties that many commodity-driven sovereign wealth funds are likely to face.

Chapter 3 shows how poor the prognosis for the listed OECD country stocks and bonds, which constitute the biggest proportion of institutional investor portfolios, is and why it is unlikely to get better.

Chapter 4 focuses on how the investment strategies, compensation practices, poor capacity and inappropriate benchmarking by most institutional investors is driving them towards a short horizon, while making matters worse for them in the long term.

Chapter 5 looks at a cross section of different long-term investors that have done a better job of acting as long-term investors and what lessons other institutional investors can learn to improve their own strategies in order to make them more long-term oriented, while improving the returns on offer and diversifying away risks.

Chapter 6 explains how investing in illiquid, unlisted assets that include private equity, direct lending to small and medium-sized enterprises (SMEs) and infrastructure by using in-house capacity and partnerships with other institutional investors, governments and development finance institutions, is the most promising way forward for institutional investors. Most of the best opportunities lie in emerging and developing markets.

Executive Summary

Background

Winter is coming, as a big chill descends on institutional investors of all shapes and sizes. Pension funds, insurance firms and sovereign wealth funds, which together hold more than $80 trillion in assets, face fragility and a bleak return landscape that is unprecedented in recent history. In the words of experts, pension funds face an “existential crisis” that is “scary and surreal”.

Analysts expect insurance firms “to begin failing”, and sovereign wealth funds and endowments to “face a challenging environment”. The negative interest-rate policy could also have “fatal consequences” for banks. Institutional investors worry how it is becoming impossible for them “to create any return at all.”

This nightmarish scenario has been precipitated by a combination of long-term structural factors such as demographic decline and stagnating productivity, as well as a poor policy response to the financial crisis that left most rich economies with debt overhangs, sclerotic growth, shrinking monetary policy space and rising political risk.

As much as 80% of the assets of institutional investors tackled in this report are invested in these rich economies, mostly in listed bonds and stocks. This exposes them to poor growth, high systemic risk, including common risk factors such as demographic decline and rising political risk in the developed world. Essentially, many institutional investors appear to have locked in low and falling financial returns for already high and rising risk, the exact opposite of what financial theory and prudent investing suggests.

How did we get here? And what, if anything, can institutional investors do to get out of this predicament?

Structural challenges

Developed economies face huge structural challenges posed by demographic decline, stagnating productivity and a growth sclerosis. Dependency ratio, the proportion of over 65s as a percentage of workforce, is set to nearly double to 47% by 2050 in developed economies. Birth rates in the EU now average just 1.58, far below the 2.1 needed just to keep populations at current levels. As an illustration, fewer babies were born in Italy last year than at any point since the birth of the country in 1861, and two-thirds of Japan’s farmers are aged over 65.

Growth in recent decades has come in equal measure from an increase in the workforce and from gains in productivity. As populations decline and productivity growth stagnates, average GDP growth rates in developed economies have declined from 5% in the 1960s and 70s to 1.5% now, with little hope of an uptick. The credit boom in the run up to 2008 artificially inflated growth in rich economies, but Lehman Brothers’ crash led to a deep recession. Many financial institutions were bailed out and governments launched the largest fiscal and monetary policy stimulus in the history of the world. Despite that, many developed economy GDPs have still not recovered to pre-crisis levels.

Inefficient policy response to the crisis

The bank bailouts and fiscal stimulus increased public debt in OECD economies from an average of 80% of GDP in 2008 to 111% of GDP In 2015. Many governments are still running fiscal deficits and private sector debt is on the rise again. But an expansionary fiscal policy on its own would simply not have been enough, and the biggest policy response came from central banks in the rich world. In many cases they slashed interest rates all the way into negative territory, with more than 500 million citizens in the developed world now living under negative interest rate regimes. Since Lehman’s collapse, central banks around the world have cut interest rates a record-breaking 670 times or about once every 3 trading days or so.

This has put bank profitability, which relies on the net margin between the costs of borrowing and lending, under serious pressure, particularly in the Eurozone. When sharp rate cuts proved insufficient to tackle the post crisis economic downturn and freezing up of the financial system, central banks in rich economies initiated large-scale asset purchases under quantitative easing programmes that now amount to almost 25% of global GDP. The purchase of (mostly) sovereign bonds under these programmes drove down yields into record low territory, with between a third and half of all sovereign bonds now trading in negative territory. It is not just German, Swiss and Japanese bonds that have negative yields - in September European firms Henkel and Sanofi also issued bonds with negative yields.

Pension funds, insurance firms and sovereign wealth funds in crisis

This collapse of yields has hit pension funds, which have almost half their portfolios in fixed income assets, particularly hard. Ageing demographics and the fact that falling interest rates increase liabilities, as the discount rate falls have put a further squeeze on pension funds. For life insurers, bonds constitute three quarters of the asset mix, so are even more important. Sovereign wealth funds are also in trouble with the NBIM, the $882 bn Norwegian sovereign wealth fund now holding more than $100 bn or almost 10% of its portfolio in the form of bonds with negative yields. The average yield on its bond portfolio has fallen from more than 3% in 2010 to a about 1% now.

In the UK, the pensions deficit has ballooned to GBP 710 billion, while in the US the deficit may be as high as $4 - $6 trillion. Life Insurers in the US and Europe have guaranteed returns on between 60% and 80% of the products they have sold with yields on investments now threatening to fall below these promises. Their stock prices are in free-fall, and some firms may go bankrupt unless something changes soon. Further compounding the problems of OECD economies are the unfunded or the underfunded liabilities of almost $80 trillion, with nine rich economies facing public sector pension liabilities of more than 300% of GDP, according to Citi.

The decline in bond yields, no matter how dramatic, does not fully reflect the plight of long-term investors. One indirect consequence of the fall in bond yields and the direct purchase of assets by central banks has been a near-record rise in stock markets, as well as rapid rises in the price of other assets such as real estate, since far too much money is chasing the existing, easily investable, assets. The supply of many financial assets in the rich world has diminished, even as the demand for them has risen thus inflating prices, risking bubbles and depressing yields. Dividend yield on the S&P 500 and Germany's Dax index is now a paltry 2.1 and 2.9 per cent, respectively.

Returns on standard stock/bond portfolios are likely to stay very depressed

Given that OECD country stocks and bonds comprise between three-quarters and four-fifths of most institutional investor portfolios, the collapse in their yields bodes ill for these investors. It is not just that the yields have collapsed temporarily, but that there is very little scope for bond and stock yields to rise any time in the foreseeable future.

The IMF, the OECD and many of the world's leading central banks and economists all expect that rich country interest rates have entered a "new normal" of close to zero interest rates. In any case, if and when bond yields do rise, this will inflict significant capital losses on a number of investors.

One-off structural shifts such as the arrival of China and cheap labour to the global markets, a secular decline in tax rates and productivity boosts from the telecom revolution meant that corporate profits have boomed and now account for a record share of American GDP.
However, the low growth, low investment, demographic decline and debt overhang that now all characterise OECD economies mean that the days of rising profits are gone. As expectations for future profitability are modest, the price/earnings ratio, which is at historically high levels, is also unlikely to rise much, so the prospects for capital gains are poor. If anything, capital losses on stocks are far more likely.

The prognosis does not bode well. The London Business School has estimated that the likely future real return on a standards stock/bond portfolio will be only 2% to 2.5% for the foreseeable future. AQR, a fund management group has estimated it to be 2.4%. The McKinsey Global Institute finds that such the yields on such a portfolio will fall between 2% and 4.5% from that seen in recent decades. SocGen, the investment bank now expects net annual real returns in the medium term on such portfolios to have fallen from 8% in 1986, to 3% in 2006 to just over 1% now.

For US pension funds, between half to three quarters of the current corpus comes from accumulated financial returns on investments, so the effect of the predicted collapse in returns on the pensions landscape would be nothing short of catastrophic.

The poor growth prognosis, plummeting returns on savings and yawning pension fund deficits now mean that the low interest/low yield policy that was supposed to discourage savings, while encouraging consumption and investment, may now be having the exact opposite effect. Companies unsure about the future opportunities and burdened by pension deficits are investing less than they were before the crisis. Consumers, insecure about their future incomes and pensions, save more and not less. Both may still, in some countries, be still trying to pay off the excessive debt build up in the previous boom-bust cycle. This has sapped aggregate demand from the economy, while entrenching the poor growth scenario.

Risks are rising

Historically, developed economies were considered to be politically stable, with predictable and sensible policy making that meant they posed little financial and political risk. The phrase 'political risk' was used mostly in the context of developing economies. When every ranking of political risk in the world now lists the election of Donald Trump in the US and problems in the EU in its top risks, that notion is outdated. Political risk has arrived in the OECD, as the UK's unexpected vote for a Brexit demonstrated so clearly. The ratings agency S&P recently downgraded Poland saying that its system of institutional checks and balances has been eroded significantly.

The past decade saw the real wages of about 70% of citizens in the much of the rich world either declining or stagnating, even as governments were bailing out large banks. The inequality between the top 1% and the bottom rose at an alarming pace, eroding faith in the establishment. Italian GDP/capita, for instance, is still below the levels of 1999 when Italy joined the Euro. The mismanagement of the Eurocrisis has meant that many rich economies' GDP is still below pre-crisis levels. The political centre has fragmented, with anti-globalization parties of the extreme right and extreme left in the ascent. This fragmentation has drastically shrunk political space for sensible policymaking, increasing the fragility of rich economies.

Total debt levels in the Eurozone and the US have risen to about 250% of GDP, and many rich economies still face big fiscal deficits. In Japan, just government debt is more than 230% of GDP. While countries such as Germany have fiscal space for expanding public spending, particularly at record low borrowing costs, OECD economies have far less fiscal space today than at the onset of the crisis in 2008. The US Fed slashed interest rates about 500 basis points in each of the last three recessions. With the present interest rate now at 50 basis points, monetary policy space has shrunk massively. The IMF, BIS and OECD have all now warned of the dangers that might arise from even looser monetary policy.

This combination of rising political risk and shrinking political, fiscal and monetary policy space is very dangerous, and it is unclear if the rich world can adequately respond to future shocks to the economy or make sensible long-term policy. For investors heavily overexposed to low yield OECD bonds and stocks, this is yet another cause for alarm. Perhaps they have locked in low returns for high and rising correlated risk?

The current investment approach of institutional investors makes the problems far worse

The past few years have seen a rapid rise in passive investing by institutional investors, wherein they simply invest in whole standardised indices of stocks and bonds. The most popular indices such as S&P 500 or the

MSCI World Index, or the Barclays Capital Aggregate Bond Index almost all are populated mostly by rich economy listed stocks and bonds. Fully passive investments now account for more than a third of the whole market. Yet the influence of these indices is far greater than what this number captures.

By far the most important benchmark that institutional investors and asset managers use to evaluate their performance, manage their risk and determine compensation is a combination of some of these standard indices. Any investor or asset manager is loath to deviate too far from the benchmark, as their livelihood literally depends on it. With the average tenure of a Chief Investment Officer (CIO) at a public pension plan having shrunk to less than four years now, even a single year of significantly underperforming the benchmark index can end careers.

This performance pressure is compounded by the short-termism embedded in incentive structures. Fully 60% of investment managers are evaluated on the basis of their annual performance and three-quarters of bonuses are paid annually as cash for outperforming benchmarks. Even risk is often defined as deviation from the benchmark or in relation to the volatility of the benchmark index. All of these make institutional investors hug the index to the point that almost 75% of all institutional investor investments are closely linked to listed stock and bond indices. This, in turn, has significantly increased the co-movement of stocks and bonds and has greatly exposed these investors to common risk factors.

Investing with the index attracts far too much money towards those firms and entities with listed securities, most of which can already access capital cheaply. The use of market-capitalisation benchmarks, such as S&P500, by definition “leads to the creation of portfolios with excessive exposure to companies that may be overvalued or simply larger.” This does not lead to an efficient allocation of capital, as a study by analysts at Sanford C. Bernstein has shown.

Furthermore, most passive investors, such as the Norwegian Sovereign Wealth Fund and other index huggers wrongly use short-term price volatility as a measure of risk. Research has confirmed that market prices are far more volatile than economic fundamentals. Historically, US stock prices have been over three times more volatile than fundamentals, with indications that this has risen to between six to ten times since partly as a result of index hugging.

In fact, index hugging and using price volatility as a proxy for risk detract from the real ‘shortfall risk’ that institutional investors face, which is the risk of not being able to meet their obligations because of poor returns over the long term. Evidence is that these inappropriate measures of performance and risk lead to behavior that actually increases this real shortfall risk, particularly for long-term investors. What can they do to tackle this?

A glimmer of hope – new opportunities for institutional investors

Clearly there is a lot of reason for gloom, but before one gets too depressed it is useful to look at some more hopeful aspects of the global economy that provide plenty of opportunities for higher returns and risk diversification for institutional investors.

As depressing as the demographic trends for rich economies are, in many emerging and developing economies the demographics look far more favourable. India, for example, is expected to benefit from a “demographic dividend” for years to come. It will soon have fully 20% of the world’s working-age population. The population of Africa is likely to rise from 1 billion in 2010 to 1.6 billion, possibly more, by 2030. With the exception of China, most parts of the developing world have favorable demographics.

For this demographic dividend to materialise, however, the new workers coming into the workforce will need productive employment opportunities, which are far from guaranteed. Unemployment and underemployment remain endemic throughout the developing world, but this creates the potential for win-win opportunities, wherein institutional investors from OECD economies investing more money into

emerging economies can help create jobs, expand productive capacity, increase aggregate growth and enhance their own returns.

NBIM, the Norwegian Sovereign Wealth Fund, has found that more favourable demographics, scope for productivity catch-up and healthier public finances mean that growth prospects are better in the developing world for several decades to come. The OECD, the IMF and the World Bank all echo that prediction and recent history has shown that developing and emerging economies have registered growth rates that are 2-3 times higher than those seen in rich OECD economies.

Even as public debt levels for rich OECD economies have risen, those in many fast-growing developing economies such as India have actually fallen. Many economies such as India, Indonesia and Mexico have undertaken serious structural reforms and the political and policy environment in many developing economies is far more stable now. Political risk may actually be falling. Another favorable development has been the accumulation of foreign exchange reserves, which has reduced the vulnerability of emerging economies to external shocks.

As they urbanise rapidly, as technology catches up, as the middle-classes expand and as they see a rapid rise in innovation and increasing workforces, these emerging and developing economies have a big need for capital to invest in infrastructure, in clean energy and in developing and expanding productive capacity to cater to rapidly rising demand. Most are short particularly of the long-term risk bearing capital of the kind that institutional investors are very well placed to provide.

Matching capital from developed economy institutional investors with these large and promising investment opportunities in developing economies is a marriage made in heaven. Not only does it promise significantly higher returns for investors desperate for yield, it will also help them to structurally diversify their portfolios away from excessive exposures to risk factors common to OECD economies. And in doing that, these funds are more likely to be able to meet their obligations, will help create jobs, expand productive capacity, boost global GDP and can help tackle climate change.

In the developed world, the low levels of infrastructure investment in recent years are weighing down productivity and many productive but unlisted firms, especially SMEs, still find it very hard to access capital at reasonable costs, even as listed giants can borrow at close to zero per cent. Infrastructure, direct provision of capital to unlisted smaller firms and private equity are all promising avenues to both increase returns and expand productive capacity in the developed world.

It is clear that the poor design of many institutional investors, index hugging, poor risk measures and short-termism stops many of them from exploiting these most promising opportunities in both the developing and the developed world.

The way forward

Three things are clear so far. The first, that the best opportunities for diversifying risk, increasing returns and expanding productive capacity lie away from the traditional listed OECD country stocks and bonds universe that most institutional investors primarily inhabit. The second, that staying with traditional stock/bond portfolios in rich economies now poses a serious existential risk for many institutional investors facing rock-bottom returns and rising risk. The third, that moving beyond this traditional investment strategy towards the unlisted, infrastructure and emerging economy space will be hard for most investors who do not have the right institutional design to make such investments.

What can be done to change this?

The first thing institutional investors need to do is to improve their governance and strengthen their board and staff capacity. As Keynes noted in his masterpiece, "General Theory", the behavior of long-term investors will seem "eccentric, unconventional and rash in the eyes of the average opinion". Having weak

governance and poor staff capacity means that institutional investors have limited capacity to deviate from the average, which is represented by the standard index investments. Improving compensation, recruiting professional boards, as Canadian pension funds such as OMERS and CPPIB, the Australian and New Zealand Superannuation funds have done, is the right way forward. Unlike listed assets, which are easy to invest in, exploiting the unlisted opportunities requires specific domain knowledge, local expertise and direct investing capability.

As a second step, they need to change their performance benchmarking and reform compensation practices. Here the example set by Singapore's GIC, which uses a twenty year rolling return and by Woodford investment management, which has eliminated bonuses altogether may be useful for others to follow. Shifting away from using short-term volatility as the measure of risk, as many more sophisticated sovereign wealth funds have done, is another useful step. Last but not the least, moving away from relative measures of performance to an absolute benchmark for return, such as global growth rates plus 2%, is another step in the right direction.

A third step is the need to expand collaborations and partnerships, particularly with host country governments, with other like-minded institutional investors and with development finance institutions such as the IFC, the private sector arm of the World Bank, and Norfund, the Norwegian government's development finance institution. This would help leverage limited expertise and human capacity for maximum impact, access local knowledge and possibly address political risk.

A three-way joint venture between the Indian government, the State Bank of India and the State General Reserve Fund, the sovereign wealth fund of Oman, to invest in Indian assets is a good template. The Philippine Investment Alliance for Infrastructure, a four-way venture between the Asian Development Bank, the Philippine state pension fund, the Dutch pension fund APG and the Macquarie group, an infrastructure specialist, is another promising innovative partnership. The IFC's Asset Management Company, which allows institutional investors to co-invest alongside the IFC in its portfolio, is another pioneering and promising collaboration that needs to be scaled up and replicated more widely.

In the developed world, the Global Strategic Investment Alliance, the unlisted co-investment infrastructure vehicle set up by Ontario Municipal Employees Retirement System (OMERS) and a consortium of Japanese pension funds, serves as an excellent template. The UK's Pensions Investment Platform (PIP), set up to channel pension fund money into UK infrastructure, is still at inception but offers an interesting template nonetheless.

Last but not the least, investing in line with secular themes such as the growth of clean energy, the rise of emerging and developing economies, rapid urbanisation and the need for infrastructure, offers the most promising long-term opportunities. Because large long-term investors can invest in illiquid assets, invest in staff capacity, have the wherewithal to be counter-cyclical, don't have to use short-term volatility as a measure of risk, they have access to a much broader range of investment strategies and a much bigger investment universe. Hence they should, at least in principle, generate higher returns for lower risk, compared to the average investor.

To conclude

Institutional investors face a bleak landscape, given how poor the prospects for returns in their traditional portfolios, comprised mostly of OECD listed stocks and bonds, are. Add to that the rising political risks and shrinking fiscal and monetary policy space in rich economies, and the deadly combination of poor returns with high downside risks looms large.

Poor governance, limited human capacity, benchmarking focused on standard stock and bond indices, short-term incentives and inappropriate risk measures all act to restrict institutional investors to easily accessible OECD listed assets. In aggregate, this means that most institutional investors focus on getting a

larger share of existing productive capacity, which, given the poor prognosis for growth in rich economies, is stagnating.

True economic opportunities lie in expanding productive capacity by directing capital towards infrastructure, private equity, unlisted assets, particularly in capital poor, but faster growth emerging and developing economies. This offers a win-win opportunity that will diversify risk and increase returns for investors while increasing global growth, promoting development and helping tackle climate change.

Introduction

Investors in rich economies are facing a perfect storm, precipitated by long-term structural factors such as demographic decline. The financial crisis and the inability of policy makers to successfully deal with its consequences have left developed economies with debt overhangs and very little monetary policy space. Poor economic prospects, rising inequality and big bailouts of banks have fuelled a populist backlash in the US and in Europe that has severely shrunk political space, while increasing fragility.

This nightmarish environment of record low interest rates, a debt overhang, poor growth prospects and rising political risk has been made worse by the failings of institutional investors themselves. Many have made matters worse by having poor compensation structures, weak governance and little in-house capacity that has driven a short-term focus on easily investible listed stocks and bonds in OECD economies. This exposes pension funds, insurance firms and sovereign wealth funds to a brutal financial landscape that promises poor returns and high levels of risks.

While there is little that these funds themselves can do to influence big structural shifts such as demographic decline or rising political risks in OECD economies, much can be done to improve the rather dismal prospects they face by changing investment strategies and institutional set up. In addition, if they band together, it may also be possible to influence perverse regulations and improve policy responses by rich country governments.

CityUK, a think tank, has estimated that institutional investors hold around $100 trillion in assets under management (AUM), of which $33.9, $26.5 and $26.1 trillion are held by pension funds, insurance firms and mutual funds respectively. In addition to this, sovereign wealth funds and central banks hold more than $15 trillion of assets. These assets have almost doubled just in the past decade and now amount to more than global GDP. While more than 80% of these assets are owned by OECD countries right now, much of the future growth of institutional investors is likely to come from emerging markets.

Not all the investors above have a long-term investment horizon, which is the focus of this report, but the majority of these actors, particularly pension funds, insurance firms and sovereign wealth funds, do have at least some capacity to act as long-term investors. Doing so, as we will show in this report, will help improve prospects for both for the investors themselves, as well as for the global economy.

It is because of their vast size and critical role in the allocation of capital that the way institutional investors invest has significant consequences for the global economy[1]. Equally important is the impact on the hundreds of millions of ordinary citizens whose future welfare depends on the ability of pension funds and insurance firms to deliver on the promises they have made to these savers. The returns generated by sovereign wealth funds and foreign exchange reserve managers directly affect the fiscal capacity of many governments and thus the welfare of citizens. As the biggest providers of long-term capital, the investment strategies of these institutional investors directly influence what sectors, which firms and what countries get funded and at what cost. This in turn affects the total productive capacity of the economy.

What is clear is that the investments of institutional investors have a huge impact on the macro and micro outcomes in the global economy, while they themselves are affected by the trends and expectations about

[1] "The age of asset management?" Bank of England, 2014

the economy. The way that this expectation – investment feedback cycle - works is crucial for the health of the economy, as quality investment in promising sectors and firms helps increase both financial returns to the investors and growth rates in the economy. When this cycle ceases to function well, it can lead to huge misallocation of resources to sectors of the economy that cannot effectively deploy capital, thus increasing financial risks, depressing returns and resulting in lower overall GDP growth.

This report highlights how dangerous business-as-usual may be for institutional investors and shows a path forward that can help improve dismal return prospects while reducing risks. Such actions, which will necessitate big changes to the way the institutional investors are set up and what investment strategies they follow, point in the direction of investments in more illiquid assets such as infrastructure and a substantial reallocation towards emerging and developing economies. This, as the report highlights, will also improve global growth prospects, expand productive capacity, create employment, foster development, improve the sustainability of pensions and can help improve the environmental footprint of the economy.

Chapter 1: Decline

The majority of the world's savings, particularly those channeled through institutional investors, originate in and are still invested in rich OCED economies. The financial, economic, social and political prospects for these economies thus will have an outsized impact on the fate of these funds.

It is true that OECD economies remain much richer, prosperous and stable than their emerging counterparts, but this chapter charts how the days when they dominated the world economy, the global financial system and politics may well be behind us.

In here we highlight some of the structural challenges OECD economies face, particularly poor demographics and high levels of indebtedness. We also discuss how some more short-term factors such as a poor response to the crisis has left them facing a deflationary environment with little additional room for policy maneuver. Moreover, the activism of central banks through rock-bottom interest rates and quantitative easing may have run its course, and falling yields, as we show in Chapter 2, spell disaster for institutional investors, particularly pension funds and insurance firms exactly when citizens' dependence on them delivering a safe retirement is rising.

The economic and financial problems are not helped by a backlash against the political system that is now evident in the United States and in swathes of Europe, as most visibly evidenced by the vote for a Brexit. The political mainstream is fragmenting, empowering anti-globalization and anti-immigrant constituencies, even as further economic integration and more immigration into ageing economies are the best guarantors of economic prosperity.

The backlash has been fuelled by combination of factors that include stagnation of incomes for the middle classes, rising inequality, the disappearance of manufacturing jobs, protests against relatively high levels of immigration, the recent influx of refugees, the bailout of big banks and post-crisis austerity. While not quite dystopia yet, rich economies are faced with a shrinking political centre that will make the formulation of sensible policy responses to these challenges much harder. This is likely to hasten their relative decline.

While it is true that in some rich countries such as Greece absolute levels of income have declined sharply following the crisis, the GDP and income levels across the rich world in general are not expected to fall in absolute terms. However, the much faster growth rates, better demographics and improving political stability of the rest of the world means that OECD economies are stagnating as emerging economies catch up.

Demography

As the post-war "baby boomer" generation starts to retire, most OECD economies are facing a sharp demographic decline, and this, according to economic theory and empirical data, will cast a dark shadow over their economic prospects. The median age in the EU, for example, has crept up to 42 from 36 in just two decades. Birth rates in the EU now average just 1.58, far below the 2.1 needed just to keep populations at current levels.

Fewer babies were born in Italy last year than at any point since the birth of the country in 1861[2]. By 2060 the German government expects its population to plunge from 81 million to 67 million. Spain has one of the lowest fertility rates in the EU at just 1.27 and its population has been shrinking from 2012[3]. Population in Japan is in steep decline having already fallen by more than 1 million from peak levels. The fact that two-thirds of Japan's nearly two million farmers are over the age of 65 is indicative of the scale of the demographic challenge it faces[4].

Ruchir Sharma, of Morgan Stanley, has shown in his new book "The Rise and Fall of Nations" that GDP growth has historically come from two sources, namely the rise in working age populations and productivity growth in roughly equal proportions. He further shows that for countries where working age population is growing at less than 2% a year, growth rates exceed 6% in only one out of four cases. In economies with shrinking working age populations that now include much of the rich world GDP growth has averaged just 1.5%[5].

The United States is the only large developed country where population continues to grow mainly due to immigration, albeit still at a slowing rate of less than 1%. The US too is facing an ageing workforce, as the baby boomers retire and fertility rates stay below replacement levels[6]. From next year, the total aggregate workforce in the developed world will start to decline, threatening growth[7]. "Among advanced countries, the working-age population will shrink 26% in South Korea, 28% in Japan, and 23% in both Germany and Italy by 2050, according to the U.N.[8]"

Source: Financial Times

As the population ages, dependency ratios, as shown in the graph above, are expected to rise sharply, further increasing the pressure on institutional investors such as pension funds and insurance firms that are

[2] https://www.theguardian.com/world/2015/feb/13/italy-is-a-dying-country-says-minister-as-birth-rate-plummets
[3] http://ec.europa.eu/eurostat/statistics-explained/index.php/People_in_the_EU_%E2%80%93_statistics_on_demographic_changes
[4] http://www.bloomberg.com/news/articles/2016-08-22/japan-turns-to-foreign-workers-as-farmers-age
[5] http://www.morganstanley.com/ideas/ruchir-sharma-rise-and-fall-of-nations
[6] http://www.worldometers.info/world-population/us-population/
[7] http://www.wsj.com/articles/how-demographics-rule-the-global-economy-1448203724?tesla=y&alg=y
[8] ibid

supposed to provide for retirement. This double whammy of slower growth and rising demands on institutional investors puts them in a very tight spot, as highlighted by this report.

However, demographic trends in the rest of the world are far better.

With the notable exception of China and Russia, which are ageing rapidly, most other emerging countries in the world have favorable demographics, with rising working age populations whose median age is low in contrast to the developed world. In 15 years, China will have the world's largest population of the over 60s and a workforce that is in rapid decline[9]. The size of Russia's and China's workforce is expected to shrink by 21% by 2050.

In contrast to that, India is expected to benefit from a "demographic dividend" for years to come. "The country will soon have 20% of the world's working-age population, and boasts a birth rate of 2.5 children per woman. The working-age population, aged 15-64, will rise by 125 million over the next decade, and another 103 million over the following decade[10]."

Other countries in South Asia such as Bangladesh and Pakistan also have very favourable demographics, as do other emerging market giants such as Indonesia and Brazil. The UN estimates that the population of Africa is likely to rise from 1 billion in 2010 to 1.6 billion by 2030 and this is most likely an underestimate[11]. Africa also looks set to reap a "demographic dividend". The median age in the Arab world is under 30 and it too has a favourable demographic profile. In fact, Saudi Arabia and Nigeria are today the only major countries that have labour force growth above 2%[12]. On the whole, middle income emerging economies will see a 23% rise in their working age population by 2050 led by India at 33%[13].

While favourable demographics don't guarantee high growth, they appear to be a necessary condition for any sustained period of high growth. Meanwhile, OECD economies have ageing, often declining populations with rising dependency ratios. On demographics alone, the prognosis for much of the rich world's growth prospects is poor. This puts pressure on institutional investors that will see falling financial returns and fewer economic opportunities, while being expected to deliver adequate pensions for a growing cohort of retirees.

Fortunately, for much of the developing world, particularly South Asia and much of Africa and the Arab world, the demographic dividend is set to provide a tail wind. Much can still go wrong, of course, but the prospects for growth in the developing world look far more promising in comparison to OECD economies. For the demographic dividend to materialise, however, the new workers coming into the workforce will need productive employment opportunities, which are far from guaranteed. Unemployment and underemployment remain endemic throughout the developing world[14].

This creates the potential for win-win opportunities, wherein institutional investors from OECD economies investing more money into emerging economies can help create jobs, expand productive capacity, increase aggregate growth and enhance their own returns.

[9] http://time.com/4218169/demographics-global-economy-immigrants-china/
[10] http://www.forbes.com/sites/michaellingenheld/2015/02/25/demographics-will-power-the-worlds-new-growth-leader-india/#4fec1ab03fc3
[11] http://www.economist.com/news/middle-east-and-africa/21598646-hopes-africas-dramatic-population-bulge-may-create-prosperity-seem-have
[12] http://www.morganstanley.com/ideas/ruchir-sharma-rise-and-fall-of-nations
[13] http://www.wsj.com/articles/how-demographics-rule-the-global-economy-1448203724?tesla=y&alg=y
[14] http://www.ft.com/cms/s/0/0bbe354a-6951-11e6-ae5b-a7cc5dd5a28c.html#axzz4IdIo0tt2

Debt

Much of the developed world has not properly recovered from the crisis of 2008. In response to that crisis, governments bailed out financial institutions by taking private debt on to the public balance sheet and loosening fiscal policy even as tax revenue fell precipitously. Consequently, public debt levels rose substantially across much of the OECD economies. A healthy recovery, where economies bounced back from the crisis would have increased GDP and flooded government coffers with a cyclical upturn in tax revenues such that debt/GDP ratios would have fallen back. Such a recovery is notable for its absence. Much of the developed world has only now, six years after the crisis, clawed back pre-crisis levels of GDP.

Even now, the UK, Japan and many countries in the Eurozone have persistently high deficit levels and low growth, which means that their debt/GDP ratio is still climbing. In aggregate, debt levels for OECD economies have risen from 79.9% in 2008 to 111.2% in 2015. The UK has seen an increase from 57.3% to 103.1%, Japan from 171.1% to 232.5%, Spain from 48% to 111% and the US from 72.6% to 106.5% in debt as a percentage of GDP[15]. Total public and private debt in the US and the Eurozone rose from about 225% in 2007 to more than 250% now[16]. McKinsey, a consultancy, found that debt-to-GDP ratios have risen in all 22 developed economies they looked at, by more than 50 percentage points in many cases[17].

According to McKinsey, global debt has risen by $57 trillion since 2007, of which more than half is accounted for by rich economies. The balance is accounted for by emerging economies, of which China has seen the biggest rise.

There has also been some concern over the sharp rise in debt levels in some emerging markets, as captured by some alarmist Wall Street Journal (WSJ) headlines such as “Rising Debt in Emerging Markets Poses Global Threat”[18], but those concerns have largely melted away. A more recent WSJ headline “Everyone Wants Emerging Market Bonds, But There Aren’t Enough To Go Around” says it best.[19]” Indeed, debt levels in some emerging economies such as China, Malaysia and Thailand and in some African countries, particularly those that are commodity exporters, are a cause for concern.

But in sharp contrast to most OECD economies, India’s debt/GDP ratio has actually fallen from 74.5% in 2008 to 66.4% in 2014, despite a high fiscal deficit mostly because of rapid growth. Few emerging economies, with the exceptions highlighted above, have seen their debt rise by much and for most the debt/GDP ratio remains much lower than in OECD economies. Many also have sufficient foreign exchange reserves, which are now near record levels, in order to pay back any foreign currency borrowing, so a repeat of previous emerging market crises is highly unlikely[20].

On the whole, total debt in developing countries remains relatively modest, averaging 121 percent of GDP, compared with 280 percent for advanced economies, while their growth rates and demographics look much healthier. Moreover, three quarters of the new debt accumulated in emerging economies is in the household and corporate sectors and, as McKinsey suggests, “this reflects healthy financial system deepening, as more households and companies gain access to financial services[21].”

[15] http://www.oecd-ilibrary.org/economics/government-debt_gov-debt-table-en
[16] http://www.ft.com/cms/s/0/9b8fdfae-661b-11e6-8310-ecf0bddad227.html#axzz4I258txEr
[17] http://www.mckinsey.com/global-themes/employment-and-growth/debt-and-not-much-deleveraging
[18] http://www.wsj.com/articles/rising-debt-in-emerging-markets-poses-global-threat-1453238133
[19] http://www.wsj.com/articles/everyone-wants-emerging-market-bonds-but-there-arent-enough-to-go-around-1471937517
[20] http://www.economist.com/news/briefing/21678215-world-entering-third-stage-rolling-debt-crisis-time-centred-emerging
[21] http://www.mckinsey.com/global-themes/employment-and-growth/debt-and-not-much-deleveraging

Empirical research and history show that debt overhangs depress growth rates and that a rapid buildup of debt increased the likelihood of crisis[22]. On both counts, the prognosis for developed economies looks worrying, while the outlook for the developing world is much sunnier despite there being some areas of concern. Both the levels total of debt in the rich world and the rapid rise of as much as 50% of GDP seen in some of the developed economies since the crisis mean that growth is likely to be depressed, and the likelihood of another crisis is higher. Moreover, recessions, once underway, are likely to be longer and deeper in high debt economies[23].

What these already high debt figures do not capture are the many contingent liabilities of rich economies, the biggest often being pension commitments. They exceed 300% of GDP for countries such as Poland, France, Germany, Italy, the UK, Portugal, Spain and Finland, and are bigger than 100% of GDP for both the US and Japan.[24]

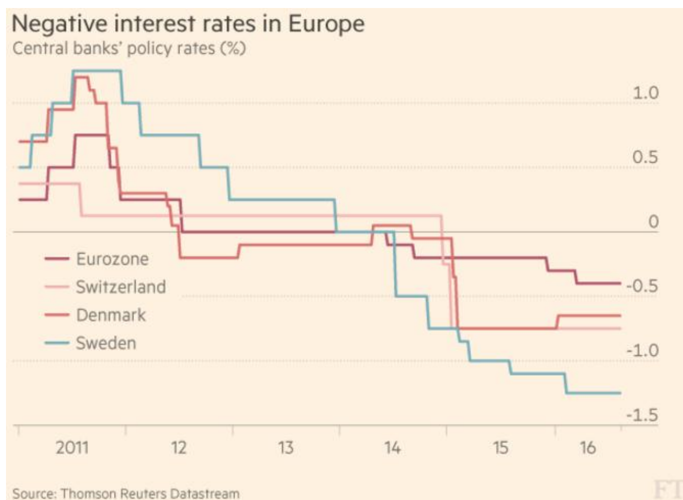
Stagnating growth will make it very hard for rich economies to reduce their debt and contingent liabilities, but emerging economies, which both have lower debt burdens and contingent liabilities and faster growth rates, should see an increase in their debt bearing capacity. It is important that additional debt finances productive investments rather than wasteful consumption or white elephant projects.

Deflation

Adding to the problem of high debt is the fall in inflation across all OECD economies. Some of the past instances of high levels of indebtedness have seen helpful bouts of higher inflation that can help reduce the real value of outstanding debt[25]. In contrast, the combination of deflation and high indebtedness can squeeze an economy into a debt-deflation trap, where efforts to repay debt shrink aggregate demand reducing wages, increasing the real burden of debt and further diminishing capacity to repay debt[26]. This is a big worry in the euro zone, where many banks are already stuffed with dud loans[27]."

Also, prices are falling in many places at once. Greece has seen price falls for more than two years now and prices in the Eurozone fell by 0.2% last year. Germany, Italy and Spain all saw falls and the US, Britain and China each have inflation rates of less than 1%. Japan seems unable to get out of deflation for any length of time. This looks like a sign of entrenched weak demand. As the Financial Times highlights, "eight years after the crash, major economies including the US are stuck with sub-target inflation, ultra-low rates, and economic growth that remains pedestrian[28]".
In a bid to stimulate a recession-hit economy and to allow fragile banks to borrow at a reasonable cost, in the immediate aftermath of the crisis in 2008 central banks across the developed world cut interest rates in unison. They have been cutting since and many, as the graph below charts, have now gone into uncharted negative territory. This includes Switzerland and Japan, although the US is also very close to zero. Another stated reason, particularly in the Eurozone, has been to try and generate inflation to meet central bank targets of roughly 2%, the norm in OECD economies.

[22] http://www.economist.com/blogs/buttonwood/2016/01/monetary-policy
[23] ibid
[24] http://www.ft.com/cms/s/0/8a54a0c6-648b-11e6-a08a-c7ac04ef00aa.html#axzz4I45dGCpJ
[25] http://www.economist.com/blogs/buttonwood/2011/06/escaping-debt-crisis
[26] http://www.economist.com/blogs/economist-explains/2015/01/economist-explains-4
[27] http://www.economist.com/news/leaders/21644148-deflation-can-be-good-thing-todays-version-pernicious-feeling-down
[28] http://www.ft.com/cms/s/0/e93cec28-6ce8-11e6-9ac1-1055824ca907.html#axzz4IdIo0tt2



Source: Financial Times[29]

When lowering interest rates has not worked, central banks across the rich world have resorted to additional measures, particularly quantitative easing that has involved central banks purchasing hundreds of billions of dollars of assets in the financial markets[30]. The biggest component has been government bonds, but mortgages, corporate bonds and in some instances shares have also been bought in the tens of billions. Additionally, central banks have opened special discount windows to allow banks to borrow from them at low rates, particularly to lend to the real economy. They have also resorted to forward guidance, opining on the likely future evolution of interest rates from which a clear message of "lower for longer" has now emerged.

All of this has severely depressed yields across fixed income markets, particularly for rich country government bonds and has created very serious, often unintended, consequences for banks as well as institutional investors such as pension funds and insurance firms. These will be addressed in detail in the next two Chapters.

An in-depth study on the impact of sub-zero interest rates across the developed world in the Eurozone, Japan and Scandinavia by S&P has concluded that as much as a quarter of the world's GDP is affected by negative rates.

The Chief Executive of Deutsche Bank recently cautioned that the negative interest-rate policy could have "fatal consequences."[31]."Monetary policy is now running counter to the aims of strengthening the economy and making the European banking system safer". The IMF agrees by saying that "any further lurch into negative rates in the Eurozone would do more harm than good[32]." However, the biggest negative impact is not on banks but on institutional investors.

Negative rates have, together with QE programmes, driven half of the developed world's sovereign bonds into negative yields, with grave consequences for pension funds and insurance firms. They have sharply

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[29] http://www.ft.com/fastft/2016/08/18/nearly-500m-people-live-under-negative-rates-sp/
[30] http://www.economist.com/blogs/economist-explains/2015/03/economist-explains-5
[31] http://www.marketwatch.com/story/the-head-of-germanys-largest-bank-says-negative-rates-are-fatal-2016-08-25?siteid=rss
[32] http://www.ft.com/fastft/2016/08/18/nearly-500m-people-live-under-negative-rates-sp/

reduced the investment returns these institutions rely on to meet their long-term liabilities. Yields on 10 year German bunds, for example, is now 0.16% and on 30 year Bunds just 0.4%[33].

Prospects for normalisation are rather dim, as an increasing number of economists expect low inflation and low interest rates to be the new normal in the rich world. Some have hypothesised that the real natural rate of interest has fallen to 1% or lower, probably because population ageing has boosted saving even as lower expectations of growth have cut investment [34].

The longer OECD countries suffer from sub-normal levels of inflation and the longer interest rates and yields stay negative, the bigger the problems faced by their banks and institutional investors will become.

Some emerging economies such as China are also facing sub-normal levels of inflation, but for the most part, inflation rates, central bank interest rates and yields on governments bonds all remain in relatively healthy territory in most emerging economies.

Distribution

Inequality within today's advanced economies was high before the world wars, but thanks to the influence of wartime policy and the expansion of the welfare state immediately after, it fell to levels not seen in the 20th century before or hence. Around 1980, as a result of a series of public policy measures that included reduction in top tax rates, liberalisation and the advent of globalisation and technology, it started climbing again. This was most starkly visible in the UK and the US, but other rich countries have not been immune.

Particularly after China joined the WTO and became integrated into global supply chains, the incomes of the blue-collar working classes in advanced economies stagnated, as more production moved to China and wages for Chinese workers rose, albeit from very low levels. The sense of loss at workers declining economic power was compounded by a sense of political powerlessness, particularly in the US, where the very rich used their fortunes to influence elections[35].

The real incomes of middle classes have also stagnated in advanced economies, even as the very visible incomes of the super rich, the so-called 1%, have exploded[36]. On average, between 65 and 70 per cent of households in 25 high-income economies experienced stagnating or falling real wages between 2005 and 2014.

In addition to longer-term structural factors discussed so far, an important explanation for the prolonged stagnation in real incomes is the financial crises and subsequent weak recovery. These experiences have eroded popular confidence in the competence and probity of business, administrative and political elites[37]. Growing insecurity about the adequacy of pensions for the blue collar and middle class retirements is not helping either, and has contributed to the rise of populist politics, as well as a backlash against globalisation and immigration in many advanced economies. In some countries such as Italy, the real GDP per capita has actually fallen, as the graph below shows.

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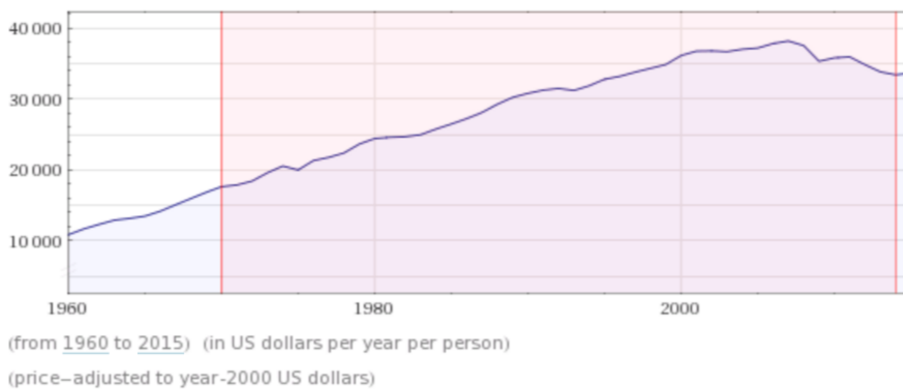
[33] http://blogs.wsj.com/moneybeat/2016/08/12/heres-a-possible-explanation-to-the-hunt-for-yield-there-isnt-one/
[34] http://www.economist.com/news/leaders/21705826-rich-worlds-central-banks-need-new-target-when-2-not-enough
[35] http://www.economist.com/news/books-and-arts/21653596-anthony-atkinson-godfather-inequality-research-growing-problem-mind-gap
[36] http://voxeu.org/article/greatest-reshuffle-individual-incomes-industrial-revolution
[37] http://www.ft.com/cms/s/0/54f0f5c6-4d05-11e6-88c5-db83e98a590a.html?siteedition=intl#axzz4I258txEr



Source: Wolfram Alpha

While we consider the political effects of stagnating incomes and rising inequality in the next section, what is equally important is the pernicious impact that inequality has on growth. The IMF, for instance, has estimated that a one percentage point increase in the income share of the top 20% will drag down growth by 0.08 percentage points over five years, while a rise in the income share of the bottom 20% actually boosts growth. Inequality impairs growth when the poor are unable to access opportunities for education and do not have access to proper healthcare, thus lowering productivity[38].

Raghuram Rajan, the former chief economist of the IMF, has demonstrated the link between inequality and financial instability, and Larry Summers, the former president of Harvard University, holds the rise in inequality party responsible for the glut in global savings and depressed demand, because the rich spend a lower proportion of their income than the poor.
While absolute inequality in emerging countries such as China is rising, relative inequality in many emerging economies is stable or falling. Even where it is rising, it is in the context of the wages of the poor and the middle classes rising, but slower than the earnings of the rich. This is nowhere as politically toxic as the stagnation in incomes seen in advanced economies, and the economic consequences are not quite that pernicious.

The inability of institutional investors, particularly pension funds and insurance firms to keep their promises to policy holders will push millions more into poverty, push inequality up even more and generate a destructive political backlash.

Dystopia?

Branco Milanovic, a scholar of inequality, has posited that he expects inequality in advanced economies to maintain its recent rise, for a few years yet, and fears that this could lead to some dark outcomes. He fears that the US may fall into the grip of an "undemocratic plutocracy", while Europe risks falling prey to right-wing nativism[39]. His prognosis for inequality and political consequences in emerging economies is far more benign and he expects catch-up growth to continue.

While real incomes have stagnated over a far longer period than any since the war, in many advanced economies that cannot be the only driver of discontent amongst the blue collar workers and middle classes. It would appear that many find cultural changes also threatening, as is visible in America's culture wars and in the debates around Brexit. Immigration - globalisation in "flesh" has also become a big driver of

[38] http://www.economist.com/blogs/economist-explains/2015/06/economist-explains-11
[39] http://www.economist.com/news/books-and-arts/21695853-surprisingly-little-known-about-causes-inequality-serbian-american-economist

discontent due to perceived cultural, economic and security threats, no matter how fictional. As the Financial Times puts it, “citizenship of their nations is the most valuable asset owned by most people in wealthy countries. They will resent sharing this with outsiders”. The UK’s vote to leave the EU was a warning shot[40].

Persistent high unemployment and weak growth, particularly since the crisis, have also contributed to the rise of populist anti-establishment parties in many parts of Europe, including the far-right National Front in France and Spain’s left-wing Podemos party. In Austria and Sweden, the rapid rise of the populist right also comes in the wake of an unprecedented surge of migrants and in others such as the Netherlands it comes from a backlash against economic immigration.

Populism almost brought Greece to the brink of leaving the Euro and actually led to the UK voting to leave the EU. The Netherlands has rejected a trade deal with Ukraine and Le Pen, who is leading in the polls for the French presidential election, is against Euro membership. Two of the great political parties in the west — the Republicans in the US and the Labour Party in the UK — are in a crisis, risking the weakening of democracies in both countries[41]. The rise and rise of Donald Trump, despite his shameless immigrant and foreigner-bashing far-right propaganda, is a sign of the times.

The political centre in many rich economies is fragmenting and politics is turning into a battle between the establishment and the so-called anti-establishment parties, which variously blame globalisation, the selfish elite, company bosses, immigrants or the establishment for the plight of the common man and promise simplistic solutions. As Gideon Rachman says, these span the spectrum from the far left to the far right, but the “characteristic they almost all share is a claim that the system is “rigged” and that ordinary people are being trampled by elites”[42].

While political risks were traditionally seen to be associated with developing economies, they have been rising in rich economies. For example, the Brexit vote resulted from traditional British Euroscepticism, reinforced by a general Western disillusionment with globalisation, simmering since the 2008-09 financial crisis, according to Control Risks, a political risk consultancy. It has warned that the “populist insurgency against ‘elite’ political and economic establishments” may be “a harbinger of further political shifts in Western countries against globalization[43].” Dani Rodrik of Harvard University was prescient when he warned that rising inequality could also threaten public confidence in growth-boosting policies like free trade and create a backlash against globalisation[44].

Most of the top risks for the global economy issued annually by the Economist Intelligence Unit now relate in some way related to the vulnerability of Western governments and institutions: Donald Trump winning the White House and a fracturing of the EU, for instance. The marked fall in support for globalisation and the rise in protectionist measures and protectionist and anti-immigrant rhetoric in rich economy politics is alarming and indicates a retreat into de-globalisation.

The IMF, for example, is right to be increasingly “concerned over rising political risks around the world ranging from protectionist rhetoric in the US presidential campaign to support for populist parties in Europe. It also is anxious about the potential impact on the global economy and financial markets of British

[40] http://www.ft.com/cms/s/0/54f0f5c6-4d05-11e6-88c5-db83e98a590a.html?siteedition=intl#axzz4I258txEr
[41] http://www.ft.com/cms/s/0/0c2fc5b2-6630-11e6-8310-ecf0bddad227.html#axzz4IILsO4RJ
[42] http://www.ft.com/cms/s/0/0c2fc5b2-6630-11e6-8310-ecf0bddad227.html#axzz4IdIo0tt2
[43] https://www.controlrisks.com/en/our-thinking/analysis/the-global-implications-of-brexit
[44] http://www.economist.com/blogs/economist-explains/2015/06/economist-explains-11

voters deciding to quit the EU[45].” It also noted that divisions and Euroscepticism had “weakened prospects for collective action”, which left the single currency area “increasingly vulnerable to risks while there is little policy space.[46]”

The problems extend far beyond the Eurozone, and political risk and populism have reared their ugly head in central and eastern Europe too.

Earlier this year, S&P downgraded Poland saying that its “system of institutional checks and balances has been eroded significantly”. The country’s populist Law and Justice government, it added, had “initiated various legislative measures that weaken the independence and effectiveness of key institutions”.

It would appear that Hungary’s flirtation with “illiberal” democracy under prime minister Viktor Orban is spreading. In Slovakia, the Eurosceptic prime minister Robert Fico’s Smer party lost votes in elections in March, but ended up forming a four-party coalition that includes the right-wing Slovak National party. A neo-Nazi group also entered parliament as the fifth-largest party.

Moody’s has warned that “unorthodox policymaking” in Poland and Hungary and populism in Slovakia and Czech Republic had become “major risks” for investors. Disillusionment because of a perception that EU membership has failed to deliver promised benefits, partly because the global financial crisis intervened, is leading to a “questioning of the mainstream politics and the rise of the fringes . . . almost across the board”.

“In the majority of the countries we see new parties coming up from the left or the right, mostly non-ideological, populist-type parties. Now that has its own risks . . . in inefficiency of decision-making and planning of policy direction[47].”

Ousmène Mandeng, formerly of the IMF, captures the zeitgeist well and agrees with Dani Rodrik that politics in rich economies is changing towards a “de-globalising world”. While previous bouts of political change, such as the fall of authoritarian regimes in Latin America in the 1980s and 1990s and in east Asia after the 1997 Asian crisis, and the fall of the Berlin Wall were part of the growing consensus towards globalisation, “globalisation may now have stopped and, with that, the political trend supporting it” — in Europe and the US, where the political tone has become “increasingly anti-globalisationalist”.

The feeling of loss, of alienation from the global elites and the governing cadres of their own society makes citizens in these countries wish to protest. They see large multinationals and big governments as acting against their interests. They may worry about large-scale migration and its possible impact on economic opportunity and the culture of their country. As growth languishes, this discontent is only likely to grow. I t is not dystopia yet, but expect growing troubles in rich economy politics and policymaking[48].

Decline

As would have become clear to the reader by now, most OECD economies face multiple challenges, namely declining demographics, high and rising debt, fragmenting politics, deflationary pressures and rising

[45] http://www.ft.com/cms/s/0/4c69acc6-33d4-11e6-ad39-3fee5ffe5b5b.html#axzz4IdIo0tt2
[46] http://www.ft.com/cms/s/0/4c69acc6-33d4-11e6-ad39-3fee5ffe5b5b.html#axzz4IM9qFit6
[47] http://www.ft.com/cms/s/2/dd974bc0-0ad2-11e6-b0f1-61f222853ff3.html#axzz4IM9qFit6
[48] http://www.ft.com/cms/s/0/aca105d6-ef4a-11e5-9f20-c3a047354386.html#axzz4IM9qFit6

inequality. Add to this the related problem of stagnating productivity, and an unpromising picture starts to emerge.

Between 2005 and 2015, output per hour worked grew by only 1.3% a year, down from growth of 3% a year between 1995 and 2005 for the USA and in the year to the most recent quarter productivity actually fell, by 0.4%[49]." Total factor productivity, the best measure of technological advance grew by just 0.2%, compared with an average of 1.1% in the two decades prior to the financial crisis.

Squeezed between poor demographics and declining productivity, while burdened by excessive debt, rich country economies would do well to manage even modest growth rates.

As growth expectations have fallen, this has led to other problems that reduce the effectiveness of post crisis policymaking. Businesses, for example, anticipating slower long-term growth cannot be expected to invest much. So, even as borrowing costs for businesses have fallen in many cases to record lows, capital investment has flat-lined. Under poor growth scenarios it may be that the number of profitable projects has also fallen simultaneously[50]. Consumer spending has also not picked up as expected and demand remains weak, as consumers see a bleak economic future.

Another reason for both business and consumer spending remaining weak could be that both are trying to pay off excessive levels of debt taken on in the boom years of 2001-2008 and deleverage.

A third reason why consumers and businesses may be reluctant to spend despite negative rates on savings and record low interest rates on borrowing could be the pernicious effect of these low rates on pensions. Falling yields, as we show in Chapter 2, have opened up yawning deficits in pension schemes. Companies remain responsible on defined benefit schemes and may be investing less as they divert funds towards plugging these deficits. Individuals, seeing that they will getting less returns from defined contribution schemes than they had hoped for, may also start saving more for their retirement.

This leads to the paradox of thrift, whereby lower spending and investment by individuals and companies shrinks the total size of the economic pie by reducing aggregate demand and reinforces problems of sclerotic growth. This was made worse by austerity policies in Europe, which also reduced government spending. Much of the advanced world is now stuck in this bad equilibrium wherein anticipation and expectation of poor growth has led to behaviour that will actually deliver that poor outcome.

The economic prospects of OECD economies, which were already looking modest at best before the crisis, have significantly deteriorated since. A study by Norges Bank Investment Management (NBIM) showcases the striking decline in the average GDP growth rates in developed economies from 5% in the 1960s and 70s to 1.5% now. It also finds that more favourable demographics, scope for productivity catch-up and healthier public finances mean that growth prospects are better in the developing world for several decades to come[51]. For example, of the 66 countries that grew at 4% or faster in 2015, only Luxembourg is an OECD member[52].

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[49] http://www.economist.com/news/finance-and-economics/21705847-americans-are-spending-and-hiring-so-why-arent-firms-investing-econundrum
[50] http://www.economist.com/blogs/buttonwood/2016/01/global-economy
[51] NBIM, 30 March 2012, 'Economic Growth and Equity Returns', *NBIM Discussion Note.* http://www.nbim.no/Global/Documents/Dicussion%20Paper/2012/DiscussionNote_5-12_Final.pdf
[52] http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG

The divergence in growth rates, as the OECD and the US National Intelligence Council[53] point out, is likely to continue. The OECD now expects the share of global GDP attributable to rich economies to shrink from 64.7% in 2011 to 42.3% in 2060[54].

The latest growth forecasts from the International Monetary Fund also look poor for rich economies and more optimistic for emerging economies. It expects the pace of gross domestic product growth in emerging markets to increase every year for the next five years while developed markets stagnate.

The future shape of the world is starting to emerge and in this, both emerging markets and poor low income countries will grow faster than OECD economies for a long period and will constitute a much higher proportion of world GDP, world trade and world financial assets than they do now. Consequently, the share of OECD economies on all of these parameters is set to decline.

The relative decline of OECD economies, already evident before the crisis hit, has now accelerated. Moreover, the resilience of these economies to future shocks is expected to be much weaker now that political, fiscal and monetary policy space has shrunk.

[53] National Intelligence Council, December 2012, *Global Trends 2030: Alternative Worlds.* http://www.scribd.com/doc/115962650/Global-Trends-2030-Alternative-Worlds

[54] OECD, November 2012, 'Looking to 2060: Long-term global growth prospects', *OECD Economic Policy Papers*. http://www.oecd-ilibrary.org/docserver/download/5k8zxpjsggf0.pdf?expires=1375920306&id=id&accname=guest&checksum=123334890FD812773838FE720F30CC9B

Chapter 2: Disaster

Institutional investors, particularly in the rich world, are facing a perfect storm, where a combination of factors has come together to depress returns and increase risks. This is at the same time as baby boomers in OECD economies are retiring in huge numbers and developed country public finances are in a poor shape. The consequences for the world, in terms of pensions penury for millions of citizens, financial instability, political backlash and fiscal overstretch can be huge, unless something is urgently done to tackle this crisis.

In this Chapter we focus on how poor the yield environment faced by institutional investors is, and how risks have risen at the same time as returns have fallen, and what this means for the ability of institutional investors such as pension funds and insurance firms to deliver on their promises.

An existential crisis

Many pension funds and insurance firms face nothing less than an existential crisis. Things are so bad that some of Europe's largest pension funds have banded together and called on central banks to drop inflation targets, which have partly driven the record low interest rate environment[55]. The chief executives of Swedish AP7 and Danish ATP have expressed their "deep worries" and said how it was becoming impossible for them "to create any return at all."

Philippe Desfossés, chief executive of ERAFP, a French pension fund, believes that "many pension funds in Europe will implode over the next two to three years" if the central bank's low interest rate policy continues. That policy, he says, is "weighing heavily on the pension fund industry" and that "the risks facing pension funds are continuing to grow[56]".

In order to be able to understand the scope and scale of the problems facing institutional investors, it is critical to look at their investment strategies and asset allocation, as well as the yields on those asset classes and their valuations that account for the bulk of institutional investor investments. This is the subject of the next three Chapters.

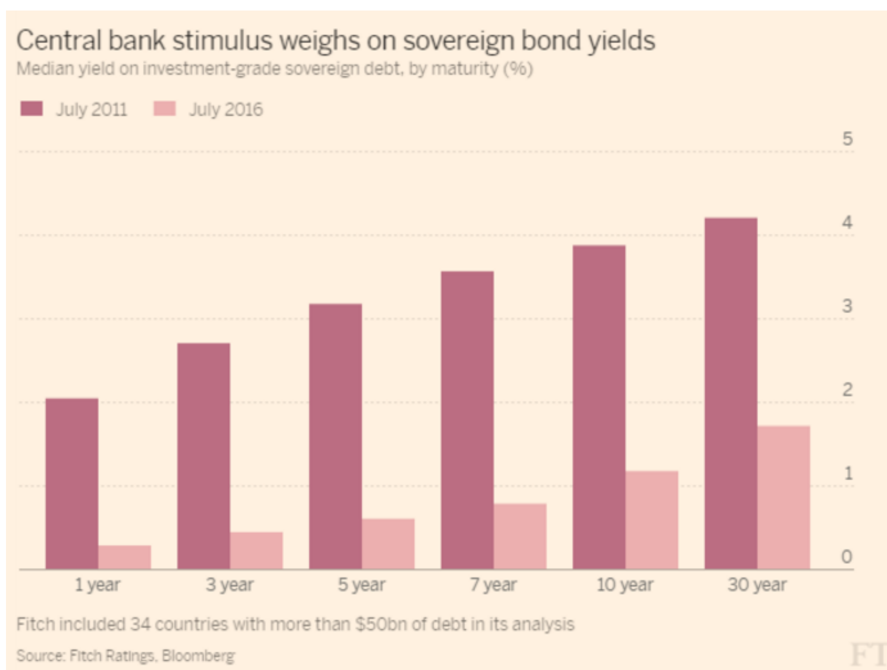
The new normal of low rates

A combination of factors has meant that interest rates and related bond yields have progressively fallen for developed economies. These factors include Paul Volker's successful taming of inflation in the 1980s, the arrival of China and other emerging economies on the world scene and thus putting a downward pressure on wages and prices, as well as a possible glut of savings seeking "safe" investments often in developed country government bonds.

That trend was visible even before the crisis of 2008, in response to which central banks in most OECD economies have lowered interest rates to record low levels, including, for a number of countries, to below zero. A parallel policy measure that has put additional downward pressure on yields was the launching of huge programs of quantitative easing wherein these central banks together bought trillions of dollars' worth of government bonds and other asset classes.

[55] http://www.ft.com/cms/s/0/6d414fa8-70f6-11e6-9ac1-1055824ca907.html#ixzz4JRey0D9H
[56] ibid

Larry Summers, the former president of Harvard University, has put forward “secular stagnation” as a possible explanation in the form of a world where an excess of savings is not matched by sufficient attractive investment opportunities, hence creating a downward pressure on interest rates and bond yields. Under this scenario, a host of factors from demographic decline leading to lower growth expectations, to the lower capital intensity of newly emergent IT industries, to rising inequality, which concentrates wealth in the hands of the few who have a higher propensity to save, has led to a savings glut and a shortage of global aggregate demand that has been sucking more of the “world economy into a zero rate trap”[57]. While the secular downward trend is important and means that low rates may be the new normal, nevertheless the suddenness of the decline in yields in the past five years in particular, as the chart below shows, has caught many institutional investors by surprise.



Source: Financial Times

Gertjan Vlieghe from the Bank of England forecasts that real interest rates may remain low for a considerable period owing to the high debt, poor demography and the worsening distribution of income that we discussed in Chapter 1[58].

Low rates may now have perverse effects on savings, expenditure and investment

A driver for central banks cutting interest rates to record lows was to get companies to invest more and consumers to spend more. Companies, under economic theory, are expected to borrow and invest in projects if the returns are sufficiently higher than the cost of borrowing, so a lowering of interest rates ought to make more projects look attractive and thus increase investment and stimulate the economy. Similarly, lower interest rates reduce the attractiveness of savings and make borrowing cheaper and thus are expected to stimulate consumer spending.

[57] http://www.economist.com/news/finance-and-economics/21684797-fed-has-last-raised-rates-what-happens-next-exit-pursued-bear
[58] http://www.economist.com/blogs/buttonwood/2016/01/monetary-policy

But global capital expenditure by firms, excluding the boom in energy and resources, has flat-lined since the crisis despite record low borrowing costs. Under poor growth expectations it may be that the number of profitable projects has also fallen simultaneously[59]. Consumer spending has also not picked up as expected, while demand remains weak.

One reason for both business and consumer spending remaining weak could be that both are trying to pay off excessive levels of debt taken on in the boom years of 2001-2008 and deleverage.

Another is that that the low interest rate policy may have reached its limit. The biggest reasons people need to save is for retirement and for purchasing large assets, mostly houses. Beyond a certain point, low rates seem to have had a perverse effect through these channels and lead to more not less savings, the exact opposite of the objective of low interest rates and QE. The falling yields on bonds means that in order to target the same level of retirement income, citizens need to save much more. Indeed, Larry Fink, chief executive of BlackRock, the world's largest asset manager, has said that not enough attention was being given to the impact of negative rates on individuals' saving habits[60].

A fall in interest rates from 4% to 2%, for example, doubles the savings necessary for a $20,000 income from $500,000 to $1,000,000, and interest rates have fallen much below that 2% level. In the US, long-term inflation linked bonds are yielding just 0.7% and in the UK they have turned negative[61]. At the same time, QE has pumped up the valuation of houses, meaning buyers have to save ever more to pay for getting on the housing ladder.

Both have driven consumers to save more and spend less, leading to the paradox of thrift, wherein money saved is money not spent, thus sucking demand out of the system and leaving everyone worse off. Rob Arnott of Research Affiliates says that "the natural response for investors facing a zero yield is to stop spending, save more and put money into markets — actions that lead to asset bubbles. "The behaviour we are seeing is exactly what you would expect given that framework.[62]" Larry Fink agrees saying that "low rates may not work as central bankers intend: those planning for retirement will need to save more, not less, to generate a given income[63]".

There is also evidence that the rising pension fund deficits of corporate defined benefit pension plans may also be giving companies a pause before they make big capital expenditure decisions, as at least part of their profit and cash flow has to be diverted to fill the pension deficits[64]. Deficits at firms is also likely to hurt dividend payments to investors as highlighted by Carclo, which has become one of the first groups to warn that its growing pension deficit is likely to prohibit the payment of its dividend[65].
Had such problems been restricted to certain parts of the economy or been limited to small investors, policymakers could possibly have ignored them. But as the following section that briefly sketches out the history and growth of institutional investors shows, these investors have grown to be bigger than global GDP and their investment decisions and behavior affect all aspects of the economy. The problems they are facing are a wakeup call and should be everybody's business, and need to be urgently addressed at the highest level of policy making.

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[59] http://www.economist.com/blogs/buttonwood/2016/01/global-economy
[60] http://www.ft.com/cms/s/0/5965b5e6-fd01-11e5-b5f5-070dca6d0a0d.html#axzz4JZs6QTI6
[61] http://www.economist.com/blogs/buttonwood/2015/12/other-paradox-thrift
[62] http://www.ft.com/cms/s/0/8a54a0c6-648b-11e6-a08a-c7ac04ef00aa.html#axzz4I45dGCpJ
[63] http://www.economist.com/news/finance-and-economics/21697234-economic-equivalent-st-augustines-plea-wrong-kind-savings
[64] http://www.ft.com/cms/s/0/8a54a0c6-648b-11e6-a08a-c7ac04ef00aa.html#axzz4I45dGCpJ
[65] http://www.ft.com/cms/s/0/c223908c-7289-11e6-bf48-b372cdb1043a.html#axzz4JKbgDvjH

The growing size and importance of institutional investors

This section not only briefly explains the rapid growth of institutional investors, but also gives some context and background about the environment under which they saw such growth and why the present economic environment is hitting them hard.

Institutional investors now manage an increasing share of global wealth and have grown from strength to strength, particularly from the 1970s onwards. The introduction of funded pension plans as a supplement and substitute to pay-as-you-go pension systems was the catalyst that supported the growth of the industry, particularly in the form of defined benefit pension funds. Worker contributions were partially or fully matched by employers who also bore the final responsibility for the scheme's ability to deliver the promise being made to workers. Defined benefit pensions were most fashionable when yields were high, life expectancy was shorter and pensions were perceived to be a form of insurance.

Simultaneously, we also saw the rise of insurance firms, particularly life insurers, both in the United States and in Europe that also offered savings products that mirrored some of the characteristics of defined benefit pension plans in the form of guaranteed returns on policy premiums in addition to the promise of a lump-sum pay out.

As the stock market boomed and interest rates on bonds were high in the 1980s, many pension plans performed rather well, so much so, that companies sometimes withdrew surpluses from funds that had become bigger than expected owing to high returns on investments. Defined contribution plans started becoming fashionable in this period, when some savers got caught up in the bull market and wanted to ride the bull market without limiting their upside.

Inevitably, interest rates fell and the stock market saw occasional crashes, leading to deficits opening up in pension plans. Regulators also strengthened oversight, particularly after Robert Maxwell stole £400m from his company's pension plan in 1991[66].

These developments and rising longevity led to employers gradually shifting away from defined benefit plans towards defined contributions, where they did not have to guarantee any pay-out and the risks were borne entirely by the pension holder.

Accompanying these trends towards the institutionalisation of individual savings, mostly in rich OECD economies, was a gradual accumulation of wealth in the public sector in emerging economies. The early start came from commodity exporting countries such as Kuwait, which set up a precursor to a sovereign wealth fund or the Kuwait Investment Office as far back as in 1953 to invest surplus oil revenues[67]. Botswana was another early mover and other commodity, particularly oil, exporting countries followed suit. Abu Dhabi, Qatar and Norway also have significant sovereign wealth funds and an increasing number of countries in Africa and Asia have been establishing them of late. The commodity price boom of the 2000s rapidly expanded their assets.

The Asian crisis of 1997-1999 was another significant marker in the development of institutional investors. Following the crisis, many emerging economies took on board a lesson to accumulate precautionary foreign

[66] http://news.bbc.co.uk/2/hi/business/1251019.stm

[67] A comparative study of sovereign investor models: Sovereign Fund Profiles, Harvard University, 2015

exchange reserves to make sure there was no repeat of a balance of payment crisis that had large economic, social and political consequences in the area. Their foreign exchange reserves are still growing. In the 2000s, there was a growing realisation that these reserves, which were then mostly invested in OECD government bonds, generated poor returns and many countries such as China set up sovereign wealth funds to deploy the reserves into higher yielding assets.

Other countries such as Singapore had set up development funds to hold and manage public sector assets and to encourage the development of domestic industry. Some, such as Temasek, have also evolved into sovereign wealth funds.

These institutional investors taken together manage tens of trillions of public and private savings and are one of the most important providers of savings for investments in the global economy. In particular, many of these institutions can be considered to have the capacity to be long-term investors that have the financial capacity to serve as patient capital identifying and funding productive investment opportunities in the global economy.

According to Willis Tower Watson, developed country pension fund assets now amount to $35.4 trillion, which are evenly split between defined benefits and defined contribution schemes. CitiUK's estimate of $33.9 in pension fund assets is in the same ballpark. Almost all new pension schemes nowadays are defined contribution and most older defined benefit schemes are closed to newcomers.

According to S&P Global Market Intelligence, insurance firm assets, at $30 trillion, are roughly the same order of magnitude. CitiUK's number, $26.5 trillion, is a little lower but may be explained by methodological differences. Of these, life insurers hold about three quarters, with the balance made up by property and casualty insurers.

The size of foreign exchange reserves and sovereign wealth funds has risen rapidly to now amount to as much as $15 trillion globally, of which roughly half is in the form of sovereign wealth funds.

Mutual funds, which invest on behalf of both individuals and institutional investments, also manage $26.1 according to CitiUK but often only invest in liquid instruments. University endowments, foundations and family offices make up the balance of institutional investors and all three of these are suited to be long-term investors.

Taken together, the long-term institutional investors, together with family offices, hold savings in excess of $80 trillion, more than global GDP in OECD countries alone and have, at least on paper, the capacity to invest for the long term.

The parlous state of pension funds

Pension Funds are in a crisis. "It's existential. That's the one-word summary of the scale of the challenges," according to Alasdair Macdonald of Willis Towers Watson. "You can pull different levers, but the declines in rates is an existential problem for the entire pensions system."

"It's scary and it's surreal," echoes Carsten Stendevad, who heads ATP, the $110bn national Danish pension plan. "First, if you're in the business of offering annuities, your product just became very expensive to

produce. But secondly we can see that the impact of QE is affecting other asset classes as well. That's the scarier part. There's nowhere really to hide[68]."

The sharp fall in returns poses an existential question because historically, it is return on investments, not employee or employer contributions, that has been the biggest source of accumulation of pension fund savings. For example, of the $5.9 trillion revenues of American public sector pension funds since 1984, $3.7 trillion came from returns on investments[69]. The source of this was the good returns on offer. For example, TRS, the pension fund for Texas teachers delivered an impressive 30-year return of 9.1 percent annually. Over the past five years, the median pension fund has earned an annualised return of 9.5%; over the past 25 years, the return has been 8.5%[70].

As interest rates and expected returns have fallen precipitously, the deficits at pension plans, both public and private, keeps growing alarmingly. American corporate pension funds went from a surplus in 2007 to a deficit of $404 billion by the end of 2015[71]. For companies in the S&P 1500 index, this widened to $562bn by July 2016, nearly $160bn more due to further drops in bond yields[72].

On the other side of the Atlantic, Mercer has estimated that the UK's 350 largest listed firms face a deficit of £150 billion on £870 billion of pension promises. More broadly, the Pension Protection Fund estimates a total UK pension deficit of more than £400 billion. Approximately 85% of the funds it covers are in deficit. PwC has the most recent estimate, showing that the collective deficits in the 6,000 schemes it examined "had risen by a whopping £100bn in just one month to stand at £710bn at the end of August". Only 67 per cent of their £2.2tn of estimated future liabilities is covered by their assets according to PwC[73].

Even worse, Hymans Robertson, a consultancy, has calculated that this number is a gross underestimate and that the true cost of filling the UK's pension black hole would be as much as £1 trillion.

Tom McPhail of Hargreaves Lansdown speaks for many in the industry when he maintains that "the problem pension schemes face is that since 2008, monetary easing designed to keep the economy growing has driven down bond yields and pushed down discount rates so the amount they have to set aside has grown and grown[74]."

Controversies on the size of pension deficits also rage in America, where public pension funds are, somewhat controversially, allowed to discount future liabilities, using their expected returns on investments rather than the more standard approach of using riskless bond yields that most corporate pension plans are forced to follow. Even using generous assumptions, the 100 largest US public pension funds were just 75 percent funded[75].

The median assumption of return for state employee pension is 7.62 percent down from 8 percent over the past five years, according to the National Association of State Retirement Administrators[76]. But if their liabilities were priced the same way as corporate plans, then their total deficits would be about $3.4

[68] http://www.ft.com/cms/s/0/8a54a0c6-648b-11e6-a08a-c7ac04ef00aa.html#axzz4I45dGCpJ
[69] http://www.economist.com/blogs/buttonwood/2016/02/pensions
[70] http://www.economist.com/news/finance-and-economics/21678812-pension-funds-and-endowments-are-too-optimistic-many-unhappy-returns
[71] http://www.economist.com/news/business-and-finance/21702623-rules-encourage-public-sector-pension-plans-take-more-risk-putting-it-all
[72] http://www.ft.com/cms/s/0/8a54a0c6-648b-11e6-a08a-c7ac04ef00aa.html#axzz4I45dGCpJ
[73] http://www.ft.com/cms/s/0/c223908c-7289-11e6-bf48-b372cdb1043a.html#ixzz4JRctHz6z
[74] http://www.ft.com/cms/s/0/49b3fcd4-63f9-11e6-a08a-c7ac04ef00aa.html?siteedition=intl
[75] http://www.reuters.com/article/markets-pensions-returns-idUSL1N1AK1X7
[76] http://www.chicagobusiness.com/article/20160810/BLOGS10/160809835/the-states-pension-reality-gap-is-about-to-get-even-wider

trillion[77]. A recent study that uses more conservative assumptions, such as discount rate of 4% and not 7.6%, has generated some controversy. It finds that the deficit is as high as $6 trillion, meaning that the plans are only 45% funded[78]."

In the UK, Royal Mail, which has one of the country's largest pension schemes, wrote to members to tell them the scheme would be unaffordable within two years[79]. Returns in US plans have collapsed. Overall Public pension funds in the US had a return of just over 1 percent in 2015, while corporate funds had a return of 1.64 percent, according to Wilshire Analytics.[80]." CalPers and CalStrs, America's two largest public pension funds, returned only 0.6 percent and 1.4 percent respectively, Louis Kosiba, executive director of the Illinois Municipal Retirement Fund, puts this down primarily to the low and falling yield on bonds.

David Stockton, a former adviser to President Reagan, has said that 85% of pension funds will fail if their returns fall to 4%. There were few US funds that managed to exceed that in 2015 and the prognosis for 2016 looks quite as bad.

Most savers started contributing in the days that returns, which have now collapsed, were higher and the rule of thumb of saving 8% of income for 40 years to get 75% of one's salary in the form of a pension seemed to work. No longer. In the UK, the problem has been compounded by regulatory changes and a growing conservatism of pension fund trustees both of which have driven more pension fund investments into government bonds – rising from 28% ten years ago to more than 50% now[81].

Andrew Lapthorne from SocGen has calculated that if someone today invested $100,000 in a balanced portfolio of stocks and bonds, they could expect a return of $21,800 over the next two decades after costs. Ten years ago that same investor might have expected to make $60,000 and three decades ago $150,000[82].

While the discussion so far has focussed on defined benefit schemes, the existential crisis afflicts the whole of the pension system. The average American 401(k) saving scheme holds enough savings to fund an annual income of just $4,000 or so. Those depending on defined contribution plans have simply not saved enough and face poverty under the expected future return landscape. With the demographic and debt problems discussed in the previous chapter, the biggest challenge could actually arise from unfunded pay-as-you systems. Citi has estimated the value of unfunded or underfunded government pension liabilities for 20 countries in the OECD at $78tn, compared with the official $44tn gross government debt burden[83]."

Insurance firms

Just as with pension funds, interest rates play a big part in the way insurers make money. They influence the guarantees life insurers offer clients, affect the value of long-term liabilities and they determine the returns that insurers make on investments.

Most insurers have invested heavily in bonds owing to the nature of their liabilities, with US life insurers holding as much as three quarters of their assets in bonds. As long as interest rates were high, this strategy

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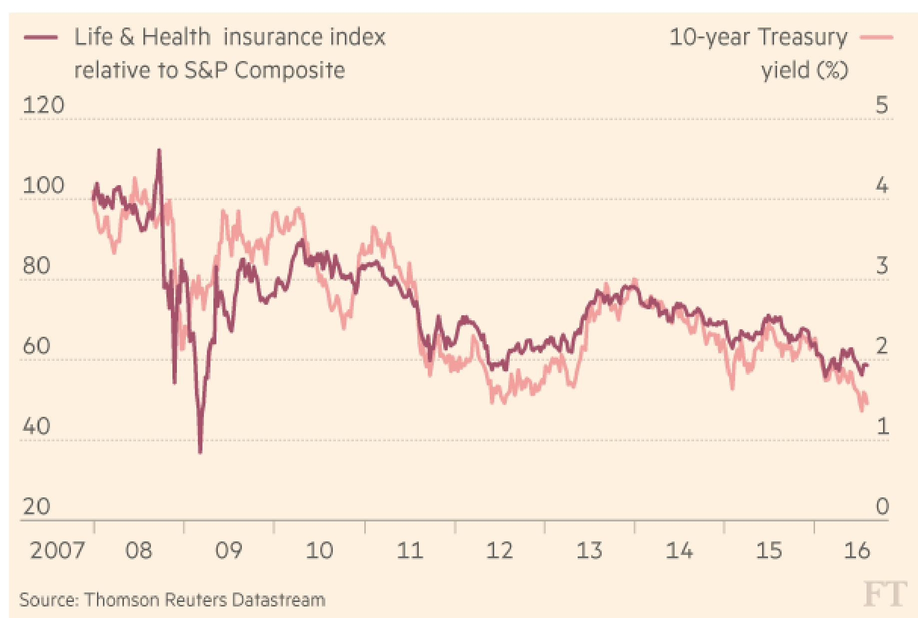
[77] http://www.ft.com/cms/s/0/8a54a0c6-648b-11e6-a08a-c7ac04ef00aa.html#axzz4I45dGCpJ
[78] http://www.marketwatch.com/story/why-your-states-public-pension-plan-is-in-a-much-bigger-hole-than-you-already-fear-2016-08-16
[79] http://www.cityam.com/247315/royal-mails-pension-scheme-under-pressure-costs-set-double
[80] http://www.dailymail.co.uk/wires/reuters/article-3724515/Low-investment-returns-taking-toll-U-S-pension-funds.html
[81] http://www.ft.com/cms/s/0/49b3fcd4-63f9-11e6-a08a-c7ac04ef00aa.html?siteedition=intl
[82] ibid
[83] http://www.ft.com/cms/s/0/49b3fcd4-63f9-11e6-a08a-c7ac04ef00aa.html?siteedition=intl

worked well. No longer. Falling yields have pushed returns on US life insurer assets down to 4.7% in 2015 and counting.

The trouble is compounded by the fact that most insurance firms have offered savings and retirement products that guarantee minimum returns. Moody's has estimated that products with guarantees account for 60-80 per cent of US life insurers' balance sheets, with the average outstanding guarantee returning between 2 per cent and 4 per cent.

In Europe, guarantees offered by life insurers have been even more generous. Fitch estimates that German life insurers need returns of about 2.4 per cent if they are to meet their guarantees which average 3.2% and that the yield on insurers' investments will slip below that level.



Source: Financial Times

No wonder then that the stocks of insurance firms have been in a free-fall. European companies have been crushed by losses of between about 17% and 50%, and five of the nine U.S. companies are in red[84]. The longer interest rates remain so low, the harder it gets for insurance firms. The dependence on interest rates is so high that the share prices of US life insurers, as the chart above demonstrates, closely tracks the price of the benchmark US 10-year government bond.

The outlook is so poor that Nikhil Srinivasan, chief investment officer of Italian insurer Generali, has said that "waiting for yields to go up and it's like waiting for Godot". While he says that Generali does not plan to buy bonds with negative yields, James Peagam of JPMorgan Asset Management says that life insurers have so much cash that they need to invest, and they need to do something with it, including buying bonds with negative yields[85].

[84] http://www.ft.com/cms/s/0/6194f264-4dd2-11e6-8172-e39ecd3b86fc.html#axzz4IbaLuZ1Z
[85] http://www.ft.com/cms/s/0/6194f264-4dd2-11e6-8172-e39ecd3b86fc.html#axzz4IbaLuZ1Z

Sovereign Wealth Funds

For the past few years, sovereign wealth funds have enjoyed an unexpected boom. Their assets grew to $7.2 trillion double that in 2007 and the number of funds tracked by the Institute of International Finance is up 44% to 79 since the end of 2007, of which nearly 60% of sovereign-wealth-fund assets are in funds dependent on energy exports[86].

The unexpectedly high price of oil, which reached $115, meant that many of their coffers were boosted to unprecedented levels. While a number of them lost market value in the immediate aftermath of the financial crisis – Norway's Government Pension Fund, now the world's largest, lost about a quarter of its value – their ability to withstand that dip without panic selling meant that they recovered quickly in 2009 and most more than made up for the losses in 2009. Additionally, their long-term mandate allowed them to act counter-cyclically, so they managed to snap bargains when others were panic selling.

This meant that they generated good returns as asset prices recovered and then were further inflated by central banks pumping money into the global economy. This happened at the same time as new inflows bloated their capital base. Those good days are now sadly over.

The outlook has now deteriorated sharply. Oil price fell from those dizzying heights all the way down to $28, even though it has now recovered to about $50. The IMF has estimated that the high breakeven price for the home countries of various funds left the countries in deficit and in many cases needing to start withdrawing from the funds. Norway's breakeven price is $47, Kuwait $52, Qatar $58, UAE $67, Kazakstan $83 and for Saudi Arabia, more than $100.

Russia ate through 44% of its Reserve Fund in 2015 and Kazakstan is expected to deplete its fund by more than 40% in the next 3 years to finance government expenditure. Norway and Abu Dhabi, owners of the two largest sovereign wealth funds, are also expected to drawdown their funds, albeit much smaller percentages[87].

Not only have the funds stopped growing, at least temporarily, the returns landscape they face has also deteriorated sharply for many of the reasons discussed above. Returns for many SWFs have fallen in the past couple of years, though of all institutional investors they may be best placed to recover.

What is critical, is that under a more normal regime of commodity prices which is now expected, the returns on investments for the funds will become ever more important, even as the return landscape becomes more challenging. University endowments, some of which such as Yale, Harvard and Stanford have delivered stellar returns over the past couple of decades, must also now face a far more challenging return landscape.

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[86] http://www.wsj.com/articles/the-trouble-with-sovereign-wealth-funds-1450836278

[87] http://www.institutionalinvestor.com/article/3533485/investors-sovereign-wealth-funds/oil-has-sovereign-wealth-funds-hitting-sell-button.html#/.V8SPsZOx9E8

Chapter 3: Despair

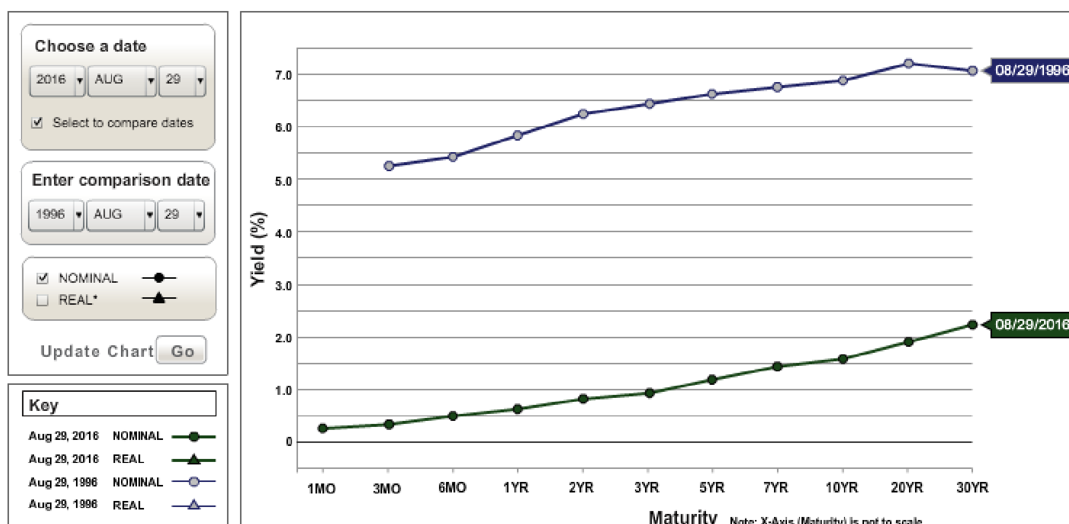
As has become crystal clear in the previous two chapters, institutional investors, particularly in the developed world, now face grave challenges if not an outright existential threat. Squeezed between the ageing populations and poor economic outlooks in their home economies and poor returns across the asset classes they most frequently invest in, many may not survive the crisis, at least not in their current form.

In this chapter we dig deeper into the kinds of asset classes that these funds allocate the biggest proportion of their investments to, and look at what the near and medium term prospects for returns on these are. As a complement to this, we also look at some of the additional downside risks that might arise from the excessive exposure to these asset classes.

The bottom has fallen off bond yields

As highlighted in Chapter 1, the fall in interest rates in OECD economies has dominated news and discussion at Jackson Hole and in policymaking circles. If one includes the Eurozone, Japan, Sweden, Denmark and Switzerland, then more than 500 million people in the rich world now live under negative interest rates. This, as the Deutsche Bank, the IMF and the ECB have highlighted, can have serious negative consequences for the profitability of banking systems and eventually their stability.

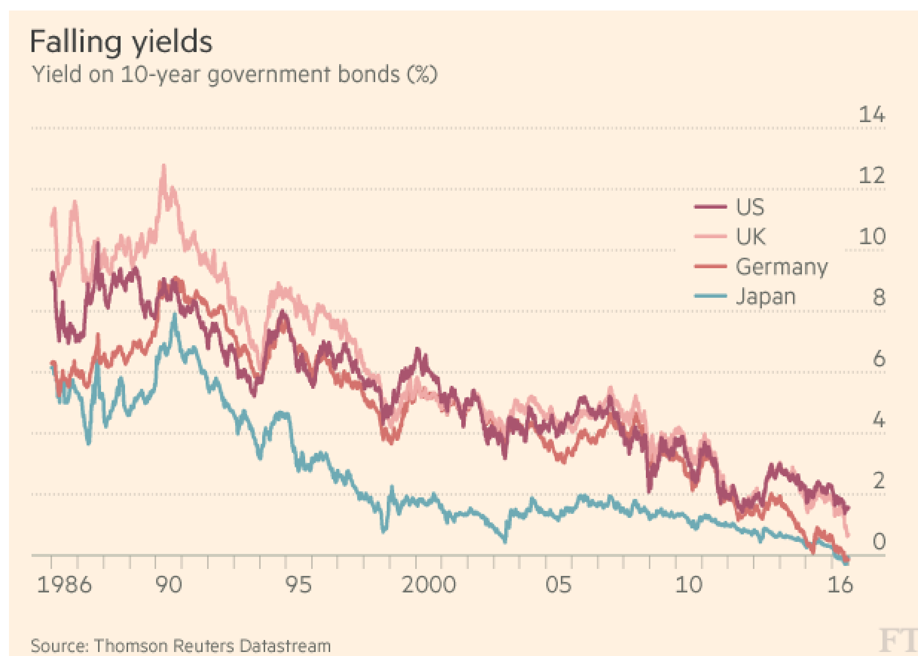
As serious as the problems caused by negative interest rates for banks are, it is quite likely that the problems caused by declining and increasingly negative yields of bonds for insurers, pension funds and other institutional funds are, as we discussed in Chapter 2, even more serious. While interest rates have been cut sharply by central banks immediately after the crisis, bond yields have been falling for three decades, though quantitative easing has driven them into unchartered low yield territory. The ten year US Treasury yield, which was as high as 16 per cent in 1981, is now just about 1.6 per cent[88]." As the following graph shows, it has fallen from 6.86% to 1.57% in the past 20 years alone.



Source: US Treasury

[88] https://ig.ft.com/sites/pensions-interestrates-explainer/

QE and low interest rate policy has meant that bond yields across much of the OECD have hit record low levels, with more than $13 trillion of developed country bonds now with negative yields[89]. Bloomberg estimates that nearly a third of the global government bond market is trading on a negative yield; there are even some corporate bonds in the same position[90]. As recently as 2014, no government debt had negative yields. As the following graph shows, both German and Japanese 10 year bonds are now firmly in negative territory. The Bank of Japan, in its more recent policy announcement has guaranteed to keep the 10-year bond yields under zero per cent[91] and the US Fed has, defying earlier predictions, kept interest rates on hold in its latest meeting[92].



Source: Financial Times

These ultra-low yields underpinned by interest rate cuts have, as we have discussed earlier, driven pension scheme liabilities up, with asset values failing to keep up and thus driving up deficits[93]."

UK pension funds, according to the pension regulator, had increased their holdings of UK government bonds to 50% from 28% just a decade ago, so they are particularly hit. American life insurers hold more than 75% of their assets in the form of bonds, so they have also been badly hit. Their European counterparts are even more conservative, holding an even larger share of bonds and are thus suffering deeply from declining yields.

In fact, the average bond yield on Bank of America's developed-market index is now as low as 0.56%[94]. Yields on corporate bonds have also plunged, particularly in Europe. The average yield on euro investment-grade corporate bonds now yields just 0.52%, according to Bank of America Merrill Lynch index data, down from 1.28% before the ECB's policy to buy corporate bonds as part of its QE program was unveiled[95]."

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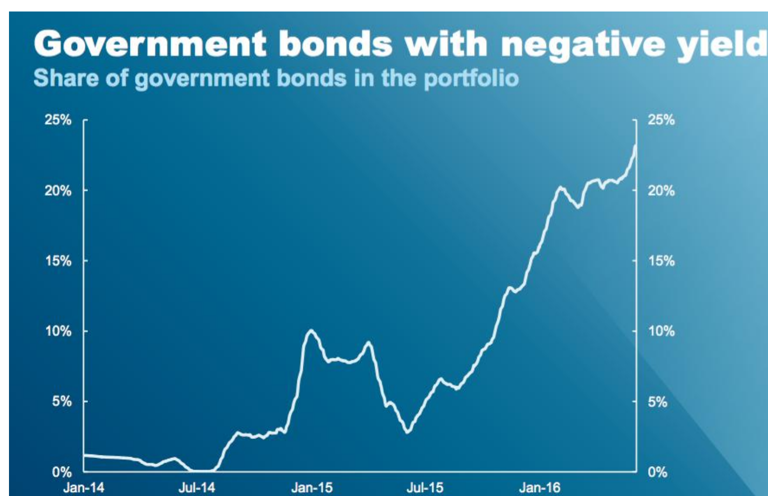
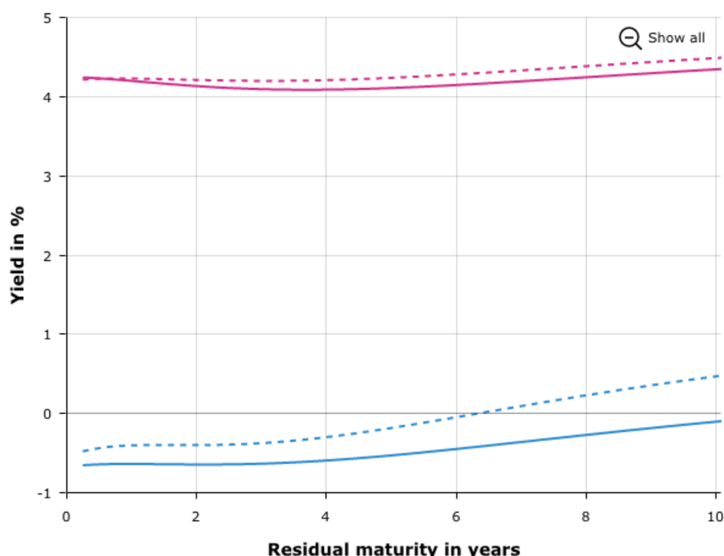
[89] http://www.ft.com/cms/s/0/1f5c1b08-6915-11e6-ae5b-a7cc5dd5a28c.html#axzz4IILsO4RJ
[90] http://www.economist.com/blogs/economist-explains/2016/02/economist-explains-6
[91] http://www.ft.com/cms/s/0/028d47a8-7faa-11e6-bc52-0c7211ef3198.html#axzz4KxhSbyQH
[92] http://www.ft.com/cms/s/0/cb0f4316-8022-11e6-8e50-8ec15fb462f4.html#axzz4KxhSbyQH
[93] http://www.cityam.com/247404/bank-england-assertions-pension-scheme-deficits-tested
[94] http://www.wsj.com/articles/bond-funds-turn-to-emerging-markets-1471198010
[95] http://www.wsj.com/articles/what-to-learn-from-the-ecbs-great-european-corporate-bond-squeeze-1472113972

Companies in Europe, such as the German consumer-products company Henkel AG and French drug maker Sanofi SA have just sold bonds at negative yields[96].



Source: NBIM

The graph below shows how the yield on Eurozone sovereign bonds of 10 years and less has fallen from around 4.5% in 2008 before the crisis to below zero (for AAA rated sovereigns) and close to zero for all (dotted line) outstanding sovereign bonds. The graph above shows how the percentage of sovereign bonds with negative yields in the portfolio of Norway's Sovereign Wealth Fund has risen from 0% in July 2014 to almost 25% now.



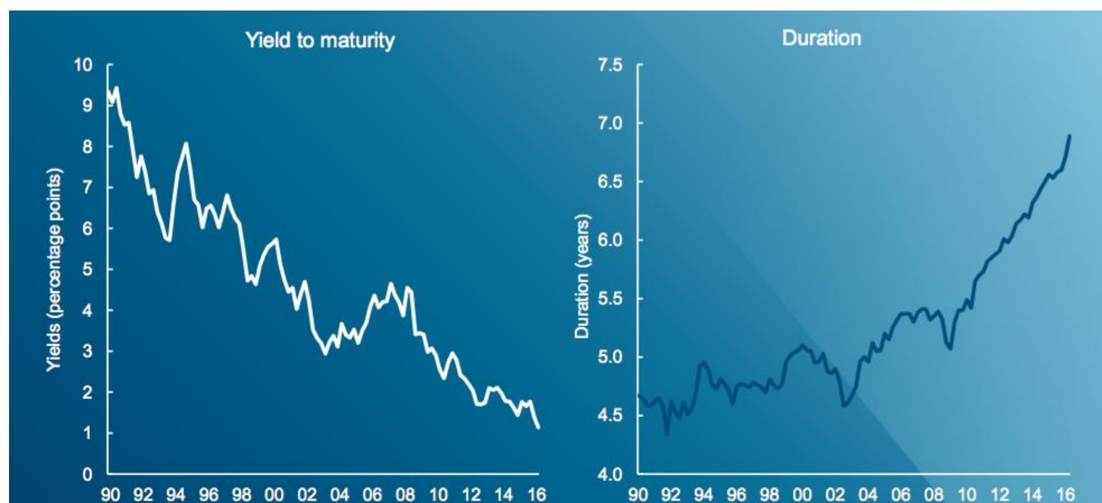
Source: European Central Bank

The flattening of the yield curve has been another feature of this crisis, wherein the gap between yields on 10 year Bunds (-0.16%) and on 30 year Bunds (0.4%) has shrunk[97]. This, according to Absolute Research and the BIS, is driven by insurance firms, which own as much as 40% of government debt holdings by Eurozone

[96] http://blogs.wsj.com/cfo/2016/09/07/the-morning-ledger-companies-get-in-on-negative-interest-game/
[97] http://blogs.wsj.com/moneybeat/2016/08/12/heres-a-possible-explanation-to-the-hunt-for-yield-there-isnt-one/

residents. Pension funds are also desperately trying to increase the yield available to them by buying longer dated bonds with slightly higher maturity[98].

This behaviour, according to the BIS, may generate a negative feedback loop by driving bond yields higher and lowering long-term interest rates that then necessitate even more purchases. The graph below showcases this phenomenon in action for Norway's Sovereign Wealth Fund, which has been buying bonds with ever-longer maturities as yields have collapsed.



Source: NBIM

These long-dated purchases also expose the funds to significant dangers. If interest rates and yields rise to more normal levels, they will be hurt as the market value of these bonds they hold collapses. A rise in interest rates to 1% will cause a 9% fall in the value of 10 year Bunds, while a rise to 2% will result in an 18% fall. 30-year bonds will see much bigger falls in value.

However, the expectation, as became clear at the Jackson Hole retreat of central bankers, is that rates in OECD economies will remain "lower for longer". Nor is quantitative easing in Europe or Japan going to end soon. In fact, Marvin Goodfriend, a professor at Carnegie Mellon University and a former Fed official, told policymakers that they should be thinking of ways of pushing interest rates into even more negative territory in order to stimulate their economies[99].

Shares are overvalued and returns will fall

As was expected, one of the most visible impacts of quantitative easing was the rise in rich country share indexes. In fact, while discussing how QE helps stimulate the economy, central bankers and academics look at how it drives asset prices higher and how it may cause consumers to spend more because of the "wealth effect", which makes consumers feel richer. No wonder that stock markets in rich countries have boomed since the crisis, albeit with some hiccups along the way, and dividend yields have fallen as prices have risen.

The sharp fall in bond yields discussed in the previous section has driven investors, desperate for returns, into all manners of other assets, none more so than stocks. The S&P 500 for example, sits only a few points

[98] http://blogs.wsj.com/moneybeat/2016/08/12/heres-a-possible-explanation-to-the-hunt-for-yield-there-isnt-one/
[99] http://www.ft.com/cms/s/0/6735bbea-6c90-11e6-a0c9-1365ce54b926.html#axzz4IbYQnGen

below record highs. According to Bloomberg, its dividend yield is 2.1 per cent and Germany's Dax index is yielding 2.9 per cent[100]." The dividend yield on the FTSE 100 looks higher but is expected to fall sharply[101].

Institutional investors such as pension funds, insurance firms and sovereign wealth funds are the biggest holders of stocks in the world, so the performance of stock markets has as big an impact on their performance and expected return as the yields available in bond markets. There is evidence showing a stampede into dividend-paying stocks in response to the plunge of interest rates in recent years. Investors are trying to replace falling interest pay outs from bonds with dividends from high-yielding share; but dividends are not guaranteed and this strategy exposes them to risks of big capital losses[102]. Additionally, earnings are falling and valuations are above at historically high levels. In fact, many companies are paying bigger dividends than their earnings, making a fall inevitable.

By most measures, stocks are overvalued. CAPE, the cyclically adjusted price-earnings compiled by Robert Shiller, averages 16.7 since 1881 but has risen to 25, suggesting that shares may be overvalued by 44% compared to historical standards[103]. With share valuations, a multiple of expected earnings, the so-called P/E ratio, at the highest levels since the dotcom boom, this, in the immortal phrase of Shiller, is starting to look like "irrational exuberance"[104].

The higher the starting stock price and the price-earning ratio, the lower the expected future yield on stocks[105]. As equity markets have boomed, forward-looking return expectations in equities have fallen and "the scale of the problem is dizzying"[106]. Historically, there has been a relation between yield and returns over the next decade. The lower the yield, the less well stock markets are likely to perform over the next decade. On the basis of all these factors, it seems fair to say that future stock returns in OECD economies are likely to be much weaker than in recent history.

Portfolios of rich country shares and bonds will lock in low returns and are risky

Traditionally, the most common benchmark portfolio for institutional investors such as pension funds has been a 60/40 mix of stocks and bonds. Most funds still use such benchmark and many allocate their assets in proportions that are not too far off from this mix. It is useful then, after our discussion on bonds and stocks above, to look at what the prospects for the performance of such a portfolio are in the future and see how this might have changed from past performance. This section will also look at the return prospects for some other asset classes that institutional investors invest in.

The prognosis does not bode well. A detailed study by the London Business School that looks at more than 100 years of data and covers more than 20 developed economies concludes that the likely future real return on such a portfolio will be only 2% to 2.5%. AQR, a fund management group, uses a different methodology, but comes up with a remarkably similar number, just 2.4% based on current inflated valuations of stocks and bonds. Adding an inflation rate of 2%, which seems to be out of the reach of OECD

[100] http://investingsignal.com/stocks-mixed-amid-choppy-oil-price-action-financial-times/
[101] http://www.economist.com/blogs/buttonwood/2016/02/equities
[102] http://www.wsj.com/articles/dividends-are-what-matter-now-1472081992
[103] http://www.economist.com/blogs/buttonwood/2016/02/equities
[104] http://www.ft.com/cms/s/0/c4406bec-6442-11e6-8310-ecf0bddad227.html#axzz4HTjJvcGa
[105] Annual Survey of Large Pension Funds and Public Pension Reserve Funds, OECD, 2015
[106] http://www.ft.com/cms/s/0/61b1eab6-6ad0-11e6-a0b1-d87a9fea034f.html#axzz4IbaLuZ1Z

country central bankers, brings the nominal return to 4% to 4.5%, a far cry from the 7%-8% managed by US pension funds over the past two or three decades[107].

It is clear that returns on equities and bonds in the OECD, particularly the US and Europe, were much higher in the past two decades than the long-term average, and are not sustainable. As the McKinsey Global Institute (MGI) puts it

"These returns were driven by an extraordinary confluence of favourable economic and business fundamentals. Inflation and interest rates declined sharply from peaks in the late 1970s and 1980s. Global economic growth was strong, fuelled by positive demographics, productivity gains and rapid growth in China. Corporate-profit growth was even stronger, reflecting revenue gains in new markets, declining corporate taxes, and advances in automation and global supply chains that helped rein in costs. Publicly listed North American companies alone increased their post tax margins by 65 percent in this three-decade period."

This golden age has passed.

The MGI finds that the forces that drove these exceptional returns are weakening and in some cases reversing. The fall in interest rates and inflation, as we highlighted in Chapter 1, is reaching its limits. Global growth, as Ruchir Sharma of Morgan Stanley also notes, is expected to be lower, as the populations in the developed world and China age also lowering prospects for corporate profits. In 2007, notes Mr Sharma, "there were 60 economies in the world that were growing annually at a pace of more than 7 per cent", but "today, that number is down to eight or nine countries"[108].

It is true that technology could boost margins for some companies, but the big North American and Western European firms that took the largest share of the global profit pool in the past 30 years face new competitive pressures from emerging-market companies, while barriers to entry in many industries have fallen. "These forces", MGI thinks, "may curtail margins going forward[109]."

The Bank of England has shown that the current low return regime correlates strongly with slowing economic growth, ageing populations, savings gluts in emerging economies, declines in infrastructure investing, rising income and wealth inequality, and falling capital good prices - some of the factors we discussed in Chapter 1.

Overall, MGI finds that returns on equities in the US and Europe over the next two decades could be 1.5 to 4.0 percentage points lower than the returns on offer in the past three decades. For bonds, it expects returns to be 3.0 to 5.0 percentage points lower or worse.

One of the reasons for the good return performance of many institutional investors in rich economies over the past few decades that is seldom discussed has been the huge capital gains they have experienced. These will not be repeated and some may, in fact, be reversed.

In the early 1980s, long-dated treasuries yielded 15% or more and stocks in the US traded at a cyclically adjusted P/E ratio of less than 7. Yields on 30-year bonds have now fallen to less than 3% and the

[107] http://www.economist.com/news/finance-and-economics/21678812-pension-funds-and-endowments-are-too-optimistic-many-unhappy-returns
[108] http://www.ft.com/cms/s/0/6c04a842-55ad-11e6-9664-e0bdc13c3bef.html#axzz4IILsO4RJ
[109] http://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/why-investors-may-need-to-lower-their-sights

equivalent P/E ratio is now 25%. This delivered huge capital gains to investors. The capital gains, as yields fell from 15% to 3% for a 30-year bond, is a whooping 235%. To repeat the trick, yields would need to fall to -2.3%, an unlikely and alarming prospect. The rise in P/E ratios added about 3.4 percentage points to the S&P 500 annually from 1980. The P/E ratio will need to rise to an unbelievable 70 to deliver the same capital gains. If anything, mean reversion over the long term, a characteristic of financial markets, means that some of these capital gains may be reversed and investors should, if anything, brace themselves for capital losses on their portfolios[110].

GIC, Singapore's Sovereign Wealth Fund agrees, fearing that "even small increases in interest rates will negatively impact asset prices, and reduce potential returns." It also sums up the dim prospects for returns well by saying that:

"while asset prices have risen strongly, the outlook for economic growth and earnings has not improved by as much. Current valuations are high, given the strong performance across major asset classes in the past 5 years, and this portends lower expected returns over the next 10 years. Similarly, a low interest rate environment in major economies coupled with low bond yields point to lower prospective income returns and capital gains on bond investments respectively, resulting in lower expected returns on fixed income assets.

The challenge posed by high current valuations, low starting yields and low potential future returns is common to all major asset classes: public equities, private equity, bonds and real estate. Therefore, the investment environment over the next 10 years is expected to be more difficult for all investors. Even over a longer time horizon of 20 years, we expect the real return for both the Reference Portfolio and the GIC Portfolio to be more modest than history[111]."

It expects the investment environment "to be more difficult over the next 10 to 20 years, given historically low interest rates, current high asset valuations and a modest, yet uncertain growth outlook[112]."

Keith Ambachtsheer, a renowned pensions expert, agrees with this depressing prognosis. He finds that future real returns from US equities and Treasury bonds, the two largest asset classes in the portfolios of almost all institutional investors, are likely to fall to 3.6% and 0.6% from the 6.7% and 3% average they enjoyed from 1871 to 2014.

Investing in a balanced portfolio in stocks and bonds back in 1986 would have generated a net annual return of 7.5 percent. Since 2006 this same portfolio would have yielded a new annual return of 3 percent. The scale of the problem is highlighted by the fact that the same portfolio is now expected to generate an annual return of only 1.1 percent, according to the investment bank Société Générale[113]."

According to Mr Ambachtsheer, as a rule of thumb, for every 1 per cent drop in annual returns, contributions must rise 20 per cent. If the prognosis in this section is correct, pension contributions must double if pensioners do not want to face old age poverty.

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110 http://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/why-investors-may-need-to-lower-their-sights
111 http://www.gic.com.sg/report/report-2014-2015/investment_report.html
112 http://www.slideshare.net/GIC_Presentations/investing-in-a-lowreturn-environment
113 http://www.ft.com/cms/s/0/8a54a0c6-648b-11e6-a08a-c7ac04ef00aa.html#axzz4I45dGCpJ

His recommendation, which dovetails neatly with the core recommendation of this report, is for institutional investors to invest differently.

What is crystal clear, is that the traditional 60/40 approach of investing 60% in liquid stocks and 40% in bonds is doomed to near certain failure, as returns will fall short of both historical returns and of what is needed by institutional investors to deliver on their promises to retirees, policyholders and other stakeholders.

In the next chapters we show how institutional investors, particularly the ones such as insurers, pension funds and sovereign wealth funds, which can invest for the long-term, can capture superior returns that would help alleviate some of the worst pressures that were the subject of the last Chapter.

In particular, a much bigger allocation to unlisted markets, real assets, particularly infrastructure and in emerging economies has the virtue of not just delivering superior returns, but could also help diversify away some of the risks institutional investors currently face. Such a shift is not easy and will necessitate strengthening governance, building in-house capacity, striking partnerships, changes to compensation practices, a longer term perspective and a different approach to risk and performance measurement. Some funds are much further down this spectrum, while others may never make it.

The future, much more than the past, will be characterised by a much more differentiated performance between different investors.

Meanwhile political, policy and financial risks in OECD economies are rising

The previous sections in this Chapter paint a dismal picture of the prospects for returns from investing in OECD bonds and stocks. In this section, we will consider how in addition to delivering low returns, such a portfolio subjects investors to the rising political, policy and financial risk in OECD economies. This comes on top of the structural declines in productivity and demography, as well as the overhang of debt discussed in Chapter 1.

As the Fletcher school of law and diplomacy darkly warns, “the past assurances of steady economic growth and an open and accountable political environment in the West may be on the wane. A decline in relative political-economic stability, and in investor confidence in formerly ‘stable’ Western democracies is something that should not be overlooked in the world of political risk[114].”

The possible election of Donald Trump is, according to the Economist Intelligence Unit, one of the biggest risks facing the global economy. The vote for a Brexit, a populist backlash against the elite, sent tremors across financial markets and remains a grave cause for concern across the G-20 and financial markets. Meanwhile, the political situation in the rest of the European Union is not much better.

With the rise of the anti-euro, anti-immigrant far right AfD in Germany, National Front in France and Party for Freedom in the Netherlands, even the core of the Eurozone may no longer have the political space needed for urgent governance, economic and financial policy reforms[115]. The European Central Bank (ECB)

[114] http://www.fletcherpoliticalrisk.com/home-1/2016/2/29/thinking-about-political-risk-in-advanced-economies
[115] http://economia.icaew.com/opinion/july-2016/the-core-of-the-eurozone-may-no-longer-have-the-political-space-needed-for-urgent-governance-reforms

has also warned that the rising tide of populism has raised the threat of economic and financial instability in the Eurozone and could make it harder for governments to service their debts.

It also noted that the implementation of economic reforms needed to boost longer-term growth and create jobs "may have become more difficult" as a result of such factors. "These rising political risks at both the national and supranational levels, as well as the increasing support for political forces which seem to be less reform orientated, may potentially lead to the delay of much needed fiscal and structural reforms." This, it has said, may "potentially contribute to contagion and re-fragmentation in the euro area[116]."

The political risk community, traditionally focussed on developing and emerging economies, is waking up to the rising political risk within OECD economies. "Risk analysts increasingly need to look inward as well as outward, and closely, to see threats that are harder to spot than pirates on the main or barbarians at the gates. They must gauge the steady erosion of trust on Main Street and in their own changing workplaces[117]." Control Risk, a political risk consultancy, sees anti-establishment backlash on display in the United States and in Europe as a sign of a more permanent shift in the West against globalisation.

Talking about Central and Eastern Europe, Otilia Dhand, a political risk analyst at Teneo Intelligence warns there are "new parties coming up from the left or the right, mostly non-ideological, populist-type parties. Now that has its own risks . . . in inefficiency of decision-making and planning of policy direction[118]."

Investors talking to the Wall Street Journal have point to the lacklustre corporate profits, tepid economic growth and a fragile banking system in Europe, and its vulnerability to a range of political risks in the coming months that could derail the region's feeble recovery[119].

The Economist rightly identifies that the long period of sluggish growth and low rates has been good for investors, but it has not been that great for voters; real wages have struggled to rise. This is showing up as anger at the ballot box across the globe, particularly in rich economies[120]. It rightly suggests that now "firms need to pay the same attention to political risk in the developed world" as they have traditionally done for developing economies[121].

According to Stephen King of HSBC, "the combination of weak nominal GDP growth and low interest rates suggests that central bankers' monetary powers are beginning to wane. Abnormally high political risk reflecting itself in increased protectionism, a desire to reduce immigration, and a boost to minimum wages to rebalance the economic rewards towards labour and away from corporates[122]".

In addition to the shrinking political space that the rising populism has brought about, OECD economies also have very little room left on the monetary and fiscal fronts. This means that their capacity to respond to any future economic or political shocks is very limited, sharply increasing the fragility of the economy.

Given that most rich country central banks today have interest rates that are close to or below zero, it leaves very little room to cut when the next recession strikes. In the three most recent recessions the Fed

[116] http://www.ft.com/cms/s/0/13bfdf1e-21b7-11e6-aa98-db1e01fabc0c.html#axzz4IM9qFit6
[117] http://blogs.reuters.com/financial-regulatory-forum/2016/07/06/brexit-signals-shift-political-risk-hits-long-stable-western-economies/
[118] http://www.ft.com/cms/s/2/dd974bc0-0ad2-11e6-b0f1-61f222853ff3.html#axzz4IM9qFit6
[119] http://www.wsj.com/articles/growing-political-risk-makes-cheap-european-stocks-unattractive-1471878052
[120] http://www.economist.com/blogs/buttonwood/2016/06/view-pimco
[121] http://www.economist.com/news/business/21707264-managers-need-watch-political-risk-developed-markets-well-emerging-ones-risky
[122] http://ftalphaville.ft.com/2016/07/28/2171158/this-is-nuts-but-cheer-up/

slashed rates by 6.75%, 5.50% basis points, and 5.12%, but has little room to reduce rates any further making monetary policy rather impotent[123].

GIC rightly warns that in the event of an economic downturn, "policymakers may run out of policy tools to sufficiently boost growth, leading to a slow and difficult recovery[124]".

This situation is causing investors to revisit their assumptions about relative risk in emerging economies vs. the OECD. As the Wall Street Journal asks, "emerging markets are risky, but the bigger question investors should ask is whether developed markets are all that much safer[125]".

Moreover, investors in emerging economies "are used to discounting the failings of institutions, whether related to corruption, lack of independence for the judiciary, concerns over property rights and so on. But investors get paid for taking that risk: the yield on the Emerging Market Bonds Index is 4 percentage points above that on US Treasury bonds. Many emerging economies such as India have, in fact, embarked on reform programs that diminish many of these risks and are likely to deliver an upside to investors.

The risk in OECD economies, on the other hand, may be one of investor complacence. Investors are getting negligible, with negative returns on their OECD investments, even as political, economic and financial risks are on the rise and the underlying situation is fragile.

As the Centre for Global Research says, there is a "growing volatility in financial asset prices as excess liquidity, debt, and the shift to financial asset investing produces asset bubbles, asset inflation, and then deflation." It also points to the "growing ineffectiveness of fiscal and monetary policies as debt and incomes from financial assets rise, incomes from wages and salaries stagnate and household debt rises, and debt on government balance sheets increases while government income (taxes) slows—which together reduce the elasticities of response of investment and consumption to interest rates and multiplier effects from government fiscal policies[126]."

A manifestation of the rising risks in OECD economies can be seen in the recent volatility in their currency markets, often a good proxy for political and financial risk.

The Swiss Franc, long considered to be one of the most stable currencies in the world, went from about 1.60 per euro shortly before Lehman Brothers collapsed in 2008, to near parity with the euro before the Swiss Central Bank introduced a ceiling in September 2011. Within minutes of this cap being removed in 2015, the franc rose as much as 41 per cent against the euro[127]. Somewhat less dramatically, the pound fell against the dollar by more than 10% over the course of a few hours in the immediate aftermath of the Brexit vote, the biggest fall in more than 30 years. Over a somewhat longer time period, the Yen has strengthened against the dollar by 17% between January and July in 2016 and the Euro /USD rate has fluctuated by almost 10% between December 2015 and May 2016.

[123] http://www.economist.com/news/leaders/21705826-rich-worlds-central-banks-need-new-target-when-2-not-enough
[124] http://www.slideshare.net/GIC_Presentations/investing-in-a-lowreturn-environment
[125] http://www.wsj.com/articles/whos-risky-now-a-brexit-boost-for-emerging-markets-1467214175
[126] http://www.globalresearch.ca/systemic-fragility-in-the-global-economy/5505941
[127] http://www.bloomberg.com/news/articles/2016-01-15/switzerland-weathers-the-superstrong-franc

Chapter 4: Dysfunction

The traditional view in asset management is that it is impossible for everyone to outperform the market. That, of course, makes sense. Everyone IS the market. This common sense view can be articulated in another way, which is that in the long run the average investor will see the average performance of the market. This also makes intuitive sense, especially given accumulating evidence that for the vast majority of investors it has been impossible to outperform the market for any sustained length of time.

Many active fund managers charge a fortune and every dollar of fee paid to them is a dollar less for the investor. Perhaps the most egregious example of high fees comes from hedge funds, many of which still charge 2/20 – 2% of the assets under management every year and 20% of the excess profits over an agreed benchmark. In the heyday of hedge funds in the 90s and the early years of this century this was considered acceptable, but as hedge funds have underperformed the S&P 500 index by 51% in recent years, this exorbitant fee structure has caused outrage[128].

The rise and rise of passive index investing

The received wisdom in recent years has tilted towards passive index investing, which has grown from strength to strength and now accounts for a third of the total market and growing[129]. According to Bank of America Merrill Lynch, there has been an "accelerating trend of flows out of active funds and into passive vehicles." A poor performance by active managers has contributed to this and "year-to-date flows out of active have now reached a post-crisis high[130]." The low cost of this strategy is one its biggest appeals as opposed to active investing. Much of what goes for active investing is in any case, according to many experts, actually simply passive index tracking at core, disguised to look active in order to charge high fees[131].

The case for passive investing has been summed up below.[132]

- In the long term, the average investor will have an average before-costs performance equal to the market average. Therefore, the average investor will benefit more from reducing investment costs than from trying to beat the average.
- The efficient market hypothesis says that equilibrium market prices fully reflect all available information. This has been widely interpreted as suggesting that it is impossible to systematically "beat the market" through active management.
- Principal agent problems, wherein the asset manager runs a fund in her own interest rates than that of the asset owner, mean that it is expensive and difficult to monitor any active management strategy, so it is better to stick to index management, which is cheap and easy to monitor.
- Under strong assumptions, the capital asset pricing model, which far too many investors still believe in, shows that in equilibrium all investors will end up holding some combination of the market portfolio and the riskless asset, and that this is optimal.

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[128] http://www.ft.com/cms/s/0/9bd1150e-1b76-11e6-b286-cddde55ca122.html?siteedition=intl#axzz4IdIo0tt2
[129] http://ftalphaville.ft.com/2016/08/24/2173139/as-an-investment-strategy-grows-more-popular-the-probability-of-a-comparison-involving-marxism-approaches-1/
[130] http://www.ft.com/cms/s/0/9de30114-7061-11e6-9ac1-1055824ca907.html - ixzz4JRgOybR5
[131] https://www.ipe.com/norges-chief-slams-disguised-beta-hedge-funds/19931.fullarticle
[132] http://www.investopedia.com/terms/p/passivemanagement.asp

Many of these, particularly the CAPM and Efficient Market Hypothesis, hold only under some very restrictive assumptions that do not resemble the real world, and that have been successfully challenged. But large passive holdings raise also raise other problems. Analysts at Sanford C. Bernstein, a research firm have gone as far as to suggest that a “capitalist economy where the only investment is passive is worse than either a centrally planned economy or an economy with active market-led capital management[133].” In reality we are still far from all investment being passive so this is surely an exaggeration but their research does point to the problems that can arise in the efficiency of capital allocation. The Economist has recently highlighted new analysis showing that large ownership by passive investors can reduce competition and lead to higher prices[134].

While we fully acknowledge that active investing has disappointed in aggregate and that passive index investing, including through exchange traded funds (ETFs), does make sense for many mutual funds and individuals with small savings or those with a short term horizon, we believe that the institutional investors, who are the focus of this report, should think twice before jumping on the passive index investing bandwagon.

Too many pension funds, insurance firms and even some sovereign wealth funds such as the Norwegian GPF, are big fans and active users of a passive index investing approach. This is highly correlated with the use of the standard 60/40 listed stock and bond portfolio that was the subject of the discussion in the last chapter. Even when funds are not fully committed to this approach, they often use this as a benchmark against which they evaluate the risk and performance of their own portfolios. Deviations from this benchmark are often not very big and many investors end up hugging indices such as the S&P 500 even if they do not completely replicate it.

It also became clear in Chapter 3 that the performance of this traditional strategy of investing with the index in mostly OECD country listed bonds and equities was going to be despairingly poor over the next decade or two. Institutional investors hugging the index saw satisfactory, even good, returns the past couple of decades that saw a confluence of unrepeatable benign factors and unprecedented capital gains, as bond yields fell and P/E ratios rose. However, this strategy has run its course and the performance of the “market”/ index/60-40 portfolio is likely to be so poor that pension funds, insurance firms and sovereign wealth funds will simply be unable to meet their explicit or implicit liabilities.

Not every institutional investor hugged the index. Several, such as the university endowments of Yale and Harvard Universities, the Canadian Pension Plan Investment Board, Ontario Teachers Pension Plan and the New Zealand Super Fund, have pioneered different approaches to investing. There is much that other institutional investors can learn from these in order to adapt to the new normal of the decline in OECD economies, super-low bond yields and poor stock market performance in the rich world.

Over the next few sections we will, using a rich array of examples from current practices of some pioneering investors, make a robust theoretical and practical case for how institutional investors need to change the way they invest, given the new normal of the current economic and financial realities.

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133 http://www.economist.com/news/finance-and-economics/21707191-passive-investment-funds-create-headaches-antitrust-authorities-stealth

134 ibid

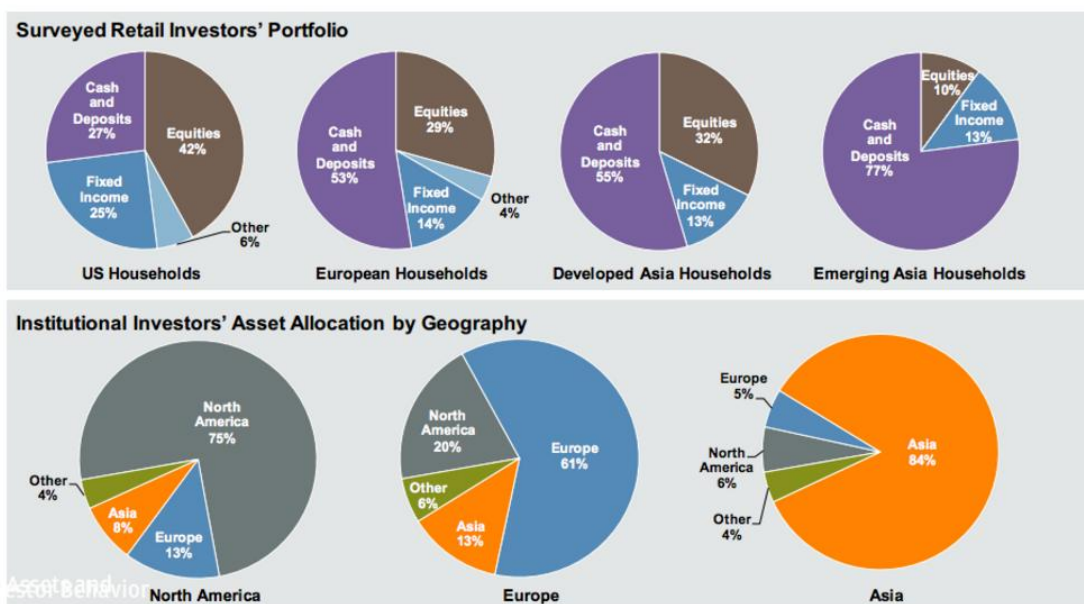
Investors demonstrate a huge home bias

Most institutional investors, particularly those located in rich OECD economies, are heavily invested in their home economies and, to a lesser extent, in those of other OECD economies. This "home bias" is well documented and has some explanations. The first is one of familiarity. Investors are far more drawn to companies and asset classes that they are familiar with. An American fund manager, for example, is likely to feel far more comfortable with Apple and IBM than with an Indian IT firm such as Infosys, even though all three firms are multinational companies (MNCs).

The second big driver of home bias is information asymmetry. Here again, a fund manager based in the UK will know more about and feel more sure about the business strategy and prospects for a restaurant business in the UK than one based in China. She or he is more likely to feel that there is lack of more complete information and context about the food business in China than about the business back home. There is evidence that the further away a country is geographically and/or culturally, the less likely a fund manager is to invest in it. Linguistic barriers also often crop up and could contribute to information asymmetry, as the English speaking analyst/fund manager who does not speak German may miss vital clues and leading indicators about the prospects for a German retail business that appear first in the German press, for instance.

A third big driver of home bias is currency risk. The liabilities of most institutional investors in any given country or region are denominated in the home currency, and their performance is also judged in that same home currency. Investing in a foreign currency involves taking an additional layer of risk.

The shocking degree of home bias is captured well by the graph below. North American institutional investors invest three quarters of their assets in North America, with 61% of European money being invested in Europe and 84% of Asian money in Asia.



Source: JP Morgan[135]

[135] http://mebfaber.com/2014/05/26/home-bias-everywhere/

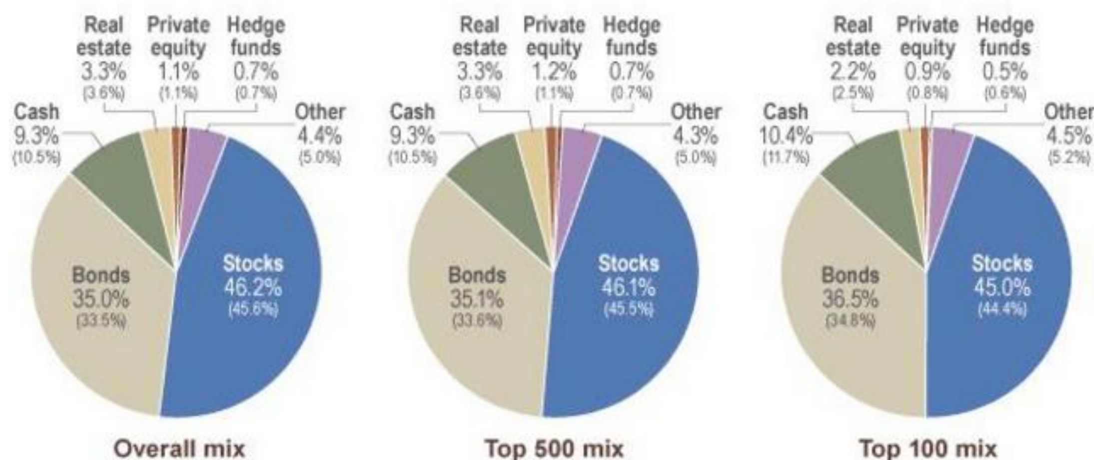
This worked well, as discussed in Chapter 3, when the North American and European markets were booming, but will cost them dearly now that the prospects for both are so poor.

Listed stocks and bonds dominate portfolios

Another form of familiarity bias also shows up in the kinds of assets that fund managers choose to invest in. Stocks and bonds are by far the most dominant and familiar asset class and as the following graph indicates, the average portfolio of institutional investors, in the US in this case, is pretty close to the 60/40 generic portfolio, that we have discussed above.

Information asymmetry is also at play here, meaning that the listed stocks and bonds, particularly of large, well-known firms and government entities, get more attention than they perhaps strictly deserve, as it is believed there are few skeletons in the cupboard for these listed securities. They are scrutinised by many analysts and generally have very stringent reporting requirements, so almost all relevant information is in the public domain.

Yet another phenomenon at play is the rise of index investing we discussed in the previous section, wherein most institutional investors that either invest passively or use the 60/40 mix or indices as benchmarks end up buying up whatever is in the major indices, which is stocks and bonds of major firms and governmental entities.



Source: Seeking Alpha[136]

Performance is measured against broadly similar bond and stock benchmarks

Some assets of institutional investors are managed in-house and the rest are given over to external asset managers. On average, about 25% of assets are given out to external asset managers, with the balance managed by institutional investors themselves. In both cases, there arises a principal-agent problem, namely, the manager who makes investments does not own them, so her interest may not be aligned with that of the actual owners of the assets.

[136] https://staticseekingalpha.a.ssl.fastly.net/uploads/2012/2/7/1161232-13286346805997572-DougCronk_origin.jpg

When asset management is outsourced, institutional investors need to monitor and measure the performance of the manager to know whether they are doing a good job or not. Even when assets are managed internally, the trustees or the board of the institutional investor, which represents the interests of the asset owners in pension funds, for example, need to monitor the performance of the managers.

In both cases, the most common practice is to use a benchmark portfolio against which to measure the performance of managers. The most common internal benchmark is the 60/40 portfolio that we have discussed before. Indices such as the S&P 500 or the MSCI World used for the equity component and the Barclays Aggregate Bond Index often used for bonds. When specific mandates are given to external managers who specialise in certain geographies or asset classes, more narrow indices such as the JP Morgan Emerging Market bond index or the Bear Stearns High-Yield index, relevant to the specialist are used instead. For some hedge fund mandates it is common to also use an absolute benchmark, say a minimum return of x% in order to monitor and measure performance.

The point of this discussion is that by far the majority of assets in the world are managed against a benchmark index. While a third simply track the index as a passive investment, most active management strategies also use those indices as a baseline and then overweight or underweight certain stocks or bonds. This means that the biggest, most popular indices for stocks and bonds in the world act as attractors and, almost by default, most institutional investors end up investing between half and three quarters of their total assets according to these indices.

The Long Term Portfolio guide agrees saying that “in practice, benchmarks have tended to exert outsize influence on investing choices. Too frequently, the best long-term thinking of asset managers is compromised by considerations of performance rankings, or “tracking error” against a benchmark which may itself be ill suited[137].”

And the World Economic Forum (WEF) notes that “the performance of investment managers is often evaluated in relation to a performance benchmark or index such as the S&P 500. This can discourage investment professionals from making long-term investments that may perform differently from the benchmark[138].”

Performance against the benchmark is most commonly measured on a quarterly or annual basis, with a few instance of using multi-year rolling averages. This is seriously problematic, as highlighted by a survey of Charted Financial Analysts where 70% of members surveyed cited ‘performance evaluation based on short periods’ as a barrier to investment in long-term assets[139].

Market volatility is the most common, but often inappropriate, measure of risk

In standard models of finance, including the capital asset pricing model, volatility (standard deviation) is used as the standard measure of risk. For liquidity-constrained investors who might need to sell investments at a very short notice, the daily, weekly, quarterly and annual variation in the price of an asset is very relevant.

[137] Long Term Portfolio Guide: Reorienting portfolio strategies and investment management to focus capital on the long term, Focusing Capital on the Long Term, 2015
[138] The Future of Long Term Investing, World Economic Forum, 2011
[139] Long Term Financing: Investor Perspectives in Europe, CFA Institute, 2013

If a small retail investor, for example, had invested savings in a money market fund, and needed to draw on these for a medical emergency, the price at which she would be able to sell the investments is very important for her. If the price of the fund fluctuates wildly, say between $80 and $120 for a $100 investment, she could easily incur a loss of 20% of her principal. The more frequent and the bigger the fluctuations which volatility captures, the larger the risk she faces. Similarly, if a pension fund's owners are mostly retired and depend on regular income from the fund, it is risky for the fund to be invested in volatile assets if it has to regularly liquidate its positions to generate cash flows to fund pensions.

Many mutual funds, which total about $26.1 trillion in assets, can be liquidated at a short notice. These open-ended funds can be redeemed at any time so managers may need to sell the assets the fund invests in at a short notice to refund investor cash. Close-ended funds, which cannot be liquidated at the whim of customers, do not need this liquidity at a short notice. For the open-ended funds, volatility, as for retail investors, may be an appropriate measure of risk.

Because of this appeal to common sense, and the use of volatility as a standard proxy for risk in financial models, the vast majority of institutional investors also use the volatility of an asset price as a measure of its risk. When they consider one asset to be more risky than another, they often mean it is more volatile.

Unfortunately, even institutional investors such as the Norwegian GPF, use this measure for their internal risk models despite the fact that they have no need for liquidity. The law governing the GPF specifies that only about 4% of the fund can be withdrawn in any year and foresees that the fund will not need to liquidate its investments at a short notice[140].

When performance is measured against a benchmark portfolio it is not just deviation on return that is taken into account, but also the deviation on volatility from the benchmark portfolio's volatility. The biggest risk for pension funds, insurance firms and sovereign wealth funds, as we saw in Chapter 2, is that they will not generate sufficient returns in the long term to be able to meet their implicit and explicit liabilities and promises. The best measure of that is "shortfall risk" and not market volatility, which only measures how much a fund may lose if it has to be liquidated in the short term.

The Long Term Portfolio Guide agrees saying that "investors commonly and inappropriately use short-term volatility as shorthand for risk, despite the fact that real risk entails economic loss, especially in the context of longer time horizons." There are, however, exceptions to this. A major sovereign-wealth fund defines risk primarily as the likelihood and magnitude of "permanent impairment of capital", a far more appropriate measure for those who do not need short-term liquidity[141].

Another reason why the focus on short-term price volatility is wrong for long-term investors in particular is because research has confirmed that market prices are far more volatile than economic fundamentals. Over the past century, for example, US stock prices have been over three times more volatile than fundamentals, with indications that this has risen to between six to ten times since 1990[142].

[140] Investing for the Future, Re-Define, 2013
[141] Long Term Portfolio Guide: Reorienting portfolio strategies and investment management to focus capital on the long term, Focusing Capital on the Long Term, 2015
[142] Patience and Finance, Bank of England, Andrew Haldane, 2010

Compensation practices often reward short-term performance

As discussed earlier, most institutional investors measure the performance of internal and external managers every quarter or every year. Most pay bonuses based on measures of performance against the benchmarks. The most common period used to calculate outperformance or underperformance against a benchmark based on which bonuses are paid is a year, with a much smaller number of investors using rolling three to five year averages in the calculation of bonus payments.

A few investors have several components that go into the calculation of the bonus, which is paid annually, but the biggest component by far is still performance against a benchmark measured annually. Although bonuses increasingly include non-cash components such as equity shares, deferred cash, stock options, three-quarters of the average bonus is still paid in cash, even though asset owners indicate they would like to pay only half of that amount in cash[143].

Surveys also indicate that fully 60% of managers are evaluated purely on short-term performance of one year or less, with the remainder having some medium-long term component, often not more than three years or so[144].

Because bonuses are usually determined annually, it incentivizes the investment managers to ensure that the portfolios they manage perform well over that time frame. This short-termism is reinforced by risk being measured as "volatility of the price of an asset over a relatively short time horizon, such as quarterly. This kind of risk measure and performance metric will limit the manager's desire to take on short-term volatility in return for potential superior long-term investment performance[145]."

This is a problem, because "put simply, trying to do the best each year is a recipe for doing badly in the long term[146]."

Many institutional investors suffer from weak governance and a poor quality of boards

All institutional investors have some form of a board or trustees. In the case of pension funds, board members often include company executives and workers' representatives. For public sector funds, elected officials and local politicians are often represented on the boards. What far too many pension funds have in common is the lack of professional, financial and investment competence on their boards.

Insurance firms, especially the large ones, often have more professional boards just like other large corporations but most board members have little investment expertise.

As with public pension funds, sovereign wealth funds too have boards that are heavy on politicians and in many cases bureaucrats, but the quality of the boards varies widely. Many funds have professional boards that draw on international experts in investing, but others such as the Norwegian GPF, have boards that are not well suited to effectively oversee investments.

[143] - The Future of Long Term Investing, World Economic Forum, 2011
[144] Long Term Investing: What determines investment horizon?, Centre for International Finance and Regulation, Geoff Warren, 2014
[145] Focusing Capital on the Long Term, by Dominic Barton and Mark Wiseman, Harvard Business Review, 2014
[146] 'Resilience and the Long-term: Rethinking Portfolios for Prosperity', Paul Woolley, Speech at The Prince's Charities, 2013

Boards across institutional investors vary widely in terms of how they are selected, how long the terms of board members are, the expertise they posses and how involved they are in the setting the broad direction of investment strategy.

But poor governance often ends up limiting the investment strategy of an institutional investor and is a critical determinant of how well it will perform. This is particularly important for a long-term investor. As Keynes noted in his masterpiece, General Theory, the behaviour of long-term investors will seem "eccentric, unconventional and rash in the eyes of average opinion[147]". Having a board that does not understand countercyclical investment or "buying when others are selling, or selling when others are buying", or the allure of "exotic" emerging markets, or "illiquid" asset classes such as infrastructure and private equity that are harder to evaluate and understand, will mean that investment managers will not be able to deploy these strategies that are crucial to success in long-term investing.

The board must, as Dominic Barton and Mark Wiseman write in the Harvard Business Review[148], be independent and professional, with relevant governance expertise and a demonstrated commitment to a long-term investment philosophy. Board members need to have the competencies and time to be knowledgeable and engaged.

Long-term oriented institutions "must be founded on governance structures that support, even force, an attention to the long term. Such structures should ensure effective direction and oversight of the investment process through sufficiently qualified boards" and should provide the freedom to act in the long-term interest of their beneficiaries[149]."

"Unfortunately, many pension funds—including many U.S. state and local government employee pension plans—are not run this way; they often succumb to short-term political pressure or lack sufficient expertise to make long-term investment decisions in the best interests of beneficiaries[150]."

"The governance structures and practices of the top ten Canadian pension funds are often cited as a major competitive advantage allowing them to invest for the long term[151]."

Most institutional investors end up investing for the short term

Many institutional investors have no immediate need for liquidity. Many, such as defined benefit pension funds, will need to make pay outs that are several years out into the future and can be easily anticipated. The same also applies to many life insurers. This means that a substantial proportion of their portfolios, which varies depending on the demographic of their policyholders, can be locked in for long periods to maximise returns. For sovereign wealth funds, foundations and endowments, which are not linked to any specific liabilities and often are just expected to pay out earnings, a much bigger proportion of their portfolios can be locked in.

Defined contribution pension plans, on the other hand, often invest through mutual funds and savers have the right to change pension funds, the asset managers they invest through or even redeem their savings at

[147] http://www.ft.com/cms/s/0/9cc892c6-6526-11e6-8310-ecf0bddad227.html#axzz4J6MHSzUy
[148] Focusing Capital on the Long Term, by Dominic Barton and Mark Wiseman, Harvard Business Review, 2014
[149] http://www.cppib.com/en/public-media/headlines/2016/long-term-portfolio-guide.html
[150] Focusing Capital on the Long Term, by Dominic Barton and Mark Wiseman, Harvard Business Review, 2014
[151] Long Term Portfolio Guide: Reorienting portfolio strategies and investment management to focus capital on the long term, Focusing Capital on the Long Term, 2015

a short notice. This means that these defined contribution plans, which form a growing proportion of pensions, have a much higher need for liquidity. This means that unlike defined benefit plans, they cannot afford to lock in a large proportion of their portfolios for long-term investment. This is a problem, as it may shrink the total available pool of long-term savings, but there are some good suggestions on how to address this problem that we will examine later in this report.

Despite many institutional investors having mandates that expect them to maximise returns over the long-term and most having no need for near term liquidity, far too many end up investing in a manner that belies their long-term mandate and capacity. The Aspen Institute is right in saying that "many college savings, 401(k), and related retirement funds engage in behavior that is inconsistent with their investors' goals, as they trade securities, pay their managers, and engage in (or support) activism in pursuit of short-term financial objectives at the expense of long-term performance and careful analysis of fundamental risk[152]." This short-termism imposes large costs both on the institutional investors themselves, as well as the society and economy as a whole.

How does short-term behaviour arise and what costs does it impose?

As discussed in previous sections, the vast majority of investment managers are evaluated on and compensated on the basis of annual performance. Furthermore, for most, the performance is benchmarked against indices of listed, liquid OECD government stocks and bonds. Fully 60% of investment managers are evaluated on the basis of their annual performance and as much as 75% of the bonuses they are offered for outperforming their benchmarks are paid in cash form.

With this compensation structure, a measure of risk that is based on quarterly or annual volatility and returns benchmarked mostly against listed liquid indices you get managers who do the following:

1) hug the index closely,
2) focus on outperforming it in the near term, even when it comes at the cost of long-term returns and
3) are uncomfortable with investment strategies that might be volatile in the short-term, even if they generate long term value.

Another problem arises because long-term investing can represent a career risk. The "average tenure of a chief investment officer of a public pension plan is only four years and the average tenure is even shorter for more junior staff", and few long-term strategies come to fruition in this short a time frame[153]. Also, because performance has been measured relative to the listed benchmark and to the peer group, even a year or two of underperformance can get the investment manager fired, regardless of whether their investment strategy is superior over the 10-year or longer time horizon that actually should matter to the institutional investor.

This structure of incentives and performance measurement produces high turnover ratios, as most traders seek to time markets and use momentum strategies to outperform the index without deviating from it too much. This destroys value for asset owners, as churning is costly[154]. It causes herding around the index and attracts far too much money towards those firms and entities with listed securities, most of which can already access capital cheaply. The use of market-capitalization benchmarks such as S&P500 by definition

[152] Overcoming Short-termism: A Call for a More Responsible Approach to Investment and Business Management, Aspen Institute, 2009
[153] Focusing Capital on the Long Term, by Dominic Barton and Mark Wiseman, Harvard Business Review, 2014
[154] Overcoming Short-termism: A Call for a More Responsible Approach to Investment and Business Management, Aspen Institute, 2009

"leads to the creation of portfolios with excessive exposure to companies that may be overvalued or simply larger[155]".

Another perversion arises from the excessive overreliance on passive index investing that we have discussed earlier in this chapter. If the price of a company rises or a bond yield falls, the design of most indices means that passive investors buy the stock, often overshooting the price rise that was justifiable by any changes to the fundamentals in the first place. Similarly, falls in a price generate automatic index driven selling often overshooting in the other direction.

Index investment, an authoritative study has found, substantially increases the "co-movement of stocks with respect to trading patterns, price returns and liquidity risks within all markets analysed. It also found "statistically significant and economically relevant evidence that the growth in index-linked investing is related to the substantial increase in risk commonalities[156]."

Regulation that forces pension funds and insurance firms to mark their portfolios to markets, penalizes assets which have higher short-term volatility or lower liquidity, or introduces other restrictions in the form of the assets or geographies that the institutional investors are allowed to invest in, can also produce short-term behavior. A poll of CFA Institute members, for example, found that 60% of respondents indicated that they believe prudential regulations such as Solvency II reduced incentives to invest in long-term assets[157].

No matter what the origin of short-term oriented behaviour, it is very prevalent amongst institutional investors and imposes a great cost on both their own performance and on society.

In addition to over-trading and the excessive transaction costs associated with that, it increases volatility, makes all investors crowd into similar listed liquid assets, which may not channel capital to the most productive parts of the global economy. It increases the risk of crisis and drives short-termism at companies. As we will see in the next Chapter, short term focus prevents investors from focusing on many asset classes, countries and investment strategies that can simultaneously increase return and reduce risk for them, while enhancing growth and increasing sustainability.

In a large survey of top corporate executives, 79% said they felt especially pressured by investors to demonstrate strong financial performance over a period of just two years or less, while 73% said they should use a time horizon of more than three years. Fully 86% declared that using a longer time horizon to make business decisions would positively affect corporate performance in a number of ways, including strengthening financial returns and increasing innovation[158].

Today institutional investors own 73% of the top 1,000 companies in the U.S., versus 47% in 1973, so the signals they send to corporates really affect corporate behavior. Short-termism is essentially "undermining the ability of companies to invest and grow, and those missed investments, in turn, have far-reaching consequences, including slower GDP growth, higher unemployment, and lower return on investment for savers[159]".

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[155] Long Term Portfolio Guide: Reorienting portfolio strategies and investment management to focus capital on the long term, Focusing Capital on the Long Term, 2015
[156] http://www.economist.com/blogs/buttonwood/2016/06/academics-and-investing
[157] Long Term Financing: Investor Perspectives in Europe, CFA Institute, 2013
[158] Focusing Capital on the Long Term, by Dominic Barton and Mark Wiseman, Harvard Business Review, 2014
[159] ibid

The Aspen Institute is right in saying that "encouraging investors and intermediaries representing investors to adopt a long-term perspective will ultimately encourage and empower boards of directors to adopt long-term strategies for growth and sustainable earnings, and to rely on long-term, forward-looking metrics in the consideration of compensation and performance incentives[160]."

The focus of long-term and short-term investors can differ substantially, even when they invest in the same asset, as the following example makes clear.

Imagine having bought a stock that yields a 6% dividend for $100. For an investor with a 1-year horizon, the price at which she can sell the stock at year end is a far more important determinant of the return than the $6 dividend payout. "It is no surprise then that investors with short horizons would spend most of their time focusing on price drivers. As the horizon increases, the relevance of price declines while the importance of cash flows and reinvestment begin to increase. After about 11-12 years, terminal wealth comprises about 50% end-period price, just over 30% cash flow and just under 20% from reinvestment. After 20 years, the weightings are 29% end-period price, 30% cash flow and 41% reinvestment." The longer the horizon, the more the investor will focus on "value discovery" and "cash flow", and the less he or she will focus on "price discovery"[161].

Short-term fluctuations in the price of the security, unless they reflect some fundamental changes that affect long-term cash flows, will be irrelevant for long-term investors, while for an investor with a short horizon, this volatility can be all-important and make the difference between profit and loss, over-performance or underperformance and getting fired or getting a raise.

[160] Overcoming Short-termism: A Call for a More Responsible Approach to Investment and Business Management, Aspen Institute, 2009
[161] Long Term Investing: What determines investment horizon?, Centre for International Finance and Regulation, Geoff Warren, 2014

Chapter 5: Drive

In Chapter 4, we discussed how many institutional investors, despite having a long-term horizon, ended up investing in much of the same asset classes and in behaving in the same manner as investors with shorter horizons. This, we showed, came at a big private cost to them, as well as at a public cost to society and the economy at large.

This Chapter focuses on what it means to be a long-term investor, the advantages such investors can enjoy and the institutional and behavioral aspects that are necessary to run a successful long-term investment strategy. We use examples where possible.

Long-Term Investing and its merits

There are several definitions for what it means to be a long-term investor, but such investors are "perhaps best characterised as those who set their sights on the generation of value and returns over the passage of time, backed by considerable discretion over when they trade[162]."

The ability to be long-term oriented is influenced by a number of criteria, of which the nature of liabilities being long-term is perhaps the most critical distinguishing feature. As important is capacity, which depends on the design and governance of the institutional investor. Having, for example, a weak or incompetent board that loathes to deviate from the herd or poor organizational capacity that does not offer expertise needed to seek assets or strategies that work best over the long-term can be obstacles to a long-term approach. So can be compensation and performance measures that evaluate and reward short-term performance, also hindering a long-term approach. Investment beliefs, cultural aspects and behavioral biases can play a further important role[163].

Geoff Warren of the Centre for International Finance and Regulation (CIFR) neatly summarises the advantages that long-term investors enjoy. "A key benefit of long-term investing is that it offers access to a broader opportunity set. Long-term investors can, in theory, attempt to implement any strategies available to short-term investors, plus some[164]. According to him these include value investing, exploiting pricing discrepancies across segmented markets, long-term thematic investing, adding economic value through engagement and control and, finally, investing in complex assets.

Long-term investors also have the freedom to exploit more dynamic approaches to investing that recognise that expected returns and risk premiums can fluctuate. A good example of this is what is now called Risk On / Risk Off, where changes to general risk perception lead to big changes in asset allocations by short-term and index investors[165]. Long-term investors can buy when others are selling, and sell when others are buying. This counter-cyclicality, as we will see later in this Chapter, can earn handsome financial rewards.

These advantages of being a long-term investor are put into practice by investors such as GIC, which states that its "long-term investment approach offers several advantages. It allows GIC to be contrarian in the face of short-term market sentiment, and reap higher long-term returns by assuming illiquidity risk. As such, our investments in private equity, for example, enhance the long-term returns of the GIC Portfolio."

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[162] Long Term Investing: What determines investment horizon?, Centre for International Finance and Regulation, Geoff Warren, 2014
[163] Long Term Investing: What determines investment horizon?, Centre for International Finance and Regulation, Geoff Warren, 2014
[164] Benefits (and Pitfalls) of Long-Term Investing, Centre for International Finance and Regulation, Geoff Warren, 2014
[165] http://lexicon.ft.com/Term?term=risk-on,-risk-off

The World Economic Forum echoes the message of the last Chapter by acknowledging that while "long-term investing is more important than ever, yet it seems to face an increasing number of obstacles."

The Forum also finds that such an approach "can provide above-market returns, due to the ability of companies backed by patient capital to undertake more innovative and ambitious projects." Very importantly, it notes that society often "benefits from the types of projects backed by long-term capital, such as infrastructure improvement and energy efficient technology development. With current estimates of pension and infrastructure investment shortfalls each topping several trillion dollars globally – and the infrastructure funding shortfall in Africa alone estimated as high as US$ 45 billion per year – society needs ever more long-term investment[166]."

The superior potential returns for long-term investors can flow from a lot of channels, which we have listed above. Below we elaborate on some of these.

They benefit from illiquidity premiums and can ride out market fluctuations in both asset prices and the price of risk and even benefit from them by buying when others are selling. They are less susceptible to behavioral imperfections and panics that drive markets in the short term, and can provide market-stabilizing liquidity provision during crises that also simultaneously allow them to make value trades.

They have access to a much bigger universe of investment opportunities that includes complex, illiquid and exotic investments that deliver value over a longer-horizon or have high upfront costs or gestation periods. This allows them to reap higher returns and simultaneously diversify away more risks.

The longer time horizon also allows such investors to position themselves to benefit from secular macro-trends of the kinds we have discussed in Chapter 1, such as the ageing demographics of rich economies and the relative rise of emerging markets, as well as the development of new technologies and action against climate change.

Less churning in the portfolio, better engagement with companies to stop wasteful mergers, and a lower turnover of managers and could also deliver big savings for long horizon investors, thus increasing net returns substantially.

Now that the benefits of long-term investments, in terms of being able to generate higher returns while lowering risk, are clear, what institutional investors need to do to move away from the sub-optimal short-termist reality is discussed in the last Chapter. How to take advantage of their potential to have a long-term investment horizon is also looked at. This is the subject of the rest of this Chapter.

Reforming Compensation

Current compensation practices that mostly evaluate, reward and penalise performance on an annual basis encourage short-term behaviour that focuses on maximising returns over that time horizon. In response to this, some institutional investors are introducing bonus payments linked to performance over a longer period of time, 3-5 year rolling average. Others are reducing the cash component and increasingly paying

[166] Measurement, Governance and Long-term Investing, World Economic Forum, 2012

bonuses that are co-invested alongside the portfolio and can only be redeemed after a lock-in period and give the manager skin in the game. Still others have introduced claw-back provisions.

Some others such as Craig Newman, chief executive of Woodford Investment Management, which has £14.3bn under management, have concluded that bonuses are "largely ineffective in influencing the right behaviours". Finding that upon reflection, "there is little correlation between bonus and performance and this is backed by widespread academic evidence," his firm has eliminated all bonus payments altogether. Daniel Godfrey, former chief executive of the Investment Association agrees and is setting up an investment trust that will not pay bonuses to executives, in an effort to reduce short-termism. "There will be nothing they can do to earn more money [above their fixed salary][167]."

Removing bonuses altogether, reducing the cash component, evaluating bonuses over a long period of time, claw back provisions and linking bonus payment to the quality of how investment decisions were made rather than the outcome, can all work, to some extent to reduce short-termism in institutional investors and the asset managers they use.

Reforming Performance Benchmarking

As discussed in the previous Chapter, the benchmark for measuring performance and the frequency of measuring it are the biggest factors that determine what the final investment strategy of an institutional investor looks like.

Using listed bond and stock indices for benchmarking encourages a hugging of the index and leads to behavior that puts far too much money into crowded assets and generates herding, a scramble for outperforming the benchmark that encourages short-term momentum trading. It also means that long-term investors, who enjoy many more degrees of freedom and a market portfolio that is far broader and more diversified than just the listed stock and bond market, end up not using that freedom. Many end up investing in the same liquid asset classes that investors with a shorter horizon are forced to invest in. This leads to underperformance as well as a misallocation of capital.

It is essential for long-term institutional investors to move away from quarterly and annual performance measurement, and away from benchmarks of listed stocks and bonds.

GIC, Singapore's Sovereign Wealth Fund, for example, has a mandate to achieve good long-term returns. In line with this long-term objective, its primary metric for evaluating its own investment performance is the rolling 20- year real rate of return. In its own words, "to give a sense of on-going portfolio performance, we provide the nominal rates of return in USD terms over 5- and 10-year periods. While these investment results serve as medium-term trackers of how GIC's 20-year results are evolving, the 20-year period remains the right time horizon to assess the performance of the portfolio, given GIC's long time horizon."

Norway's finance ministry, which sets the reference portfolio for Norges Bank Investment Management (NBIM), the asset manager uses a reference portfolio comprised mainly of listed stocks and bonds and allows NBIM only a 1% tracking error in any year[168]. It also benchmarks NBIM's performance against the portfolio every quarter with the consequence that NBIM, to all intents and purposes, ends up acting as a passive index investor, with some active management on the side.

[167] http://www.ft.com/cms/s/0/4ae1ae18-6871-11e6-ae5b-a7cc5dd5a28c.html#axzz4IILsO4RJ
[168] Investing for the future, Re-Define, 2013

While the reference portfolio that GIC uses is 65% global equities and 35% global bonds, it deliberately encourages the investment portfolio to be agnostic about the short-term behaviour of the Reference Portfolio. It explicitly states that it "does not construct the GIC Portfolio with the aim of outperforming the Reference Portfolio over short periods[169]." It recognises that it can only benefit from long-term investing if it is prepared to tolerate short-term unrealised losses or underperformance relative to the market from time to time, in order to generate good real returns over the long-term, so it allows for far greater deviation from the reference portfolio than NBIM is allowed.

That is why while NBIM's actual portfolio looks very similar to the reference portfolio, GIC's investment portfolio looks quite different from the benchmark. While NZZ Super agrees that "the composition of its reference portfolio is the single biggest driver of Fund returns", only 70% of the Fund is invested in line with it, compared to a figure of more than 97% for NBIM. NZZ managers are allowed a lot of room for discretion, provided they see opportunities outside the reference portfolio that they believe can add value and reduce risks. This is one of the main reasons why NBIM underperforms its peer group[170]. By some calculations, it has left upwards of $100 bn of potential return on the table by choosing to passively track indices[171].

It also uses a long-term performance expectation based on the amount of investment risk it has decided to take, rather than a target that needs to be hit on an annual basis. It says that "working to an expectation rather than a target avoids any short-term incentive to increase risk when returns are least rewarding – and vice versa."

The Canadian Fund CDPQ warns of the downside of being benchmark-driven, rightly pointing out that "from a risk perspective, it is quite different to be benchmark-driven than to be benchmark- agnostic". It prefers to focus on and measure what it owns rather than what it does not own (that is, what happens relative to the benchmark), as it believes "such a benchmark-agnostic approach favors deep analysis and strong long-term convictions."

The Long Term Portfolio Guide suggests that the benchmark used for investment strategy "need not be an investable index" at all. Nor does it need to be used for manager-performance rating. "It may well be more appropriate for the strategy benchmark to specify a metric such as absolute return or rate of real value creation that matches the mandate horizon, opportunities, risks and costs[172]."

In fact, many asset classes such as infrastructure, private equity, other unlisted investments in SMEs and geographies such as emerging and frontier economies especially suitable for long-term investors may not have a suitable benchmark index at all. In particular, investment strategies that are suitable for long-term investors such as the countercyclical rebalancing employed by NBIM generate big deviations from reference portfolios by design.

In addition to having longer evaluation periods, using broader asset class based benchmarks, allowing big deviations from benchmarks to encourage long-term value maximising behaviour, institutional investors are indeed starting to look at absolute return benchmarks and deserting any kind of benchmark portfolios altogether. Paul Woolley of the London School of Economics has suggested that long-term investors should

[169] http://www.gic.com.sg/report/report-2014-2015/investment_report.html
[170] http://www.economist.com/news/business/21586268-changes-norways-gigantic-sovereign-wealth-fund-will-be-felt-around-world-more-money
[171] http://www.economist.com/news/business-and-finance/21707435-norways-global-fund-its-tough-small-democracy-run-worlds-biggest
[172] Long Term Portfolio Guide, Focusing Capital on the Long Term, 2015

consider using “global GDP plus local inflation as a sound overall benchmark, while risk should be specified in relation to cash flows rather than prices[173].”

Building size and capacity, and strengthening governance

As discussed in the previous Chapter, a lack of institutional capacity often drives an investment strategy that focuses on easy to invest asset classes such as listed bonds and stocks, and drives passive investing and index hugging. Where institutional investors do seek other alternate asset classes or more active management strategies, they are forced to go to external asset managers, who, it has been estimated, cost three times as much as internal managers. This can take a huge chunk out of performance over the long term. That is why large funds with internal capacity have been found to have a 0.5% advantage on overall portfolio returns and a 4% advantage on real estate.

Many long-term assets, in particular illiquid assets, are not accessible to all investors, as they are marketed as “off-market” deals. As a result, only a select few investors with the internal capacity to evaluate such assets are even made aware of the opportunity, and those that are not, are unable to use these assets to implement a long-term investing strategy[174].

Evaluating a long-term investment opportunity can be especially hard, as deals can be customised, information hard to come by and risks might arise over a long period of time. They sometimes require domain specific or local knowledge that many institutional investors do not have the in-house expertise for. In particular, certain public institutions with restricted compensation levels and relatively few staff may find it very hard to execute long-term investment strategies.

As opposed to the American public pension fund model, the Canadian model focuses on building strong in-house teams and empowering them. While bonds and equities still dominate US public pension portfolios, the Canadian plans hold over a fifth of their funds in real assets, such as infrastructure. The Canadian model has proved to be tremendously successful with OTPP, for example, having made 8.2 per cent per year, net of fees, over the past decade[175].

Keith Ambachtsheer, a pensions expert and a big proponent of building in-house capacity, explains that “you actually capture enough of the knowledge and skills that you need to execute a long-horizon investment internally[176]”. In order to do that, “you have to have pay scales that allow you to attract those kind of people.” Many institutional investors have caps on compensation and follow strategies that are best described as “penny wise and pound foolish”. They then use external managers who end up being far more expensive and face incentives that drive shorter-term behaviour.

Some funds go beyond just being able to identify and execute customised long-term investments such as in infrastructure and actually get involved in operations too. Michael Sabia, chief executive officer of the Caisse de Dépôt et placement du Québec, says that “Being involved in the operation of assets is a source of additional value creation.” CDPQ plans to construct and operate Montreal’s rapid-transit system.

OMERS, another Canadian fund that offers opportunities for investments in infrastructure to other long-term investor has in-house teams that “originate, execute and directly manage most of the investments,

[173] ‘Resilience and the Long-term: Rethinking Portfolios for Prosperity’, Paul Woolley, Speech at The Prince’s Charities, 2013
[174] - The Future of Long Term Investing, World Economic Forum, 2011
[175] http://www.ft.com/cms/s/0/99075c68-68f9-11e6-a0b1-d87a9fea034f.html#axzz4IILsO4RJ
[176] http://www.ft.com/cms/s/0/99075c68-68f9-11e6-a0b1-d87a9fea034f.html#axzz4JKbgDvjH

which allows it to co-ordinate opportunities across investment platforms and keep costs down. Its large scale, diversified assets and strong internal expertise also make it a "desirable partner for other like-minded investors." -

The Danish pension group ATP, New Zealand's superannuation system and Singapore's sovereign wealth fund GIC are other funds that have followed the Canadian example and built strong in-house expertise. The GIC, for example states that it takes advantage of "internal expertise and resources, local market presence and global network to find bottom-up opportunities that will deliver good risk-adjusted returns[177]".

An expert committee set up to advice the Norwegian Sovereign Wealth Fund recently advised NBIM to "also start building a team with expertise in listed and unlisted infrastructure." It went to on say that "institutional investors of a certain size have achieved lower costs, and higher gross returns, with internal than with external management, both in the unlisted and listed space" and that the Fund's "size should allow it to fully exploit these economies of scale."

Experts such as Dana Muir, a professor at the University of Michigan, say that governance is also critical. He points to the success that Canadian funds have had in separating the management decisions of investing the funds make from political considerations[178].

APG involves its board more closely and makes sure that it understands the investment strategy and is fully on board "by having members of the Board of Trustees and/or participants complete questionnaires about the fund's attitude to risk[179]."

The New Zealand Superannuation Fund is overseen by a board of "guardians" whose members are selected for their experience, training, and expertise in the management of financial investments. "The board operates at an arm's length from the government and is limited to investing on what it calls "a prudent, commercial basis." Similarly, the Wellcome Trust and Yale University's endowment fund both "delegate strategic investment implementation to a committee of experienced professionals[180]."

The Australian Future Fund, another institutional investor admired for strong governance, has board members who "must be drawn from outside government, and meet the requirements of having substantial expertise and professional credibility in investing or managing financial assets or in corporate governance[181]."

Being big is an advantage when it comes to investing for the long horizon. Not only does it allow the institutional investor access to all geographies and all asset classes to make a true universal portfolio, but it also makes it easier to build in-house capacity and strengthen governance. There may be minimum deal-sizes in illiquid markets for assets such as infrastructure that only big investors will be able to access. Size also allows the costs of building capacity to be spread over a bigger asset base. And it may be easier to attract better quality board members and staff to organisations that are bigger and seen to be more influential.

[177] http://www.slideshare.net/GIC_Presentations/investing-in-a-lowreturn-environment
[178] http://www.ft.com/cms/s/0/99075c68-68f9-11e6-a0b1-d87a9fea034f.html#axzz4IILsO4RJ
[179] https://www.apg.nl/en/article/from-asset-allocation-to-risk-allocation/580
[180] Focusing Capital on the Long Term, by Dominic Barton and Mark Wiseman, Harvard Business Review, 2014
[181] Designing an Investment Organization for Long-Term Investing, Centre for International Finance and Regulation, Geoff Warren, 2014

“Larger pools of capital create more opportunities to invest for the long term by opening up illiquid asset classes, making it cost-effective to invest directly, and making it easier to build in-house engagement and active ownership capabilities[182].” According to William Morneau, a pensions adviser, opportunities in illiquid asset classes are “often cost-effective once an asset owner has at least $50 billion in assets under management.”

In fact, as expected, smaller long-term investors tend to maintain a more conservative asset allocation and are less likely to take advantage of their specific long-term investing capabilities[183]. Thus Dominic Barton and Mark Wiseman are right to suggest that savers, regulators, and board members of smaller asset owners should be open to these institutions pooling assets or even merging[184].

New pooled fund vehicles targeted towards infrastructure and other long-term investments (‘Long Term Investment Funds’) could be a welcome development that stops short of outright mergers between the many smaller pension funds and other long-term investors that are sub-critical in size, but allows them to access long-term investment opportunities that would be unavailable on their own[185].

Holding long-term investment beliefs and exploiting the long term advantage

In the first section of this chapter we showed how being a long-term investor imparts a greater number of degrees of freedom to an investor, bringing access to a broader set of asset classes, investment strategies and geographies. This should allow such investors to reap a higher return and diversify away more risk. However, turning this opportunity set into investment strategy requires LTIs to have investment beliefs, which allow them to exploit these advantages. In this section we consider some of these.

Thematic investing, wherein an investor bases its investment strategy to take advantage of a secular trend is a common means of exploiting the advantage that comes from having a long investment horizon. Singapore’s GIC, for example, has deliberately pursued opportunities in the relatively volatile Asian emerging markets because it believes they offer superior long-term growth potential. In the past decade, it has invested as much as a third of its assets in a range of public and private companies in those markets.

This theme, of the future of emerging economies being bright, is one that a lot of long-term institutional investors follow in their investment strategies. Thematic investment for the long-term requires strong governance as the example of GIC shows. It has a 20-year horizon and during developed-market booms, its equity holdings have significantly underperformed global equity indexes. At such times, it is important for the board to resist pressure to cut losses and stick with the long-term belief.

The Future Fund has identified seven secular themes that influence its investment strategy. These include: debt and deleveraging; policy and politics; demographics; globalization and emerging wealth; resource scarcity; technological innovation; and inflation. The board of the Future Fund believes, that it is important that core investment beliefs arising from these secular themes and not peer pressure or short-term deviations from benchmarks that should be used to devise investment strategies. This allows the Fund to have an unusually long-term investment horizon, which presents a competitive opportunity to add value by

[182] Focusing Capital on the Long Term, by Dominic Barton and Mark Wiseman, Harvard Business Review, 2014
[183] The Future of Long Term Investing, World Economic Forum, 2011
[184] Focusing Capital on the Long Term, by Dominic Barton and Mark Wiseman, Harvard Business Review, 2014
[185] Long Term Financing: Investor Perspectives in Europe, CFA Institute, 2013

exploiting thematic investment beliefs[186].

Because markets price short-term news more fully and accurately than long-term trends, thematic investment using demographics, the rise of emerging markets or technological trends etc. can offer superior returns to long-term investors.

Mean reversion is another long-term feature of financial markets. Market prices deviate significantly from fundamental or intrinsic value in the short run and returns show short-term momentum but longer-term tendency is for reversion to the mean.

This allows institutional investors such as the New Zeland Superfund to use a “contrarian” strategic tilting of its portfolio that can result in extended losses relative to long- run benchmarks. It could, for example, underweight an asset class in a bull market or overweight it in a bear market. The longer the underperformance lasts the more the pressure to unwind the strategy. That is why is so imperative that NZSF’s board is strongly committed to the strategy, sticking to the investment beliefs behind it and willing to defend it to internal and external stakeholders, particularly in periods when the strategy underperforms.

Norges Bank Investment Management (NBIM) offers another example of the advantages of being able to be contrarian. In 2007, the Ministry of Finance asked NBIM to raise its equity share from 40% to 60% over the medium term. Then the financial crisis hit and NBIM lost over 40% of the value of its global equity portfolio. It created a domestic backlash and it faced significant external pressure not to buy back into the falling market. However, the government remained firm in its original goal and allocated all $61 billion of inflows in 2008, or 15% of the fund’s value, to buying equities. Because of this, NBIM generated a return of 34% on its equity portfolio in 2009 and outperformed the equity market rebound.

NBIM uses a rebalancing rule that means that it sells when the market rises and buys when the market falls to keep its relative share of bonds and stocks close to the benchmark. This is a countercyclical strategy and meant that NBIM “bought into the falling equity market of mid-2011, turning an equity loss of nearly 9% that year into an 18% return in 2012[187].”

Research points to the ability to ‘go against the crowd’ and the capacity for contrarian and counter-cyclical behaviour as being critical for successful long-term investing[188]. It might help to encourage a non-consensus culture that includes: “focusing discussions around ‘where the market could be wrong’; soliciting of non-mainstream opinions; and being very careful to ensure that radical views are not dismissed too quickly.” That open, creative approach is the best way to make sure that long-term opportunities are best understood and risks managed.

Perhaps the most discussed and best-understood advantage that long-term investor enjoy is the fact that they do not need liquidity in the short term. This opens up the whole universe of illiquid assets to them for possible investment. Such assets include private equity, unlisted investments in SMEs, large equity stakes in listed firms, real estate and infrastructure. The broadening of this investment universe and the fact that there is less competition for such assets since short-term investors cannot access them allows long-term investors to harvest a liquidity premium and diversify their exposures simultaneously thus improving portfolio outcomes. Unlisted assets may offer exposure to sectors, themes and strategies that are not readily available in listed markets.

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[186] Designing an Investment Organization for Long-Term Investing, Centre for International Finance and Regulation, Geoff Warren, 2014
[187] Focusing Capital on the Long Term, by Dominic Barton and Mark Wiseman, Harvard Business Review, 2014
[188] Measurement, Governance and Long-term Investing, World Economic Forum, 2012

Illiquidity generally relates to both the cost and the ability to trade. Illiquid assets, which are often not standardised and typically have less information publicly available, cost more to trade. This is to do with a greater need for capacity and due diligence as well as a thinner market with fewer matching counterparties.

This cost manifests as a "wider bid-ask spreads, greater price impact in order to execute a trade, 'haircuts' to secure exit in private markets, and so on. Hence, one effect of illiquidity is its impact on expected return, which is a function of the higher expected cost of a 'round trip' of buying then selling the asset[189]." The longer one holds on to such assets the less the deadweight loss of transaction costs will be.

Furthermore, the ability to trade illiquid assets varies through time with the cost of exit usually increasing during market weakness[190]. This again reinforces the need to have a strong board that has bought into the investment strategy. No matter how long-term the liabilities of an institutional investor are, if the governance structure and board are not designed for long-term investing, then the manager would come under great pressure to exit the investment exactly when such an exit is most costly, inflicting large losses because of the illiquid nature of the asset.

In addition to expanding the investment universe and scope for diversification, unlisted and illiquid assets can also help increase returns through other channels. They may be more subject to market imperfections that give rise to opportunities and certain investors may be well placed to exploit information advantages in these markets. Adding value through direct control is yet another source of value generation. All of these require strong expertise on part of the institutional investor[191].

This again reinforces the point that long-term investment strategies can only be accessed by institutional investors with size, strong investment beliefs, a strong board and a governance structure and remuneration system that rewards long-term performance and does not penalise short-term underperformance, as long as the investments have been made in line with the institutional view.

[189] Long Term Investing: What determines investment horizon?, Centre for International Finance and Regulation, Geoff Warren, 2014

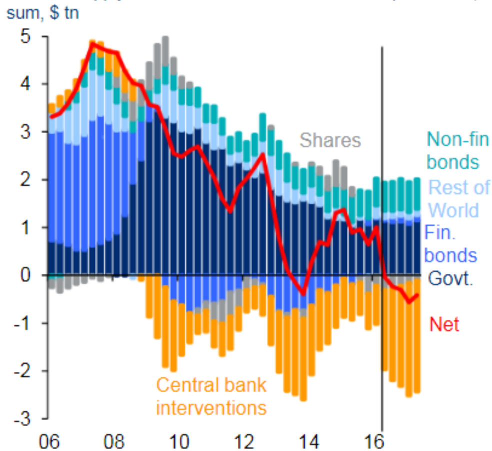
[191] Benefits (and Pitfalls) of Long-Term Investing, Centre for International Finance and Regulation, Geoff Warren, 2014

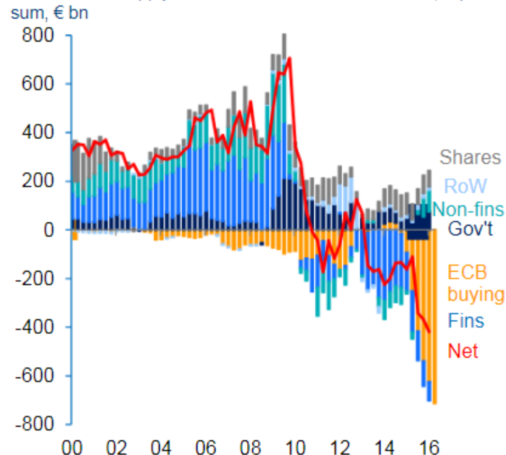
Chapter 6: Dream

It has become clear from the discussion in the last few chapters that institutional investors face a very challenging landscape. With the relative decline of OECD economies, the very poor prospects for returns and the rising political risk, institutional investors, most of which are heavily overexposed to OCED listed bonds and stocks need to change their approach to investing. Chapter 4 showed how and why most are still stuck in a short-term index investment mind-set that is now certain to deliver very low returns for high potential levels of risk.

Chapter 5 discussed some of the changes institutional investors will need to make to have a more long-term approach to investing that would allow them access to a broader set of opportunities. Furthermore, we also highlighted some good examples of institutional investors who have pioneered a long-term approach to investment and the lessons that other investors can learn from them.

This section drills deeper into a more practical level to examine some of the approaches these leading investors have taken to harvest premiums available only to long-term investors. We also highlight how following these approaches is the only way that institutional investors can help forestall the disaster that is about to befall them, as discussed in Chapter 2. This Chapter sketches a way forward for long-term investing that both delivers a superior risk-adjusted performance for the investors themselves and increases growth and delivers sustainability by improving the allocation of capital towards the most productive and sustainable opportunities globally.





Source: Citi Research

In line with the analysis and message in this report so far, this graph demonstrates how large QE purchases by central banks, which have now expanded their balance sheets to as much as 40% of global GDP, have severely restricted the supply of the listed bonds and stocks that constitute the lion's share of the portfolio of most institutional investors. No wonder then, that an increasing number are seeking to invest ever larger amounts in the alternative space which is the dominant theme of this Chapter and constitute the ideal asset class for long-term investors seeking to diversify risks and increase returns.

The need for alternative investments

As expected, a survey by Towers Watson found that exposure to alternatives has been trending higher over time, particularly since the financial crisis and the recent dramatic decline in yields. But eking out higher returns involves trade-offs: taking higher risks or tying up cash for longer. Many prefer the latter, investing in more illiquid assets such as property, private equity and infrastructure.

Alternative assets as a proportion of American pension portfolios, for example, rose from 5% in 1995 to 16% in 2004 to 29% in 2014. Of this, about 8.5% is allocated to hedge funds with the balance accounted for mostly illiquid by private equity, real estate and infrastructure investments. The shift, according to surveys, is driven by influences such as seeking diversification, pursuit of higher returns and a shift towards using absolute return benchmarks rather than benchmark portfolios[192].

The OECD, which tracks global pension funds and pension reserve funds, found a similar trend. "Large Pension Fund allocations to alternatives (including infrastructure) increased from 14.3% of total assets in 2010, to 15.3% in 2014 on average[193]. For Public Pension Reserve Funds, it increased from 11.2% in 2011 to 13.5% in 2014."

The OECD also reported that those funds that have the ability to set long-term policy targets, saw the biggest drift in their portfolios towards alternatives. "Funds that are able to maintain a long-term view on liquidity of reserve assets have responded by increasing return-seeking assets."

As discussed earlier in this report, Canadian funds have pioneered investing in alternative assets such as infrastructure for the long term and have invested a much higher proportion of their portfolio in these asset classes. The CPPIB, for example, invests fully $107.5 bn of $264.6 bn in private markets of which 5.7% is in infrastructure. OMERS invests as much as 16.4% in infrastructure and has 16.9% in real estate compared to 11.5% for CPPIB. ABP, a European pioneer in private markets, by contrast, still invests only 2.1% in infrastructure. The Australia Future Fund is just one of many others, which have also recently increased its allocation to private equity and unlisted infrastructure.

Sovereign wealth funds, as the table below shows, have also significantly expanded their asset allocation to private markets, and most of the largest ones now invest in private equity, real estate and infrastructure.

	2002	2007	2012	2014
Private Markets	15.40%	16.20%	25.70%	27.50%
Listed Equities	36.30%	40.00%	41.00%	37.60%
Listed Bonds & Cash	48.30%	43.80%	33.30%	34.80%

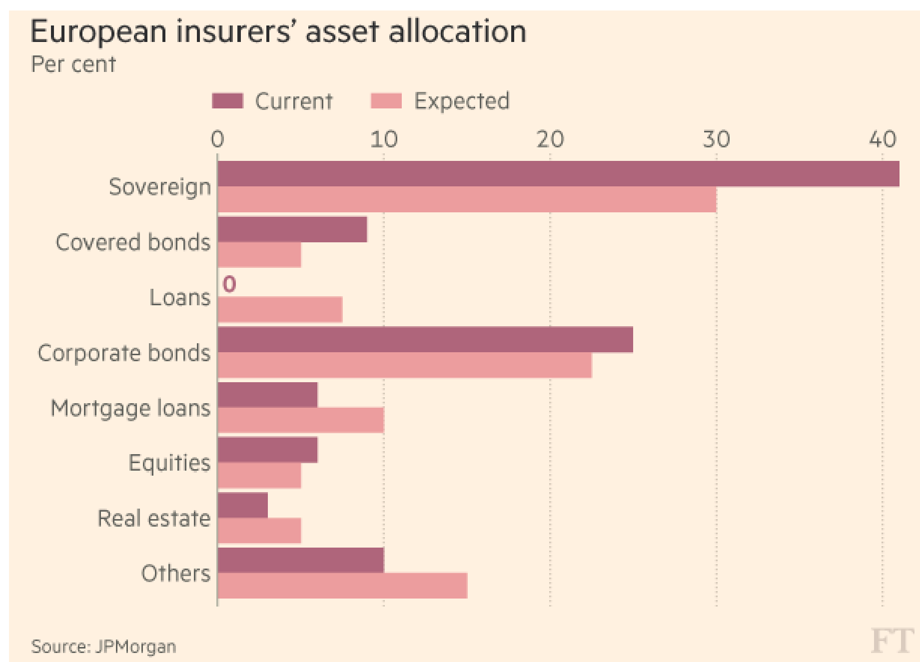
Source: How do Sovereign Wealth Funds Invest? A Glance at SWF Asset Allocation

It is not just pension funds and sovereign wealth funds that are expanding their footprint in the alternative space, but insurance firms are too. For example, the UK insurer Aviva says that 80 percent of the new investments it is making to back its annuity business will be in long-duration assets, rather than traditional gilts or corporate bonds.

[192] Long Term Investing: What determines investment horizon?, Centre for International Finance and Regulation, Geoff Warren, 2014
[193] Annual Survey of Large Pension Funds and Public Pension Reserve Funds, OECD, 2015

“Infrastructure investments are particularly popular, as they offer the long-term cash flows life insurers need to back their promises. Germany’s Allianz, for example, is one of the main backers of London’s super sewer[194]”.

US life insurers have increased their holdings of “alternative” assets such as private equity from 3 per cent to 5 per cent of overall portfolios in the past five years. European insurers too, as the following chart shows, are expected to expand their foray into alternatives.



Source: Financial Times[195]

Nikhil Srinivasan, the chief investment officer of Italian insurer Generali, says that the competition in real estate and private equity is heating up as “more money is chasing the same amount of deals[196].” Given the competition, many insurers have even started to create their own assets. “We have to find buildings to buy and companies to fund. We have to go out more,” he says.

As discussed in the last Chapter, institutional investors need organisational capacity and strong governance in order to be able to access many of the investment opportunities in the private space. There are several templates available to institutional investors seeking to go down the route of alternative investment, of which the three main ones are captured by the diagram below.

[194] http://www.ft.com/cms/s/0/6194f264-4dd2-11e6-8172-e39ecd3b86fc.html
[195] http://www.ft.com/cms/s/0/6194f264-4dd2-11e6-8172-e39ecd3b86fc.html#axzz4JKbgDvjH
[196] ibid

"Yale Endowment" Model	"Texas Teachers" Model	"Canadian Pensions" Model
Increase significantly the allocation to private equity, and specifically to venture capital, relative to public equities and fixed income.	Create strategic partnerships with large private equity managers to achieve lower fees and more attractive terms.	Seek direct and co-investment opportunities in addition to, or instead of, traditional fund investments.

Source: IFSWF[197]

The Yale model still depends on external asset managers, while beefing up governance and some capacity in-house in order to be able to hand out and monitor mandates in alternatives to asset managers. Yet the main improvement in performance comes from the changes to portfolio allocation, a first mover advantage and developing good relationships with external asset managers.

Texas Teachers have gone a step further and built strategic partnerships with private equity managers, so they get preferential access and the advantages of a lower cost. Canadian funds such as OMERS have gone one step further still and built so much in-house capacity that not only do they manage private equity and infrastructure in-house, but also seek investments from other like-minded institutional investors.

The rise of direct investing

As mentioned above, there are a number of models for engaging in the alternative space that involve different levels of using external managers vs. building in-house capacity, with the Yale model and the Canadian model being at the opposite ends of the spectrum.

As the pressure on returns, as thoroughly documented in this report, has built up, asset owners have been forced to become more conscious of leakages along the value chain, such as costs and fees, as these consume a greater proportion of a relatively lower total return.

As the share of high free external managers for alternative investment increased, particularly in hedge funds and private equity, the ultimate stakeholders – namely, governments, pensioners and plan beneficiaries - started questioning the value of such engagements. The use of hedge funds, in particular, came in for a lot of scrutiny. In the past year alone, big public pension plans in California, New York and New Jersey have pulled money from hedge funds as politicians attacked their high fees. Some have in-sourced hedge fund-like mandates in order to save money, particularly as hedge funds underperformed.

In Canada and other countries such as the Netherlands, "big public pension funds have branched aggressively into infrastructure and real estate, and cut costs by running all of the operations themselves[198]." It has been estimated that in-house management for large institutional investors can deliver the same results as external managers at a third of the cost.

[197] http://www.ifswf.org/publications/ifswf-case-study-investing-private-equity-kia-fsi
[198] http://www.ft.com/cms/s/0/8a54a0c6-648b-11e6-a08a-c7ac04ef00aa.html#axzz4I45dGCpJ

In addition to being costly, the use of external managers, as discussed earlier in this report, can foster a short-term culture, as delegated agents attempt to satisfy the expectations of investors who in turn are monitoring them based on the flow of short-term results[199].

This has been another reason that many of the larger and/or progressive endowments, sovereign wealth funds, not just pension funds, have invested heavily in beefing up their own capability and resources. "They have implemented governance frameworks and risk-management systems that now enable greater autonomy to implement professional standards of investment management. There has been an increase in real-time investment decision-making by internalised professional investment teams[200]."

Because direct investing expands the universe of productive investments that institutional investors can fund and because it encourages institutions to invest for the long term, it can increase global productive capacity and have a stabilising and counter-cyclical effect on capital markets.

Direct investment can provide a particularly important source of capital for infrastructure. It can also prove to be important in real estate development, urbanisation and as a source of foreign direct investment (FDI). Since many such direct investments happen across borders, destination-country governments are likely to improve their policy framework to attract the kind of desirable long-term investment that institutional investors represent[201]. In policy circles, particularly in emerging economies, such direct investments are considered to be economically superior to inflows of portfolio capital and engender stability.

For the institutional investors, direct investing increases transparency and allows control, which can be used to add value and help reduce costs. As yields have fallen, most of the larger global asset owners have come to implement some variant of the "Canadian model", "whereby they have built up substantial internal expertise in targeted areas of comparative advantage and insourced that portion of their investment management value chain[202]."

Even with their large size, it does not make sense for all big institutional investors to build expertise in every sector, in every asset class and in every geographic domain. Finance theory dictates that more diversification reduces portfolio risk, so collaboration across institutional investors in different countries, platforms for pooling resources and deal flow and partnerships with multilateral development banks that have a big geographic footprint makes sense.

In addition to expanding the investible universe for each investor, this can help spread the cost of capacity-building across more institutions, help increase deal flow and allow value-adding targeted expertise develop. Co-investing, partnerships, seed capital and connectivity outside the investment ecosystem are all examples of these emergent innovations.

Building partnerships

As we saw in the previous section, many large institutional investors have been building up in-house capacity. This is true both for active investing within the listed space, as well as direct investing in alternatives.

[199] Designing an Investment Organization for Long-Term Investing, Centre for International Finance and Regulation, Geoff Warren, 2014
[200] Innovations in Long-Term Capital Management The Practitioner's Perspective, World Economic Forum, 2016
[201] Direct Investments by Institutional Investors: Implications for Investors and Policy-Makers, World Economic Forum, 2014
[202] Innovations in Long-Term Capital Management The Practitioner's Perspective, World Economic Forum, 2016

Active strategies of the kind the many hedge funds use, for example, are mostly not scalable and often part of a zero-sum universe, where one investor's gain is another's loss. The mindset for many such strategies is one of completion, where the nature of the strategy and the timing of trades are often jealously guarded secrets. These do not easily lend themselves to co-operation across institutional investors. One way of thinking about these is that they mostly focus on maximising the share of a fixed pie that asset managers can get.

Direct investing in private markets and infrastructure on the other hand, naturally lend themselves to collaboration. Here the value is added through control or direct management and often by expanding productive capacity through increasing efficiency or providing a longer-term value-maximising horizon to managers. Sometimes direct investment enables productive activity, for example, the building of green-field infrastructure, which may not otherwise have been financed. In most cases, the focus of direct investment is on expanding the share of the pie.

CPPIB Private investments, for example, seeks to add value at different stages of the investment cycle:[203]

- At the decision to invest, through access to the best opportunities, superior information, unique insights, and expert structuring and financing of transactions;
- During the holding period, through careful stewardship, enhanced governance and improvement in assets, operations and profitability and
- Upon exit, through selection of the optimal means and timing with conclusion on favourable terms.

Before building up in-house capacity on alternatives gathered critical mass, institutional investors depended primarily on external asset managers. But as other investors move towards the direct investing approach, it has now become fashionable to do so with the support of peers rather than fund managers.

Co-investments first become fashionable in the private equity space, where private equity firms would sometimes invite large institutional investors to co-invest with them directly on large deals in addition to the normal close-end fund structure that characterises most private equity investments. Probitas Partners found that of the 137 institutional investors they surveyed in 2013, a third had co-investment strategies for private equity, up from about a fifth in 2011. By now, that figure is likely to have increased to half.

OMERS, the Canadian pension fund has a private equity arm that has already made $6.5 bn of investments and competes head on with private equity firms. It also invites participation from other institutional investors, where appropriate saying that "our preference is for control buyouts but we will also consider joint control with a trusted and like-minded partner[204]."

But the asset class most naturally amenable to a cooperative co-investment model is infrastructure. "This is due to the large capital requirements for these investments and their associated long time horizon. As a result, a number of investor-led co-investment platforms have been set up to provide institutional investors a more aligned alternative for accessing the asset class."

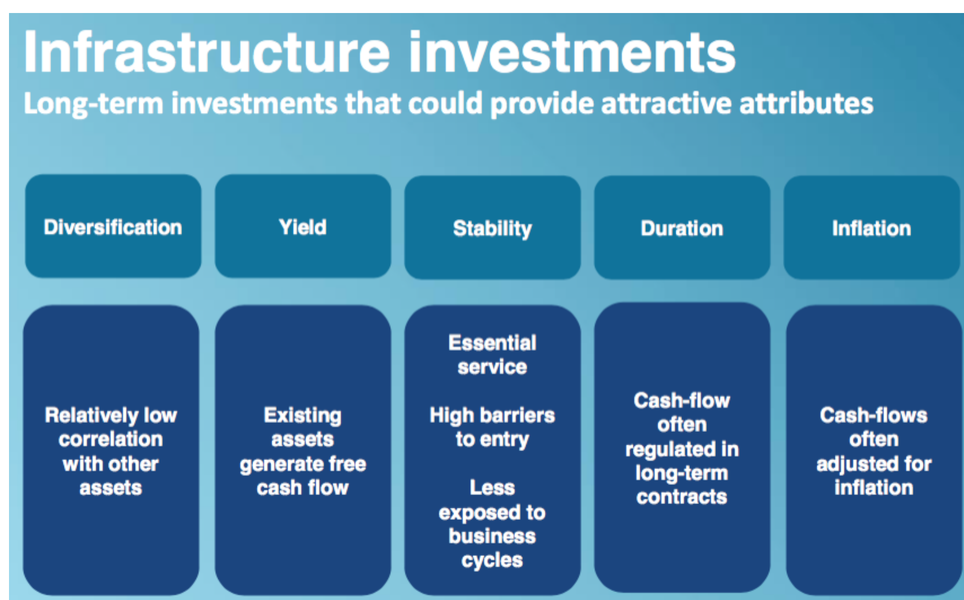
Ashby Monk of Stanford University has developed a useful classification of the various templates for partnerships. The "Alliance", he says, is a group characterised by a loose affiliation of like-minded investors

[203] http://www.cppib.com/en/what-we-do/private-investments-overview.html
[204] http://www.omerspe.com/Our_Approach.htm

around an investment theme to share deals and resources. A “Syndicate”, on the other hand, is a formal affiliation of like-minded investors around an investment theme to share deals and resources. The “Seed”, according to him, is a group that has a formal legal structure (i.e. LP, LLC) that brings together like-minded investors around a de-novo asset manager staffed by a seasoned investment team. A variation on the Seed arrangement is that of using Platforms by institutional investors. Platforms generally refer to independent companies operating in attractive investment niches[205].

Investing in infrastructure

Infrastructure, as an asset class, has emerged particularly over the last decade as an attractive investment option for institutional investors looking to get access to long-term, stable, inflation- linked cash flows[206].



Source: NBIM

It is naturally suited for long-term institutional investors in particular, who are looking to generate predictable cash flows at a time of collapsing yields and heightened risks in developed markets. Infrastructure has a low market exposure (equity market beta), even though it is more sensitive to interest rate changes. The cash flows are generally safe due to the essential nature of service, limited competition, long-lived nature of underlying assets. Often (but not always) an infrastructure asset can be a monopoly and is characterised by high barriers to entry, long-term contracts, regulated pricing and delivery standards. Another attractive feature often is stable demand base that is relatively insensitive to price and income[207].

Not only is the asset class naturally suitable for institutional investors, but both the demand for and supply of capital for this asset class is set to see a rapid increase.

On the supply side, new opportunities for infrastructure will appear as the fiscal strains on OECD governments discussed in Chapter 1, lead more and more of them to hive off non-core assets to the private sector. This fiscal strain together with a rapid change in mind-set where it has become far more acceptable - and in sectors such as transport, power and telecoms completely uncontroversial - for infrastructure to be

[205] Capitalising on Institutional Co-Investment Platforms, Monk, A.H.B., Sharma R., Global Projects Center Stanford University
[206] Direct Investments by Institutional Investors: Implications for Investors and Policy-Makers, World Economic Forum, 2014
[207] IFSWF Case Study – Investing in Infrastructure, 2016

owned and operated by the private sector will significantly expand the pool of possible investments in OECD economies. The opportunities lie both in brownfield investments in existing projects, as well as the development of new greenfield projects. Moreover, the under-spending on infrastructure in recent decades in much of the rich world, as Larry Summers has pointed out, will generate a lot of pent up demand[208].

The biggest opportunities, however, lie in emerging and developing economies, where most of the stock of new infrastructure is likely to be added in the coming decades. As countries seek to build their stock of growth-enhancing infrastructure, deliver on Sustainable Development Goals (SDGs) and try to fulfill their obligations under the Paris agreement on tackling climate change, infrastructure spending will need to substantially increase over the next few years from present levels.

"Over the next 15 years, the global economy will need to invest around $90 trillion in infrastructure assets. This equates to $5–$6 trillion of investments per year in cities, transport systems, energy systems, water and sanitation, and telecommunications. This implies doubling the current infrastructure spending of $2–3 trillion per year[209]."

Pension funds, insurers and sovereign wealth funds scrambling to find suitable assets even as QE programs have reduced the free float of investible bonds and stocks could do worse than to prioritize a big expansion of infrastructure investments. Here too, the Canadian pension funds have trodden a path that others should follow.

"For instance, the Canadian Pension Plan has put money into infrastructure since 2005, and as of March it had C$21bn invested, or about 8 per cent of the scheme's assets. Investment returns have been pretty good, averaging 10 per cent annually since 2007, the first year they were disclosed. It is also cost-effective, with running costs for the infrastructure team last year amounting to just 30 basis points of the capital invested, less than many stock picking mutual funds[210].

While there are some listed infrastructure investment opportunities, the customised and complex nature of the asset mean that the biggest opportunities lie in the unlisted space.
An International Forum for Sovereign Wealth Fund case study concludes that "listed index alternatives are poorly representative of desired infrastructure characteristics" and that because it is still an immature asset class, there are few specialist managers. It concludes that strategic stakes, public private partnerships, peer partnerships and direct investments offer the best means of investing in the asset class[211].

An OECD survey of large pension funds found growing interest in infrastructure. Of the 41 funds that indicated investment in infrastructure assets, 30 reported exposure to unlisted infrastructure assets, while 16 had dedicated target allocations to the asset category. On average, the allocation amounted to 3% of the fund assets. Funds reported emerging market allocations between 0% and 35% of total foreign unlisted infrastructure investment. The OECD looked at a sample of 17 studies measuring returns on infrastructure investment and reported an average annual return of 11.6%. Even if this double-digit return accrued only to early movers, in an environment where bond yields often dip into the negative territory, infrastructure investment has never looked so attractive.

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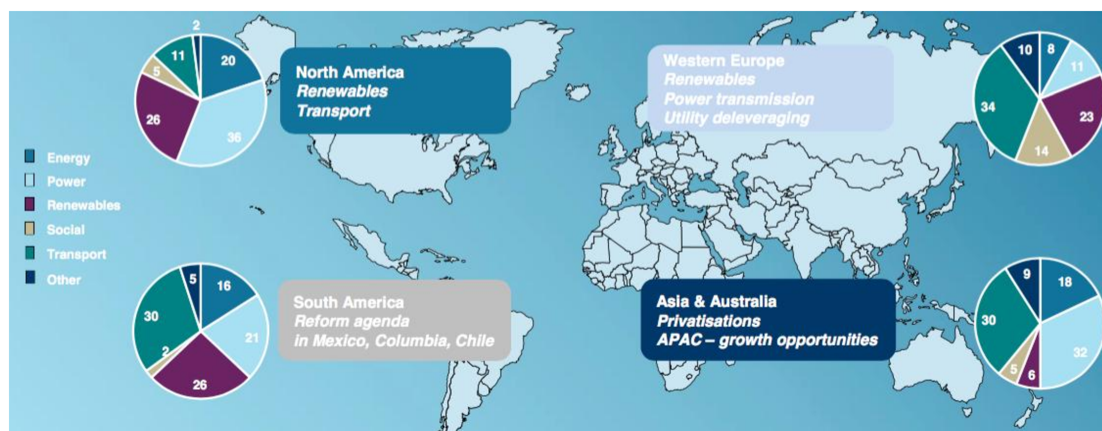
[208] http://fortune.com/2016/07/27/larry-summers-2-trillion-for-infrastructure/
[209] Driving Sustainable Development Through Better Infrastructure: Key Elements of a Transformation Program, Brookings, 2016
[210] http://www.ft.com/cms/s/0/3c6f856c-6538-11e6-a08a-c7ac04ef00aa.html#ixzz4IM9Auxy7
[211] IFSWF Case Study – Investing in Infrastructure, 2016

In order to exploit opportunities, CPPIB, for example, has opened offices in New York and São Paulo, putting investment professionals closer to key markets, and expanded its activities in Latin America, India and other selected Asian markets during 2014. The fund has five offices across four continents. The following graph indicates the global nature of the opportunity in the infrastructure space.



Source: NBIM

Given the immaturity of the asset class and its nature, investors have rightly opted to build in-house expertise to strengthen internal capabilities to invest directly or pool resources together into co-investment vehicles. Co-investment platforms have emerged as a way for investors to align interests, achieve larger scale and invest in assets without the expense of fund managers. The UK's Pension Investment Platform (PIP), the Canadian Global Strategic Investment Alliance (GSIA) and the CPPIB)-led syndicate model all provide good examples of different co-investment structures that may help institutional investors access infrastructure investments more efficiently[212].

Because infrastructure investing can be highly political, governments often play a pivotal role to help facilitate the flow of institutional capital into infrastructure assets. The willingness of institutional investors to finance investment projects in any given country is influenced by the investment climate and policy and institutional settings. There is much that governments can do to create an environment that attracts institutional capital into productive investment capacity, particularly in infrastructure. Even a 1 percent of GDP increase in infrastructure spending could add 3.4 million jobs in India, 1.3 million jobs in Brazil, and 700,000 jobs in Indonesia. It is also significant that at a time when rising inequality has become a major public policy concern, a one standard deviation increase in the quality and quantity of infrastructure can reduce a country's Gini coefficient by 0.06[213].

No wonder that recent initiatives have seen governments or development institutions providing assistance in setting up infrastructure funds and contributing directly through seed funds. The launch of the Asia Infrastructure Investment Bank and the BRIC Development Bank significantly increases the public and developmental capital dedicated to infrastructure development and a number of precedents already exist for institutional investors, development banks and governments working together to expand infrastructure investments. The Pan African Infrastructure Development fund, the Philippine Investment Alliance for

[212] Pooling of Institutional Investors Capital – Selected Case Studies in Unlisted Equity Infrastructure, OECD, 2014

[213] Driving Sustainable Development Through Better Infrastructure: Key Elements of a Transformation Program, Brookings, 2016

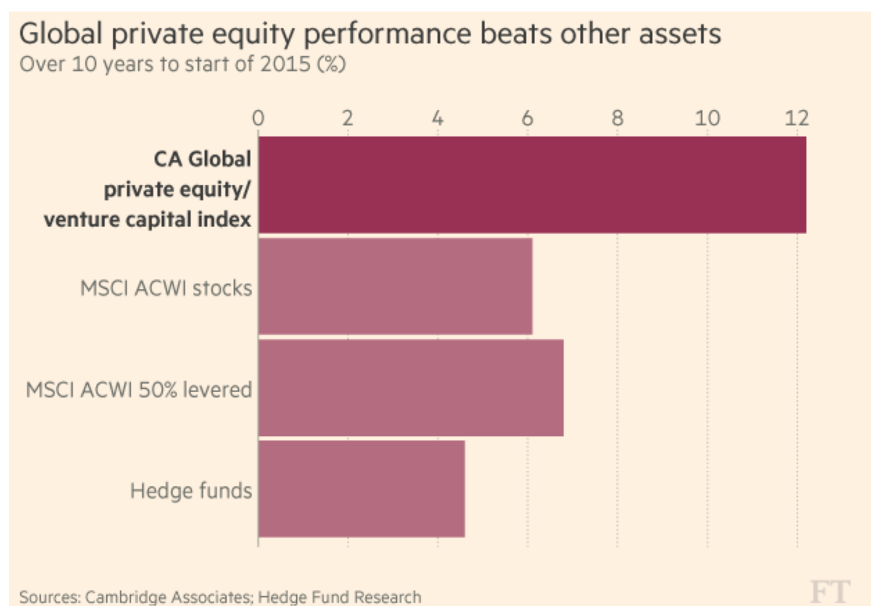
Infrastructure fund and the Marguerite fund in Europe have all been set up with public sector involvement to attract institutional investors to expand green-field investment[214]."

Such public-private partnerships and pooling of institutional investor money represent one of the most promising and synergistic developments in the institutional investor landscape, as they can simultaneously expand productive capacity, help deliver on social and environmental goals and diversify risks faced by investors, while generating attractive and stable returns in an otherwise challenging environment.

The rise of other alternative asset classes

This report makes a deliberate choice not to focus on real estate and private equity, as these asset classes are now quite mature and have been dealt with in great detail elsewhere. However, the growth of private equity does deserve a mention. Research by CPPIB, for example, has shown that "investing in private equity rather than comparable public securities yields annual aggregate returns that are 1.5% to 2.0% higher[215]."

As pressure grows on institutional investors to diversify away from low-yielding bonds and equities, private equity is considered to be a big part of the answer. Pension funds in the US now, for example, have an average target allocation of 8.3 per cent to private equity and make up a quarter of all private-equity capital in North America[216]. While traditionally private equity focused on leveraged buyouts, the field has become far more sophisticated and reaches ever more broadly into the unlisted space, particularly for companies in the Small Medium Enterprise (SME) category that have never been listed and can benefit from both the injection of capital and a more professional and experienced management structure.



Source: Financial Times

While SME's in developed economies face many challenges in accessing funds, SMEs in emerging economies have it much worse. According to the IFC, the private sector arm of the World Bank, around two-thirds of SMEs in poor countries cannot borrow as much as they would like, compared with a sixth in

[214] Pooling of Institutional Investors Capital – Selected Case Studies in Unlisted Equity Infrastructure, OECD 2014
[215] Focusing Capital on the Long Term, by Dominic Barton and Mark Wiseman, Harvard Business Review, 2014
[216] http://www.ft.com/cms/s/0/415a7ad6-6a8e-11e6-ae5b-a7cc5dd5a28c.html#axzz4IEwbgzIC

the rich world. It put the "credit gap" for small but formal businesses in developing countries at around $1 trillion in 2011. Once one includes the informal sector, which is quite big in developing countries, the amount is much larger[217].

While banks provide the lion's share of funding for unlisted firms and SMEs, private equity firms are an increasingly important provider of equity, particularly in fast growing emerging markets such as India. The most promising opportunities for private equity, in fact, lie exactly in capital constrained fast growing economies where the banking system and financial markets are not fully developed. It also means that unlike in developed economies where private equity firms have often taken listed firms off-market, in developing economies private equity firms are actually expanding the investible space for institutional investors. This has the potential to both diversify risks and increase returns, while contributing to productive capacity.

Another trend that has picked up recently is for institutional investors to bypass bond markets and become direct lenders to companies. This charge is being led by insurance firms in part, because their traditional fixed income investments offer such minuscule returns now. The post-crisis decline in securitisation, which provided an efficient way for institutional investors to be active in the loan markets, has meant that "insurers are now waking up to the reality that it's better to own the loans directly."

In 2015, MetLife, the largest U.S. life insurer, made more property loans than it ever has in its 148-year history and AIG already has more than $20 billion allocated to commercial mortgages and cites the predictable stable cash flows as an attraction. TIAA is the world's largest investor in private debt and is launching a venture focused on lending to middle-market companies. Babson Capital, owned by Massachusetts Mutual Life Insurance Co., has just raised more than $2 bn for direct lending[218]. The private debt market includes loans made directly to companies as well as property financing and mezzanine financing, a hybrid between debt and equity. It has tripled in size since 2006 to almost $500 bn according to Brown Brothers Harriman[219].

Another driver for this growth has been the stress that banks have been under since the crisis. Banks in Europe, which have also seen a steep rise in direct lending by institutional investors, have never fully recovered after the crisis and borrowing directly from institutional investors allows firms to short-circuit them altogether. Moreover, the post-crisis decline in securitisation and the additional capital requirements for banks have increased the relative attractiveness of direct lending.

Pension funds and insurers like private debt, because returns tend to be much higher than in the bond markets with yields of 9-12% in recent years. The S&P has estimated that middling European firms, of the kind that do not usually issue bonds, will need around $3.3 trillion in new loans over the next five years, creating an opportunity for expansion[220]. There is often a synergy between private equity and direct lending, because many of the firms controlled by private equity firms have been amongst the first to borrow from institutional investors. This is partly because of the growing familiarity between private equity and institutional investors.

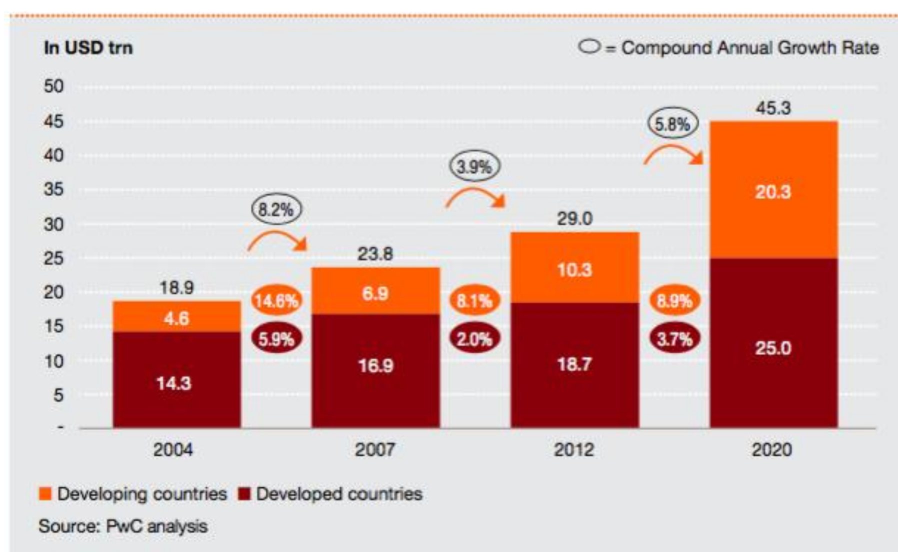
In developing economies, where banks are often even more constrained and bond markets are poorly developed, the opportunities for direct lending are set to rise at an even faster pace. As the high returns

[217] http://www.economist.com/news/finance-and-economics/21699931-big-and-tiny-firms-often-find-it-easier-borrow-medium-sized-ones-caught
[218] http://www.ft.com/cms/s/0/6194f264-4dd2-11e6-8172-e39ecd3b86fc.html#axzz4IdIo0tt2
[219] http://www.ft.com/cms/s/0/2965ff84-6ed2-11e6-a0c9-1365ce54b926.html - ixzz4JRfhWseu
[220] http://www.economist.com/news/finance-and-economics/21677220-investors-are-increasingly-eager-lend-european-firms-directly-lenders

that have recently been on offer in direct lending in Europe and North America fall under pressure from increased competition from suppliers of capital and still falling yields, institutional investors will increasingly look to emerging markets.

In recent years real estate assets have become a standard part of the portfolios of institutional investors. Even the highly conservative Norwegian Sovereign Wealth Fund, which until recently was allowed to only invest in listed stocks in bonds primarily in OECD economies, has opened up to real estate investment and now allocates 3.1% to this asset class with a target allocation of 5%.

CPPIB has 11.5%, the Dutch ABP 10% and OMERS a high 16.9% dedicated to real estate assets. Even the insurer Gernali allocates more than $30 bn to real estate assets and is looking to expand. Real estate shares some, though not all, of the characteristics of infrastructure investments. While it often delivers regular cash flows, it is a much more cyclical sector and is sometimes, as demonstrated by the housing market crisis in the US in 2008 and in Scandinavia in 1991-92, subject to bubbles and busts. The biggest opportunities for expansion in real estate investments in line with secular trends that is most likely to deliver good returns, with a limited downside lie in fast urbanising emerging economies.



Source: PwC[221]

This chart from PwC shows how the real estate asset class is likely to evolve over the next few years. It predicts that the global investable real estate universe will expand substantially, leading to a huge expansion in opportunity, especially in emerging economies. "The greatest social migration of all time – chiefly in emerging economies – will drive the biggest ever construction surge", creating a range of opportunities for institutional investors.

The future lies in developing and emerging markets

While not explicitly discussed so far, a constant underlying thread that has run through the whole report is the contrasting prognosis for the developed vs. the developing world. We will dwell on it briefly in this last section of the report and use that to highlight why institutional investors of all kinds must, if they are to

[221] Real Estate 2020: Building the future, Price Water Coopers, 2015

target a satisfactory return and diversify away their existing concentrated levels of risk, allocate ever larger proportions of their portfolios to emerging and developing economies. Often, this will have to take the form of investing in unlisted assets, not just equity and loans for firms, but also real estate and especially infrastructure.

It is true that most investible assets and productive capacity still lies in OECD economies, but what is also true across all asset classes is that by far the biggest potential for the expansion of the investible universe lies outside the OECD. It is here that one finds the fastest growing firms, the greatest expansion of domestic demand, the biggest rise in export oriented manufacturing, the fastest pace of urbanization and construction of new real estate and of course the biggest need for new infrastructure.

At the same time, the developing world remains very heterogeneous, suffers from a higher level of political risk, has poorly developed financial markets and legal frameworks and offers investors, particularly those from rich economies, high levels of information asymmetry.

Intermediating between these tens of trillions of dollars of savings seeking structural risk diversification and higher yields and these messy, heterogeneous, often hard to access investment opportunities will not be simple or easy, but is critical for the global economy. Not only is the fate of individual institutional investors and developing economies dependent on the success of this intermediation, but also the growth potential of the global economy.

Success will mean a rapid expansion of global productive capacity, the creation of tens of millions of urgently needed jobs, the improvement of the life prospects of citizens of the developing world and a shot at being able to limit the rise in global temperature. This will translate into a higher aggregate global growth rate that can help pull OECD economies out of their post crisis slump, and will deliver a far better quality of life and retirement for tens of millions of retiring citizens. New opportunities in emerging growth markets and a rapid diffusion of technology would undoubtedly have the potential to give the global economy a big boost and act as an antidote to the rising backlash against globalization seen in many rich economies.

Failure to do so will hit us hard, as sclerotic growth will continue to drive protectionism and de-globalisation may begin in earnest. Tens of millions will suffer from penury in retirement in OECD economies, even as the young populations in the developing world find it hard to find productive employment. This, in turn, will likely drive political conflict in the developing world too. It also risks the world settling into a bad equilibrium, where everyone is poorer and unrest and conflict loom large. In addition, we would have failed in our effort to arrest runaway global warming.

It is refreshing then that the very poor prognosis in the OECD economies that has been the theme of two Chapters in this report is driving institutional investors, sometimes out of sheer desperation, to look further afield beyond their comfort zones for investment opportunities. As became clear in the previous section in this Chapter, the most attractive opportunities, across all asset classes, be it equity, fixed income, real estate or infrastructure, lie in the emerging and developing world.

As a rule of thumb, institutional investors are perfectly poised to provide the kind of long-term risk capital that developing economies most lack. The inability of many investors with a shorter investment horizon to invest in the asset classes and geographies that can best deliver an expansion of productive capacity means

that institutional investors will face less competition than they do investing in the standard OECD listed bonds and equities, all of which have become a very crowded trade.

The GIC, which has been a pioneer in expanding its investments in emerging and developing economies says that it expects "emerging market equities will benefit from the sustained structural improvements in emerging economies". NZSF agrees saying "growth assets are volatile over short periods and not every individual investment will be successful. Over time, we expect growth assets to deliver a higher return than a lower-risk, less volatile investment strategy, as they are intrinsically linked to economic growth."

Jack McIntyre, a portfolio manager at the Legg Mason BW Global Opportunities Bond Fund, who raised his emerging-market allocation to 43% and slashed U.S. Treasuries from 20% to 5%, echoes investor sentiment in saying "which is riskier, buying a double-digit yielding sovereign bond or buying a negative-yielding government bond?" "I'll take the yield any day, knowing that there'll be some volatility but knowing that over time you're going to make a lot of money[222]." At present, the average yield on BoFA's developed-market index is 0.56%, compared with 4.44% for emerging-market sovereign bonds, which now constitute nearly half the yield income of these two indexes combined. "In 2008, they made up just around 20% of the total yield[223]."

The International Monetary Fund (IMF) in its latest forecast has once again said that emerging markets would account for the lion's share of global growth in 2016, with the World Bank echoing that sentiment by saying that South Asia and developing East Asia and the Pacific remained promising and resilient despite China's slowdown. According to Morgan Stanley, the combined GDP in the ASEAN-5 nations of Indonesia, Malaysia, the Philippines, Thailand and Vietnam is expected to rise by about a third to $3 trillion just by 2020.

There are more than $50 billion of infrastructure projects planned by Thailand alone, along with Vietnam's $10 billion rail modernisation and plans for new projects in Indonesia and the Philippines[224]. Partly because of expected infrastructure investments such as these, the IMF now expects the pace of gross domestic product growth in emerging markets to increase every year for the next five years, while developed markets stagnate.

The GIC expects allocation to emerging markets "to improve overall portfolio returns over the long term." It goes on to point out that "these markets offer the strongest growth prospects, driven largely by their underlying trends of a rising middle class and growth in trade. We also continue to explore new industry trends, skill sets, asset strategies and portfolio approaches that can add to our returns[225]."

Robeco, an international asset manager now predicts emerging equities to outperform developed equities, both in the short and long term[226]. It lauds the resilience of emerging equity markets, "both in absolute terms and compared with developed equity markets even after the recent UK referendum" and expects Europe to suffer most from political and economic uncertainty.

This rising political and policy risk in rich OECD economies, even as emerging economies stabilise and reform, has been another overarching theme of this report. While it is fair to say that average levels of risk

[222] http://www.wsj.com/articles/bond-funds-turn-to-emerging-markets-1471198010
[223] http://www.wsj.com/articles/rising-debt-in-emerging-markets-poses-global-threat-1453238133
[224] http://thediplomat.com/2016/08/asias-emerging-markets-from-bust-to-boom/

[225] http://www.slideshare.net/GIC_Presentations/investing-in-a-lowreturn-environment
[226] https://www.thestreet.com/story/13674632/1/emerging-markets-are-exceptional-growth-opportunities-once-again.html

for rich OECD economies remain lower than for the emerging and developing world, the risk-return trade-off has clearly become far superior for the latter. To add to that, risk and fragility in the rich world is expected to rise further, even as it falls for significant emerging economies such as India.

The Economist Intelligence Unit acknowledges this saying that "the risk of lesser developed countries harming the global outlook has eased from other years, indeed, turned on its head." It now expects that "emerging markets may be about to undergo a surprisingly rapid economic rebound" that could lead a global economic surge[227]."

Many developing economies have learnt lessons from past crises and have simultaneously been embarking on ambitious reform efforts. Unlike in the 1980s in Latin American and the 1990s in Asia, most countries now have strong bulwarks against contagion. Many have built substantial currency reserves, giving them firepower to stem market panic and support the financial system if needed.

Most economies have also allowed greater exchange-rate flexibility, which can act as a natural cushion sudden crisis. "In previous episodes, fixed exchange rates were forced into sudden, big movements that triggered panic and fuelled market turmoil[228]." The public finances of most developing economies, particularly outside of Africa, also look healthy and countries such as Mexico and India have embarked on ambitious reform programmes.

Many also have far greater policy space in the event of an economic shock. As Joachim Fels of PIMCO notes, "while the worry in developed markets is monetary policy exhaustion, most emerging market central banks have ample room to ease if needed as inflation is either below target or, where it is not, has peaked and is on its way down."

In addition to the favourable prognosis for growth and resilience, valuations in emerging markets are on record lows compared to developed markets. This, conclude fund managers, means that "emerging markets simply are a natural destination for investors now[229]." Emerging market stocks trade at a 24 per cent discount to their developed-market peers and analysts expect that "fundamentals could further improve[230]." Alliance Bernstein, a fund manager points out that the "benchmark MSCI index of high-dividend emerging market stocks yields 5.6 percent annually and trades at nine times annual earnings. The equivalent developed market index has a yield of just 3.9 percent and trades at nearly 18 times annual earnings[231]."

Over the longer term too, emerging markets look appealing because of a combination of lower current valuation compared to OECD economies and better future prospects. On a cyclically adjusted basis, emerging markets are trading at 11 times average ten-year compared to 13 for the rich world outside the US and a whopping 26 for the US[232].

Overall, it is hard to escape the conclusion that no matter which asset class one looks at, a substantial reallocation of assets to emerging markets makes eminent sense for institutional investors seeking to

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[227] http://blogs.reuters.com/financial-regulatory-forum/2016/07/06/brexit-signals-shift-political-risk-hits-long-stable-western-economies/
[228] http://www.wsj.com/articles/rising-debt-in-emerging-markets-poses-global-threat-1453238133

[229]http://www.international-adviser.com/features/1030989/emerging-market-equities-compelling
[230] http://www.bloomberg.com/news/videos/2016-08-24/blackrock-s-swan-why-we-re-bullish-on-emerging-markets
[231] http://www.reuters.com/article/us-markets-saft-idUSKCN10Y094?il=0

[232] http://www.ft.com/cms/s/0/ae3afe62-598d-11e6-9f70-badea1b336d4.html#axzz4JKbgDvjH

increase returns and diversify away risk at the same time as hoping to benefit from long-term secular trends.

As a note of caution, the traditional asset classes of listed stocks and bonds will simply not be adequate both in terms of the limited size of the free float and in their failure to capture the most productivity enhancing and promising growth opportunities in the developing world, most of which lie in the unlisted private equity, urban real estate and infrastructure development space.

Most institutional investors lack the human capacity to be able to suitably access and invest in these asset classes, so the correct way forward lies in the development of far more extensive partnerships between institutional investors, between investors and domestic financial institutions embedded in the economy with local expertise, between investors and destination country governments and between investors and development finance institutions.

This would allow for the quickest scaling up of human capacity and the most efficient use of existing expertise across all of these actors in order to successfully intermediate trillions of dollars from institutional investors seeking returns towards the most productive opportunities in economies that lack long-term risk capital.

The allure of better returns and lower risks

It is highly unlikely, if not impossible, that the kinds of returns on offer to investors in listed OECD markets in the past three decades will ever be replicated at scale. As this report has discussed, these returns accrued partly as a result of a unique confluence of economic, political, technological and policy factors that are not repeatable.

Partly because of legacy reasons, and party because of the structural factors that were the subject of Chapter 4, most institutional investors today have ended up with portfolios dominated by OECD bonds and stocks. Not only are the future return prospects for these glum, they also pose significant downside risk.

The near record valuations on stocks and record low yields on bonds make it more likely that the risk of future price movements is downwards, risking huge capital losses to the insurers, pension funds and sovereign wealth funds already in crisis. Add to that the rising populism, the exhaustion of monetary and fiscal policy space, the debt overhang and poor demographics and the risks institutional investor portfolios are exposed to start to add up. One sensible response to risk is diversification. Here, despite often owning thousands of different securities, most institutional investors are failing to actually diversify away their risks.

Most OECD economies have higher levels of financial and economic inter-linkages with each other than with emerging and developing economies. They are also facing similar structural risks such as demographic decline, falling productivity growth and debt overhang. This means that financial assets linked to OECD economies as most stock and bonds listed in these markets are exposed to similar risk factors that are highly correlated with each other, so are unlikely to offer much diversification.

It holds true that structural diversification can only come from expanding investments into emerging economies such as India, which are structurally different, have different demographic profiles and are not yet so closely interlinked financially and economically with OECD economies.

Another point, of course, is that it is only in emerging and developing economies that institutional investors can hope to make returns to allow them to meet their liabilities and obligations to their stakeholders.

Because financial markets in most developing and emerging economies are underdeveloped, a much smaller proportion of productive assets are listed and hence accessible through investing in listed bonds and stocks in these economies. The stock markets in these economies, while important, are unlikely to capture the best growth opportunities, which lie in the unlisted and sometimes informal parts of the economy. Similarly, the biggest stock of productive assets such as real estate and infrastructure is even less likely to be accessible though easy to buy standardized securities.

Thus the most promising way to access the best growth opportunities and productive capacity in developing and emerging economies is through investing in unlisted and often illiquid assets. This, as the report has highlighted, is not easy, but it is necessary.

Expanding into unlisted assets in developed economies remains relatively promising, offering prospects for both risk diversification and for better returns. As stocks and bonds have got more correlated with each other within the main indexes such as the S&P 500 and BoFA US bond index, often due to the rise of index investors who buy and sell the index often in herds, it has become harder to achieve true risk diversification through listed securities. However, unlisted assets such as infrastructure, offer structurally different risk profiles and are often less sensitive to the endogenous risks emerging from market behavior.

Perhaps the biggest advantage of such assets is that unlike listed securities which QE and excess liquidity in the system have turned into crowded trades, many unlisted opportunities can still only be accessed by long-term investors with human capacity. Moreover, the fact that direct investing, as we have discussed, can add real value to the assets by expanding their productive capacity and create new greenfield assets, means that long-term investors do not have to compete just for a slice of the shrinking profit pie of corporates, since they can actually help expand economic earnings.

It may be useful here to look at the returns generated by some of the pioneers of investments in emerging economies and unlisted private markets. NZ Super has generated a nominal return of 10.11% since inception, with an impressive 16.85% over the past 5 years. OMERS, a pioneer of private markets, direct investing and infrastructure, has notched up an impressive 7.6% annual net return over the past twenty years. APG, which now invests more than $450 on behalf of Dutch pensioners has managed about 7% nominal return over the past twenty years[233].

CPPIB, another pioneer of private markets, has managed a net nominal rate of return of 8% over the past 10 years. The GIC, the Singaporean pioneer of emerging markets, has a nominal (USD) return of 6.1% over the past twenty years[234]. The Ontario Teachers Pension Plan, one of the most respected pension funds with a big portfolio of unlisted assets, has earned 10.3% annually since its inception in 1990[235]. ADIA, the Abu Dhabi sovereign wealth fund, has delivered 7.6% and 8.1% over the past 20 years and 30 years respectively, and has a big portfolio in emerging economies[236]. Harvard University's Endowment has generated 12% over the past 20 years, while for Yale the figure is an impressive 13.9% over the past 30 years.

[233] https://www.apg.nl/en/apg-as-pension-provider/services/asset-management
[234] http://www.gic.com.sg/
[235] https://www.otpp.com/corporate/annual-reporting
[236] http://www.swfinstitute.org/swfs/abu-dhabi-investment-authority/

References

APG, 2016. “What does APG’s asset management involve?”. Available from: https://www.apg.nl/en/apg-as-pension-provider/services/asset-management

APG, 12 November 2012. “From asset allocation to risk allocation”. Available from: https://www.apg.nl/en/article/from-asset-allocation-to-risk-allocation/580

Aspen Institute, 2009. **“**Overcoming Short-termism: A Call for a More Responsible Approach to Investment and Business Management”. Available from: https://assets.aspeninstitute.org/content/uploads/files/content/docs/pubs/overcome_short_state0909_0.pdf

BBC, 30 March 2001, “Could it happen again?”. Available from: http://news.bbc.co.uk/1/hi/business/1251019.stm

Bank of England, 2014. “The age of asset management?”. Available from: http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech723.pdf

Barton, D & Wiseman, M., Harvard Business review, 2014. “Focusing Capital on the Long Term”. Available from: https://hbr.org/2014/01/focusing-capital-on-the-long-term

Bloomberg, 24 August 2016. “BlackRock's Swan: Why We're Bullish on Emerging Markets”. Available from: http://www.bloomberg.com/news/videos/2016-08-24/blackrock-s-swan-why-we-re-bullish-on-emerging-markets

Bloomberg, 22 August 2016. “Japan Turns to Illegal Foreign Workers as Farmers Age”. Available from: http://www.bloomberg.com/news/articles/2016-08-22/japan-turns-to-foreign-workers-as-farmers-age

Bloomberg BusinessWeek, 15 January 2016. “Switzerland Weathers the Superstrong Franc”. Available from: http://www.bloomberg.com/news/articles/2016-01-15/switzerland-weathers-the-superstrong-franc

Bremmer, I., 11 February 2016. “These 5 Facts Show Why Demographics Are Destiny”. Available from: http://time.com/4218169/demographics-global-economy-immigrants-china/

Brookings, 2016. “Driving Sustainable Development Through Better Infrastructure: Key Elements of a Transformation Program”. Available from: https://www.brookings.edu/research/driving-sustainable-development-through-better-infrastructure-key-elements-of-a-transformation-program/

Cahill, J., 10 August 2016. “The state's pension reality gap is about to get even wider”. Available from: http://www.chicagobusiness.com/article/20160810/BLOGS10/160809835/the-states-pension-reality-gap-is-about-to-get-even-wider

Centre for International Finance and Regulation, 2014. “Long Term Investing: What determines investment horizon?”. Available from: http://www.fclt.org/content/dam/fclt/en/ourthinking/FCLT_Long-Term%20Portfolio%20Guide.pdf

CFA Institute, 2013. “Long Term Financing: Investor Perspectives in Europe”. Available from: https://www.cfainstitute.org/ethics/Documents/ltf_issue_brief_final.pdf

CFA Institute, 2013. “Long Term Financing: Investor Perspectives in Europe”. Available from: https://www.cfainstitute.org/ethics/Documents/ltf_issue_brief_final.pdf

City A.M., 11 August 2016. “Bank of England assertions on pension scheme deficits to be "tested"”. Available from: http://www.cityam.com/247404/bank-england-assertions-pension-scheme-deficits-tested

City A.M., 10 August 2016. “Royal Mail's pension scheme under pressure as costs set to double”. Available from: http://www.cityam.com/247315/royal-mails-pension-scheme-under-pressure-costs-set-double

ControlRisks, June 2016. “The global implications of Brexit”. Available from: https://www.controlrisks.com/en/our-thinking/analysis/the-global-implications-of-brexit

CPPIB, 2016. “What we do: private investments”. Available from: http://www.cppib.com/en/what-we-do/private-investments-overview.html

The Diplomat, 22 August 2016. “Asia’s Emerging Markets: From Bust To Boom?”. Available from: http://thediplomat.com/2016/08/asias-emerging-markets-from-bust-to-boom/

Economia Magazine, 20 July 2016. “Has the Eurozone core lost the political space needed for urgent reforms?”. Available from: http://economia.icaew.com/opinion/july-2016/the-core-of-the-eurozone-may-no-longer-have-the-political-space-needed-for-urgent-governance-reforms

The Economist, 24 September 2016. “Norway’s global fund: How to not spend it”. Available from: http://www.economist.com/news/business-and-finance/21707435-norways-global-fund-its-tough-small-democracy-run-worlds-biggest

The Economist, 24 September 2016. “Pensions: Fade to grey”. Available from: http://www.economist.com/news/briefing/21707560-it-costs-lot-more-fund-modern-retirement-employers-workers-and-governments-are-not

The Economist, 17 September 2016. “Free exchange: Stealth socialism”. Available from: http://www.economist.com/news/finance-and-economics/21707191-passive-investment-funds-create-headaches-antitrust-authorities-stealth

The Economist, 17 September 2016. “Schumpeter: Risky business”. Available from: http://www.economist.com/news/business/21707264-managers-need-watch-political-risk-developed-markets-well-emerging-ones-risky

The Economist, 27 August 2016. “Monetary policy: When 2% is not enough”. Available from: http://www.economist.com/news/leaders/21705826-rich-worlds-central-banks-need-new-target-when-2-not-enough

The Economist, 27 August 2016. “American business investment: Econundrum”. Available from: http://www.economist.com/news/finance-and-economics/21705847-americans-are-spending-and-hiring-so-why-arent-firms-investing-econundrum

The Economist, 30 July 2016. “Buttonwood: Putting it all on red’. Available from: http://www.economist.com/news/business-and-finance/21702623-rules-encourage-public-sector-pension-plans-take-more-risk-putting-it-all

The Economist, 23 April 2016. “Buttonwood: The wrong kind of savings”. Available from: http://www.economist.com/news/finance-and-economics/21697234-economic-equivalent-st-augustines-plea-wrong-kind-savings

The Economist, 2 April 2016. “Globalisation and inequality: The new wave”. Available from: http://www.economist.com/news/books-and-arts/21695853-surprisingly-little-known-about-causes-inequality-serbian-american-economist

The Economist, 6 February 2016. “Equities: Get ready for dividend cuts”. Available from: http://www.economist.com/blogs/buttonwood/2016/02/equities

The Economist, 4 February 2016. “Companies gamble; pension funds take the hit”. Available from: http://www.economist.com/blogs/buttonwood/2016/02/pensions

The Economist, 27 January 2016. “The global economy: What happened to the capex boom?”. Available from: http://www.economist.com/blogs/buttonwood/2016/01/global-economy

The Economist, 16 January 2016. “Monetary policy: The dead hand of debt”. Available from: http://www.economist.com/blogs/buttonwood/2016/01/monetary-policy

The Economist, 2 January 2016. “Free exchange: Exit, pursued by bear”. Available from: http://www.economist.com/news/finance-and-economics/21684797-fed-has-last-raised-rates-what-happens-next-exit-pursued-bear

The Economist, 10 December 2015. “The other paradox of thrift: Why low rates mean you need to save more”. Available from: http://www.economist.com/blogs/buttonwood/2015/12/other-paradox-thrift

The Economist, 21 November 2015. “Investing in a world of low yields: Many unhappy returns”. Available from: http://www.economist.com/news/finance-and-economics/21678812-pension-funds-and-endowments-are-too-optimistic-many-unhappy-returns

The Economist, 14 November 2015. “The world economy: Pulled back in”. Available from: http://www.economist.com/news/briefing/21678215-world-entering-third-stage-rolling-debt-crisis-time-centred-emerging

The Economist, 15 June 2015. “The Economist explains: How inequality affects growth”. Available from: http://www.economist.com/blogs/economist-explains/2015/06/economist-explains-11

The Economist, 6 June 2015. “Economic and social justice: Mind the gap”. Available from: http://www.economist.com/news/books-and-arts/21653596-anthony-atkinson-godfather-inequality-research-growing-problem-mind-gap

The Economist, 4 June 2016. “SMEs in developing countries: Caught in the middle”. Available from: http://www.economist.com/news/finance-and-economics/21699931-big-and-tiny-firms-often-find-it-easier-borrow-medium-sized-ones-caught

The Economist, 2 June 2016. “The view from Pimco: Low inflation, slow growth and lots of political risk”. Available from: http://www.economist.com/blogs/buttonwood/2016/06/view-pimco

The Economist, 1 June 2016. “Academics and investing: Risk and the stock market”. Available from: http://www.economist.com/blogs/buttonwood/2016/06/academics-and-investing

The Economist, 31 October 2015. “Private-debt investing: Lenders of first resort”. Available from: http://www.economist.com/news/finance-and-economics/21677220-investors-are-increasingly-eager-lend-european-firms-directly-lenders

The Economist, 9 March 2015. “The Economist explains: What is quantitative easing?”. Available from: http://www.economist.com/blogs/economist-explains/2015/03/economist-explains-5

The Economist, 19 February 2015. “Deflation: Feeling down”. Available from: http://www.economist.com/news/leaders/21644148-deflation-can-be-good-thing-todays-version-pernicious-feeling-down

The Economist, 9 February 2016. “The Economist explains: Why investors buy bonds with negative yields”. Available from: http://www.economist.com/blogs/economist-explains/2016/02/economist-explains-6

The Economist, 7 January 2015. “The Economist explains: Why deflation is bad”. Available from: http://www.economist.com/blogs/economist-explains/2015/01/economist-explains-4

The Economist, 8 March 2014. “African demography: The dividend is delayed”. Available from: http://www.economist.com/news/middle-east-and-africa/21598646-hopes-africas-dramatic-population-bulge-may-create-prosperity-seem-have

The Economist, 14 June 2011. “Escaping the debt crisis: The inflation option”. Available from: http://www.economist.com/blogs/buttonwood/2011/06/escaping-debt-crisis

The Economist, 14 September 2013. “Schumpeter: More money than Thor”. Available from: http://www.economist.com/news/business/21586268-changes-norways-gigantic-sovereign-wealth-fund-will-be-felt-around-world-more-money

Eurostat, June 2015. “People in the EU – statistics on demographic changes”. Available from: http://ec.europa.eu/eurostat/statistics-explained/index.php/People_in_the_EU_%E2%80%93_statistics_on_demographic_changes

The Financial Times, 2016. “Lexicon: Definition of risk on, risk off”. Available from: http://lexicon.ft.com/Term?term=risk-on,-risk-off

The Financial Times, 21 September 2016. “Federal Reserve sets stage for 2016 US interest rate rise”. Available from: https://www.ft.com/content/cb0f4316-8022-11e6-8e50-8ec15fb462f4#axzz4KxhSbyQH

The Financial Times, 21 September 2016. “BoJ launches new form of policy easing”. Available from: https://www.ft.com/content/028d47a8-7faa-11e6-bc52-0c7211ef3198#axzz4KxhSbyQH

The Financial Times, 4 September 2016. “Pension funds call for an end to inflation targets”. Available from: https://www.ft.com/content/6d414fa8-70f6-11e6-9ac1-1055824ca907#ixzz4JRey0D9H

The Financial Times, 4 September 2016. “‘Cure’ for UK pension funds deficits inflicts more pain”. Available from: https://www.ft.com/content/c223908c-7289-11e6-bf48-b372cdb1043a#axzz4JKbgDvjH

The Financial Times, 2 September 2016. “Fund houses take on banks over lending”. Available from: https://www.ft.com/content/2965ff84-6ed2-11e6-a0c9-1365ce54b926#ixzz4JRfhWseu

The Financial Times, 1 September 2016. “Vanguard attracts nearly $200bn this year”. Available from: https://www.ft.com/content/9de30114-7061-11e6-9ac1-1055824ca907#ixzz4JRgOybR5

The Financial Times, 30 August 2016. “Pension solution lies in long-term thinking”. Available from: https://www.ft.com/content/9cc892c6-6526-11e6-8310-ecf0bddad227#axzz4J6MHSzUy

The Financial Times, 28 August 2016. “Central bankers to persist with brave new world”. Available from: https://www.ft.com/content/6735bbea-6c90-11e6-a0c9-1365ce54b926#axzz4IbYQnGen

The Financial Times, 26 August 2016. “Pensions and ageing populations: the problem explained”. Available from: https://www.ft.com/content/49b3fcd4-63f9-11e6-a08a-c7ac04ef00aa?siteedition=intl

The Financial Times, 26 August 2016. “Pensions’ shift into private equity ignores risks”. Available from: https://www.ft.com/content/415a7ad6-6a8e-11e6-ae5b-a7cc5dd5a28c#axzz4IEwbgzIC

The Financial Times, 26 August 2016. “Pensions pain: disaster is avoidable”. Available from: https://www.ft.com/content/61b1eab6-6ad0-11e6-a0b1-d87a9fea034f#axzz4IbaLuZ1Z

The Financial Times, 25 August 2016. “As China nears exhaustion investors must look elsewhere”. Available from: https://www.ft.com/content/1f5c1b08-6915-11e6-ae5b-a7cc5dd5a28c#axzz4IILsO4RJ

The Financial Times, 24 August 2016. “Canada quietly treads radical path on pensions”. Available from: https://www.ft.com/content/99075c68-68f9-11e6-a0b1-d87a9fea034f#axzz4IILsO4RJ

The Financial Times, 24 August 2016. “Finding work proves harder for world’s youth”. Available from: https://www.ft.com/content/0bbe354a-6951-11e6-ae5b-a7cc5dd5a28c#axzz4IdIo0tt2

The Financial Times, 24 August 2016. “As an investment strategy grows more popular, the probability of a comparison involving Marxism apparently approaches 1”. Available from: http://ftalphaville.ft.com/2016/08/24/2173139/as-an-investment-strategy-grows-more-popular-the-probability-of-a-comparison-involving-marxism-approaches-1/

The Financial Times, 23 August 2016. “Pensions and bonds: the problem explained”. Available from: https://ig.ft.com/sites/pensions-interestrates-explainer/

The Financial Times, 22 August 2016. “Two top asset managers to drop staff bonuses”. Available from: https://www.ft.com/content/4ae1ae18-6871-11e6-ae5b-a7cc5dd5a28c#axzz4IILsO4RJ

The Financial Times, 22 August 2016. “Pensions: Low yields, high stress”. Available from: https://www.ft.com/content/8a54a0c6-648b-11e6-a08a-c7ac04ef00aa#axzz4I45dGCpJ

The Financial Times, 22 August 2016. “The crisis in Anglo-American democracy”. Available from: https://www.ft.com/content/0c2fc5b2-6630-11e6-8310-ecf0bddad227#axzz4IdIo0tt2

The Financial Times, 21 August 2016. “Monetary policy lacks the muscle to boost growth”. Available from: https://www.ft.com/content/9b8fdfae-661b-11e6-8310-ecf0bddad227#axzz4I258txEr

The Financial Times, 18 August 2016. “Nearly 500m people live under negative rates – S&P”. Available from: https://www.ft.com/content/69b5ed16-9008-3c46-a470-b7a3336cb8fb

The Financial Times, 18 August 2016. “A wake-up call for markets’ infrastructure dreamers”. Available from: https://www.ft.com/content/3c6f856c-6538-11e6-a08a-c7ac04ef00aa#ixzz4IM9Auxy7

The Financial Times, 17 August 2016. “Irrational exuberance begins to surface in US stock market”. Available from: https://www.ft.com/content/c4406bec-6442-11e6-8310-ecf0bddad227#axzz4HTjJvcGa

The Financial Times, 7 August 2016. “EM investing: Why it is back in fashion”. Available from: https://www.ft.com/content/6c04a842-55ad-11e6-9664-e0bdc13c3bef#axzz4IILsO4RJ

The Financial Times, 1 August 2016. “Insurers: Forced to dig deep”. Available from: https://www.ft.com/content/6194f264-4dd2-11e6-8172-e39ecd3b86fc#axzz4IbaLuZ1Z

The Financial Times, 3 August 2016. “Not a time for switching to emerging markets”. Available from: https://www.ft.com/content/ae3afe62-598d-11e6-9f70-badea1b336d4#axzz4JKbgDvjH

The Financial Times Alphaville, 28 July 2016. “This is nuts. But cheer up?”. Available from: http://ftalphaville.ft.com/2016/07/28/2171158/this-is-nuts-but-cheer-up/

The Financial Times, 19 July 2016. “Global elites must heed the warning of populist rage”. Available from: https://www.ft.com/content/54f0f5c6-4d05-11e6-88c5-db83e98a590a?siteedition=intl#axzz4I258txEr

The Financial Times, 16 June 2016. “IMF warns of political risk to eurozone recovery”. Available from: https://www.ft.com/content/4c69acc6-33d4-11e6-ad39-3fee5ffe5b5b#axzz4IM9qFit6

The Financial Times, 24 May 2016, “ECB warns of populist risk to financial stability”. Available from: https://www.ft.com/content/13bfdf1e-21b7-11e6-aa98-db1e01fabc0c

The Financial Times, 24 May 2016. “Hedge funds: Overpriced, underperforming”. Available from: https://www.ft.com/content/9bd1150e-1b76-11e6-b286-cddde55ca122?siteedition=intl#axzz4IdIo0tt2

The Financial Times, 12 May 2016. “Political risks come to the fore in central and eastern Europe”. Available from: https://www.ft.com/content/dd974bc0-0ad2-11e6-b0f1-61f222853ff3#axzz4IM9qFit6

The Financial Times, 10 April 2016. “BlackRock’s Larry Fink warns negative rates could hit spending”. Available from: https://www.ft.com/content/5965b5e6-fd01-11e5-b5f5-070dca6d0a0d#axzz4JZs6QTI6

The Financial Times, 24 March 2016. “Cut your exposure to growing political risks”. Available from: https://www.ft.com/content/aca105d6-ef4a-11e5-9f20-c3a047354386#axzz4IM9qFit6

Fletcher Political Risk Group, 29 February 2016. “Thinking about Political Risk in Advanced Economies”. Available from: http://www.fletcherpoliticalrisk.com/home-1/2016/2/29/thinking-about-political-risk-in-advanced-economies

Forbes, 25 February 2015. “Demographics Will Power the World's New Growth Leader: India”. Available from: http://www.forbes.com/sites/michaellingenheld/2015/02/25/demographics-will-power-the-worlds-new-growth-leader-india/#551e6f553fc3

Fortune, 27 July 2016. “Larry Summers: The Next President Will Need Up to $2 Trillion for Infrastructure”. Available from: http://fortune.com/2016/07/27/larry-summers-2-trillion-for-infrastructure/

The GIC, 27 July 2016. “Investing in a Low-Return Environment”. Available from: http://www.slideshare.net/GIC_Presentations/investing-in-a-lowreturn-environment

The GIC, 2016. “The Investment Report”. Available from: http://www.gic.com.sg/report/report-2014-2015/investment_report.html

The GIC, 2016. “The GIC 2015/2016 Report”. Available from: http://www.gic.com.sg/

Global Research, 6 February 2016. “Systemic Fragility in the Global Economy”. Available from: http://www.globalresearch.ca/systemic-fragility-in-the-global-economy/5505941

The Guardian, 13 February 2015. “Italy is a 'dying country' says minister as birth rate plummets”. Available from: https://www.theguardian.com/world/2015/feb/13/italy-is-a-dying-country-says-minister-as-birth-rate-plummets

Haldane, A., 2010. “Patience and Finance”. Available from: http://www.bankofengland.co.uk/archive/Documents/historicpubs/speeches/2010/speech445.pdf

Harvard University, 2015. “A comparative study of sovereign investor models: Sovereign Fund Profiles”. Available from: http://projects.iq.harvard.edu/files/sovereignwealth/files/fund_profiles_final.pdf

IFSWF, 2016. “Abu Dhabi Investment Authority”. Available from: http://www.swfinstitute.org/swfs/abu-dhabi-investment-authority/

IFSWF, 2016. “Case Study – Investing in Infrastructure”. Available from: http://www.ifswf.org/sites/default/files/Publications/7.4-Case%20study-2-Infrastructure.pdf

IFSWF, 2 November 2015. “Case study: Private equity.”. Available from: http://www.ifswf.org/publications/ifswf-case-study-investing-private-equity-kia-fsi

IFSWF, March 2015. “Long Term Portfolio Guide: Reorienting portfolio strategies and investment management to focus capital on the long term”. Available from: http://www.ifswf.org/sites/default/files/Publications/FCLT_Long-Term%20Portfolio%20Guide.pdf

Institutional Investor, 1 March 2016. “Oil has sovereign wealth funds hitting sell button”. Available from: http://www.institutionalinvestor.com/article/3533485/investors-sovereign-wealth-funds/oil-has-sovereign-wealth-funds-hitting-sell-button.html#/.V8SPsZOx9E8

International Adviser, 15 August 2016. “Emerging market equities: as compelling as they seem?”. Available from: http://www.international-adviser.com/features/1030989/emerging-market-equities-compelling

Investopedia, 2016. “Passive Management”. Available from: http://www.investopedia.com/terms/p/passivemanagement.asp

IPE, 3 November 2006. “Norges chief slams “disguised beta” hedge funds”. Available from: https://www.ipe.com/norges-chief-slams-disguised-beta-hedge-funds/19931.fullarticle

Mail Online, 4 August 2016. “Low investment returns taking a toll on U.S. pension funds”. Available from: http://www.dailymail.co.uk/wires/reuters/article-3724515/Low-investment-returns-taking-toll-U-S-pension-funds.html

MarketWatch, 27 August 2016. “The head of Germany’s largest bank says negative rates are ‘fatal’”. Available from: http://www.marketwatch.com/story/the-head-of-germanys-largest-bank-says-negative-rates-are-fatal-2016-08-25?siteid=rss

MarketWatch, 20 August 2016. “The $6 trillion public pension hole that we’re all going to have to pay for”. Available from: http://www.marketwatch.com/story/why-your-states-public-pension-plan-is-in-a-much-bigger-hole-than-you-already-fear-2016-08-16

McKinsey, April 2016. “Why investors may need to lower their sights”. Available from: http://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/why-investors-may-need-to-lower-their-sights

McKinsey, February 2015. “Debt and (not much) deleveraging”. Available from: http://www.mckinsey.com/global-themes/employment-and-growth/debt-and-not-much-deleveraging

Meb Faber Research, 26 May 2016. “Home bias everywhere”. Available from: http://mebfaber.com/2014/05/26/home-bias-everywhere/

Milanovic, B., 1 July 2016. "The greatest reshuffle of individual incomes since the Industrial Revolution". Available from: http://voxeu.org/article/greatest-reshuffle-individual-incomes-industrial-revolution

Monk, A.H.B., & Sharma R., Global Projects Center Stanford University, "Capitalising on Institutional Co-Investment Platforms". Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2641898

Morgan Stanley, 6 June 2016. "The Economic Gears of a Disrupted World". Available from: http://www.morganstanley.com/ideas/ruchir-sharma-rise-and-fall-of-nations

National Intelligence Council, December 2012. "Global *Trends 2030: Alternative Worlds"*. Available from: http://www.scribd.com/doc/115962650/Global-Trends-2030-Alternative-Worlds

NBIM, 30 March 2012. "'Economic Growth and Equity Returns". NBIM Discussion Note, available from: https://www.nbim.no/globalassets/documents/dicussion-paper/2012/discussionnote_5-12_final.pdf

OECD, 2015. "Annual Survey of Large Pension Funds and Public Pension Reserve Funds". Available from: http://www.oecd.org/daf/fin/private-pensions/2015-Large-Pension-Funds-Survey.pdf

OECD, 6 May 2014. "Economics: Key Tables from OECD". Available from: http://www.oecd-ilibrary.org/economics/government-debt_gov-debt-table-en

OECD, 2014. "Pooling of Institutional Investors' Capital – Selected Case Studies in Unlisted Equity Infrastructure". Available from: https://www.oecd.org/finance/OECD-Pooling-Institutional-Investors-Capital-Unlisted-Equity-Infrastructure.pdf

OECD, November 2012. "Looking to 2060: Long-term global growth prospects". *OECD Economic Policy Papers*, available from: http://www.oecd-ilibrary.org/docserver/download/5k8zxpjsggf0.pdf?expires=1375920306&id=id&accname=guest&checksum=123334890FD812773838FE720F30CC9B

OMERS, 2016. "Our Approach". Available from: http://www.omerspe.com/Our_Approach.htm

OTTP, 2016. "Annual Reporting". Available from: https://www.otpp.com/corporate/annual-reporting

Price Water Coopers, 2015. "Real Estate 2020: Building the future". Available from: https://www.pwc.ch/de/publications/2016/pwc_real_estate_2020_building_the_future_e.pdf

Re-Define, 2013. "Investing for the Future". Available from: http://www.re-define.org/sites/default/files/images/SWF-Report_Final.pdf

Reuters, 4 August 2016. "Low investment returns taking a toll on U.S. pension funds". Available from: http://www.reuters.com/article/markets-pensions-returns-idUSL1N1AK1X7

Reuters, 6 July 2016. "Brexit signals shift: political risk hits long-stable Western economies". Available from: http://blogs.reuters.com/financial-regulatory-forum/2016/07/06/brexit-signals-shift-political-risk-hits-long-stable-western-economies/

Static Seeking Alpha, 2016. "Average Asset Mixes". Available from: https://staticseekingalpha.a.ssl.fastly.net/uploads/2012/2/7/1161232-13286346805997572-DougCronk_origin.jpg

Reuters, 23 August 2016. "Emerging markets may enjoy secular stagnation - James Saft". Available from: http://www.reuters.com/article/us-markets-saft-idUSKCN10Y094?il=0

The Street, 15 August 2016. “Emerging Markets Are Exceptional Growth Opportunities Once Again”. Available from: https://www.thestreet.com/story/13674632/1/emerging-markets-are-exceptional-growth-opportunities-once-again.html

Wall Street Journal, 7 September 2016. “The Morning Ledger: Companies Get in on Negative-Interest Game”. Available from: http://blogs.wsj.com/cfo/2016/09/07/the-morning-ledger-companies-get-in-on-negative-interest-game/

Wall Street Journal, 25 August 2016. “What to Learn From the ECB’s Great European Corporate Bond Squeeze”. Available from: http://www.wsj.com/articles/what-to-learn-from-the-ecbs-great-european-corporate-bond-squeeze-1472113972

Wall Street Journal, 24 August 2016. “Dividends Are What Matter Now”. Available from: http://www.wsj.com/articles/dividends-are-what-matter-now-1472081992

Wall Street Journal, 23 August 2016. “Everyone Wants Emerging-Market Bonds, But There Aren’t Enough to Go Around”. Available from: http://www.wsj.com/articles/everyone-wants-emerging-market-bonds-but-there-arent-enough-to-go-around-1471937517

Wall Street Journal, 22 August 2016. “Political Risks Loom Large on European Markets”. Available from: http://www.wsj.com/articles/growing-political-risk-makes-cheap-european-stocks-unattractive-1471878052

Wall Street Journal, 14 August 2016. “Bond Funds Turn to Emerging Markets”. Available from: http://www.wsj.com/articles/bond-funds-turn-to-emerging-markets-1471198010

Wall Street Journal, 12 August 2016. “Here’s a Possible Explanation to the Hunt for Yield: There Isn’t One”. Available from: http://blogs.wsj.com/moneybeat/2016/08/12/heres-a-possible-explanation-to-the-hunt-for-yield-there-isnt-one/

Wall Street Journal, 29 June 2016. “Who’s Risky Now? A Brexit Boost for Emerging Markets”. Available from: http://www.wsj.com/articles/whos-risky-now-a-brexit-boost-for-emerging-markets-1467214175

Wall Street Journal, 22 December 2015. “The Trouble With Sovereign-Wealth Funds”. Available from: http://www.wsj.com/articles/the-trouble-with-sovereign-wealth-funds-1450836278

Wall Street Journal, 19 January 2016. “Rising Debt in Emerging Markets Poses Global Threat”. Available from: http://www.wsj.com/articles/rising-debt-in-emerging-markets-poses-global-threat-1453238133

Wall Street Journal, 22 November 2015. “How Demographics Rule the Global Economy”. Available from: http://www.wsj.com/articles/how-demographics-rule-the-global-economy-1448203724?tesla=y&alg=y

Warren, G., 2014. “Benefits (and Pitfalls) of Long-Term Investing, Centre for International Finance and Regulation”. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2513089

Warren, G., Centre for International Finance and Regulation, 2014. “Designing an Investment Organization for Long-Term Investing”. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2513090

Warren, G., Centre for International Finance and Regulation, May 2014. “Long-Term Investing: What Determines Investment Horizon?”. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2442631

Wooley, P., Speech at The Prince's Charities, 2013. "Resilience and the Long-term: Rethinking Portfolios for Prosperity". Available from: https://www.accountingforsustainability.org/wp-content/uploads/2013/06/Paul-Woolley-final.pdf

Worldometers, 2016. "U.S. Population'. Available from: http://www.worldometers.info/world-population/us-population/

World Economic Forum, 2016. "Innovations in Long-Term Capital Management: The Practitioner's Perspective". Available from: http://www3.weforum.org/docs/WEF_GAC_Future_of_Investing_Executive_Summary.pdf

World Economic Forum, 2014. "Direct Investments by Institutional Investors: Implications for Investors and Policy-Makers". Available from: http://www3.weforum.org/docs/WEFUSA_DirectInvestingInstitutionalInvestors.pdf

World Economic Forum, 2012. "Measurement, Governance and Long-term Investing". Available from: http://www3.weforum.org/docs/WEF_IV_MeasurementGovernanceLongtermInvesting_Report_2012.pdf

World Economic Forum, 2011. "The Future of Long-term Investing". Available from: http://www3.weforum.org/docs/WEF_FutureLongTermInvesting_Report_2011.pdf

World Bank, 2016. "GDP Growth (annual 5)". Available from: http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG

About Re-Define

Re-Define is a prominent independent international think tank that specialises in formulating financial and economic policy. Re-Define advises several governments, international institutions, long-term investors and other stakeholders on economic, financial, developmental and environmental policy.
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