

INTERGENERATIONAL THEFT

FEBRUARY 2017



INSIGHTS
IDEAS
RESULTS

Train whistle blowing

After the Austro-Prussian war of 1866, Otto von Bismarck began a nationalisation program of the numerous Prussian railways and, in the process, stumbled across something of a problem.

Railways had been around continental Europe from as early as 1835 and many of the engineers manning these highly explosive steam kettles atop thousands of tonnes of rolling iron were, to put it nicely, getting on a bit.

This posed a material safety risk not just to the engineer but to hundreds of passengers and bystanders. The concept of a mandatory retirement age was thus born and the birth of social security was writ into law in Prussia in the 1880s.

The retirement age was set at 70 - at a time when life expectancy averaged 46 (admittedly, dragged lower by a high infant mortality rate).



Otto von Bismarck - Unwitting father of the modern Welfare State and possessor of one unholy 'tache



A GREEK TRAGEDY: PART I

Fast forward a little over 100 years to Greece in 2010 and the social security system has some altogether different characteristics. This has perhaps been made most famous by the mandatory retirement age of hairdressers at 50.

And with the first 20 or so years of a person's life taken up with education, and an average life expectancy of 80, this effectively leaves 30 years of productive work to fund the other 50 non-working years.

Something clearly just doesn't add up.

To address this gap, the government starts borrowing from future generations (cynically, unborn non-voters) to pay for the social security of present generations (voters).

The population of Greece has been in decline since 2009.



All of which is fine as long as that population is still there. The intergenerational equity argument is that those future generations get to benefit from the infrastructure that is being built by the generations of today. Putting aside the decrepit state of much of the country's infrastructure, and the reasonable dismay that future Greeks may feel on being presented with the bill, the population growth that underwrites this theory just isn't there.

A GREEK TRAGEDY: PART II

Yet it is not just the total population that matters – it is the shape of the population as expressed in population pyramids. These show, broadly, the number of people available to work productively (typically aged 15-64), the number of young people who need support through education (under 15) and the number of old people who no longer work and need support (typically 65 and over).

Or in ugly equations:

$$\text{Child dependency ratio} = \frac{\text{number of people aged 0-14}}{\text{number of people aged 15-64}} \times 100$$

$$\text{Aged dependency ratio} = \frac{\text{number of people aged 65 and over}}{\text{number of people aged 15-64}} \times 100$$

In 1950, Greece had a (demographically) beautiful population pyramid, with the 15-64 year old workforce supporting very few elderly and lots of young people coming through to add to the labour force for the foreseeable future.

At this time, only 5.9% of the population were older than 65 while 28.9% of the population were under 15.

Then, for a variety of reasons common to much of the developed world, the Greeks stopped having so many kids. At the same time, big advances in medicine and personal care meant that people were living much longer.

By 2015, 21.3% of the population were over 65 and 19.4% of the population were under 15.

By 2050, the population of Greece will not only have contracted by one million people, but 34.8% will be older than 65 and 12.3% less than 15 years old.

In terms of dependency ratios, this means that today, every 100 people of "working age" are supporting 33 older people and 23 younger people. By 2050, every 100 people in the workforce will be supporting 66 older people and 23 younger people. The total dependency ratio in Greece will be 89.

Figure 1. Greece 1950, Population 7,566,000

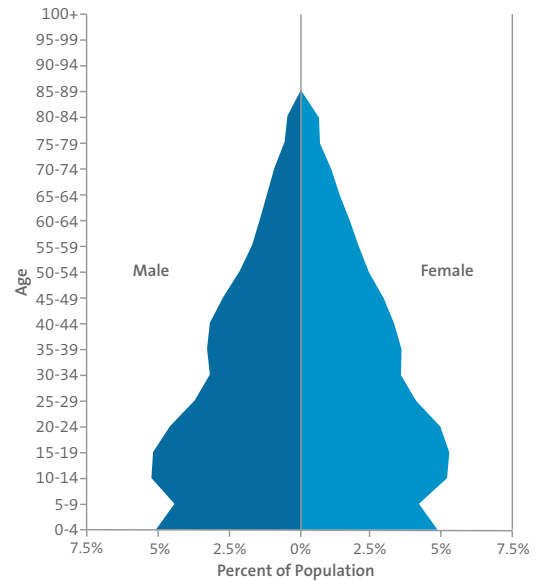


Figure 2. Greece 2015, Population 10,954,000

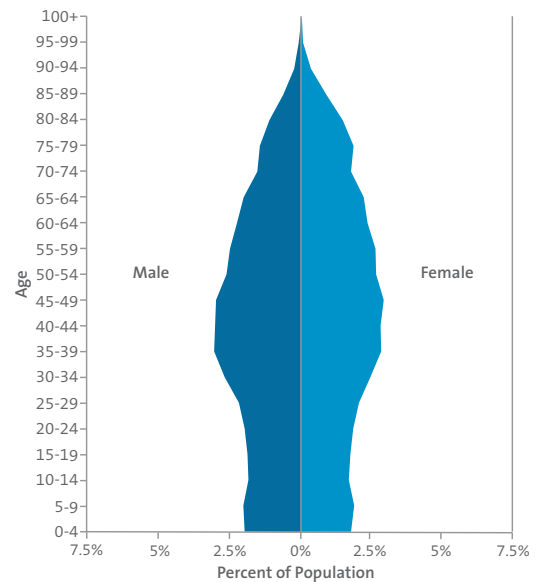
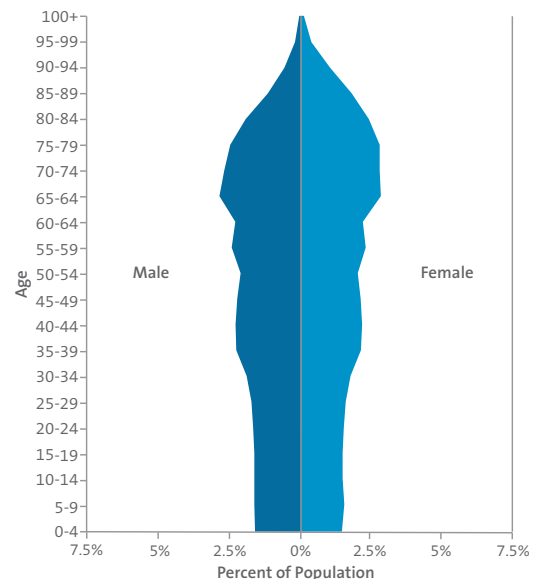


Figure 3. Greece 2050, Population 9,705,000



Source: United Nations, Dept of Economic & Social Affairs, Population Division. World Population Prospects: The 2015 revision

I WORK HARD FOR THE MONEY

This demographic shift poses any number of challenges, not least being the ongoing provision of appropriate infrastructure and care. One of the more politically difficult challenges, though, is how to actually get enough out of those 100 workers to provide for the 89 people dependent upon them, while also allowing those 100 workers to provide enough for themselves.

There are basically two ways to address this – the numerator and the denominator. You can reduce the number of people entitled to state care, or you can increase the number of people providing for them.

In an environment where “austerity” means running slightly smaller deficits – not actual surpluses – it is proving almost impossible to make cuts to entitlements or even lift the retirement age. Likewise, attracting skilled labour is proving difficult.

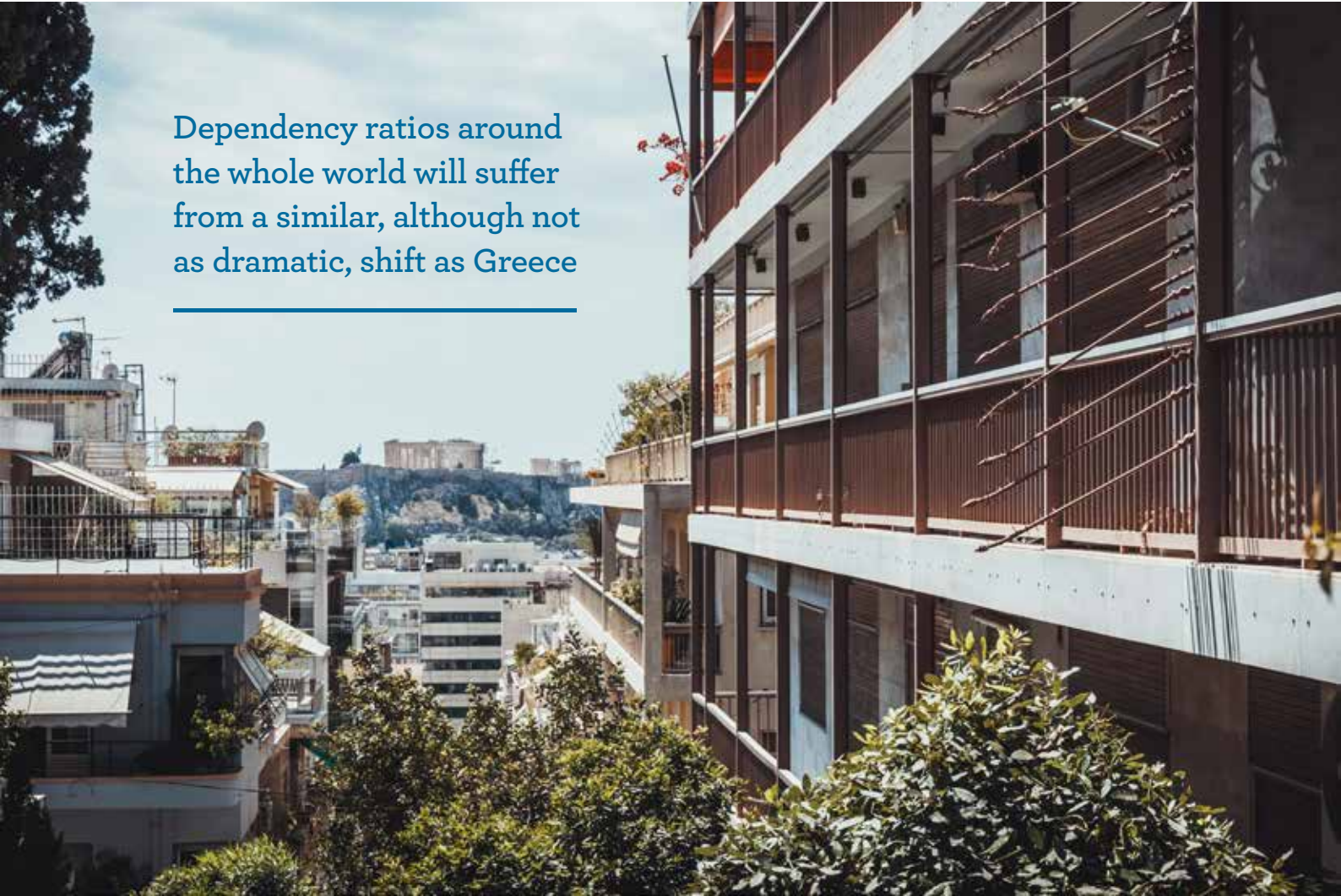
Failing to change either the number of people on benefits or the number of people providing for them only leaves one lever, which is to try and extract more and more from those 100 people doing the providing.

While this serves the immediate issue of providing additional resources to pay for the dependent population, it has consequences. This is not a particularly desirable place to be a worker, as the majority of your productivity goes to supporting people other than yourself, creating a disincentive to work in general and a particular disincentive to work in a country like Greece.

As workers leave for employment elsewhere or drop out altogether, the problem becomes more pronounced, and the disincentive to stay and work grows.

Cities die for environmental reasons (Babylon), for acts of war (Carthage) and acts of God (Pompeii).

Athens may simply be one of the first cities to die through an act of parliament.



Dependency ratios around the whole world will suffer from a similar, although not as dramatic, shift as Greece



FROM PYRAMID TO PILLAR

So what? Does it really matter what happens in Greece?

Well, no, except that it's not just a Greek problem – Greece just provides some of the more comical examples to draw upon. Dependency ratios across all of Europe and the developed world are problematic today - and forecast to get far worse come 2050.

And this is merely representative of a broader, global problem, with the OECD Old Age Dependency ratio at 25 today and growing to over 50 by 2050.

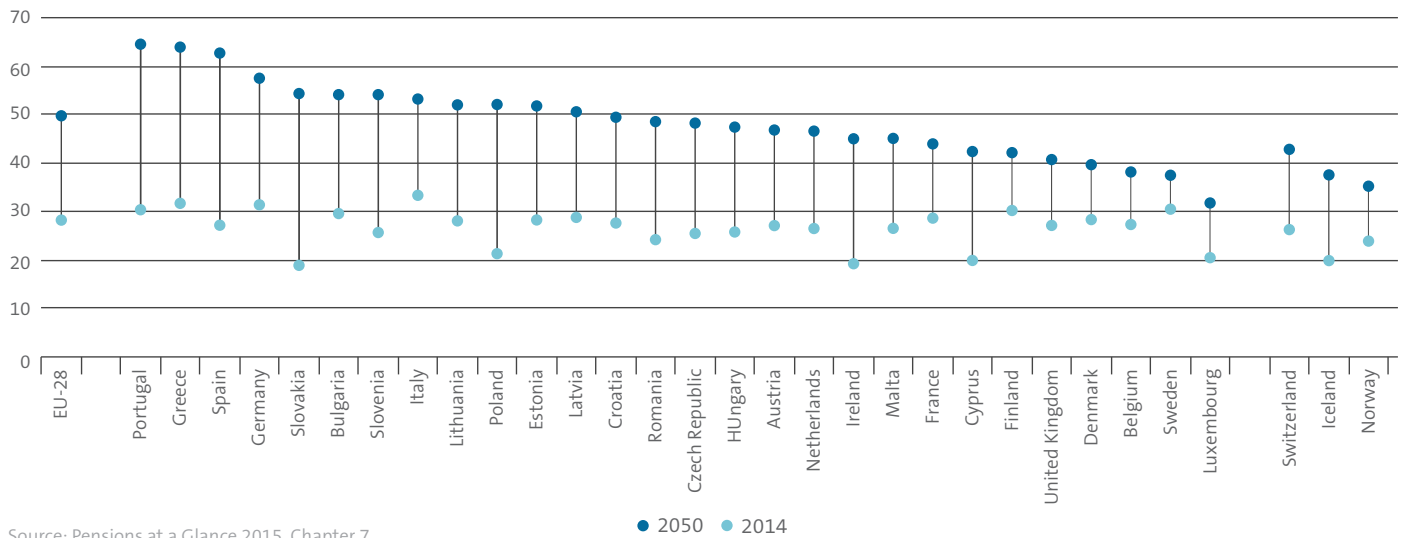
Worse, this is just the Old Age Dependency ratio. Reference was made earlier to the unproductive years at the beginning of a person's life – the Youth Dependency Ratio – which sits at around 40 today in the OECD and is expected to stay at around that level through to 2050.

Combined, this means that 100 people of working age in the OECD today (aged 20-64) are supporting a total of 65 people and are projected to be supporting 90 people with their hands out by 2050. And that is before adjusting for participation levels and unemployment rates.

If you're reading this at work, and feel as though you're having to run pretty fast just to stand still, the good news is that you're feelings are well placed.

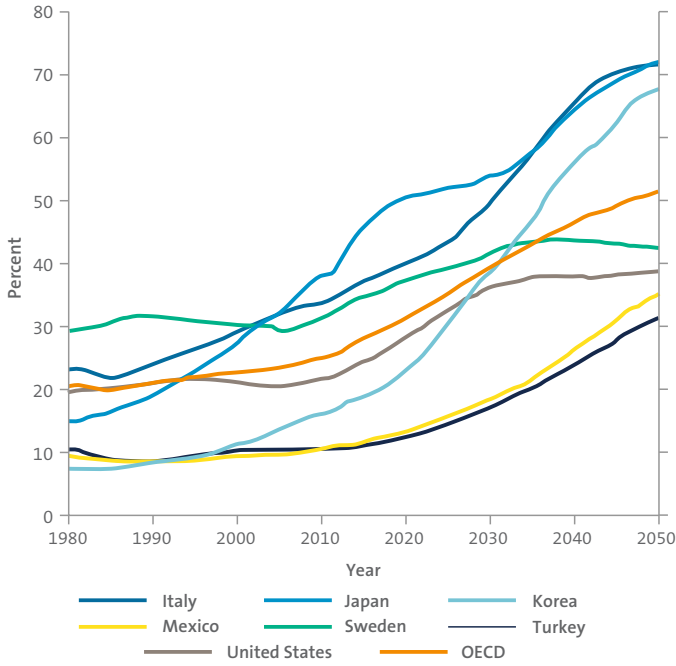
The bad news is it's going to get a whole lot worse.

Figure 4. Old age dependency ratio, 2014 and 2050 (%)



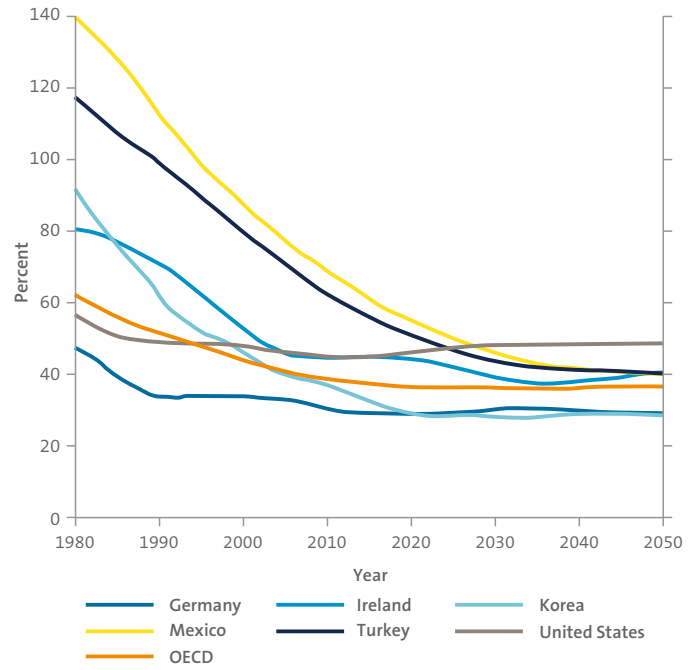
Source: Pensions at a Glance 2015, Chapter 7

Figure 5. Population aged 65 and over as a percentage of the population aged 20-64



Source: OECD Demographic and Labour Force Database

Figure 6. Population aged less than 20 as a percentage of the population aged 20-64



Source: OECD Demographic and Labour Force Database

Figure 7. World 1950, Population 2,510,947,000

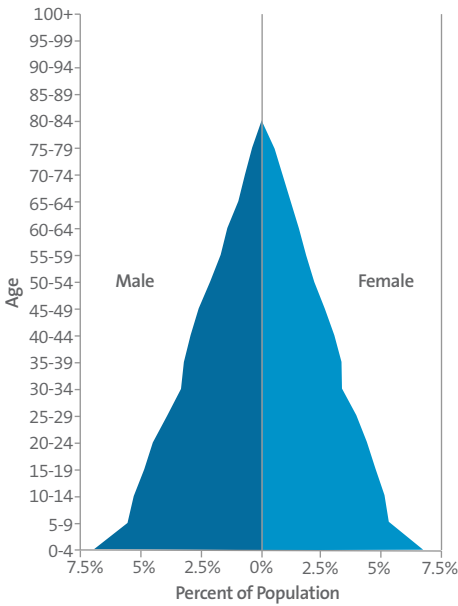


Figure 8. World 2015, Population 7,349,472,000

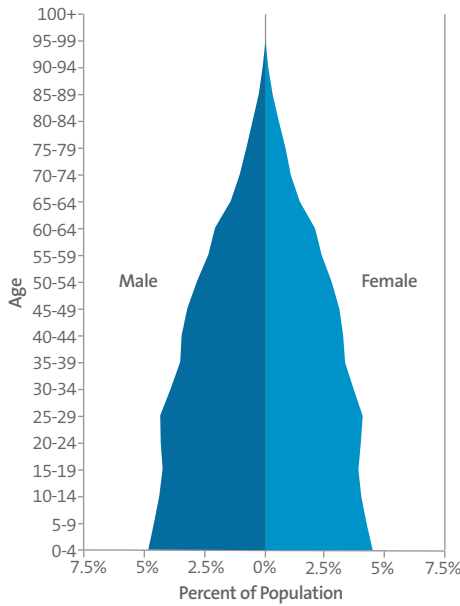
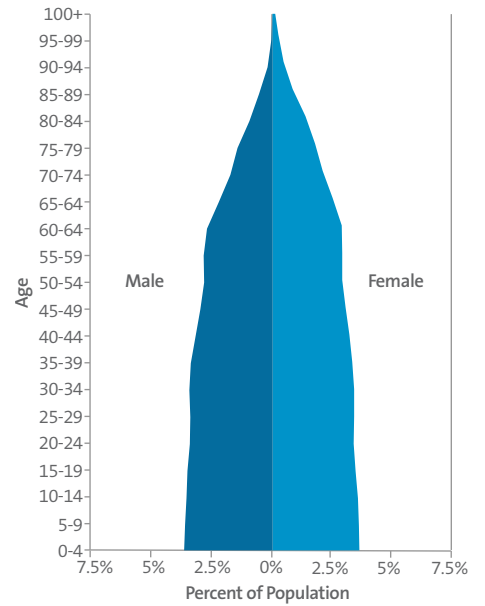


Figure 9. World 2050, Population 9,725,147,000



Source: United Nations, Dept of Economic & Social Affairs, Population Division. World Population Prospects: The 2015 revision



INVESTMENT IMPLICATIONS

There are a string of implications that flow from this demographic shift, from the continued break-up of the EU to the inevitable monetisation of debt, some of which have already been addressed in an earlier White Paper by Chris Deves (Investing in the Grey Boom).

What specifically are the investment implications of this demographic shift? There are two that intersect quite neatly: the globalisation of labour and the demand for income.

SHOULD I STAY OR SHOULD I GO?

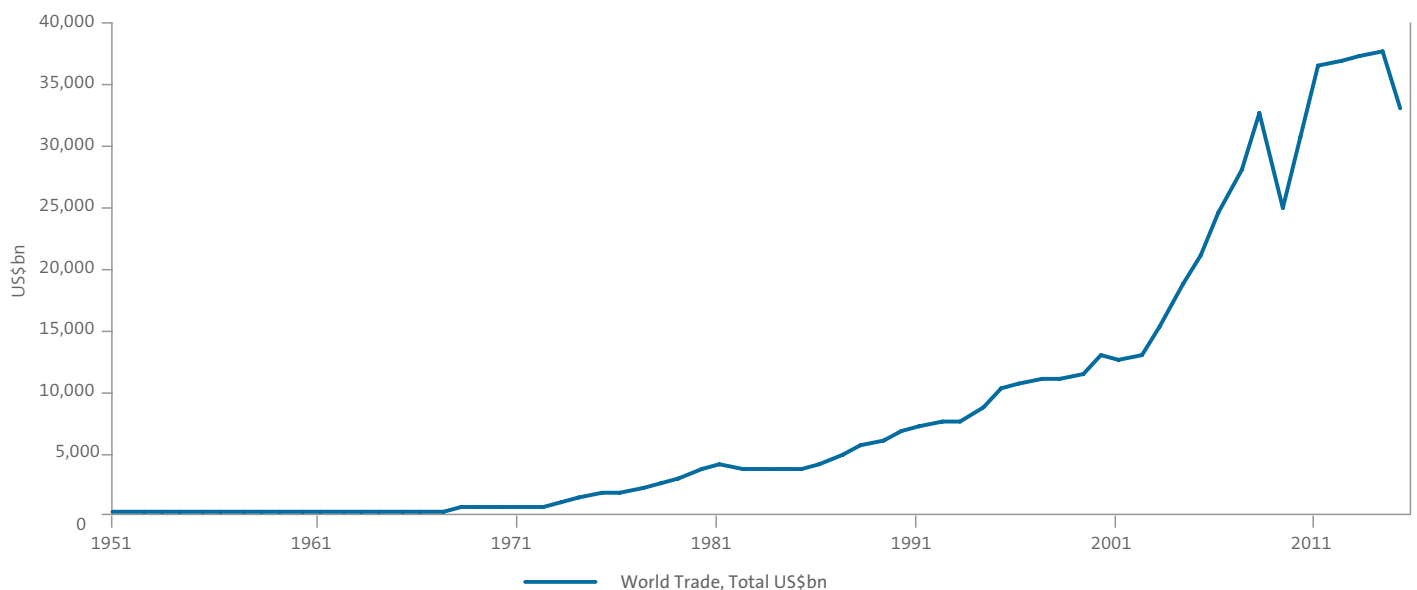
There are numerous ways to address a sky-rocketing dependency ratio, but they all fundamentally boil down to trying to limit your outgoings or trying to lift your incomings.

Your outgoings (the numerator) can be managed by restricting access to pensions, and this is something we already see at the margin through efforts to lift retirement ages, have people provide for their own retirement, and limit access based on wealth or income. Unpopular as these measures are, they also fall a long way short of what is needed.

Incomings are a potentially richer source to tap, with an influx of workers (and their taxes) raising the denominator in the dependency calculations and lowering the overall ratio. And while there is a feeling in some quarters that globalisation has failed to deliver on a lot of the promise to date, that may be about to materially change (for young, well educated workers, at any rate) in a world where states and cities compete for labour.

The young Greek, recently out of university in the scenario above, would be well placed to make the rational decision of moving elsewhere in their most productive years, where the total dependency on them was lower. Worse, for Athens, that same Greek could then quite merrily decide to move back home to collect a state pension once they turned 50.

Figure 10. Level of Global trade



Source: IMF, World Economic Outlook Database

Globalisation to date has largely centred on trade and capital, while the globalisation of labour – as expressed in the movement of people – has been pretty anaemic. Today, approximately 3.3% of the global population is classified as migrant. This is not a huge change from the earliest official recordings of 2.4% in 1960. It is also radically different to that experience in trade and capital as shown in **Figure 10 and 11**.

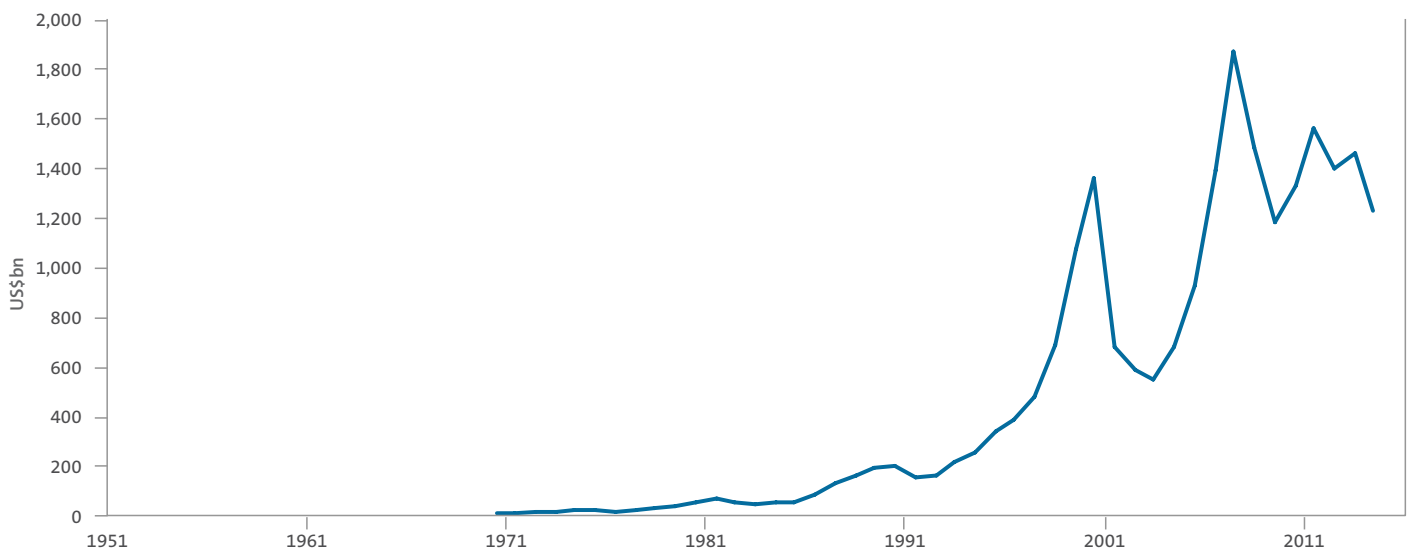
Looking ahead, those nations and cities that can attract a greater, skilled workforce will be able to levy lower overall burdens to fund their social security as the dependency ratio will be lower. Those unable to attract workers run the risk of losing their own workforce as the social burden on that workforce increases.

This poses some pretty fundamental challenges to government generally, not least being how to secure a revenue base that is presently reliant on taxing labour when that labour can move away at any time and is motivated to do so as you squeeze more revenue from it. Obviously, a lot more goes into choosing where to live than the marginal tax rate but, if states are to compete for labour, that will come at a cost one way or another.

Business, likewise, will need to make some significant changes in such an environment. There are already volumes of information on how to attract and retain key talent but, as skilled labour becomes scarce and more choosy, the need to actually follow through on the thought bubbles becomes a lot more real. When labour chooses states first, the cost to attract talent is less about bean bags and biscuits and much more about having a presence in the right locations. At an associated cost.

There will be demographic winners and losers at the city and state level.

Figure 11. Level of foreign direct investment



Source: World Bank Data, International Monetary Fund, Balance of Payments database supplemented by data from the United Nations Conference on Trade, Development & Official National Sources

DEMAND FOR INCOME

As a population changes, the demand and supply of capital changes with it. A younger cohort of people is more likely to be borrowing money to pay for education, get married, have kids and buy a home. An older cohort of people is more likely to have paid off their home, seen off the kids, and be in a position where they have an excess of capital that they are looking to invest to either provide for or supplement their retirement income.

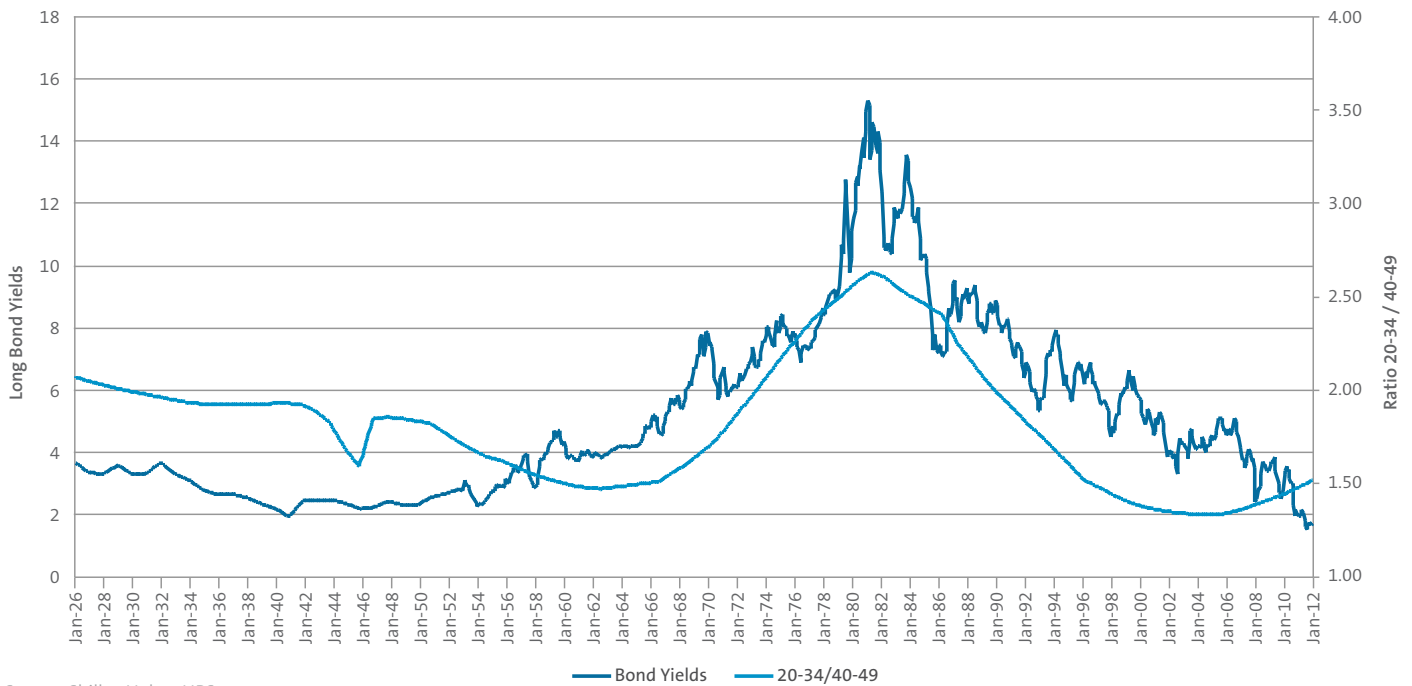
In very simplistic terms, the young cohort demand capital, and the older cohort supply it - for a price. Notwithstanding the efforts and impact of central banks, there is a demographic case that as the relative sizes of those two cohorts change, the supply

and demand of capital also changes. It may well be that “secular stagnation” is just demographics at work.

Splitting out the different cohorts and the way they have moved over time is a right royal pain, so pleasingly UBS have already done it as shown in **Figures 12** and **13**

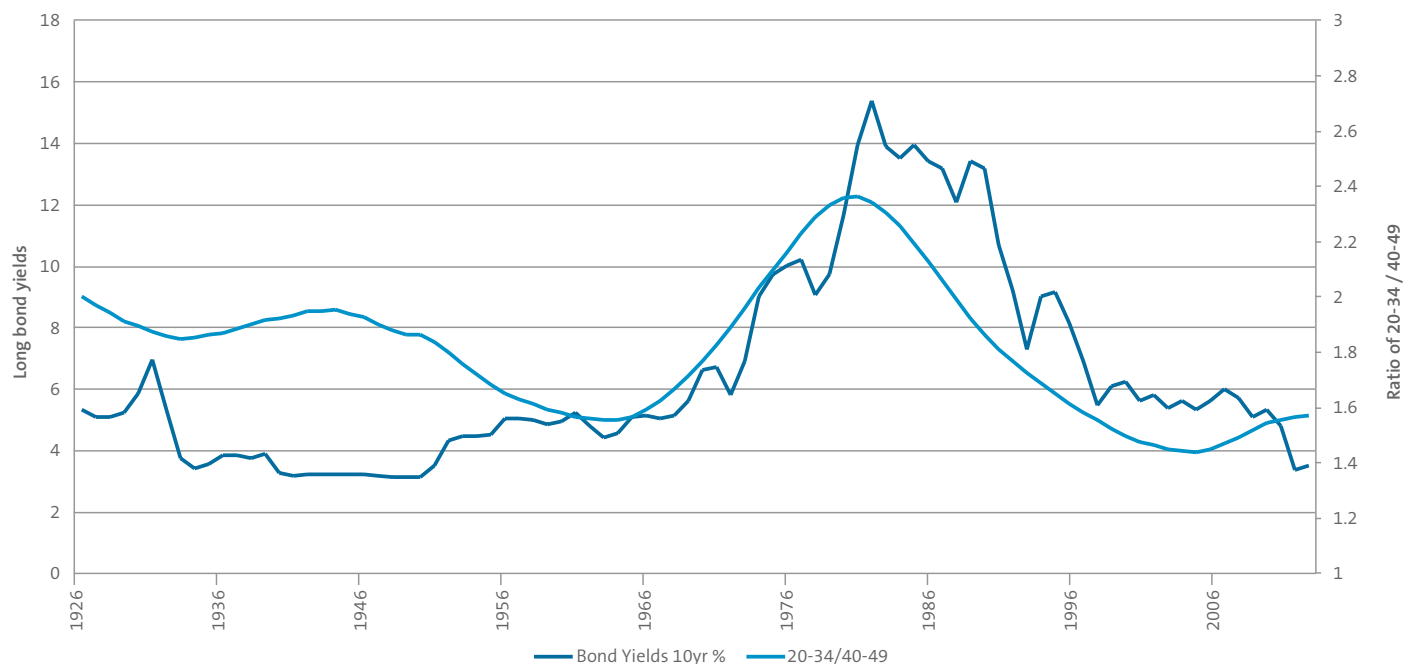
And while there are a lot of things that go into determining something like the long bond rate, it does seem as though demographics is playing a role. Further, as that ratio projects into the future, it seems likely that we will see a continued excess of saving keeping downwards pressure on long bond rates.

Figure 12. Unites States: long bond yields and the difference between the 20-34 and the 40-49 cohorts



Source: Shiller, Haber, UBS.

Figure 13. Australia: long bond yields and the difference between the 20-34 and the 40-49 cohorts



Source: Shiller, Haber, UBS.

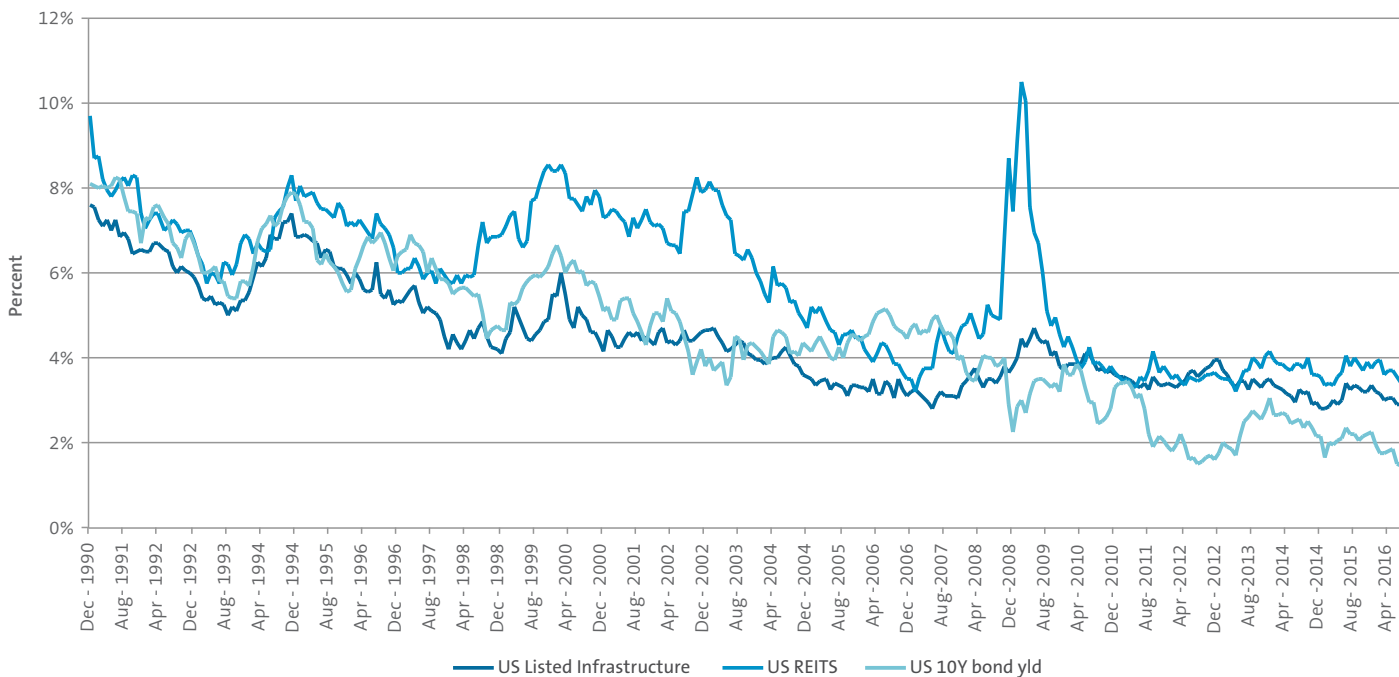


MONEY, MONEY, MONEY

This has some pretty huge investment implications, with bond rates used to price everything from domestic savings rates to equity valuations. That saving cohort is looking for a return on their savings, and if bond rates are to stay depressed for the next 50+ years, we are likely to see the hunt for yield continue casting a wider net.

To date, we have seen this play out with strong performance in high yielding equities along with real asset classes such as property and infrastructure, and while there is a lot of talk about the end of the bond bull market, it may instead be that this trend will continue as it's underpinned by demographic forces set in play over the last couple of hundred years.

Figure 14. Yield rally across asset classes



Source: UBS

I'M GONNA BE THE MAN

Beyond somewhat depressed yields going forwards, another consideration is the total impact of a moderating labour force.

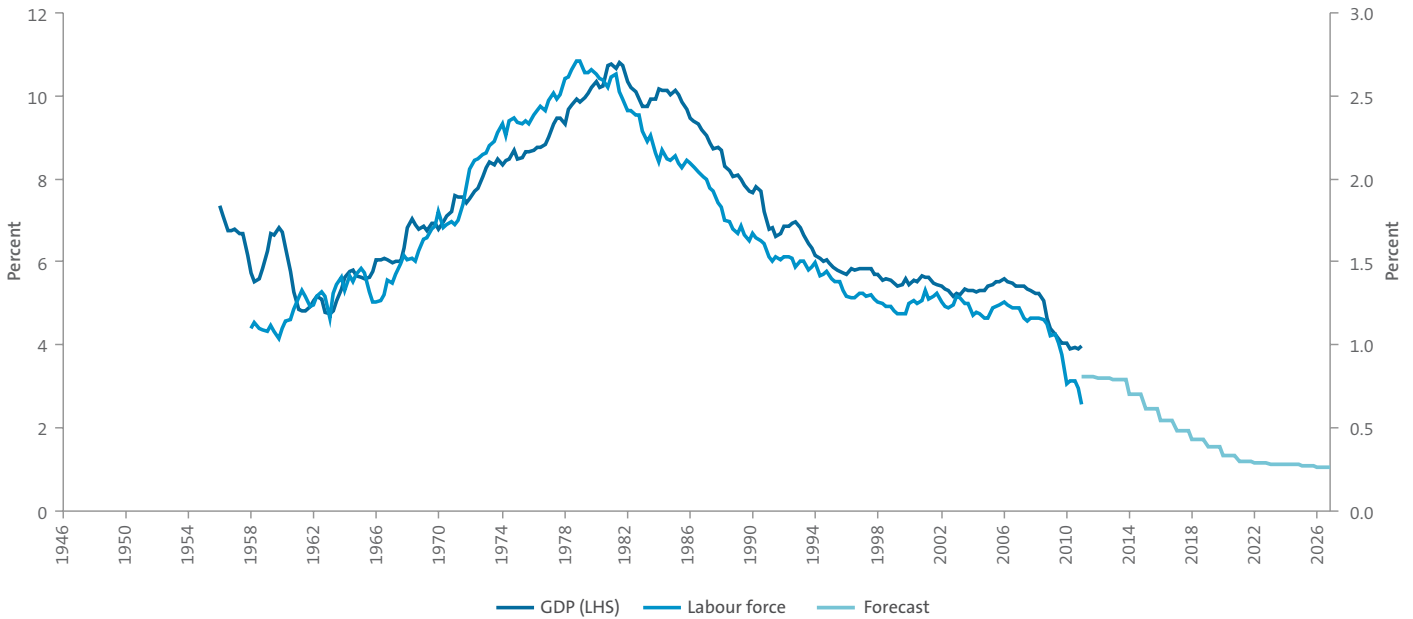
If economic growth is a function of more people joining the workforce, what sort of “new normal” should we be looking at as the structure of the workforce changes?

Figure 15 is entirely consistent with the current view of the world: low yields and low growth. The difference, here, is twofold.

Firstly, demographics is a very powerful force, but very slow moving. So the environment we are in may very well be with us for substantially longer than most people are currently anticipating – quite possibly being generations rather than months or years.

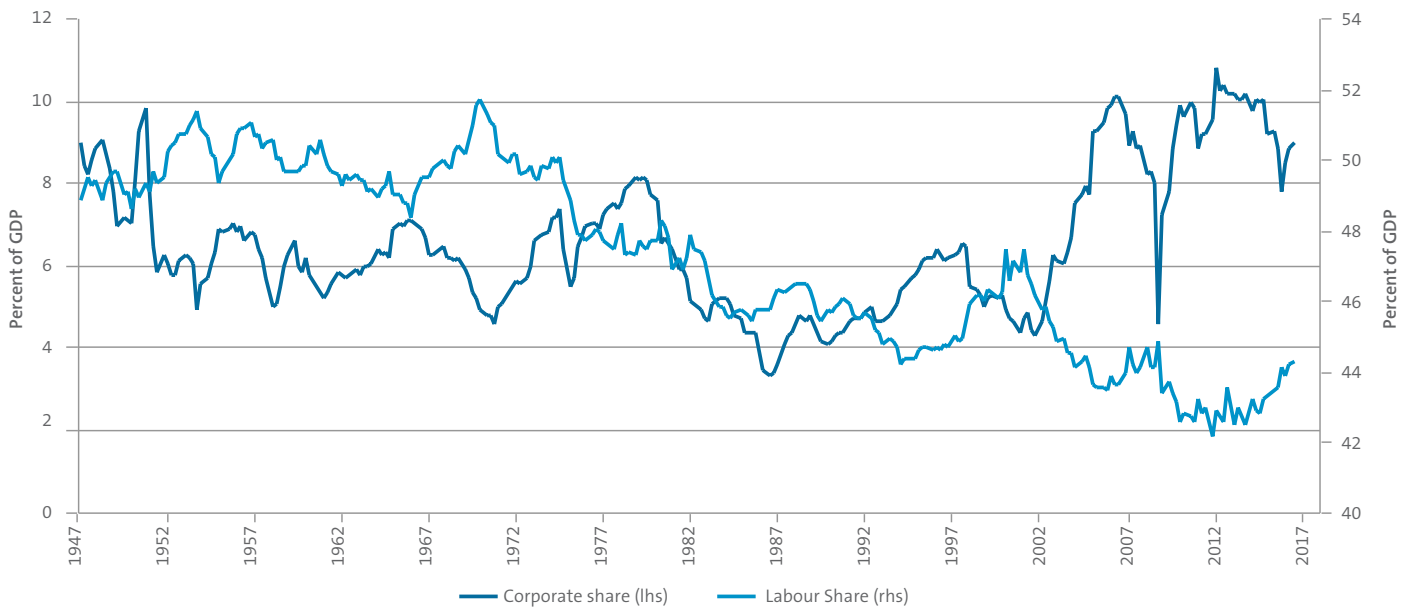
The second thing ties back to the earlier considerations around the drop in the labour force as a proportion of the total population, and the scarcity value of skilled workers as a result. If this plays out we could well see a reversal of the last 40 years where labour as a share of profitability has been in decline: **Figure 16**.

Figure 15. US smoothed growth in current dollar GDP and forecasted labour force



Source: BEA, BLS, Hokenson & Company

Figure 16. Profit / Share



Source: FRED Economic Data

INVESTING WITH A DEMOGRAPHIC TAILWIND

So where does this leave us?

There is an enormous amount to unpack from the demographics, but a couple of trends do seem to be very much at play.

The first of these, is that globally we have a demographically driven pension problem, and the easiest (and thus most likely) political fix to this is to try and steal our neighbours best talent and have them pay for our needy. This will lead to certain cities and states being winners, and others being... less fortunate.

The second of these is that the changing structure of the workforce, combined with the changes in supply and demand of savings by different age cohorts, is potentially painting a future picture of low yields, low growth and higher inflation well into the 2050's.

So what will this mean for investment portfolios? How do we access those assets that offer an attractive yield with inflation protection, exposed to those cities and states that are best able to attract the future workforce?

Turns out Global Listed Infrastructure and Global Listed Real Estate fit the bill remarkably well. If you're looking for inflation protection, attractive yields, strong cashflow generation and tangible assets in winning locations, Global Listed Real Assets is a fertile hunting ground.

In a future paper, we will explore which assets are best positioned to be winners from this demographic shift, and from that which investments in the listed space are most likely to benefit from this tailwind.



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RESULTS

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