Global Thought Leadership
The 21st Century Portfolio*
Low yields – boon or bane?

From Invesco's Global Market Strategy Office
April 2020

Data as of 31 March 2020 unless stated otherwise.
For professional/qualified/accredited investors only.

Introduction

This is an extract from The 21st Century Portfolio* document that was published in November 2019. That document considered the investment outlook to the year 2100 and identified four themes that we believe could materially impact outcomes versus historical norms: low bond yields, demographics, climate change and technological innovation. This is the low bond yield section (we have purposefully left the figure numbers as they were in the original document to aid cross-referencing).

Before delving into low bond yields, we thought it worth giving a brief overview of the conclusions from the original document. Our main conclusions are:

- Low bond yields could encourage growth and innovation but penalise investors
- Decelerating populations and climate change could dampen economic growth
- Innovation will be key to dealing with shrinking populations and limiting climate change
- Businesses and individuals can help mitigate climate change – we suggest how
- Low bond yields and dampened growth estimates to 2100 result in optimisation outcomes that favour equities and real estate
- We favour a core of equity and real estate, with equal country/regional weightings
- And four satellite portfolios focused on the following themes:
  - Africa
  - Carbon reducing innovation
  - Carbon capture
  - Labour replacing innovation

Our conclusions about low bond yields are as follows:

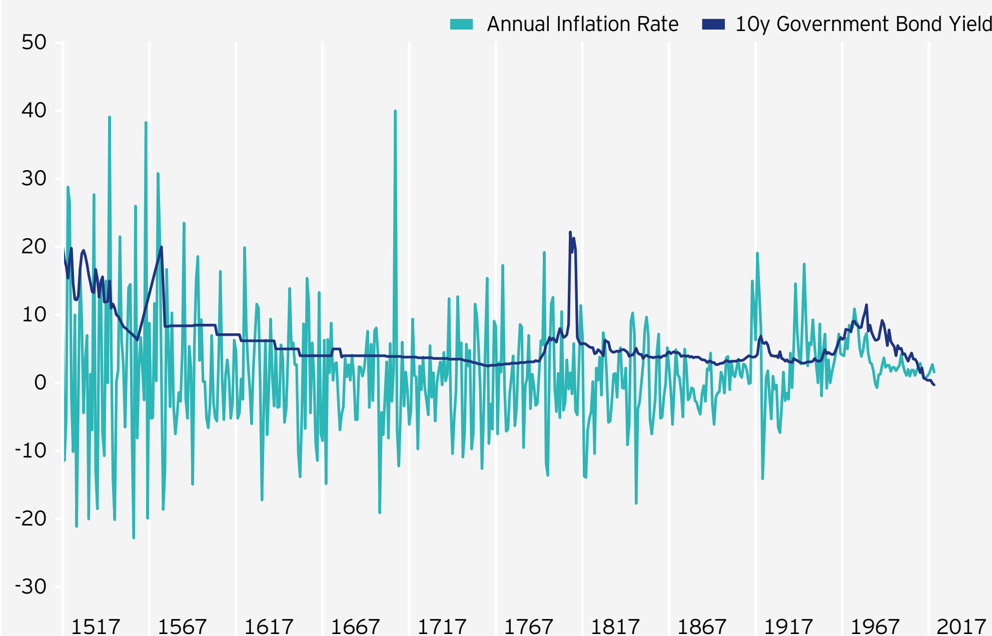
- Government bond yields have never been so low, at least not in the last 500 years. Around $11 trillion of debt carries a negative yield (according to Bloomberg Barclays indices).
- Even when extending maturities to 100 years, it is hard to find sovereign yields above 1% in countries that we would normally consider. A willingness to accept such low nominal yields over such a long horizon requires a very pessimistic assessment of the long-term outlook, in our view.
- We believe the reason for such low bond yields is an excess of savings over investment (too little investment in the developed world and too much saving in the emerging world).
- Another factor that has added to the downward pressure on yields is the asset purchase programmes launched by major central banks during and after the Great Financial Crisis (GFC).
- Normally, we would expect low yields to correct that savings-investment imbalance and there was evidence of this over recent years. Once the imbalance is removed, we would expect real yields to normalise upwards and we suspect this will happen during this century.
- However, the reaction to Covid-19 could push the world into premature (and potentially deep) recession. Apart from the depressing effect on yields of central bank interest rate cuts, the launch of a new round of asset purchases will further reduce real bond yields (in our opinion).
- However, this does not mean that yields cannot normalise upward over the rest of this century. Nor does it invalidate the idea that better returns will be earned on assets such as equities and real estate. After all, the long-term data used in the original publication started in 1915 and thus captured most of WW1, Spanish flu, the Great Depression, WW2 and the GFC. Over that period, we found that US equities offered a significant risk premium versus treasuries.
- We therefore expect equities and real estate to provide better returns than government debt over the rest of this century. We favour an equally weighted country approach to those assets and within the government debt asset class we believe that emerging markets offer the best potential.

* This is a theoretical portfolio and is for illustrative purposes only. It does not represent an actual portfolio and is not a recommendation of any investment or trading strategy.

Theme 1: Low yields - boon or bane?

We live in extraordinary times. Bond yields have never been as low as they are now.

Figure 7 – Dutch inflation and bond yield since 1517 (%)



Data is annual, with 2020 data as of 27 March 2020. Past performance is no guarantee of future results.
Source: Global Financial Data, Refinitiv Datastream and Invesco

Figure 7 shows that Dutch 10-year yields are lower than at any time during the last 500 years, despite the lack of deflation (which has been common over that time frame). Some USD ($) 11 trillion worth of debt now offers a negative yield, around one-fifth of outstanding global debt (on 30 March 2020, according to Bloomberg Barclays indices).

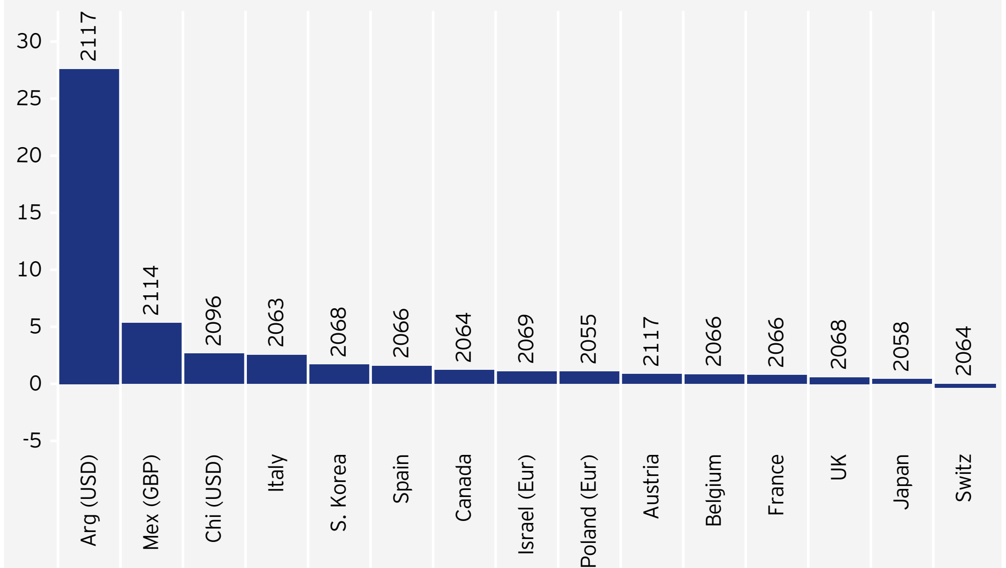
Whether this is good or bad depends upon whether you are a creditor or a debtor. The ability to source funds so cheaply should be a boon for those seeking to finance capital expenditure, be they households, companies or governments. A world confronted by decelerating/ageing populations, dealing with climate change and struggling with Covid-19 will need lots of investment and technological innovation. Low financing costs should render profitable an increasing number of projects, especially since market based real 10-year government bonds yields are -0.4% in the US, -1.1% in the eurozone and -2.6% in the UK (as of 30 March 2020).

Figure 8 shows a selection of the longest maturity bonds that we could find. Few are the countries that have yields high enough to discourage reasonable investment projects, in our opinion. If anything, such low nominal yields, in a world economy growing by around 6% per year (nominal GDP), should encourage long-term investment projects. On the other hand, those seeking to invest in financial instruments would normally be discouraged by such paltry yields. Even when starting from the middle of a global pandemic, it requires a dark view of the future, in our opinion, to believe that better returns cannot be earned over such long time horizons in other assets (equities and real estate, for example).

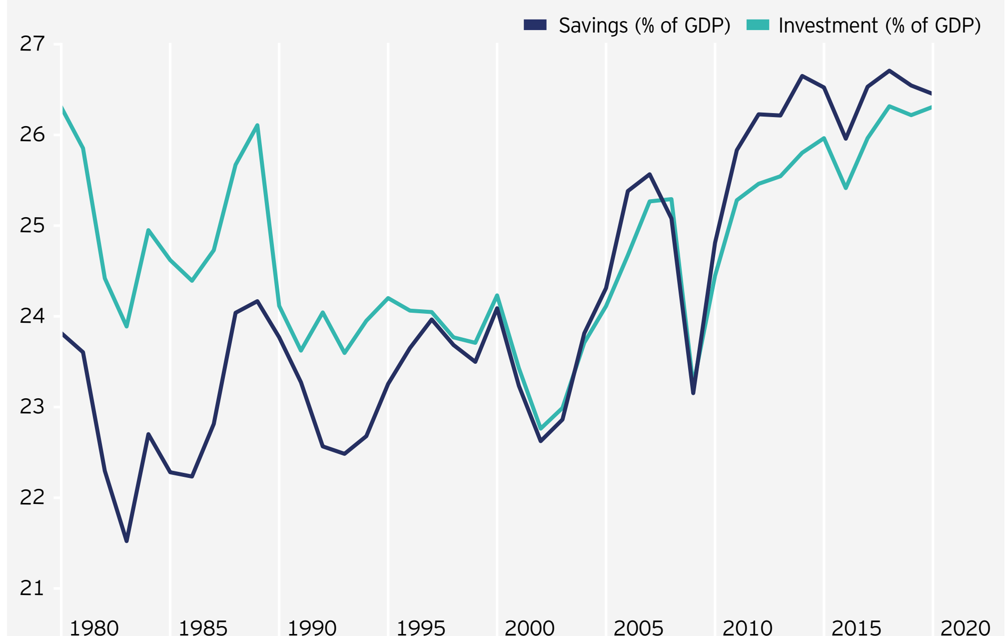
$11tn

of debt now offers a negative yield

Ultra low yields reflect excess saving and central bank debt purchases, both in the developed world



Local currency yields (unless stated otherwise). Labels show the year of maturity. "Arg" = Argentina; "Mex" = Mexico; "Chi" = China; "Switz" = Switzerland. As of 30 March 2020. Source: Bloomberg and Invesco



Note: annual data from 1980 to 2020 (based on IMF data and forecast for 2020).
Source: IMF, Refinitiv Datastream and Invesco

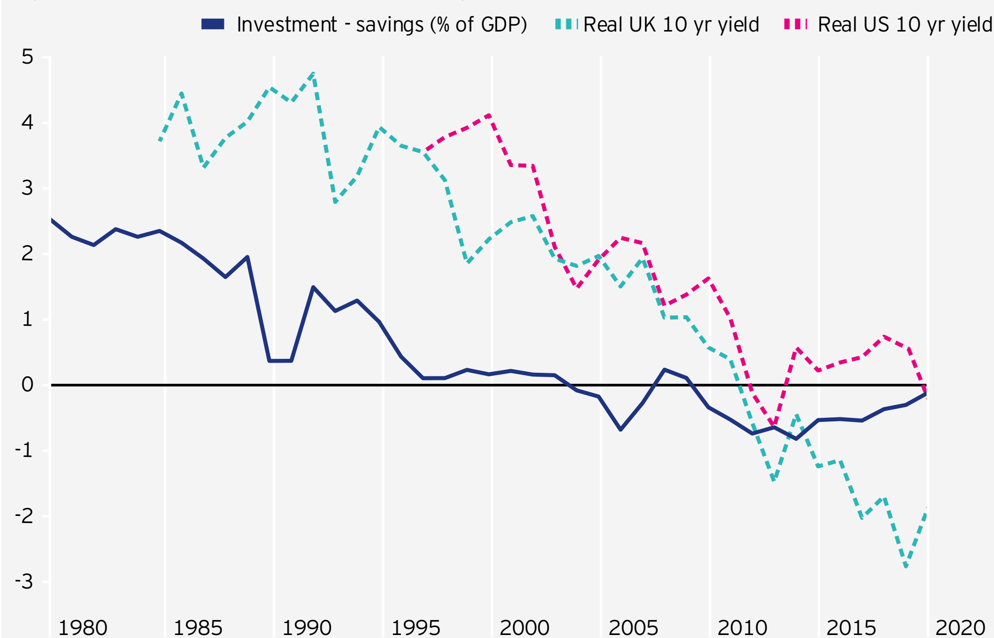
Why are yields so low? **Figure 9** suggests the problem is not a lack of investment spending: the world investment/GDP ratio is currently as high as it has been since the IMF data series started in 1980. Rather, it is that savings have risen even more rapidly. During the 1980s and 1990s there seemed to be a lack of savings (investment was consistently higher than savings). Then in the early part of this century, the two were roughly in balance. However, since the Global Financial Crisis (GFC), there appears to have been a surplus of savings.

It may seem odd that world savings and investment are not always equal. Though an individual country can have a mismatch, with a corresponding balance of payments imbalance, that should not be possible across all countries. However, apart from mismeasurement problems, it is possible to have periods of disequilibrium and interest rates can be thought of as one of the balancing factors that should eventually return the world to equilibrium.

Figure 10 shows that this may indeed have been the case over recent decades. The lack of savings (relative to investment) in the 1980s and 1990s could explain why real bond yields were so high at that time – real UK 10-year yields reached 5% in 1992, well above what any reasonable estimate of growth might have been at that time. In theory, those high real financing costs should have

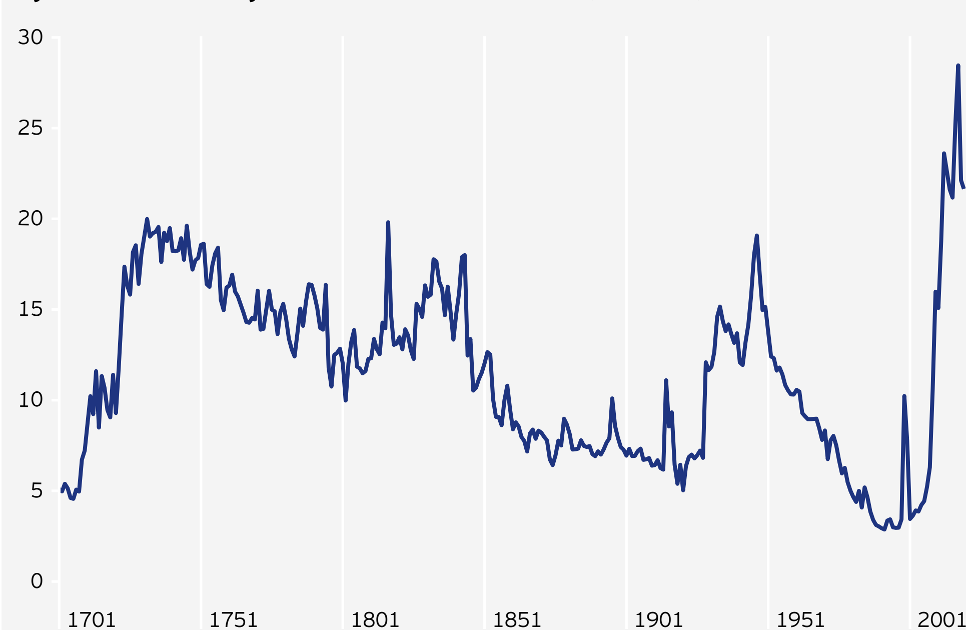
discouraged investment spending while encouraging savings. Indeed, savings trended upward and investment trended lower (both as a share of GDP) and the gap between them had disappeared by the late 1990s.

Figure 10 – Global investment minus savings and real bond yields (%)



Note: Annual data from 1980 to 2020. Savings and investment data is from the IMF (2020 is IMF forecast). Real bond yields are market-based measures taken from inflation protected government bonds, showing the longest available data (2020 data is as of 27 March 2020). Source: IMF, Refinitiv Datastream and Invesco

Figure 11 – Bank of England balance sheet 1701-2019 (% of GDP)



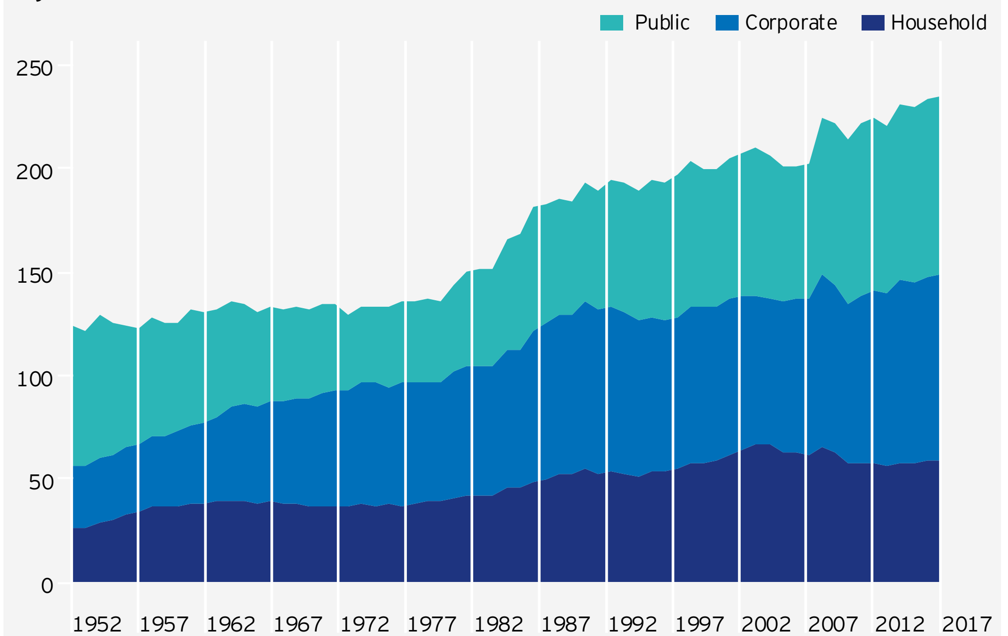
Note: annual data (2020 ratio based on BOE balance sheet as of end-March 2020 and GDP in 2019). Source: Bank of England, UK Office for National Statistics, Hills, Thomas & Dimsdale, Refinitiv Datastream and Invesco

The rough equilibrium between investment and savings in the early part of this century allowed real bond yields to stabilise but then two things happened that we think contributed to the decline in real yields towards current levels: first, savings started to exceed investment (and the gap widened after the GFC); second, central bank asset purchase programmes added to the demand for government bonds (**Figure 11** puts the Bank of England's recent balance sheet expansion into a historical perspective, though recently announced Covid-19 measures are not yet visible in the data).

That savings remain so high in the presence of such low yields may be due to a lingering sense of caution after the GFC. It is commonly thought that rising levels of debt contributed to the financial crisis and it is possible that elevated savings ratios are part of a deleveraging process.

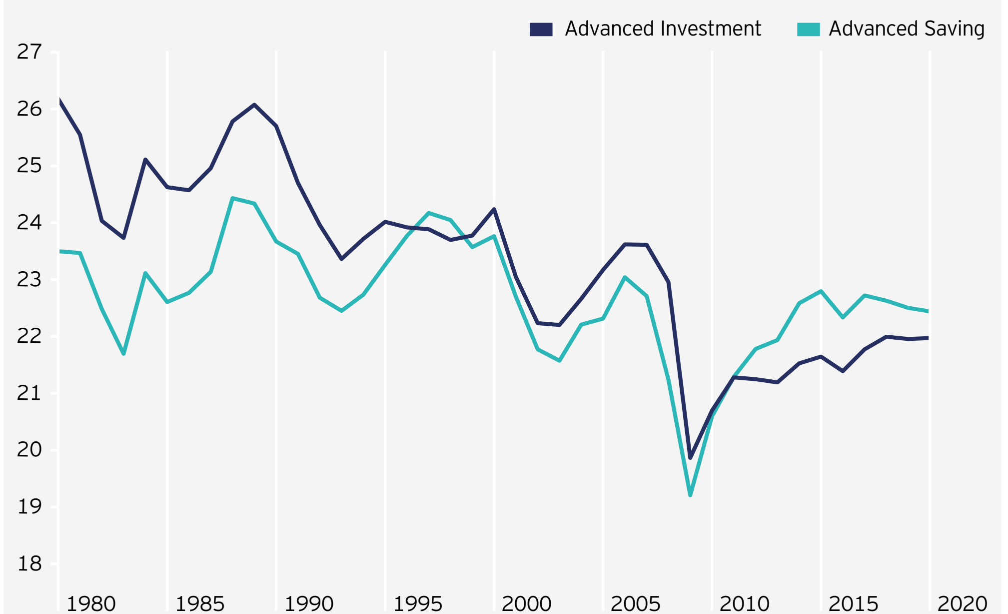
Figure 12 shows there was a near constant rise in the global debt-to-GDP ratio during the post-war era, with a notable acceleration since the late-1970s. The debt ratio has trended upward since the GFC but household debt-to-GDP would appear to have peaked before then. **Figure 12** uses market exchange rates but when using PPP exchange rates, BIS data suggests total global debt has stabilised in the last two years.

Figure 12 – Global non-financial sector debt (% of GDP)



Note: Based on annual data for the 25 largest economies in the world (as of 2018). Data was not available for all 25 countries over the full period considered. Starting with only the US in 1952, the data set was based on a successively larger number of countries until in 2007 all 25 were included in all categories. The data for all countries is converted into US dollars using market exchange rates. Unfortunately, debt is a stock measured at the end of each calendar year, whereas GDP is a flow measured during the year so that when the dollar trends in one direction it can distort the comparison between debt and GDP. To minimise this problem, we use a smoothed measure of debt which takes the average over two years (for example, debt for 2018 is the average of debt at end-2017 and at end-2018).
Source: BIS, IMF, OECD, Oxford Economics, Refinitiv Datastream and Invesco

Figure 13 – Advanced world saving and investment (% GDP)



Note: annual data from 1980 to 2020 (based on IMF data and forecast for 2020).
Source: IMF, Refinitiv Datastream and Invesco

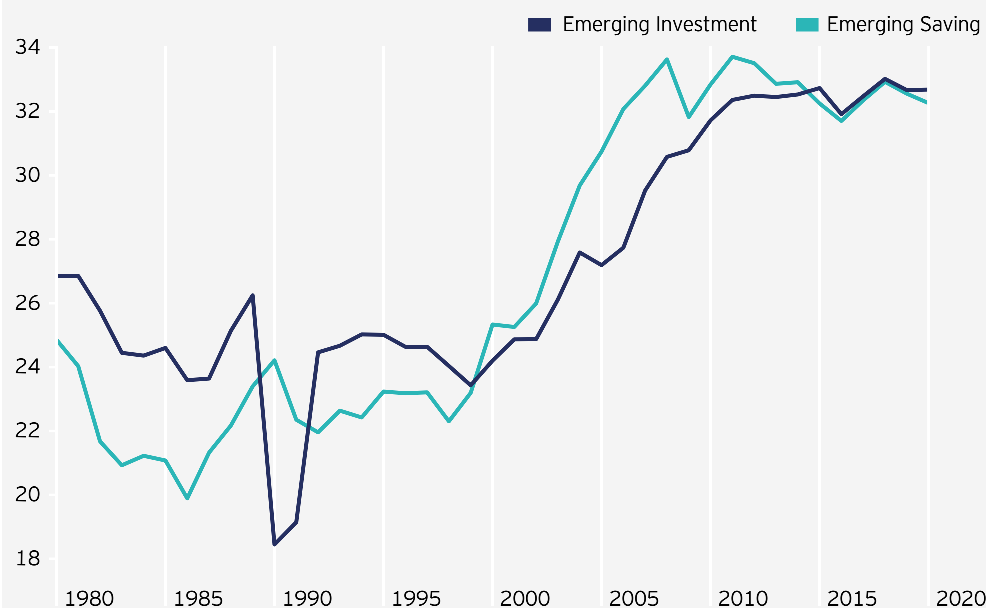
A comparison of **Figures 13 and 14** reveals a stark contrast between advanced and emerging economies: investment spending in the advanced world has been trending lower for several decades (though with recovery since the GFC) and there is an excess of savings over investment. On the other hand, both savings and investment increased markedly in the emerging world in the early part of this century (we suspect due to China) and savings and investment have levelled out since the GFC and are now roughly in balance.

The developed world has a particular problem: weak investment and excess savings, despite extremely low interest rates and bond yields. It is then worth remembering that it is the developed world that has the biggest debt problems (see Global debt review 2019 published in July 2019) and the central banks that have employed quantitative easing. It is therefore in the developed world where we would expect the biggest efforts to encourage investment and discourage savings over the coming years and decades, which may suggest bond yields will remain abnormally low for a long time. In our view, fiscal policy will have to play a much bigger role, as central banks seem to have reached the limit of their powers.

In theory, if governments can reignite economies and boost confidence, low financing costs could pave the way to a strong gain in investment spending in the developed world. Few are the countries that would not benefit from a sustained rise in infrastructure spending. Climate change mitigation and adaptation are obvious areas where spending will be needed and it can be financed cheaply.

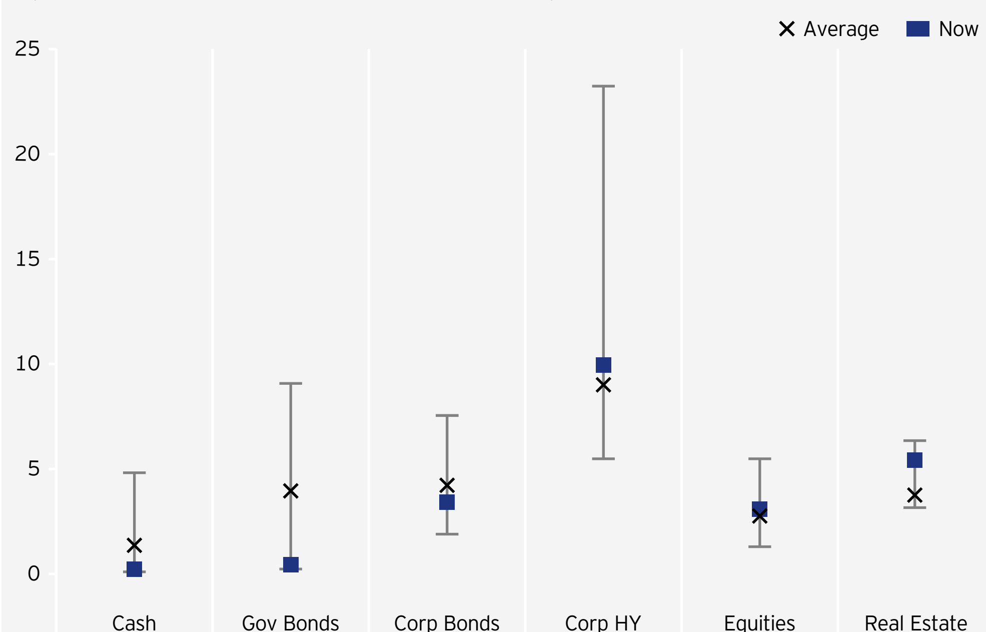
Low rates are here to stay and could help with climate change

Figure 14 – Emerging world saving and investment (% of GDP)



Note: annual data from 1980 to 2020 (based on IMF data and forecast for 2020).
Source: IMF, Refinitiv Datastream and Invesco

Figure 15 – Global asset yields within historical ranges (%)



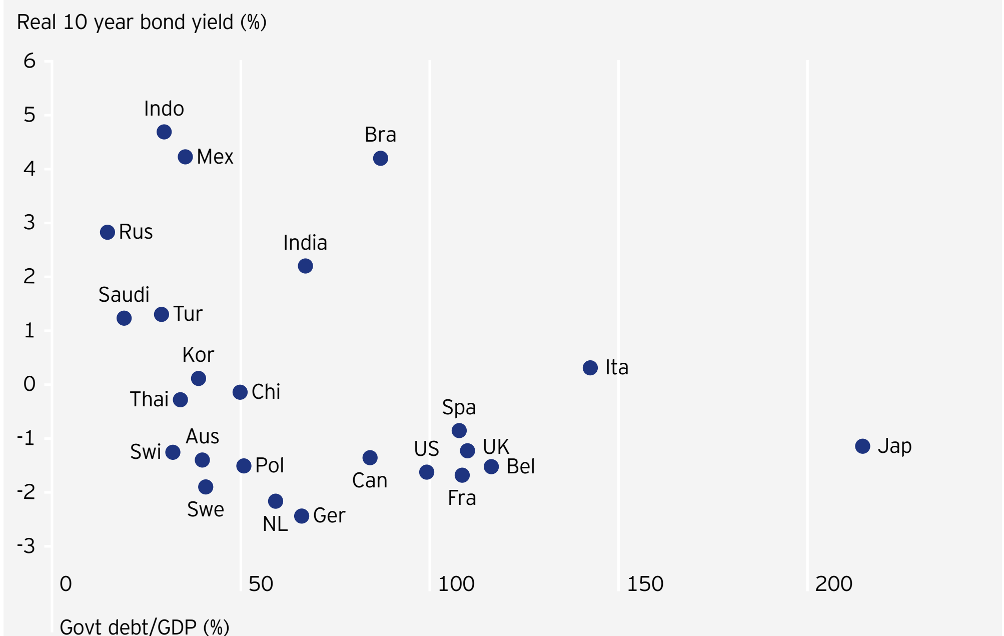
Start dates are: cash 1/1/01; govt bonds 31/12/85; corp bonds 31/12/96; corp HY 31/12/97; equities 1/1/73; REITs 18/2/05. See appendices for definitions, methodology and disclaimers. As of 26 March 2020.
Source: Datastream and Invesco

Much as low interest rates are a boon to governments, companies and households looking to finance spending projects, they are a bane to investors looking to generate investment returns. A 100-year bond with a yield of 1% will, by definition, offer an annualised nominal return of 1% if held to maturity (assuming no default). That does not seem very encouraging, especially if there is inflation.

Luckily, other assets can offer better yields (see **Figure 15**). Equity and real estate yields are above historical norms. We believe this is a strong argument for sticking with such assets, as suggested by the historical returns shown in **Figure 4** in the full version of the 21st Century Portfolio document.

Further, within fixed income assets, we think there are better alternatives than developed world government debt. First, higher yields (and we believe higher returns) are available on investment-grade (IG) and high-yield (HY) corporate debt (see **Figure 15**). Also, within sovereign debt markets, the real yield available on emerging country debt tends to be higher (and government debt lower) than in the developed world (see **Figure 16**). As stated at the outset, we would expect higher returns to be associated with higher volatility but over the sort of multi-generational time-frame that we are talking about, we are not so concerned about volatility and would simply go with the higher projected returns.

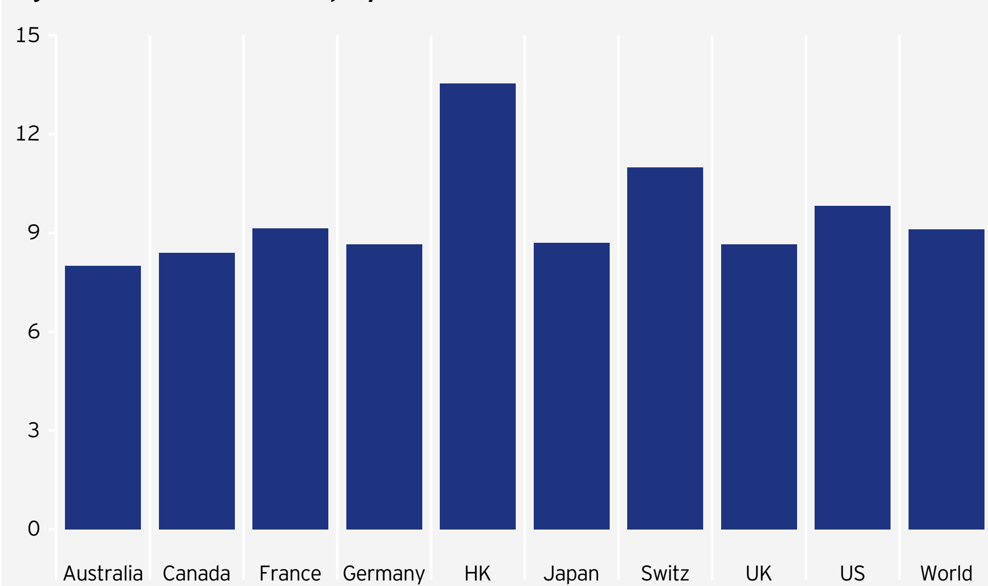
Figure 16 – Real yields and government debt



Note: The countries shown are the 25 largest in the world by GDP, as of 2018 (excluding Argentina). Real bond yield uses IMF forecasts of CPI inflation to 2024 (nominal bond yields were as of 30 March 2020). Govt debt/GDP is as of 2018. See appendix for guide to country name abbreviations.
Source: BIS, IMF, OECD, Oxford Economics, Bloomberg, Refinitiv Datastream and Invesco

We do not have equity indices for many non-US markets since 1915 but **Figure 17** shows a comparison of annualised total returns across countries since 1969. What is striking is the similarity of returns, especially when it comes to major markets. Hong Kong is the stand-out but how many people in 1969 (when Mao was still in power) foresaw how things would turn out in China? This then begs the question as to whether international diversification pays off over the long term?

Figure 17 – Annualised total equity returns since December 1969 (%)



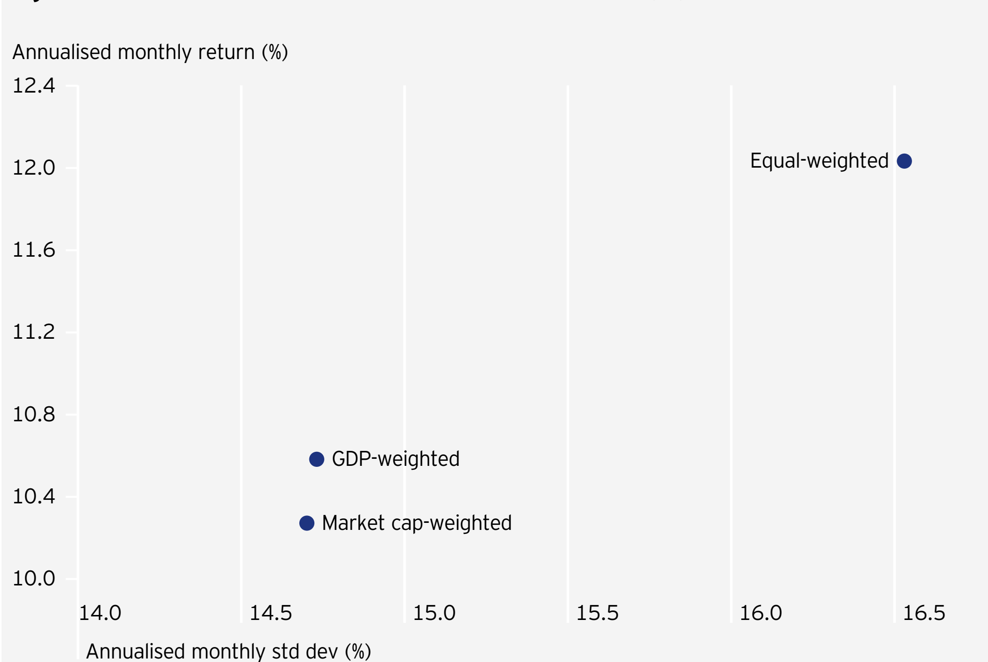
Based on monthly data from 31 December 1969 to 30 March 2020, using MSCI total return indices in US dollars. Past performance is no guarantee of future results. Source: MSCI, Refinitiv Datastream and Invesco

Why lock the grandchildren into the world as it exists today?

However, and as the disclaimer says, the past may not be a guide to the future. It may not be prudent to put all the grandchildren's eggs into one national basket, given the difficulty of foreseeing events over the next 80 years. Our default option would therefore be to invest in a broad version of World equity indices (to include emerging and frontier markets).

Simply buying a capitalisation weighted version of global indices may be the easy thing to do but it may not make sense given the timescales involved (why lock the grandchildren into the world as it exists today, with a built-in bias to the US equity market?). A more balanced approach would be to equally-weight a range of countries (or to GDP-weight them). Historically, this would have produced better returns than a simple capitalisation-weighted index, though with more volatility, which we are willing to tolerate for such a portfolio (see **Figure 18**). Note that, although equal-weighting has produced better results over the full period shown, it has not done so since the GFC.

Figure 18 – MSCI World risk and reward since December 1969 (%)



Based on monthly data from 31 December 1969 to 30 March 2020, using MSCI total return indices in US dollars. "Market cap weighted" is the standard MSCI World Index. "GDP-weighted" is provided by MSCI, with countries weighted by GDP rather than by market capitalisation. "Equal weighted" is our recalculation of the World Index, with countries weighted equally (and reweighted each month). Past performance is no guarantee of future results. Source: MSCI, Refinitiv Datastream and Invesco

An equally-weighted country allocation approach has tended to outperform classic market capitalisation-weighted schemes

Appendix 1: Definitions of data and benchmarks

Definitions of data and benchmarks for Figure 15

Sources: we source data from Refinitiv Datastream unless otherwise indicated.

Cash: returns are based on a proprietary index calculated using the Intercontinental Exchange Benchmark Administration overnight LIBOR (London Interbank Offer Rate). The global rate is the average of the euro, British pound, US dollar and Japanese yen rates. The series started on 1st January 2001 with a value of 100.

Gold: London bullion market spot price in USD/troy ounce.

Government bonds: Current levels, yields and total returns use the Bank of America Merrill Lynch Global Government Bond total return index.

Corporate investment grade (IG) bonds: Bank of America Merrill Lynch Global Investment Grade Corporate Bond total return index.

Corporate high yield (HY) bonds: Bank of America Merrill Lynch Global High Yield total return index.

Equities: MSCI World gross total return index.

Real estate: FTSE EPRA/NAREIT Global total return index.

Abbreviations for country names in Figure 16

Aus = Australia
Arg = Argentina
Bel = Belgium
Bra = Brazil
Can = Canada
Chi = China
Fra = France
Ger = Germany
India = India
Indo = Indonesia
Ita = Italy
Jap = Japan
Kor = South Korea
Mex = Mexico
NL = Netherlands
Pol = Poland
Rus = Russia
Saudi = Saudi Arabia
Spa = Spain
Swe = Sweden
Swi = Switzerland
Tur = Turkey
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