PICTET
1805
Asset Management

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A SECULAR OUTLOOK

2018

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Overview

Financial markets have a long evolutionary history defined by adaptation, innovation and competition.

It is from this vantage point that Pictet Asset Management's Secular Outlook assesses the long-term prospects for equities, bonds and other major asset classes.

Our research suggests that the next five years will see markets evolve along several dimensions, and that each of these structural changes promises to have a strong bearing on investment returns and portfolio construction.

Among the most transformational is the breakneck growth of private assets. A response to both a decline in the supply of attractively-valued US stocks and a lopsided regulatory regime, the growth of private equity in particular is to be welcomed and feared in equal measure. Welcomed because it has the potential to enrich the investment landscape and feared because it threatens to make the task of building an equity portfolio more costly and complicated.

The elevation of non-financial considerations in investors' capital allocation decisions will further reconfigure asset markets. In future, to retain and attract investment, companies will need to pay greater attention to their environmental, social and governance credentials. Those that fail to do so should expect to pay a heavy price.

Investors will also be forced to reassess emerging market investments as competition between the developing and developed world reaches new levels of intensity. The tech sector is likely to be the most fiercely contested battleground. China, India and South East Asian economies look set to capitalise on the technological leaps they've made in recent years, enabling them to challenge Silicon Valley's status as the world's premier innovation hub.

Together, these trends will have profound implications for portfolio construction. Put simply, the default portfolio split evenly between developed market stocks and bonds will no longer be able to deliver the real returns most investors need. Emerging assets will have to become a bigger part of the investment mix. The same is true for alternatives such as private equity, gold and real estate.

Because as financial markets evolve, so should investor portfolios.

1

Secular trends

I

The global economy – back on its feet

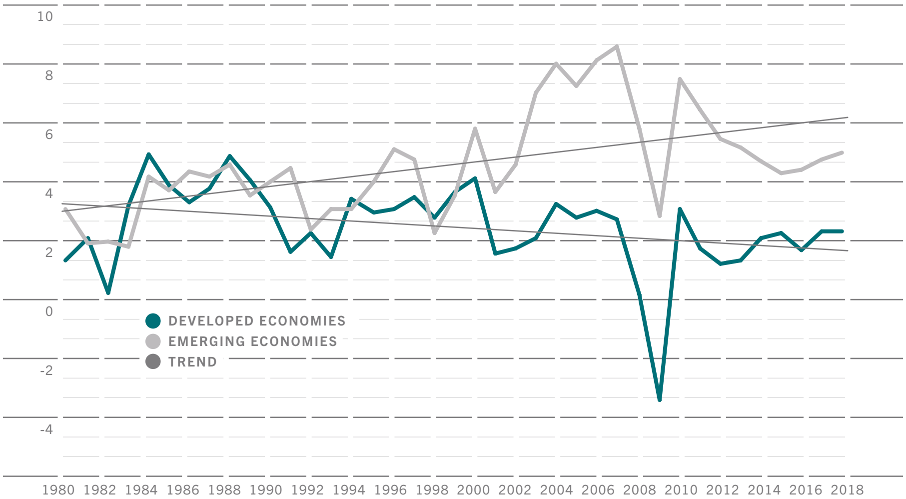
A catastrophic financial crisis almost drove it off a cliff a decade ago. Then it stumbled painfully over the euro zone's travails. But the global economy has at last found its stride again and looks set to keep to it over our forecast horizon.

We expect world GDP to grow on average at its long-run trend of 3.0 per cent over the coming five years – developed economies a little weaker than potential, emerging markets a little stronger, but steady overall.

A growing divide

FIG.1

GDP GROWTH RATES: DEVELOPED AND EMERGING ECONOMIES, YEAR ON YEAR % CHANGE



Source: Thomson Reuters Datastream, data covering period 31.12.1979-25.03.2108

To be sure, there are risks that could yet derail our projections: intractable trade wars; a Chinese financial meltdown; a re-emergence of the euro zone crisis; conflagrations in the Middle East or the Korean peninsula. All these loom over our long-run horizon with varying degrees of likelihood.

Then there are cyclical factors that could play a role over the coming five years, not least because the US recovery has already enjoyed an extended run. US economic growth appears to have peaked and its fiscal deficit and inflationary pressures are growing, thanks in part to generous tax cuts. Indeed, inflation is staging a revival in many parts of the world and could show investors what asset prices used to look like in the absence of supportive central bankers.

We see emerging economies growing at an average of some 4.6 per cent a year over the next five years, about a tenth of a percentage point above trend.

Developed economies have much less scope to grow. We expect 1.6 per cent annual growth over our forecasting horizon, against a long-run potential of 1.8 per cent. Much of this is down to structural changes such as a decline in the working age population and a fall in labour productivity. Trend growth in the US, Canada, UK, Australia and the euro zone has been slowing by about a tenth of a percentage point each year since 1995. This steady downward drift won't be a feature of every economy though: Japan's decline has almost come to an end while Germany has managed a marginal improvement in trend growth – mainly thanks to mass immigration and the labour reforms of 2003-2005.

Central bankers hold the keys

Central banks face a tough task in normalising monetary policy as growth and inflation approach the levels investors were used to before the 2008 crisis. The US Federal Reserve's and other policymakers' biggest challenge in unwinding quantitative easing and raising rates is to do so at a pace that deflates rather than punctures a credit bubble. Central banks are increasingly turning to macroprudential measures, which primarily adjust how much credit banks can supply by, say, varying a regulatory cap on leverage, instituting countercyclical capital requirements and/or limiting loan-to-value or debt-to-income ratios for borrowers. So far, these measures seem to be effective at containing credit bubbles even as most economies return to rude health, nurtured by what are still exceptionally low official interest rates.

The European Central Bank, for its part, faces the perennial threat of another euro zone crisis. To begin with, it is very likely that the new ECB president will be much more hawkish than the incumbent Mario Draghi. And then Italy's recent election result was a reminder of how febrile European politics can be. Populism at the periphery raises the risk of a two-speed Europe, with the Franco-German core pursuing ever closer integration and leaving the rest trailing. That's not to say France and Germany are immune from populist politics, though traditional parties could take a page from their rivals' books and adopt populist measures such as more public spending.

In Germany, such a fiscal boost would potentially set the government at loggerheads with the ECB – we are already expecting German inflation to run at 2 per cent over the next five years. Yet European institutions have shown themselves to be flexible when necessary, content to turn a blind eye or fudge a solution – a tendency which benefits the UK more than the ugly Brexit headlines may suggest.

China is certain to have a major influence on the global economy over the next five years. Our view remains that Chinese growth will slow to a long-term trend of around 5 per cent from around 7 per cent in recent years. This expected slowdown is down to several factors. The economy's increasing maturity, unfriendly demographics and government efforts to source more growth from domestic consumption and services (and less from investment) are each weighing on the economy, as are regulatory moves to reduce non-financial debt. But even though our growth forecast is a third below the average of recent years, it's enough to keep China converging towards US per capita GDP.

In this context, the expansion of President Xi Jinping's powers could prove a mixed blessing. Over the short term, a stronger central authority is better placed to push forward reforms – with the caveat that too aggressive a shift could unbalance China and trigger a financial crisis. Longer term, however, reforms could alienate important political constituencies in the country, raising the spectre of political upheaval and consequent economic stumbles. Turkey's recent struggles following a failed coup and President Recep Tayyip Erdoğan's increasingly autocratic administration offer salutary lessons.

So we expect the engine of global growth to be India, thanks to major reforms such as rationalising a tangle of state and local levies into a unified national value added tax or cutting and reducing bureaucracy and graft by simplifying and automating welfare and benefits transfers. It is the only major economy where growth has trended higher during the past two decades, and we expect it to expand broadly in line with its long-run sustainable rate of 7.5 per cent over the forecast period. It would then account for nearly a third of total global growth. Indeed, India's economy looks uncannily like China's in the early 2000s: with an 8 per cent share of global GDP, 10 per cent of US GDP per capita, a population of 1.25 billion, and a trend growth rate of between 7 and 8 per cent.

The productivity puzzle

The world's growth potential is on a downward trend because of a simultaneous slowdown in labour productivity and investment in capital stock.

Maybe it shouldn't be surprising that incremental improvements to how much workers can produce are shrinking, both in developed and emerging economies. In the US, for instance, investment in education is no longer increasing as a percentage of total spending. Not that more money is always the answer – American spending per pupil has nearly doubled in real terms since the early 1980s, yet National Assessment of Educational Progress averages are basically unchanged for elementary and secondary students.

At the same time, the US economy is becoming less entrepreneurial: regulation increases and competition decreases. The composition of the labour force is another drag – there are fewer prime-age workers in the 40- to 50-year-old bracket to spread skills and experience. The US capital stock is barely growing on a per capita basis, once depreciation is factored in.

The picture isn't entirely hopeless. Over the longer term, technical innovation and higher spending on research and development should eventually feed through to output, even if there's limited evidence that this is happening now.

Indeed, it is surprising to see productivity slow while the digital economy is booming. The paradox doesn't seem to be simply down to measurement errors. Maybe modern technology just isn't as revolutionary as, for instance, the introduction of electricity and the internal combustion engine. We suspect the current wave of technological innovation isn't so much a democratisation of technology as a redistribution of wealth to the owners of intellectual property rights.

Whatever the causes, US labour compensation has fallen to a record low of 30 per cent of market capitalisation. In other words, a dollar of wages only buys 30 cents of the US equity market, a quarter of what it bought in the early 1980s. That's a consequence of how much wage growth has lagged behind equity returns. Over the past 60 years, wages have gone up 6.2 per cent a year in nominal, or money, terms. That's in line with US bond returns. Meanwhile, the economy has grown 6.5 per cent a year while investors gained 11 per cent from equities.

We expect this trend to reverse. Over the next five years, wages will grow faster than GDP, which, in turn, will grow faster than equity returns, at least in the US. The decline in the supply of labour, coupled with pressure on governments to make work pay – not least through higher minimum wages – should go some way towards revaluing the worker.

II

The remarkable rise of private assets

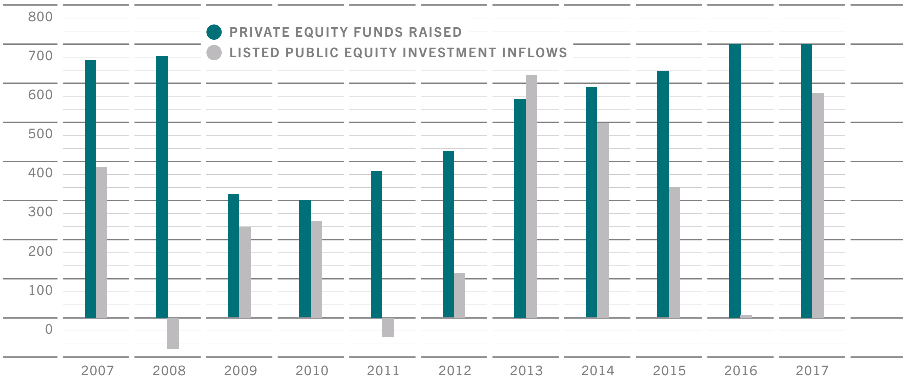
It provides companies with access to cheap capital. And it offers virtually everyone in society an affordable and straightforward way to acquire a stake in human ingenuity. As a mechanism for lifting economic growth and democratising finance, the stock market has few genuine rivals.

But the listed company's unique status in the world of investment is being contested. The challenge comes from privately held firms, which account for an ever bigger slice of the economy. This is particularly true of the US. Although the total number of US companies has remained relatively steady in recent decades, fewer of them are publicly traded. As a percentage of all US firms, the proportion of listed companies has fallen by more than half since peaking in 1996.[1]

FIG. 2

Private equity markets trump public stocks

INFLOWS PUBLIC VS PRIVATE EQUITY, US, USD BILLION



Source: Preqin, Morningstar;
data covering period 31.12.2016-31.12.2017

If this trend continues, it could make equity investing more complicated and costly for all but the wealthiest and largest investors. It could make equity investment riskier too.

1 Doidge, C., Karolyi, A., and Stulz, R. The US Listing Gap, on file with the Journal of Financial Economics, September 2016.

There is little doubt that private equity is enjoying a golden period. Globally, private equity assets under management reached a record USD2.8 trillion in 2017, growing some 7 per cent year-on-year over the past decade.[2]

And as FIG.2 shows, funds raised in private equity have outstripped investment flows into listed equity funds in four out of the last five years.

Unicorns – private companies with a valuation of above USD1 billion – are central to this trend. According to The Wall Street Journal there were 155 of these unicorns by the first quarter of 2017, more than three times the number in 2014. Private investment in tech start-ups, meanwhile, has tripled since 2013.[3]

Theories abound as to why this is happening.

Large pension funds have had a big influence. Concerned by the high valuations of publicly traded stocks and by their own stubbornly wide deficits, pension plans are increasingly attracted to the illiquidity premium offered by private investments, especially private equity. According to the investment consultant Willis Towers Watson[4], pension fund allocations to listed shares decreased by some 10 per cent over the past two decades, while holdings of alternative assets such as private equity and real estate increased by 20 per cent.

But there are other forces supporting private equity at the expense of publicly listed stocks, particularly in the US.

One is the rise of passive investing. The growing popularity of index-tracking means there are fewer investors buying the stocks of companies excluded from major equity indices such as the S&P 500.

For firms that lie outside the big market benchmarks, the appeal of remaining listed in the US naturally diminishes. At the same time, public companies are becoming frustrated at the short-termism of shareholders. In the 1980s, an investor could be expected to hold a stock for at least two years. The holding period today is less than eight months, making it difficult for executive boards to plan and invest for the long term. A private firm's board wouldn't face such constraints.

A lopsided regulatory regime is also undermining the role of the US public company. While oversight of listed firms has tightened, the same cannot be said for the private sector, where disclosure requirements have, if anything, become less onerous in recent years.

The upshot is that as private equity has grown, the number of companies listed on US exchanges has almost halved to about 3,600. Not only are American firms moving out of stock markets in greater numbers, but initial public offerings (IPOs) are also in decline. In the two decades to 2000, US entrepreneurs launched an average of 300 IPOs per year. From the 2000s onwards, the annual IPO

2 Source: Preqin, 2018
3 Source: McKinsey, 2018
4 Willis Towers Watson Global Pension Asset Study, 2017

count dropped to just 99. Moreover, the total US share of IPOs worldwide has fallen from 31 per cent to just 10 per cent over that period even though, measured as a proportion of the world's total output, the country's economic standing has remained constant.[5]

A transformed equity landscape

If, as we expect, the shift from public to private equity gathers strength in the next several years, the implications for investors will be profound.

Equity investing is bound to become more complex and expensive.

Compared to their listed counterparts, private firms are hard to invest in. Typically, only the very wealthy can afford the sums demanded for direct access via private equity funds. Investment charges are another problem. Even as the volume of private equity investments has soared, the industry has broadly stuck to its standard fee arrangement, taking 20 per cent of total investment gains on top of a 2 per cent management fee. And while retail investors can access private equity through fund of fund vehicles, such products levy an additional charge of at least 2 per cent.

Then there's the risk. Private firms face a far lower degree of regulatory scrutiny than their public counterparts. In this less transparent world, investors can't be sure of a company's policies in areas such as governance and the environment.

Returns from equity investments might also prove less inspiring than in the past – both in public and private markets. For the investor in listed companies, a lacklustre IPO market is troubling because it suggests that most of the value of equity investing is realised either in the private market (via a buyout or similar transaction) or in the years prior to a firm's listing.

Those fortunate enough to be able to invest easily in private companies, meanwhile, will find that their investments will be less lucrative than in recent years (even if private equity will retain a sufficient – if narrowing – advantage over listed stocks).

With capital pouring into private equity at a rapid rate, the volume of money chasing assets threatens to outstrip the supply of viable investment opportunities. That risks inflating initial valuations and dampening future returns.

There is already evidence of this. Over the past two decades, private equity has returned some 10 per cent more per year than stocks in the S&P 500 index. In the past three years, however, that premium has shrunk to well below the long-term average, and is now hovering at just over 3 per cent annualised. Our research shows that most of this reduction can be attributed to a narrowing of the

5 See, Fontenay, E., The Deregulation of Private Capital and the Decline of the Public Company, 2017, Duke University School of Law.

"illiquidity premium" of private investments, or the extra return investors expect to receive as compensation for having to hold such assets for much longer periods than listed stocks.

Moreover, there is a substantial body of academic research that finds a negative correlation between fundraising activity in private equity and future returns. One study, spanning 20 years, shows that when inflows into private equity are exceptionally strong, the return from that investment is lower than average in subsequent years.[6] That should be a worry for investors given that the amount of dry powder private equity funds have at their disposal is at an all-time high of USD1 trillion, according to Preqin.

Equity investing, then, is being transformed. As little as 10 years ago, all investors had to do to build a stake in the very best corporate America had to offer was to buy a diversified portfolio of listed companies. But the continued rise of private firms and private equity will force a change in approach. To achieve the same goals today and in future, investors will need to make additional and sizeable allocations to private equity, early-stage venture capital vehicles and late-stage venture capital funds. That is bound to make investing more costly and complicated.

FIG.3

Private firms' shrinking returns

RETURN OF US PRIVATE EQUITY BUYOUTS VS S&P 500 STOCKS, MONTHLY, 3-YEAR MOVING AVERAGE, %

Source: Preqin, Thomson Reuters Datastream; data covering period 31.12.2001-31.12.2017

6 See Kaplan, S. and Stromberg, P., Leveraged Buyouts and Private Equity, 2009 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1194962

Private debt assets in the ascendancy

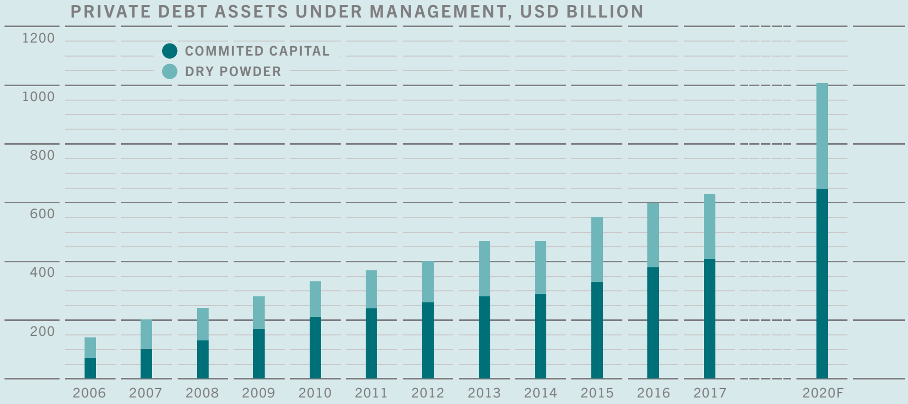
The rapid expansion of private assets isn't confined to equity: it's also spreading through the credit market. Since 2000, the volume of private debt assets under management has risen by a factor of 14 to more than USD600 billion. According to the Alternative Credit Council (ACC), the pace has increased over the last 10 years, with volumes of committed capital and dry powder growing at an annual compound rate of 20 per cent.

By 2020, the private debt industry's AUM will have broken through USD1 trillion, the ACC estimates. The growth reflects structural changes in both the supply of credit and demand for debt investments. On the supply side, tighter regulation of the financial industry has forced banks to shrink their loan books. That has created a gap which has been plugged by alternative providers of debt capital – such as asset managers and crowd-funders. At the same time, investor demand for private debt has grown as central banks' quantitative easing programmes have pushed valuations for most publicly traded fixed income assets to historically expensive levels. More than half of all institutional investors now have allocations to private debt, according to Preqin data, and an additional 13 per cent plan to add such assets to their portfolios. Although private debt offers higher yields than tradeable bonds, that premium is designed to compensate investors for risks including lower levels of protection in the event of default. What is more, there is a greater dispersion in the returns of private debt assets compared with publicly traded bonds. So, as with private equity, allocating capital to private debt requires investors to take on considerably more risk.

Private debt in the ascendancy

FIG.4

PRIVATE DEBT ASSETS UNDER MANAGEMENT, USD BILLION



Source: AIMA;
data covering period 31.12.2006-31.12.2017

III

ESG — investment's default setting

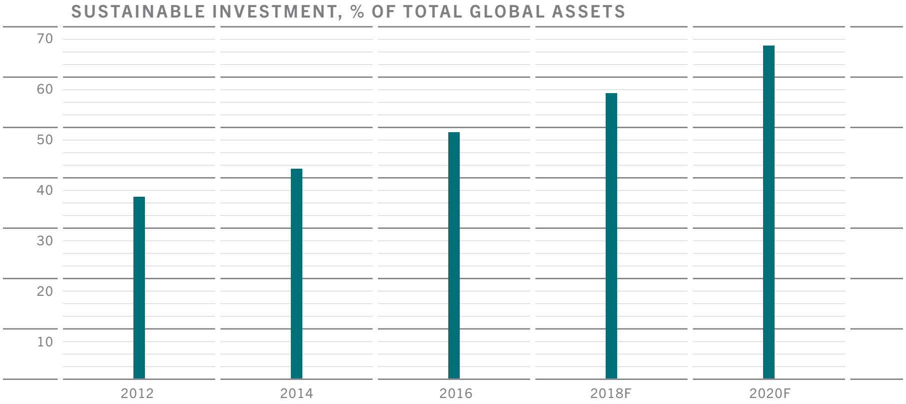
Financial data such as profit margins and revenue targets will always be a vital guide to future business success. But as investor attitudes towards the environment and social welfare change, and the flow of corporate information becomes ever harder to manage, such measures of company performance will have less influence on how capital is allocated in future.

More attention will be paid to how a company addresses wider environmental, governance and social (ESG) concerns. In fact, a

Global finance pivots towards sustainability

FIG.5

SUSTAINABLE INVESTMENT, % OF TOTAL GLOBAL ASSETS



Source: Pictet Asset Management, Global Sustainable Development Alliance, PWC

firm's ESG credentials are already starting to have a major bearing on its ability to raise capital and generate profits — corporations are discovering that the world they inhabit is one where reputational damage can prove fatal.

ESG has become one of the fastest growing segments in international investment, with assets embedding these factors growing at a pace of around 12 per cent per annum.[7]

7 2016 Global Sustainable Investment Review, compound annual growth for 2014-2016

The speed and scale of ESG's ascent are reminiscent of the surge in popularity of passive investment, which has boosted global ETF assets ten-fold since 2005.[8]

We expect ESG considerations to be incorporated into over half of all global assets under management by the end of this year. If the current pace of adoption holds, by 2020 the share will be two-thirds (although not all of these will have embraced sustainability with equal depth).[9]

Backed by regulatory support – whether that's from governments keen to fight climate change and pollution or from financial watchdogs and large investors promoting higher fiduciary duty standards – ESG clearly has the potential to become the "new normal" for the investment world. If that happens, what will it mean for business strategy and for financial markets?

New responsibilities

Companies will need to embrace ESG to attract customers and investors in the new, sustainability-conscious world. This should also help them avoid sudden and potentially costly official intervention.

The risks of doing nothing can be high, as five of the world's largest oil companies found out in January 2018 when the City of New York filed a multi-billion-dollar lawsuit alleging the industry contributed to global warming. The case is just one of many: there are now well over 100 climate-change litigation cases a year.[10]

Such pressures raise the corporate value of legitimacy and social trust. Tech companies, for example, are already stepping up data privacy controls; in future they could self-regulate content and cooperate with governments on national security issues. Food and drink makers, meanwhile, are under pressure to ease strains on public health provision, through taxes on junk food and targets on calorie content.

The ascent of ESG won't stop here. "Robot taxes" could attempt to compensate for the loss of jobs through automation , and businesses may have a role to play in any universal basic income provisions to combat income inequality. This is already being explored by pilots, including one spearheaded by Facebook co-founder Chris Hughes in Stockton, California.

8 EY, Global ETF Research 2017 http://www.ey.com/Publication/vwLUAssets/ey-global-etf-survey-2017/$FILE/ey-global-etf-survey-2017.pdf

9 ESG percentage based on historic growth rates

10 Grantham Research Institute on Climate Change and Environment; Sabin Centre for Climate Change Law

Corporations that improve their sustainability credentials can reap substantial financial rewards.

Academic studies link positive ESG attributes to reduced earnings volatility and higher future return on equity, which over the long term should support a company's market valuation. For investors, that tends to translate into lower volatility of returns.[11]

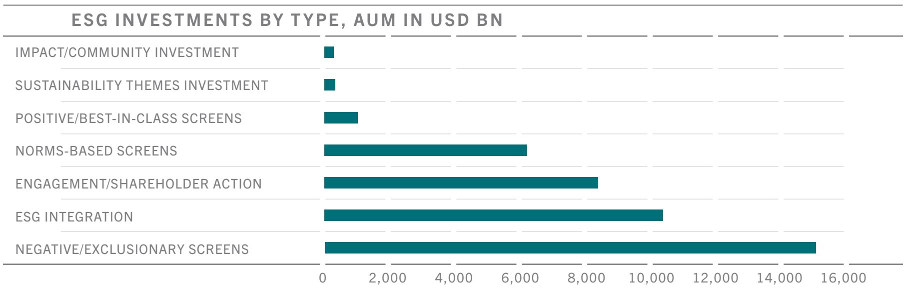
ESG concerns also influence the cost of capital – both equity and debt (see our paper "Responsible investment: the evidence stacks up"). Notably, Standard & Poor's has cited environmental risks as the main or contributing reason for 299 corporate rating revisions over a two-year period.[12]

As ESG goes mainstream and becomes the de-facto standard of investing, investors will reward "green" companies at the expense of their less sustainable peers, both by favouring them in asset allocation and by attaching a higher value to their intangible assets. This will have direct cost of capital repercussions.

If the financial arguments for sustainable investing – that it ultimately selects stronger, more future-proof companies – hold up, then businesses which do not pass muster will deliver lower returns. This, in turn, will fuel investor outflows on fundamental rather than

ESG's footprint

FIG.6



Source: GSI Alliance,
data as of 31.12.2017

purely ethical grounds. Investment consultant Mercer estimates that the embrace of environmental investing could cut expected returns for the coal sector to as low as 1.7 per cent per annum, while boosting them for renewable companies to as high as 10.1 per cent.[13]

11 Verheyden, T. Eccles, R. & Feiner, A. 2016. "ESG for All? The Impact of ESG Screening on Return, Risk, and Diversification.", Trunow, N. A., Linder, J. (2015) Perspectives on ESG Integration in Equity Investing. White Paper, Calvert Investments

12 Standard and Poor's "How Environmental And Climate Risks Factor Into Global Corporate Ratings"

13 https://www.mercer.com/content/dam/mercer/attachments/global/investments/mercer-climate-change-report-2015.pdf

Additionally, there is a case to be made for index providers to exclude some companies – such as manufacturers of controversial weapons – from mainstream indices, in line with what is becoming market practice among investors. This could make it much harder for such businesses to find financing. The impact of any such move would be all the more significant given the recent growth of passive investing.

There is, thus, the potential to create a virtuous circle, where a focus on sustainability ultimately rewards companies and their investors as well as easing some of the strains on our world. But that can only happen if ESG is applied in a robust way, beyond mere lip service. Challenges include the need for rigorous, standardised reporting – for private and public companies – which accurately measures sustainability achievements.

There are signs that governments are supportive of the need for such change. Faced with conflicting forces of fiscal constraints and growing social spending needs, authorities are increasingly encouraging both corporates and investors to embrace ESG principles. With perseverance, better governance could deliver its own rewards.

IV

Emerging markets – home to the next great tech revolution

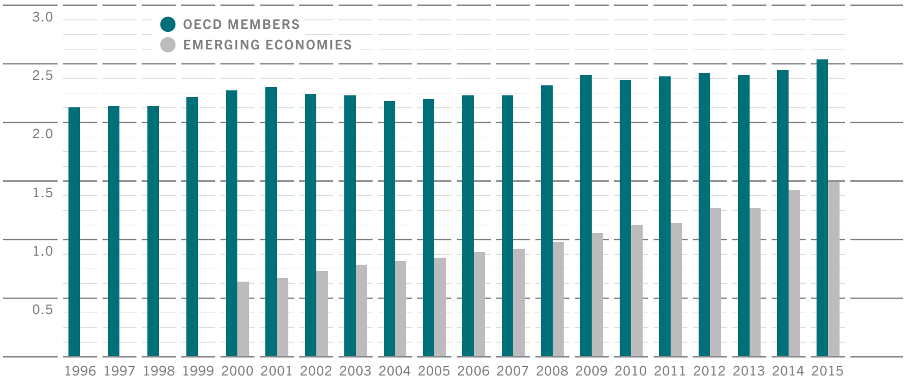
Silicon Valley's disruptive technologies have upended industries from manufacturing to health care and retail to transport. But its status as the world's innovation hub is facing its strongest challenge yet, from countries that were dismissed until very recently as unsophisticated tech copycats – emerging markets.

Countries like China, for instance, now enjoy much greater pricing power as they produce increasingly sophisticated electronics. High-end goods now account for 87 per cent of Chinese exports, up

Emerging world racing to close tech gap

FIG.7

SPENDING ON RESEARCH AND DEVELOPMENT, AS % OF GDP



Source: World Bank

from 63 per cent in 2001.[14] India is following suit, focusing on high-tech products to help lift manufacturing from 16 per cent of GDP to 25 per cent by 2025.[15] What is more, Korea and Taiwan have helped power the global rise in smart phone sales, with the market capitalisation of industry leaders such as Samsung increasing by more than 60 per cent in just two years. More broadly, emerging nations are becoming better innovators than their rich world counterparts. As IMF data show, the number of patent awards in developing economies, excluding China, grew at more than 7 per cent a year in the decade ending 2014. In the rich world, they grew by less than 3 per cent.

14 Bank of Canada, November 2017
15 Government of India, July 2016

The emerging world's embrace of technology points to a new era in its economic development. Under the traditional operating model, developing countries simply plugged themselves into global supply chains, manufacturing goods that were conceived in the West much more efficiently and cheaply than the rich world ever could. Cheap labour was part of that equation.

But tech innovation opens up an entirely new set of possibilities for emerging economies.

By moving to the frontiers of digital transformation, countries through Asia, Latin America and beyond have opened themselves to the possibility of creating home-grown, value-added products and services. They now have the capacity to loosen Silicon Valley's grip and generate revenues that no longer rely on technology transfer.

Current projections show the earnings of EM companies in the MSCI ACWI Information Technology index will grow 22 per cent over three to five years, outpacing the 16 per cent expected from their developed-market counterparts.

Developed economies are, of course, unlikely to sit back and watch. The threat could prompt tariffs and curbs in a world where trade tensions are already increasing. US President Donald Trump has already threatened to slap USD100 billion in tariffs on China – specifically targeting its "Made in China" 2025 drive – alleging intellectual property theft.

But with spending on research and development in emerging economies catching up fast with that of their developed counterparts, the innovation gap is already starting to narrow, and in key areas of the economy.

— **Artificial intelligence:** China has an ambitious government-led plan to become a global hub for AI and is already home to tech giants such as Alibaba and Baidu that can challenge American hegemony in AI software. AI could also give Taiwan and Korea's semiconductor industries a new lease of life, with the potential to generate around 25 per cent of total semiconductor demand by 2020, up from 10-15 per cent today.
— **Mobile messaging:** Emerging-market-based companies are already becoming competitive in the messaging service sector, offering a wider range of services than Silicon Valley firms, such as money transfers, job searches and prepaid electricity. Chinese service providers have a particular advantage: they can harvest big data gleaned from the country's 1.3 billion citizens.

— **Digital society:** India's radical move to transform its financial and monetary system has no comparison. The cash clampdown in November 2016 has stripped USD45 billion of cash from the economy while the number of transactions processed by the government payment system has jumped to 76 million from just 100,000 a year before. Digital identification system Aadhaar is the only non-US tech service to have broken the 1-billion-user threshold. While Aadhaar is government-owned, there's significant potential for local banks and insurers to use the platform to tap customers outside the formal financial system, thus leapfrogging the traditional branch banking set-up to adopt digital banking and payments. In Kenya, mobile money system M-PESA is expanding rapidly.
— **E-commerce:** Latin America is the fastest growing e-commerce area after Asia.[16] Home-grown online platforms are increasingly catering to a well-connected middle-class population in a region with limited infrastructure. Companies like Argentina's MercadoLibre, already Latin America's most popular e-marketplace,[17] are beginning to expand outside their home region.
— **Blockchain technology:** A number of emerging economies are embracing financial technologies, including blockchain and digital currencies, to build infrastructure and raise the level of public trust. Venezuela has already launched a virtual currency, the first to be issued by a nation.
— **Environmental technology:** China is financing a thriving environmental technology industry as Beijing directs capital towards tech-focused anti-pollution programmes, boosting the prospects of local firms that develop, for example, filters for engines and industrial applications for pollution control. China now files more environmental technology patents than Japan and Korea, Europe or North America.

As emerging markets' tilt towards technology alters their economic prospects, so too will the shift alter the behaviour of their financial markets – particularly equities.

16 Latin America's e-commerce market is set to grow at CAGR of 19 per cent between 2017-2022. Source: WorldPay as at 20.10.2017
17 By number of visitors, Statista as at 31.01.2016

By focusing on technology, the emerging world's stock markets will become even less sensitive to the ups and downs in commodity prices. Technology firms are now the biggest single sector in the MSCI EM equity index, accounting for 27 per cent of the benchmark, compared with 10 per cent a decade ago.

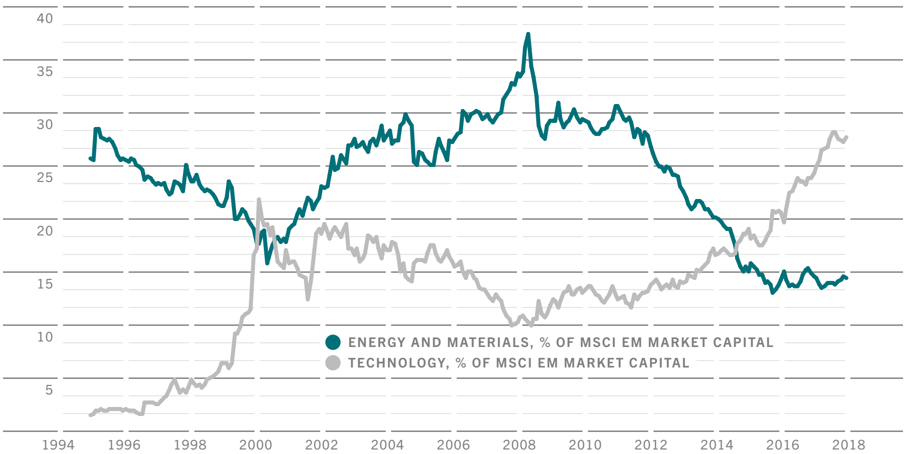
This rise has come at the expense of commodity-related stocks, which represent just 15 per cent of the MSCI Emerging Equity index, down from 37 per cent 10 years ago. The result of this rebalancing is a sharp drop in the correlations between the returns of the MSCI EM index and commodities indices to only 0.2 from a high of 0.7 in 2010.[18]

The continued rise of EM innovators should help improve the quality and sustainability of economic growth in the developing world, lifting future investment returns from EM stocks further above those of their developed counterparts. Indeed, we expect emerging technology stocks to deliver yearly returns that are more than double those of their US counterparts over the next five years – 14.5 per cent versus 7 per cent. So, for many reasons, EM tech has much further to run.

It's all about tech in emerging markets

FIG.8

EM STOCK INDEX EXPOSURE: COMMODITIES VS TECHNOLOGY



Source: Thomson Reuters Datastream;
data covering period 31.03.1994-31.12.2017

18 One-year rolling weekly returns, MSCI EM index and CRB commodity index. Source: Thomson Reuters Datastream, data covering period 16.03.1988-16.03.2018

2

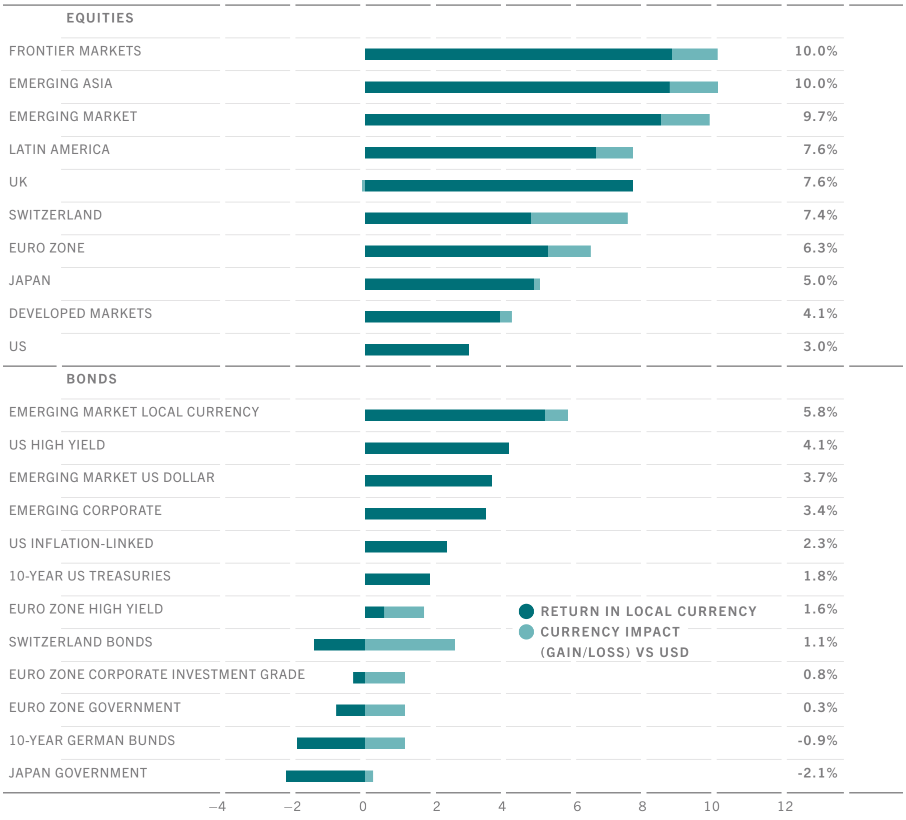
Asset class return projections

Asset class return projections

In this section we set out our return projections for the main asset classes over the next five years. We show them in FIG.9, and discuss our forecasts for equities, bonds, currencies and alternative assets in detail in the subsequent chapters.

FIG.9

ASSET CLASS RETURNS, 5-YEAR FORECAST, %, ANNUALISED



Source: Pictet Asset Management; forecast period 31.03.2018-31.03.2023

V

Equities – tougher terrain ahead

Conditions will become tougher for equity markets over the medium to long run. The key supports of recent years are starting to erode: economic growth is plateauing, the era of loose monetary policy is coming to an end, corporate profit margins are peaking and stocks' earnings multiples look stretched.

Investors therefore need to brace themselves for stock markets delivering bond-like returns with equity-like volatility – particularly in developed markets – the opposite of what they have become accustomed to.

US stocks look particularly unappealing. At around 1.9 per cent, the S&P 500 dividend yield is already below inflation. Earnings multiples are very stretched – the cyclically adjusted price-to-earnings ratio, at 32 times, is at its highest since the dotcom bubble. And corporate profit margins are at record highs. Additionally, company share buybacks – which we estimate have added an average three percentage points to annual returns for stock investors since 2009 – are likely to slow as bond yields rise.

Unless there is a broad-based surge in US economic productivity or a significant further improvement in profit margins, US equities should do less well in the coming decade than over the past one. Tax cuts and a weaker dollar should offer some relief, but not enough to reverse the trend. We expect US stocks to return an average of 3 per cent per annum over our forecast horizon, easily claiming the worst performing spot among the major global regions in local currency terms.

Equities in the rest of the world should hold up a bit better, but all of them will still have returns well below their historical norm. Within the developed universe, European stocks should benefit from lower interest rates, cheaper valuations and an economic cycle with further to run than the US now offers. Structural reforms in the euro zone – including moves to shore up the financial system and reduce unemployment – are also starting to pay off.

As a result, we expect euro zone stocks to beat their US counterparts by a cumulative 18 per cent over the next five years. That will still leave the asset class trading at a historically slightly elevated discount relative to the US – a gap which we believe can be rationalised by the persistent political risk in Europe and the absence of a fully fledged banking union.

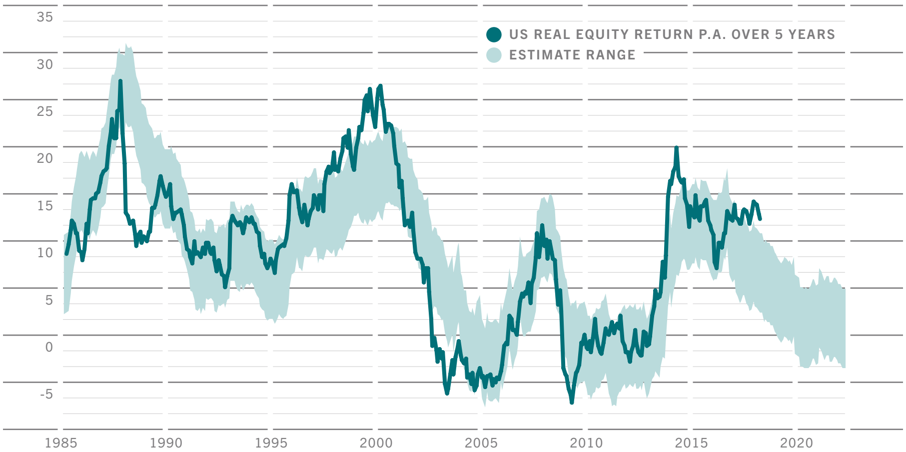
Emerging markets will be a brighter spot for equities, with a particularly strong showing expected from Asia, where we forecast an annualised return of 10 per cent in dollar terms over the next five years. Stocks in that region trade at a reasonable 12.2 times P/E, have superior earnings growth and, critically, benefit from a favourable sector composition – with the fast-growing tech industry accounting for 38 per cent of the market, double the global average.

Long-run secular trends also suggest consumption will be a bigger force in emerging economies. Emerging world populations are not ageing as fast: low and middle-income countries, for example, have 10 workers for each pensioner, compared to a ratio of four to one in rich nations.[19] Wealth is spreading, with China and India forecast to have an additional 730 million more middle-class

FIG.10

Heading down:
US stock returns

US REAL EQUITY RETURN OVER ROLLING 5 YEARS, ACTUAL AND FORECAST RANGE*, %



* Projection based on our macroeconomic forecasts of 1.8% real GDP growth, 2.6% average inflation and US bond yield at 3.5% in 2023. Forecast rage based on 75% confidence level

Source: Thomson Reuters Datastream, Pictet Asset Management; historic data covering period 31.12.1984-31.03.2023

inhabitants by 2030.[20] And growth-enhancing supply-side reforms in China, Brazil, India, South Africa and Indonesia can be expected to gather pace.

19 World Bank, based on 2015 data
20 Brookings Institute, “The Unprecedented expansion of the global middle class – an update”

Overall, though, generally tougher equity market conditions will likely be accompanied by an increase in volatility, with the VIX index edging up towards its long-run rate of 20 per cent from the 15 per cent it has averaged over the past half a decade. That is likely to be driven by a pick-up in macroeconomic volatility, as well as by correlations between bonds and equities becoming much less negative, which will reduce investors' ability to diversify their portfolios. Higher interest rates (and a flatter yield curve) have also historically been associated with greater volatility due to increased risk of bond default and more uncertainty regarding companies' cost of capital. Finally, passive investment is growing rapidly and these types of funds tend to have a shorter average holding period, potentially making markets more skittish.

VI

Bonds – an era of rising yields

Economies are finally sloughing off the great financial crisis, and that slow return to normality will feed through to fixed income markets over the coming years. Given how much they benefited from the emergency monetary policy of the past decade, developed-economy sovereign bonds are likely to suffer most from this shift, particularly outside the US. That means investors seeking more stable returns from fixed income over the coming five years will have to look to emerging markets and corporate credit.

The world economy's return to trend growth of 3 per cent over our five-year forecast horizon underpins our expectations for a general rise in inflation. This return to upward price pressure is bound to have the most significant impact on bond market performance.

Keep an eye on inflation

We expect inflation rates to rise markedly across the world, estimating average global consumer prices running at a trend rate of 2.7 per cent during the next five years from 2.4 per cent in 2017. The relative change in inflation rates will be particularly pronounced in developed economies, even though in many cases it will remain below trend.

As inflation picks up, central banks will increasingly coordinate policy tightening, albeit at a stately pace. In nominal terms – before allowing for inflation – rate hikes and central bank balance sheet shrinkage will nudge bond yields closer towards nominal economic growth rates. The relative increase in yields will be biggest in developed markets outside the US. In part, that's because US inflation rates (and bond yields) are already higher than elsewhere – we forecast US annual inflation of 2.6 per cent over the coming five years, 0.2 percentage points above trend and 0.5 percentage points above the developed economy average. This also underpins our forecast for US government bond yields to rise to more than 3.5 per cent by the end of our five-year period. That is also why we think US inflation-linked bonds will be marginally more attractive than nominal debt.

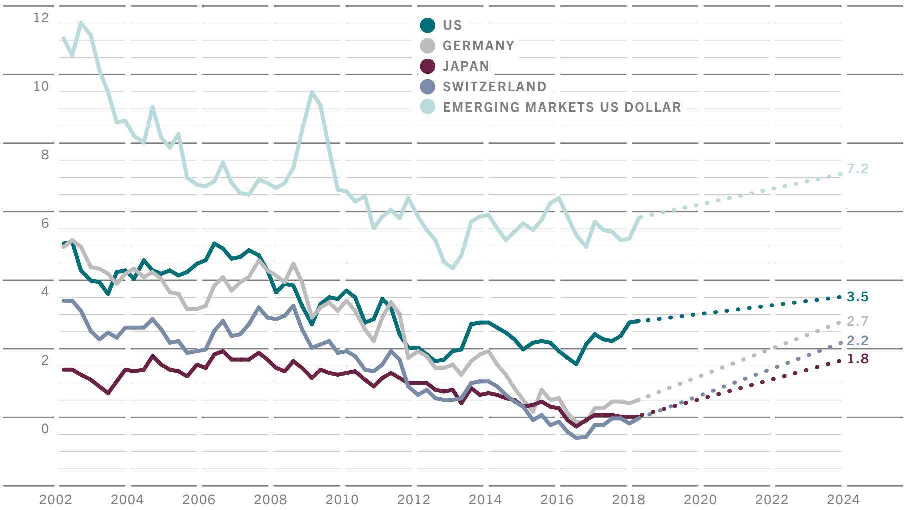
Investors in other developed market sovereign bonds will fare less well. Starting rates are substantially lower than in the US, which means yields have plenty of catching up to do to reflect inflation. Governments have reasons to favour higher inflation: it erodes the real value of high private- and official-sector debt burdens. And they can push prices higher through fiscal spending and tax cuts. In general, central bankers seem less allergic to inflation than they once were, and there are signs of willingness to accommodate price pressures by shifting to price level targeting, moving to symmetric inflation targets rather than ceilings or even removing these targets altogether.

So rates and yields are heading higher, and to a degree the market has not fully appreciated. For instance, the forward 5-year/10-year rate for Germany is 1.35 per cent, while we are forecasting a German 10-year yield of 2.7 per cent in five years' time. This is why we predict an annual loss of 2.0 per cent for these bonds (total return) over our forecast horizon. Japanese bonds, at the epicentre of extreme monetary policy, are even more vulnerable.

Yields are heading higher

FIG.11

GOVERNMENT BOND YIELDS, %, HISTORIC AND PROJECTED



Source: Thomson Reuters Datastream, Pictet Asset Management forecasts.
Data from 01.01.2002 to 31.03.2018

Embrace EM

With "safe" bond markets likely to offer poor outcomes, investors need to head to riskier markets to secure income. We see emerging market bonds – both dollar-denominated but especially local currency debt – among the best performers.

We expect economic growth to average 4.6 per cent a year across the emerging universe during the next five years – that's marginally above trend – with inflation remaining contained. We forecast an average rate of 3.4 per cent, only slightly higher than the 3.3 per cent posted during 2017, but less than half its level in 2000.

Thanks to solid growth, moderate inflation and high starting yields – 6.0 per cent and 5.8 per cent respectively for local currency and dollar-denominated bonds – we expect emerging debt to offer attractive returns. We expect EM local currency bonds to generate an annual return of 5.1 per cent, and dollar bonds to return 3.7 per cent. Default rates on local currency debt are likely to stay at a modest 0.5 per cent, where "default" often takes the form of sharp currency depreciation – investors need to keep a close eye on individual country factors, although overall we expect EM currencies to strengthen against the dollar. We expect yields on dollar and local currency EM bonds to converge.

Credit where credit is due

The other bright spot in fixed income is corporate credit – outside the euro zone. We expect US investment-grade credit to return just over 2.5 per cent a year for the next five years, with high yield more than 4 per cent. For the latter, we assume close to a long-term average default rate of 4.6 per cent, with recoveries expected at 40 per cent. Emerging market corporate credit should also do well, delivering annual returns of nearly 3.5 per cent.

Although we expect the euro zone's corporate default rates to be lower than the US's and recovery rates in line, the market's very low starting yields suggest poor returns – an annualised loss of 0.3 per cent for investment grade and a return of just 0.5 per cent per year for high yield. Euro zone investment-grade bonds yield a mere 1.0 per cent currently, thanks largely to the ECB's asset purchases. As that central bank buying winds down, this market is likely to suffer.

So while the main bond markets are likely to struggle over the coming five years after a nearly unbroken bull run since the early 1980s, investors will still be able to find positive – even attractive – fixed-income returns. But they will need to accept higher risk in exchange.

Supply shock

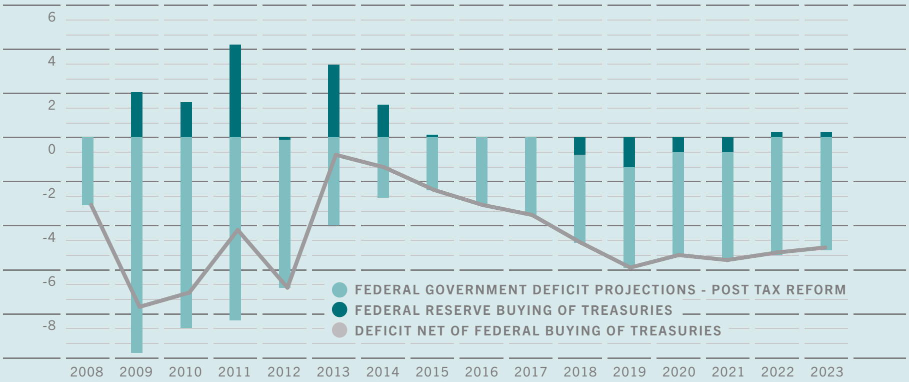
US Treasury bond investors face a flood of supply from the US government as it spends and cuts taxes just as the Fed is reversing its quantitative easing policy and shrinking its balance sheet. The result is likely to be years of market indigestion. The US government's deficit will be swollen by rising spending on social security and healthcare. A tax-cut package will add USD1.5 trillion to the deficit over the coming decade, according to the Congressional Budget Office.

That supply surge will be enlarged by the Fed's moves to bring the curtain down on quantitative easing. We expect the central bank's holdings of

FIG.12

US public finances set to deteriorate

US FEDERAL GOVERNMENT DEFICITS AS % OF GDP, INCLUDING FEDERAL RESERVE BUYING/SELLING OF TREASURY BONDS FROM 2009 ONWARDS



Source: CBO, Federal Reserve, Pictet Asset Management. Projections are based on expected roll-off of the Fed's security holdings. Deficit projections from CBO inclusive of the latest tax cuts

Treasuries to fall from USD2.45 trillion at the end of 2017 to USD1.6 trillion by 2020. The point at which this shrinkage runs at its fastest pace coincides with a rise in US government issuance. In effect, the major factors that have kept yields depressed for years will go into reverse.

As a result, the effective net supply of US government debt to the market will rise from 3.5 per cent of GDP in 2017 to 5.9 per cent in 2019 (net supply then declines again as the Fed's balance sheet stabilises even though the federal government deficit keeps growing). That assumes the economy continues as it is. A recession would cause even bigger deficits. The risk all this supply poses is a buyers' strike by foreigners. This isn't our base case, but it's worth bearing in mind, particularly in light of simmering trade tensions between the US and one of its biggest creditors, China. But even if foreign buyers don't abandon Treasury bonds, our worst-case scenario suggests that yields are likely to have to rise – considerably above 4 percent is a distinct possibility for the 10-year benchmark – to find the incremental buyer.

VII

Currencies – dollar drifting down

All market trends eventually reverse. For the dollar, a five-year bull run lost momentum in 2017, marking the beginning of what we believe will be a longer-term decline.

Economic growth in the US has peaked and its fiscal deficit is growing, thanks to tax cuts. Comments from the Trump administration, meanwhile, suggest the government might welcome a weaker – and thus more competitive – dollar, possibly as ammunition in its trade negotiations. We would not be surprised if in five or 10 years' time the dominance of the dollar as a reserve currency is put to the test, with the Chinese renminbi and potentially crypto-currencies the main beneficiaries.

In the see-saw world of foreign exchange, as the greenback goes down, emerging-market currencies are, arguably, the best placed to rise. For a start, they are 15 per cent undervalued versus the dollar, according to our models. That cheapness is not justified by fundamentals, including the emerging world's increasingly favourable growth differential versus developed markets and solid global trade dynamics. Furthermore, China – which a year ago was seen as threatening the emerging world's stability – now looks steadier as its authorities step up efforts to encourage corporate deleveraging. Its measures include a crackdown on the shadow banking sector and often opaque wealth management programmes, higher barriers against capital outflows and, conversely, easier access to China for foreign money.

Our five-year target for the dollar is RMB6, down from today's rate of around RMB6.3, with risks skewed towards a bigger move if Chinese economic growth and productivity turn out to be better than our forecasts. Overall, we expect the dollar to weaken by an average of 1.3 per cent per year against emerging currencies over our forecast horizon, bringing it halfway towards fair value.

In the developed world, we see some of the brightest prospects for the euro, thanks to the currency bloc's healthy current account surplus, its improving public finances and an economic cycle which is less advanced than that in the US. However, while the euro zone undoubtedly looks much healthier now than it did five years ago, we are not convinced that institutional and banking reforms have gone deep enough to eliminate the risk of another financial crisis at some point in the future. Persistent political wrangling over reforms should also keep a lid on investor flows into the region, capping the potential for euro appreciation at around USD1.30.

Still, that represents a steady march higher for the single currency – which is more than we think can be achieved by either the British pound or the Japanese yen. For the former, Brexit and the resulting economic uncertainty are likely to remain a big drag. For the latter, obstacles to appreciation include relatively expensive valuations and the Bank of Japan's commitment to quantitative easing at a time of policy tightening in the US and elsewhere.

VIII

Alternatives – going for gold

With inflation and market volatility set for a comeback, gold promises to be the most durably attractive alternative asset class for the next five years. The prospect of further political upheaval should also support the precious metal.

Gold usually performs best in times of greater uncertainty and rising price pressures. Like other real assets, it tends to hold its value in inflationary periods – and we are forecasting substantially higher inflation for developed economies during the coming five years than we've seen over the past decade.

Not only is gold a haven against excessively easy monetary policy, it's also a good hedge against geopolitical tensions. An increasingly belligerent Russia, President Trump's unpredictability and capriciousness and the risk that the US's trade conflict with China will rumble on for many years to come all argue for investors to increase their gold holdings. Indeed, the fact that investors are on the whole underinvested in gold is an argument in its favour. The inflation-adjusted dollar price of gold is still 50 per cent below previous peaks. We expect gold to generate an annual 6.0 per cent total return over the coming five years.

The new market environment of increased volatility, high stock and bond valuations and a growing dispersion in the returns of individual asset classes won't just benefit gold – it should also help private equity and hedge fund managers distinguish themselves from the crowd.

Although private equity is likely to keep outperforming listed shares, with an extra return of around 5 per cent per year in the US, the premium attached to illiquid assets will remain at around 3 per cent, below the long-term average of 7 per cent. And when the higher underlying volatility of private equity returns is taken into account, the risk-adjusted return for investors looks less compelling in aggregate than it has been in the past.

By contrast, hedge funds' volatility-adjusted returns – prospective returns divided by annualised volatility over the past five years – are higher than those for any other major asset class.

Meanwhile, though real estate should benefit in a period of rising inflation, it is likely to be a mixed bag – good initial yields should be supportive of US assets, while oversupply is likely to bedevil the UK office market.

We expect private equity to generate a yearly return of around 8 per cent over the coming five years, while hedge funds should deliver around 3.7 per cent. We are forecasting a 4.6 per cent annual return for US real estate, but 3 per cent for the UK.

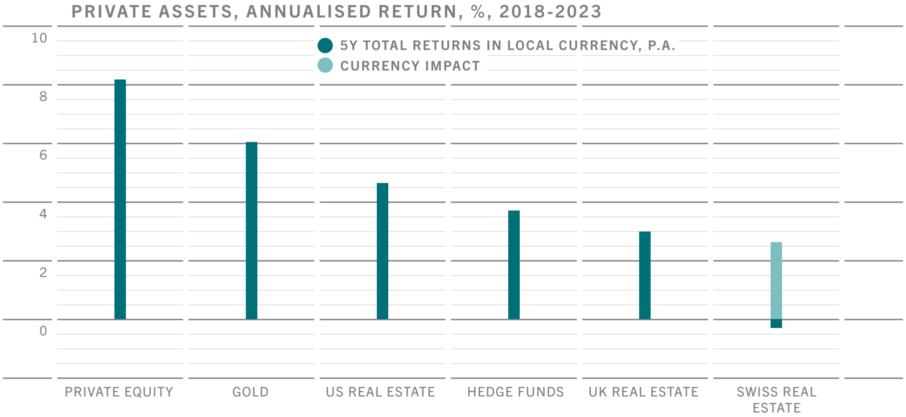
As for commodities, we're positive on industrial metals following a slump in capital expenditure and exploration that has restricted supply. Australian mining is barely growing, while China is undertaking a significant programme of coal and aluminium mine closures.

We are more cautious on oil – we forecast the price of crude to hover within the range that followed the 1970s oil shock and preceded the surge in Chinese economic growth, broadly around USD40-45 a barrel. Not only is demand slowing due to environmental considerations, but production has picked up, particularly with the boom in US shale oil, an industry that continues to benefit from advances in extraction technology.

Private equity and gold brightest spots in alternatives universe

FIG.13

PRIVATE ASSETS, ANNUALISED RETURN, %, 2018-2023



Source: Pictet Asset Management

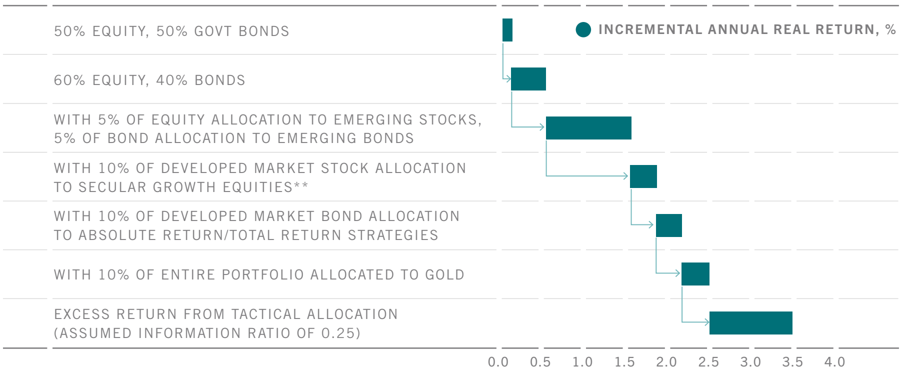
Concluding remarks

It boils down to risk. Investors willing to tolerate it should be able to generate acceptable returns over the medium term. Those that can't, won't. Anyone looking to achieve even modest returns over that timeframe needs to complement safe assets – developed-economy bonds and equities – with those from off the beaten track. Relatively illiquid assets such as hedge funds and private equity hedge funds, as well as emerging market equities and bonds should become critical portfolio components.

Decent returns can only come by taking more risk

FIG.14

DIVERSIFIED PORTFOLIOS: ESTIMATED REAL RETURN, %, ANNUALISED. 31.03.2018-31.03.2023*



Source: Pictet Asset Management,
hedging coas p.a.: EUR 1.5% / GBP 1% / CHF 1.6% / YEN 1.7%

* Indices used in calculations: MSCI equity indices, JPMorgan government and emerging-market bond indices;

** Secular growth stocks are companies we believe offer a potential excess return of 3% per year over the MSCI World A/C Index. These companies operate in industries we expect to expand at a faster rate than the world economy (such as clean energy, robotics and digital technology).

Historically, a portfolio equally weighted between bonds and equities has over the long term returned around 5 per cent in real terms, roughly 2 percentage points above trend global GDP growth. But the same portfolio now can be expected to generate an annual return closer to 2 per cent.

That uninspiring investment outlook reflects the prospect of developed countries struggling to match past expansion rates, hampered by demographic challenges and paltry productivity growth. Then there's China: its move to more sustainable rates of investment and increased focus on domestic services has shifted this central engine of global growth down to a slower gear. Although such a shift would ultimately be positive, making for a more balanced Chinese economy, the road there could well be rough. Meanwhile, all the major central banks are expected to withdraw monetary stimulus over the coming half decade. And then there's the risk of rising political uncertainty, not least if the trade war between the US and China drags on.

In order to keep generating the rates of return they've long been used to, investors need to be lucky (by, say, riding a bubble), bold (taking on higher risk) or good (generating alpha both in asset allocation and stock selection).

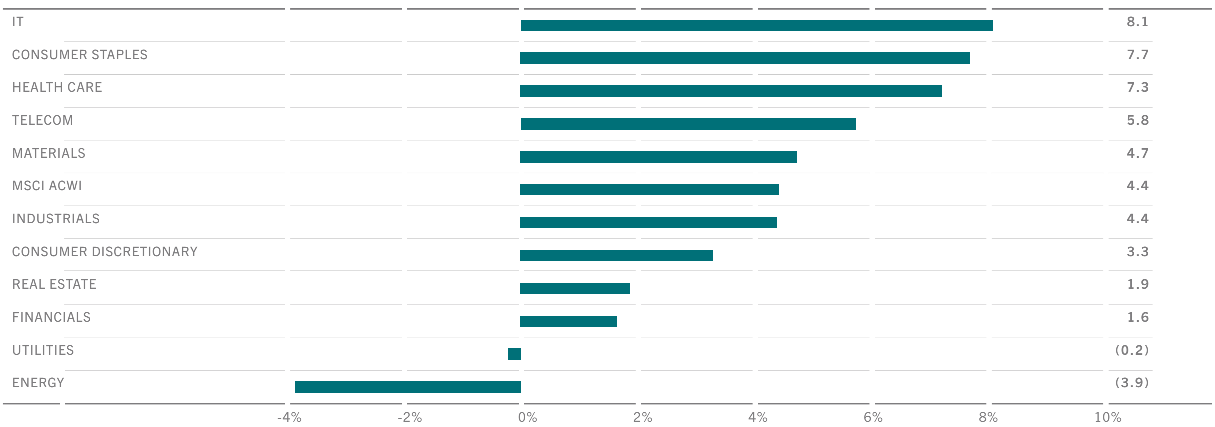
The most reliable of these options is to take on additional risk – not least because there remain attractive pockets of prospective return across countries, sectors and asset classes. China's growth may be slowing but India could prove to be the next economic giant. Tech is blossoming in emerging markets even as it becomes subject to increasing regulatory scrutiny in the developed world. Private equity continues to be a source of performance, even if excess returns aren't as high as they once were. Skilled hedge fund managers should be able to extract more alpha now that ultra-loose monetary policy is no longer providing a universal underpinning for risk assets and analytical skills can come to the fore again. Asset allocation with an eye to environmental and social factors is also bound to play an ever larger role in successful portfolios. Investment choices won't be easy. Even so, by increasing weightings in emerging-market equities and bonds, making a moderate shift out of developed-market sovereign debt into absolute return or market neutral bunds, as well taking on more gold, investors should be able to generate more attractive annual returns.

Appendix

ASSET CLASS RETURNS – 5-YEAR FORECAST, ANNUALISED, %

Source: Pictet Asset Management (forecast horizon 31.03.2018-31.03.2023)

INDUSTRY SECTOR RETURNS – 5-YEAR FORECAST, ANNUALISED, %



Source: Pictet Asset Management (forecast horizon 31.03.2018-31.03.2023), returns in local currency terms

ECONOMIC GROWTH AND INFLATION – 5-YEAR FORECAST

%	AVERAGE REAL GDP GROWTH 2023	TREND REAL GDP GROWTH 2023	AVERAGE INFLATION 2023
WORLD	3.0	3.0	2.7
DEVELOPED ECONOMIES	1.6	1.8	2.1
EMERGING ECONOMIES	4.6	4.5	3.5
DEVELOPED ECONOMIES			
UNITED STATES	1.8	2.2	2.6
EURO ZONE	1.4	1.6	1.8
GERMANY	1.7	1.9	2.0
JAPAN	1.0	1.0	1.6
UNITED KINGDOM	1.6	1.8	2.2
SWITZERLAND	1.8	1.9	1.1
EMERGING ECONOMIES			
CHINA	5.5	5.0	2.5
INDIA	7.4	7.5	5.0
ASIA EX-JAPAN	5.6	5.2	2.8
BRAZIL	2.3	2.3	4.1
LATIN AMERICA	2.6	2.7	3.8
RUSSIA	2.1	2.1	4.4

Source: Pictet Asset Management (forecast horizon 31.03.2018-31.03.2023)

GOVERNMENT, CORPORATE AND EMERGING-MARKET BONDS – 5-YEAR FORECAST

	DURATION (YRS)	CURRENT YIELD (%)	FORECAST YIELD IN 5 YEARS' TIME*	ANNUALISED ROLL**	OUR RETURN FORECAST %	CURRENCY GAIN P.A. %	USD RETURN P.A. %
US GOVERNMENT	6.5	2.7	3.5	0.1	2.1	0.0	2.1
GERMAN GOVERNMENT	7.6	0.5	2.8	0.9	-1.3	1.1	-0.2
EURO ZONE GOVERNMENT	7.8	1.0	3.3	0.9	-0.8	1.1	0.3
UK GOVERNMENT	12.0	1.5	3.0	0.4	-1.2	0.0	-1.2
SWISS	7.5	0.3	2.6	0.9	-1.5	2.6	1.1
JAPAN GOVERNMENT	10.4	0.4	2.1	0.5	-2.3	0.2	-2.1
EURO ZONE INVESTMENT GRADE	5.3	0.9	4.0	0.8	-0.3	1.1	0.8
EURO ZONE HIGH-YIELD***	4.3	3.4	7.1	0.6	0.5	1.1	1.6
EMERGING-MARKET USD	6.8	5.8	7.2	0.4	3.7	0.0	3.7
EMERGING MARKET LOCAL CURRENCY	5.2	6.0	7.2	0.0	5.1	0.6	5.8
EMERGING-MARKET CORPORATE	4.8	5.4	7.5	0.3	3.4	0.0	3.4
US INVESTMENT GRADE	7.0	3.8	5.5	0.8	2.6	0.0	2.6
US HIGH YIELD	4.7	6.6	8.5	0.6	4.1	0.0	4.1
US INFLATION-LINKED	4.8	0.7	1.1	0.1	2.3	0.0	2.3
GLOBAL GOVERNMENT	7.7	1.4	3.0	0.5	0.2	0.4	0.6

Source: Pictet Asset Management (forecast horizon 31.03.2018-31.03.2023)

* Assumes a bond yield to nominal trend GDP growth ratio of 0.75 for US, 0.7 for Germany (using euro zone GDP); for Japan we assume bond yield rises in line with trend inflation by 2023. Benchmarks: JPMorgan indices for developed/emerging government bonds and emerging corporate bonds; SBI Index for Swiss bonds; Barclays Euro Aggregate Corporate Index for euro zone investment grade; BoFA Merrill Lynch indices for euro zone/US high yield, US 10-year TIPS

** Adjust roll for year 5 based on where we expect 10-year policy rate to be; earlier years use roll calculation from Bloomberg curve data

*** Assumes recovery rate of 40% for developed world bonds, 50% for emerging-market sovereign bonds and 35% for emerging-market corporate bonds

EQUITY MARKET RETURNS – 5-YEAR FORECAST

	YIELD, P.A. %	SALES GROWTH, P.A. %*	MARGIN CHANGE, P.A. %**	EPS GROWTH, P.A. %***	12M P/E RATIO			% P/E CHANGE P.A.	TOTAL RETURN P.A.		
					CURRENT P/E	LONG-TERM AVERAGE	FORECAST IN 5 YRS****		LOCAL CURRENCY %	CURRENCY GAIN P.A. %	IN USD %
UNITED STATES	2.1	4.9	(2.2)	2.6	16.3	16.2	15.0	(1.7)	3.0	0.0	3.0
EURO ZONE	3.6	4.5	(1.9)	2.6	13.4	14.1	12.8	(1.0)	5.2	1.1	6.3
SWITZERLAND	3.5	5.1	(1.4)	3.6	16.2	15.3	14.4	(2.3)	4.7	2.6	7.4
UNITED KINGDOM	4.6	4.8	(1.1)	3.6	13.1	14.5	12.7	(0.6)	7.6	0.0	7.6
JAPAN	2.3	3.7	(1.4)	2.2	12.9	19.2	13.0	0.2	4.8	0.2	5.0
DEVELOPED MARKETS	2.5	5.1	(2.0)	3.0	15.3	16.1	14.3	(1.4)	3.8	0.3	4.1
EMERGING ASIA	2.5	7.6	0.8	7.4	12.3	12.2	11.6	(1.2)	8.6	1.3	10.0
LATIN AMERICA	3.4	6.1	0.8	5.9	13.3	11.1	11.6	(2.6)	6.5	1.0	7.6
EMERGING MARKETS	2.8	7.2	0.8	7.0	12.1	11.3	11.3	(1.4)	8.4	1.2	9.7
FRONTIER MARKETS	3.1	8.4	0.8	8.2	12.7	10.5	11.3	(2.4)	8.7	1.2	10.0
GLOBAL (MSCI ACWI)	2.6	5.3	(1.6)	3.5	14.9	15.4	13.9	(1.4)	4.4	0.4	4.8

Source: Pictet Asset Management (forecast horizon 31.03.2017-31.03.2022)

* Proxied by our forecast for nominal GDP growth (average 2018-2022), adjusted for regional revenue exposure.

** Based on a reversion to long-term mean, adjusted by business cycle (output gap) and expected currency appreciation.

*** Adjusted for dilution effects (0.0% in developed markets and 1% in emerging markets).

**** Fair value based on 12-month PE S&P 500 index (model incorporates forecasts for bond yields, inflation, and trend GDP growth). Forecast assumes P/E ratio reverts to long-term average discount to US (post-1999 for Euro zone, Switzerland and Japan). Frontier market PE is the same as emerging market PE.

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