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Amundi
ASSET MANAGEMENT

CIO INSIGHTS | MAY 2020

Covid-19 the invisible hand pointing investors down the road to the 70s

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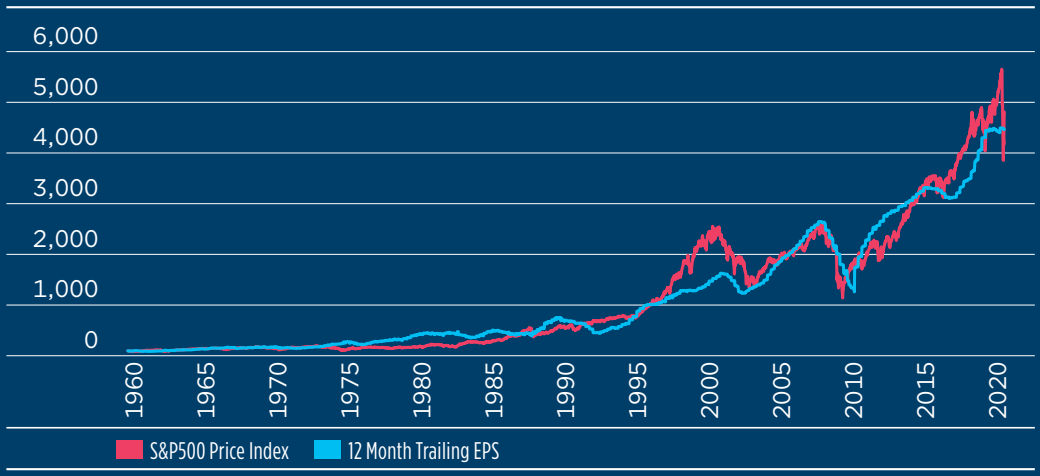
History shows that the economy and financial markets are dominated by long-term regimes that at some point come to a break point, where one regime gives way to a new one. In 2019, in the "Road back to the '70s" paper, we argued that the next recession could be the crossover point for a regime shift back towards the 1970s, which would trigger the end of a period of subdued volatility and excessive market exuberance.

While the trigger for such a move was uncertain at that time, **we now believe that Covid-19 is the perfect storm leading us towards a new era over the long run, but with some short-term implications in the meantime.**

Covid-19 the trigger of a mean reversion

The Covid-19 pandemic is the invisible hand triggering the mean reversion process and pushing volatility back to less subdued levels. This is bringing equity returns back in line with their long-term sustainable path, following a sequence of upward deviations essentially driven by monetary factors (inflation and rates trending lower).

Figure 1: S&P500 Index vs Trailing EPS



Source: Amundi on Bloomberg data. Data as of 17 April 2020. S&P500 price index vs Trailing 12 Month EPS, rebased at 100 at 31 Dec 1959.

"The sequence of regimes from the '70s (the great inflation regime) to the '90s is now reaching a new turning point".

Covid-19 also the trigger for a regime shift

The Covid-19 regime change is bringing to an end the current Volcker sequence and the bias towards austerity on the budgetary side. Initiated by the arrival of Paul Volcker at the helm of the Federal Reserve after a long period of inflationary pressure, this symbolically brought to a close the macro-financial regime of the 1970s.

Looking back, the economy and markets have gone through a sequence of regimes. The '70s were years of public debt monetisation, with a dominance of wages over profits and with high levels of inflation in goods and services. The '90s (sometimes called the regime of the shareholder, or patrimonial capitalism) were characterised by a regime of private debt, with the dominance of profits over wages (with productivity gains not benefiting workers) and asset price inflation.

This led to a bubble-burst phase, followed by a deflationary environment, and eventually to the rise in public debt in the 2010s. **The legacy of that high debt level is now leading to pressure on central banks to monetise debt, sowing the seeds for a new regime shift**. This was a feature that we also highlighted in 2019, when we noted that in a new recession, central banks would be increasingly pressured by governments to enrich their toolboxes and change their objectives, at the expense of some of their independence, as was the case in the '70s.

"The road back to the '70s will not be straight and we will likely go through a deflationary phase first, followed by higher inflation amid de-globalisation forces, the monetisation of debt, and the redirection of value chains".

The road back to the 70s

We went to bed in 2020 — we may wake up at the end of this phase of regime shift in 1973. Many think we will go back to the '30s, as the current economic recession conjures up reminders of the Great Depression. However, we think that **extreme policy accommodation will be the key feature of this new regime and the boundaries between fiscal and monetary policies will be more and more blurred**. The crisis will be fought with unprecedented and previously unthinkable measures. Words that were once taboo, such as "helicopter money", are becoming an acceptable if not a desired tool — a panacea of sorts — and are finding fertile ground in a debate that had already been evolving over the last few years, even before the crisis hit. We expect central banks and governments to continue to push, to the maximum possible levels, their tools to fight the economic recession driven by the pandemic. In our view, the recovery path will be slow and there is still a high level of uncertainty about which are going to be temporary losses vs more permanent losses in terms of potential output and employment. **Regardless of the shape that the recovery takes, from an investor perspective, it is important that the fear of a depression or a permanent loss of output will be enough to secure the extreme measures that we believe will drive the regime shift**.

We are not saying that investors will wake up **tomorrow** in a high inflationary regime; in fact, **the consequences of Covid-19 initially will likely be deflationary** (due to the demand shock, rising debt and secular stagnation features already present of low growth due to demographic trends) and core government bond yields may move even lower in the short term.

But even if inflation seems off the radar for now, **the seeds of higher inflation and higher inflation expectations are already all around us**. The direct monetisation of budget deficits (now more or less publicly admitted), a retreat from global trade/protectionism (with the breaking up of disinflationary value chains further accelerated by the disruption due to lockdowns), and a rebalancing of social and political policies in favour of labour are inflationary forces already visible. The social demand for protection will rise, alongside the requirement for better control and transparency of "critical" sectors. Company stakeholders will question business resilience (supply chain) and this should increase the cost of output in developed markets and undermine emerging market exports.

Investors should become prepared for this battle between deflationary and inflationary forces and be ready for the sequence that will follow (from deflationary to inflationary).

Examples of intellectual victory

- *According to **Blanchard**, "public debt may have no fiscal cost" as the ratio of debt to GDP could decrease over time.*
- *We have seen consensus rising around the **Modern Monetary Theory** (MMT), which suggests that fiscal and monetary policy roles may merge as MMT assumes that expansionary fiscal policy could be financed by money creation (Mitchell et al).*
- ***L Summers** noted that a lower natural interest rate of equilibrium, though not observable, paves the way for "greater tolerance of budget deficits (and) unconventional monetary policies" ...all of which are now becoming a reality.*

The elements accompanying a regime shift

A regime shift usually comes with three key trends:

1. **Intellectual victory and academic consensus around specific topics always precedes regime shifts**. Today, with inflation progressively forgotten as a threat, the idea emerging is that the current high debt levels are not an obstacle to budgetary stimulation, especially as the current crisis risks being deep and the memory of the 2008 recession is still sharp. Over the short term, debt/GDP ratios will have to increase to offset the effects of the crisis. However, taking a longer-term view, with interest rates on safe bonds expected to stay below growth rates, a low risk-adjusted rate of return to capital would justify the use of fiscal expansion and debt to finance public investment.

2. **A change in regime occurs when previous imbalances are no longer tolerated by society**. Well before Covid-19 materialised, we were living in an era of extreme inequalities, rising protectionist forces and nationalism, as well as increasing urgency around the climate change challenge. Skyrocketing unemployment, the struggles at the EU level to find a common solution, and the 'blame others' attitude which arises related to the Covid-19 outbreak will bring these imbalances to unprecedented levels.

3. **A regime shift involves a change in institutions (central banks, political parties, etc) that structure the regime itself**. We see central banks now permanently taking the "whatever it takes" position and political parties ready to expand debt as much as needed to ensure that the 2008 experience is not repeated. All of this is happening during a time of de-globalisation trends and a recession that faces a demand shock, and more importantly, a supply shock that could eventually be the trigger for an inflation pickup.

Implications for investors

1. **Covid-19 signals the outbreak of a liquidity crisis in the corporate sector (not in banks, this time), making liquidity the critical dimension that investors should incorporate into the investment process**. It also brings a definitive shift in market structure: one aspect is the fall in market making activities by banks coupled with the search for yield, the second aspect is the critical role for the buy-side in the functioning and financing of the economic financial system. However, this also comes with risks that are different from the traditional bank-centred approach. This all points to a necessity for the various authorities (central banks, regulators) to include the consequences of this reality in their policies and direct transmission channels of action. This is what the Fed is doing: not fighting the past war, but plugging facilities into the buy-side in pursuing its policies. This is also providing compelling evidence that **liquidity in our industry must be fully integrated as a key dimension in the portfolio construction process, that liquidity mismatches do happen, and that there is a trade-off between returns and liquidity**. Investors no longer should consider liquidity as exogenous and ex-post, an irregularly measured element, but as a constant ex-ante endogenous dimension of portfolio construction. Liquidity should also be **viewed not only as a defensive tool to mitigate volatility, but also as a key element to exploit investment opportunities when they arise**.

"The most relevant implication will be the need to make liquidity one of the critical dimensions that investors have to consider in portfolio construction".

2. **As a corollary of the previous point, the crisis is not only making liquidity a key aspect to watch, but it is also bringing back questions about what are safe risk-free assets**. In theory, this should be a relative concept, dependent on liabilities, but in reality, Treasuries and Bunds are the only consensual risk-free assets. This concept should be distinguished from the concept of liquid assets, but in reality, safe and liquid assets are intertwined, as the current crisis is effectively showing. Hence, the pool of effective, global safe (ie, recognised as such by the investment community) and liquid instruments is limited: **this is why it is normal that these assets come with a premium** or, to put it another way, that **should hold them irrespective of other classic metrics** (valuation, expected path of central banks, etc).

3. I**nvestors will have to optimise the cost-adjusted returns of their portfolios, considering all costs, amid the lower expected returns**. In the new regime, investors should expect lower returns for the next decade. According to our forecasts, a Euro balanced portfolio (50% Bloomberg Barclays Global Aggregate Bond Index and 50% MSCI World in EUR unhedged) will return a meagre 3.5%, compared with 6.7% over the last decade (from March 2010 to March 2020)[1]. The efficient frontier will be much lower and flatter compared to the past decade and adding risk will not be a panacea, but a **5% target will still be achievable, assuming proper diversification**. However, with lower expected returns, investors should rethink their portfolio around three components: idiosyncratic alpha, beta and income. In making active allocation choices in terms of beta exposure or any replicable factor exposure (replicable alpha) they should seek to cut their costs on this type of allocation.

   On the other hand, investors should also pursue the idiosyncratic alpha (not replicable) opportunities that will be available, especially in markets where inefficiencies continue to exist (fixed income, emerging markets, small-mid cap, ESG). Finally, they would need to add new income engines (real assets, dividends) beyond the traditional fixed income component.

[1]For a similar US portfolio with 50% S&P500 and 50% US Aggregate, we forecast an annualised return of 4.4% for the next decade vs 7.2% of the last decade (from March 2010 to March 2020).

"In an era of de-globalisation with the possibility of inflation in the future, diversification across different axes (geographic, factor and style) will have a greater role to play in enhancing risk-adjusted returns".

4. **Investors should also widen their investment spectrum to explore the benefits of diversification on different axes as we move away from a single factor (monetary) driving returns to multiple factors (growth, inflation, etc)**. In an era of de-globalisation (global growth does not mean global trade anymore), with possible higher inflation in the future (with the trend changing from moving down to rising up) and higher volatility, diversification across different axes (geographic, factor and style) will have a greater role to play in enhancing risk-adjusted returns. Growth, for example, will be a key driver of returns in exiting from a real economy crisis such as the one we are entering now. In this respect, **investors should consider slightly increasing their risk asset allocation** and having, if they do not already, **a dedicated material allocation to EM assets in their strategic portfolio**. In addition, **strategies based on geographical/regional diversification will come back into focus** while those exposed to globalisation, which benefited the most in the last three decades, will become less effective.

5. **The setting of clear investment objectives (income, downside risk tolerance, inflation protection, etc) will be key in order to build a tailored portfolio by considering the asset classes that offer the highest probability of achieving the desired goal**. For example, for investors targeting high returns, equity could continue to be a good choice, but corporate debt, especially if trading at highly discounted levels, could also be very appealing. For those searching instead for income, government bonds will be less remunerative going forward and equity dividends could be more suitable, on a highly selective basis, after the situation settles down. To seek higher income streams, investors could also consider illiquid real assets such as private debt, real estate or infrastructure. For capital preservation purposes, **to protect against inflation, investors should play various scenarios, with different types of growth and inflation profiles (stagflation, higher inflation with economic recovery) and bear in mind** that both bonds and equities have not delivered well in real terms during periods of high and growing inflation, such as the '70s, while **real assets**, such as commodities, gold, real estate and infrastructure, **have delivered better risk-adjusted returns**. Therefore, we believe it is crucial for investors to rethink their strategic asset allocation and reconsider the new hierarchy in risk premia, including their exposure to real assets, to adjust to the different inflation scenarios that could materialise in the future.

6. **Finally, in the new regime ESG themes will have greater importance in investors' portfolios**. The already growing trend of climate change-related investments is set to continue, as the issue is high on the agenda of all policymakers and the general public. Another main trend will be the societal focus towards higher social equality, **with the growing dominance of the S component**. There will be greater scrutiny over the way companies act in the interests of all stakeholders and the community. This will translate into a greater impact on stock prices of some ESG risk factors, which will provide opportunities for active managers, both in the equity and bond spaces.

In conclusion, as is the case in any dynamic system, the path to reach the new equilibrium will not be a straight one; it will oscillate and develop in waves. Investors will have to be active and flexible to exploit the opportunities that each of these waves will offer.

The new equilibrium, with new rules replacing the old ones, that is reached at the end of this sequence will be very different from the one we have been used to in the last decade, the era of low inflation and low rates. But it will take time to reach and for now the focus should be to concentrate on liquidity, exploit a wide range of risk premia, and stay active.

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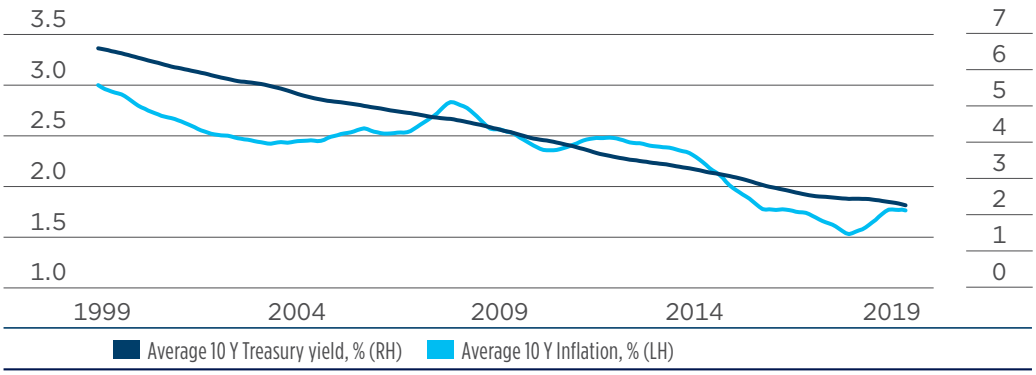
The Covid-19 pandemic is the trigger for a new financial regime

"Markets have enjoyed three decades of falling inflation and interest rates."

The past decade, the 2010s, was very positive for investors, who more than recovered the losses they experienced during the great financial crisis as they benefited from an environment of low volatility across the board (see Chapter 2 of this paper, "The inheritance from the 2010s: a regime of abnormally strong risk-adjusted returns").

This decade is simply the climax of 30 years of falling inflation and interest rates, as well as spreading globalisation (benefiting global leaders in equity markets). During this period, financial market returns were driven by monetary factors and not by real economy components (growth or earnings growth above trend).

Figure 2: Average 10 year rolling inflation rate and Treasury yields trending lower



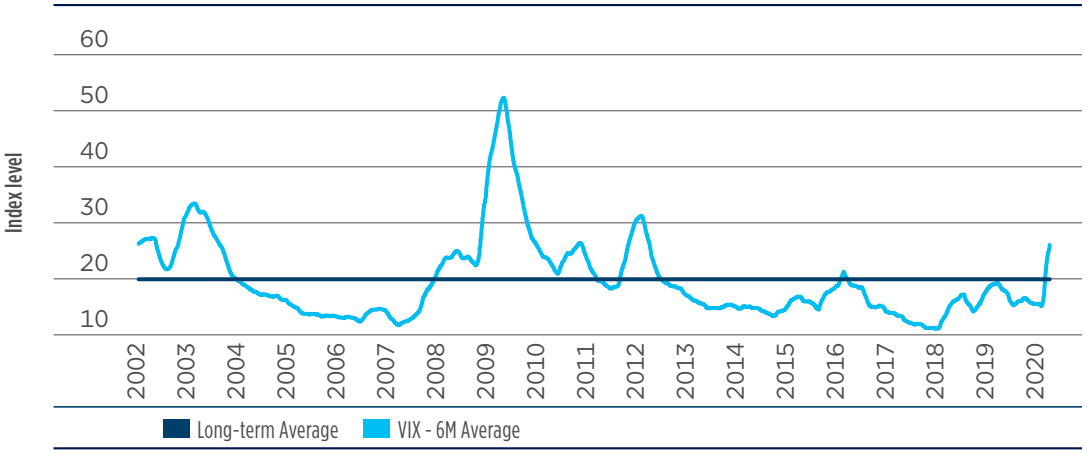
Source: Amundi on Bloomberg data. Rolling data from 31 December 1989 to 31 December 2019.

Covid-19 is the trigger for a mean reversion

"The pandemic is now triggering a mean reversion towards more sustainable trends, but the fiscal and monetary reactions to the crisis could have longer-term consequences for the economy and markets."

A mean reversion has now been triggered and the excessive equity market growth has been more than reabsorbed in a fast downward move. Volatility has returned and is set to remain for a while, and liquidity is shrinking in multiple spaces.

Figure 3: Mean reversion at work in volatility (VIX vs its long-term average)



Source: Amundi on Bloomberg data. Data as of 21 April 2020. VIX is an indicator of the implied volatility for the S&P500 Index.

"Despite the short-term pain, the crisis is also helping to fix some imbalances brought about by the previous great reflation phase."

While this turmoil is having a significant impact on short-term performances, at the same time it is fixing imbalances, and could turn out to be positive from a long-term perspective. A further continuation of financial asset inflation, against a backdrop of low real economy growth, would sooner or later have generated a bubble-and-burst scenario. This is not the time to be fearful about the future, as the short-term pain could be transitory. In our view, the most likely scenario is one of global containment of the virus in the coming months, together with a coordinated fiscal and monetary push that will help avoid a prolonged global recession. The cyclical pattern of the pandemic will drive financial markets, which will bottom before the economic cycle.

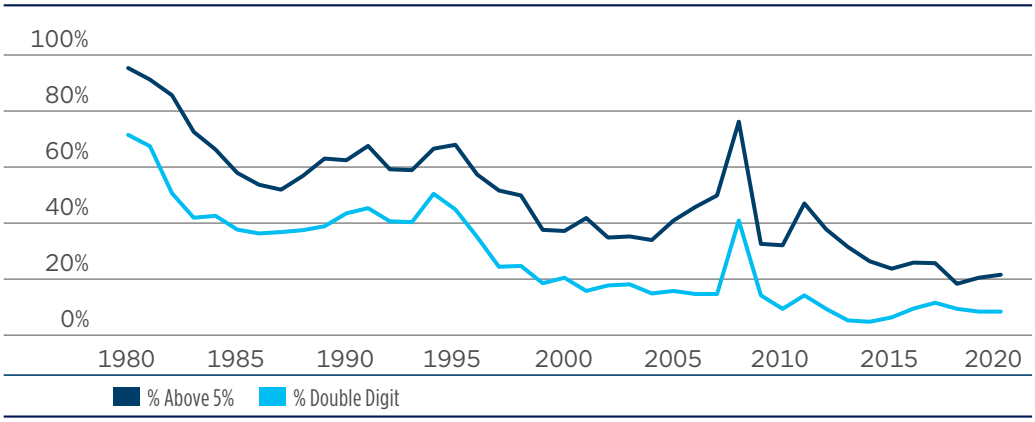
The major consequences for the economy and for investors will be in the long run if, as we believe, there is a rising probability that the day after the crisis ends we will enter a new regime that is similar in many aspects to the 70s.

Covid-19 crisis is sowing the seeds for a return of inflation

"Inflation has been dormant over the last decade, but this has not always been the case and there are now signals that the post-crisis environment could be more inflationary."

Entering the 2020s we find ourselves in a sort of post-crisis deflationary regime of rather low growth and low inflation, accompanied by a risk premium regime reflecting these trends (low interest rates, asset inflation). Over the last 40 years, the percentage of countries with double-digit inflation (and above 5%) has significantly dropped.

Figure 4: The death of high inflation (% of countries with inflation > 5% or >10%)



Source: Amundi on IMF World Economic Outlook database. Data as of 17 April 2020.

We already see some precursors for the road back to the 1970s. Inflation seems to be off the radar for now and deflationary forces will continue to prevail in the short term. However, over the longer term both the crisis itself and its cure will sow the seeds for a return of inflation, in the form of:

1. A supply shock (on top of the demand shock);
2. A rebalancing of social and political support in favour of labour;
3. Full-blown direct monetisation of budget deficits; and
4. A further reduction in global trade.

1. The supply shock

"The first sign of a return to inflation could come from the supply shock generated by the pandemic."

The recession brought about by the Covid-19 pandemic consists of a twin shock on both the demand side (low consumption amid increasing unemployment) and the supply side (lockdown impact on factory activity and a prolonged impact on services).

In the 70s the supply shock came from the oil side and led to a stagflationary environment (growth diminished with rising inflation), posing challenges for central banks in how to deal with such an event (see FOCUS 1: Regime shift – the example from the 70s to the 90s). Today, the supply shock comes from lockdowns, which are causing disruption in supply chains. While the combination of demand and supply shocks will prevent inflation rising in the short term during the recession, the situation could change once the crisis is over. A return to normality, even if at a slow pace, will increase demand, especially as liquidity will be abundant. However, supply will remain limited and will not be able to match the demand pressure, leading to higher inflation.

"The risk of inflation is higher in agricultural commodities, mainly due to logistics challenges during the crisis."

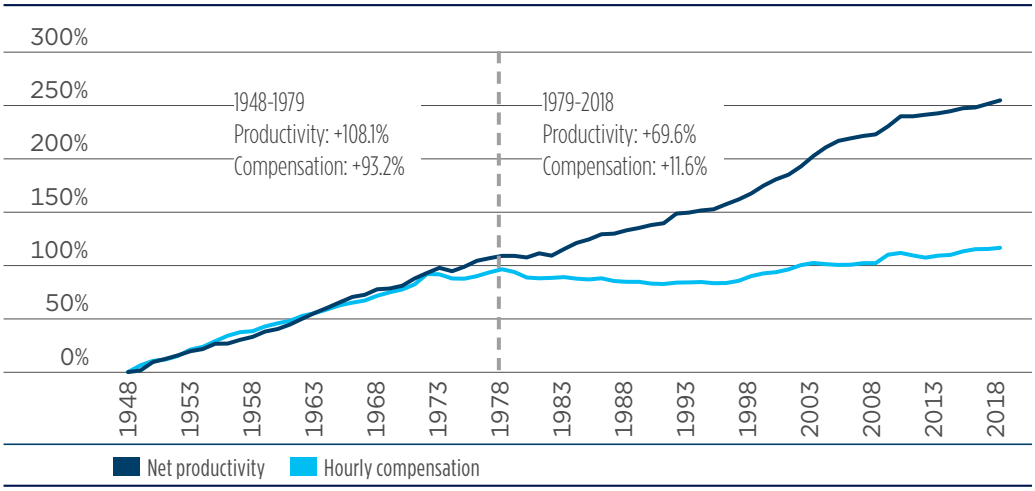
The risk of inflation in agricultural commodities and food could start to materialise before the pandemic ends. While the initial reaction in March was a downward move in prices due to the demand shock, there are signs of lower supply ahead, for example, the lower activity at food factories due to the lockdown, the shortage of migrant workers in agricultural sectors (for example, in Spain and Italy) and the disruption in global transport and logistics. Some supply chains have already been redirected into neighbouring countries, where trucks can transport food instead of using airplanes. Finally, some type of food protectionism could emerge (for instance, Kazakhstan, one of the leading exporters of wheat flour, banning exports of food staples). Global food supply is still heathy, but it is likely that some commodities will inevitably see their prices rise.

2. A rebalancing of social and political support in favour of labour

"Workers have not benefited from the productivity gains of the last few decades. Governments will be urged to tackle wealth inequalities as the crisis could otherwise result in greater social issues."

The gap between US productivity and workers' compensation has widened substantially since the end of the 70s, signalling that improvements in efficiency have not benefited workers but have mainly contributed to rising corporate profits.

Figure 5: The widening gap between productivity and worker's compensation



Source: Economic Policy Institute. Analysis of unpublished Total Economy Productivity data from Bureau of Labor Statistics (BLS) Labor Productivity and Costs program, wage data from the BLS Current Employment Statistics, BLS Employment Cost Trends, BLS Consumer Price Index, and Bureau of Economic Analysis National Income and Product Accounts. Notes: Data are for compensation (wages and benefits) of production/nonsupervisory workers in the private sector and net productivity of the total economy. "Net productivity" is the growth of output of goods and services less depreciation per hour worked. Data as of 17 April 2020.

"The persistently low interest rate environment has been the premise for another form of inflation: asset price inflation."

The low pace of wage growth has meant that on the inflation front, classic (goods and services) inflation did not materialise and the model of independent central banks was perceived as credible in preventing the return of inflation. However, the persistently low interest rate environment has been the premise for another form of inflation: asset price inflation. Indeed, in this regime, there have been those who have increasingly spoken out (with louder and louder voices) to condemn the harm inflicted by asset price inflation: when bubbles inflate, they strengthen wealth inequalities.

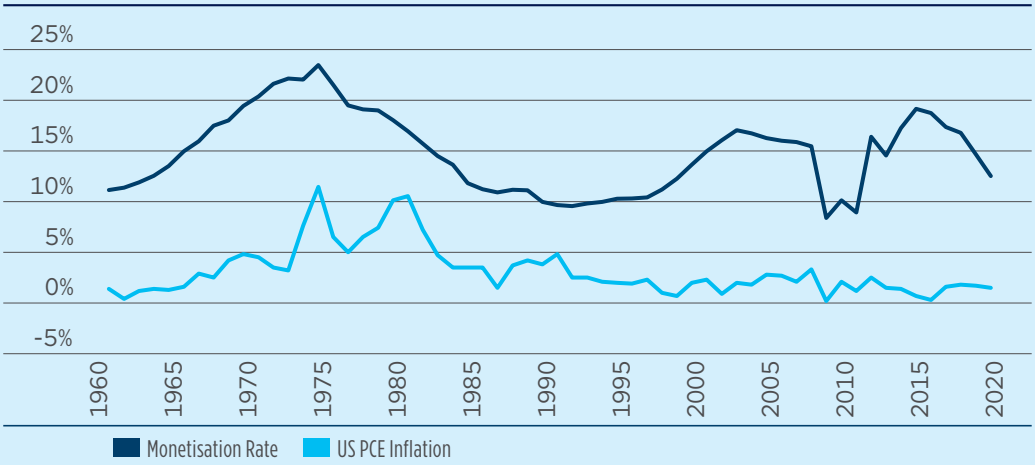
This has been the case over the last decade, with wealth inequality increasingly becoming a sign of the malaise in the current regime and posing a risk of a social bomb exploding at a time of profound recession. **The regime shift occurring could help reduce these inequalities**. First, there is an even higher sense of urgency from institutions to put in place appropriate actions to help the most vulnerable portion of the population during this crisis. Second, the help given to corporations will be first and foremost for maintaining jobs; it would not be acceptable for such cheap lending to be directed into dividend or buybacks, it must be directed into investments and jobs.

FOCUS 1: Regime shift – the example from the 1970s to the 1990s

"The 1970s were a time of severe energy shortages, economic recessions and rising unemployment."

The backdrop of the 1970s consisted of a prevailing socialist ideology and a sharing of added value, favouring salaries over profit in an environment of unionist mobilisation and social contestation. This was a period of severe energy shortages, economic recessions and rising unemployment. Central banks, subjugated by political powers, were directly monetising ballooning budget deficits. Soaring oil prices added to this complex situation.

Figure 6: Monetisation rate and PCE inflation in the US



Source: Amundi calculation with data from Bloomberg and Office for Management and Budget (see also https://www.stlouisfed.org/on-the-economy/2018/april/debt-monetization-then-now). The act of converting high-interest debt into money, through the increase of low-interest reserves is labelled "debt monetisation". The figure above plots the percentage of debt (intragovernmental holdings) held by the Federal Reserve—the monetisation rate—against personal consumption expenditures (PCE) inflation. Data as of 17 April 2020.

"Macroeconomic imbalances took the form of goods and services inflation."

Macroeconomic imbalances took the form of goods and services inflation. The risk premia in financial markets adjusted to this regime: this was a dark decade for investors, with only cash and real assets offering refuge (see Chapter 4).

The damage caused by inflation outstripped the supposed benefits. Inflation has significant effects on income distribution: first, because it is fundamentally a differential phenomenon and certain prices rise or fall more than others; second, because different income groups have different sensitivities to price increases (on the consumption basket of lower income groups, for example, food and energy inflation weighs more than on those with higher incomes). Inflation can also take the form of goods and services inflation (as was the case in the 1970s) or asset price inflation (in the 1990s). It is a fundamental choice of society to accept certain regimes of inflation, with central banks only targeting goods and services inflation.

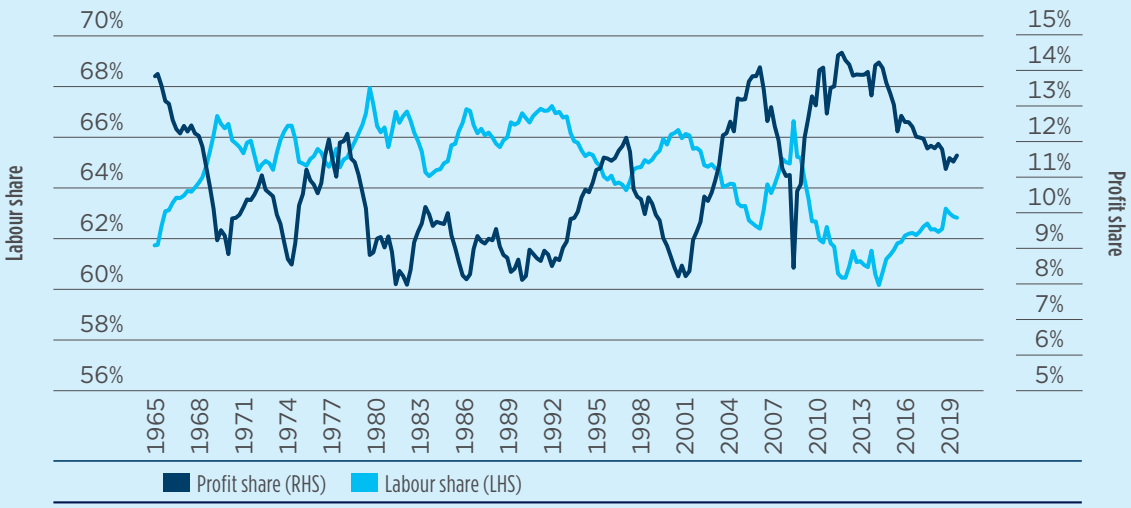
"When inflation was no longer tolerated by society, Paul Volcker was appointed as the chair of the Fed, and this triggered a regime shift."

At some point, inflation, in the form of goods and services inflation, was no longer tolerated by society and ultimately the institutions representing society (the political systems, governments, central banks) had to reflect this change. Paul Volcker was appointed as chair of the Federal Reserve in August 1979 and shortly afterwards Fed rates doubled to a peak of 20% in March 1980. These two events provided the trigger for a regime shift.

After a period of transition, during the 1990s a new regime took shape, sometimes called that of shareholder or patrimonial capitalism: the goal of corporations was to maximise

shareholder value, leading to the dominance of profit over labour, against a backdrop of deregulation ideology and globalisation.

Figure 7: Profit and labour share of GDP in the US



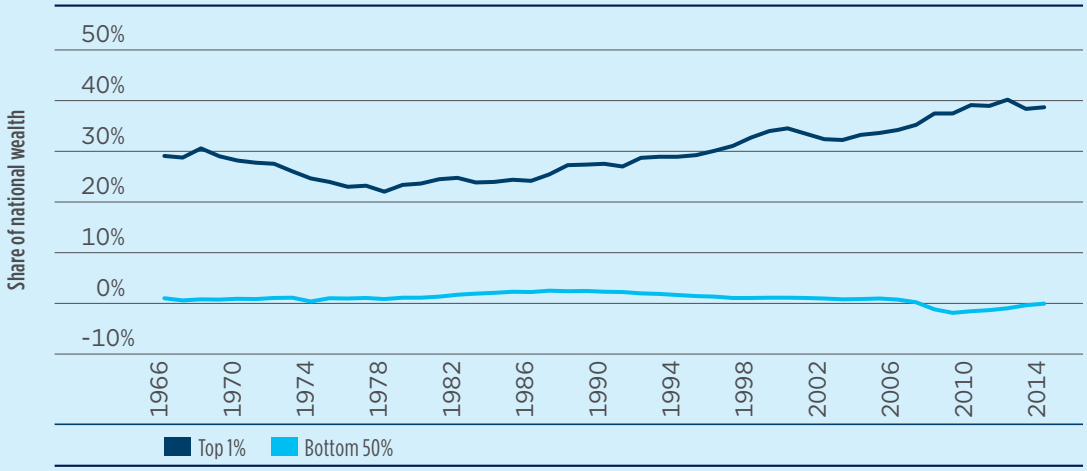
Source: Amundi, BEA, data as of 17 April 2020.

"During the 90s, a new regime took shape, sometimes called that of shareholder or patrimonial capitalism."

As potential growth and productive investment embarked on a phase of decline, private debt increased to compensate for the missing growth, laying the foundations for the economic stagnation that followed the great financial crisis, with the big asset class reflation of the 2010s.

Rising inequality is another feature of the current regime, and this was further exacerbated after the great financial crisis. Now, the invisible hand of Covid-19 is closing the door to this reflation era and its consequences, and turning the clock back towards the 1970s.

Figure 8: Net personal wealth as share of national wealth, US



Source: World inequality database, April 2020.

"The full monetisation of budget deficits, combined with a rebalancing of social and political forces in favour of labour, could provoke a price-wage loop."

3. Full-blown direct monetisation of budget deficits

Financial and economic variables becoming politicised is also a feature of the road back to the 1970s. We are entering a phase of extraordinary fiscal expansion in a world where the debt burden is already extremely high and where the coordination of fiscal and monetary pushes is crucial to ensure fast and effective support to the real economy.

On the fiscal front, budget deficits will have to increase dramatically. First, they will have to offset the economic crisis, help provide unemployed people with an emergency salary and ensure the survival of locked-down corporate businesses that otherwise would collapse, which would cause even deeper and longer-term economic pain. Second, when the sanitary emergency is over and businesses start to reopen, fiscal support will have to help restore growth. Even before this crisis, there was a strong need for infrastructure investments and investments to fight climate change: the fiscal push could be directed into these areas. At the European Union level, we do not expect too much from decisive mutualisation on the budgetary side. We consider much more likely a scenario whereby the ECB incorporates the role of Treasury, rather than seeing the mutualisation of debt issuances (again, given strong resistance from Germany and Northern European countries). This cannot and will not probably be admitted (suspicion of fiscal dominance and moral hazard playing their role) but this is ongoing.

On the monetary front, a prolonged era of financial repression is likely, with ultra-accommodative central banks ready to monetise debt ("helicopter money[2]" being a concrete possibility). All these trends could lead to a re-emergence in the long run of a higher inflationary environment (inflation is predominantly a monetary phenomenon). The full monetisation of budget deficits, combined with a rebalancing of social and political forces in favour of labour, could provoke a price-wage feedback loop.

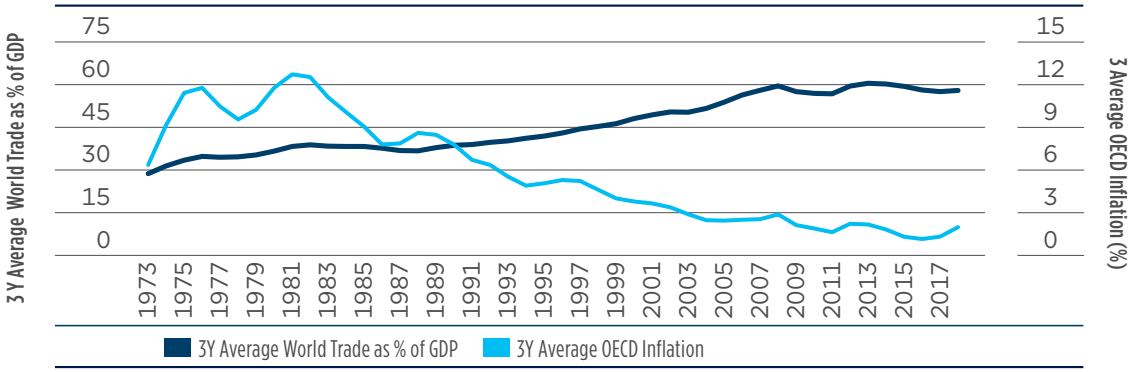
Overall, the large increase in Central Bank balance sheets, and their holdings across economic sectors, will have huge implications for the functioning of "pure free market forces", in terms of crowding out effects, mimetic attitudes, moral hazard and rational bubbles and distorted capital allocation, among others.

"De-globalisation forces will be further reinforced by the pandemic, putting an end to the concept of global growth fuelled by global trade. Domestic/regional growth engines will come back into focus."

4. A further reduction in global trade

The current crisis is further accelerating de-globalisation forces that were already advancing with the trade wars underway over the last few years. The global transport industry is facing significant disruption and states could re-insource activities and nationalise businesses in trouble (i.e., airlines) in an effort to better control sanitary and economic dynamics. The concept of global growth fuelled by trade growth was already fading before the crisis started.

Figure 9: Global trade to GDP and OECD Inflation dynamics



Source: Amundi elaboration on World Bank data (world trade, world GDP) and OECD, as of 17 April 2020.

"At the end of this transition phase, the equilibria among risk premia will not be the same."

Global growth is retreating as we move towards more autonomous growth drivers with national or regional engines, where the disinflationary effects of globalisation recede. The labour slack that drives wage growth will be a domestic one, not a global one. This means a lower contribution from global trade to global growth and disinflation.

[2]Helicopter money: monetary financing, with the preferred proposal being either a (one-off) tax break or cash handout to citizens or a permanent monetisation of a proportion of the fiscal deficit https://www.weforum.org/agenda/2015/08/what-is-helicopter-money/

Risk premia will move well in advance of effective shifts as markets test the new lines. Investors should be prepared for early action. This means that:

- global portfolios should be less exposed to global trade factors (investors have been long global trade in the last three decades); and
- symmetrically, international diversification, impaired by the correlation to a single global trade factor, should prove more effective as this factor fades.

FOCUS 2: Changing economic lens in a regime shift

"On the road back to the 70s, investors should expect more 'heterodox economics' and changes in the relevance of key indicators of portfolio management."

On the road back to the 1970s, powerful aspects of regime shifts will be unleashed, stemming from changes in what should be seen as "socio-political macro cycles". One aspect to this is that disparities in economic growth, risk premia and asset returns are likely to be explained by politics and policies (on top of the well-known technology changes, labour dynamics, etc.). At least, this was the thesis of Nobel Prize winner Douglass North.

Building on his theory of institutions and distinguishing between political rules and economic rules, research has identified a political risk factor (P-factor) in developed and emerging countries with a convincing predictivity power on cross-sectional returns. More (less) political risk entails lower (higher) returns (Henry and Miller).

The P-factor is not spanned by prominent benchmarks and is priced into developed, emerging and frontier markets, with a risk premium of up to 15% per annum. This has profound implications on the asset allocation framework for investors in a period of regime shift.

On the road back to the 1970s, investors should also expect more "heterodox economics" and, above all, shifts and changes in the importance and relevance of key indicators of portfolio management, such as interest rates, inflation, debt and currency. This will have to be taken into account in portfolio construction.

Table 1: Orthodox vs heterodox economics, and key variables to watch

Zeitgeist Orthodox economics	How the economy is managed...	Modern monetary theory Heterodox economics
Monetary and fiscal policy both have a place, but monetary policy first	**Dominant policy tool**	**Fiscal policy** is the only effective tool
Interest rate is the key variable to achieve full employment and stable prices	**Primary economic manager**	**Jobs guarantee** to achieve full employment, taxes to restrain spending / inflation
See world through **macro aggregates**	**Approach to economics**	See world through **accounting identities**
Real and financial constrains matter	**Macro constraints**	**Only real constraints matter**, see through higher inflation
Must be financed and matter over the long term	**Deficits**	**Irrelevant** - shouldn't be part of the policy conversation
To finance government spending	**Taxes**	**To slow excess consumption and inflation** and ensure **demand for currency**
	Key economic variables	
Primary tool of macro management, deficits may push rates up	**Interest rates**	Minor tool, deficits push rates down, debt issuance purpose is to raise rates
Too high inflation would require an economic slowdown driven by higher rates	**Inflation**	Inflation would only require a slow down, if driven by excess of demand, done through higher rates
Debt used to finance deficits	**Debt**	Debt used to raise rates, if needed
Largely exposed	**Currency**	Floating to ensure moneraty sovereignty, taxes are what ensures demand for a flat currency

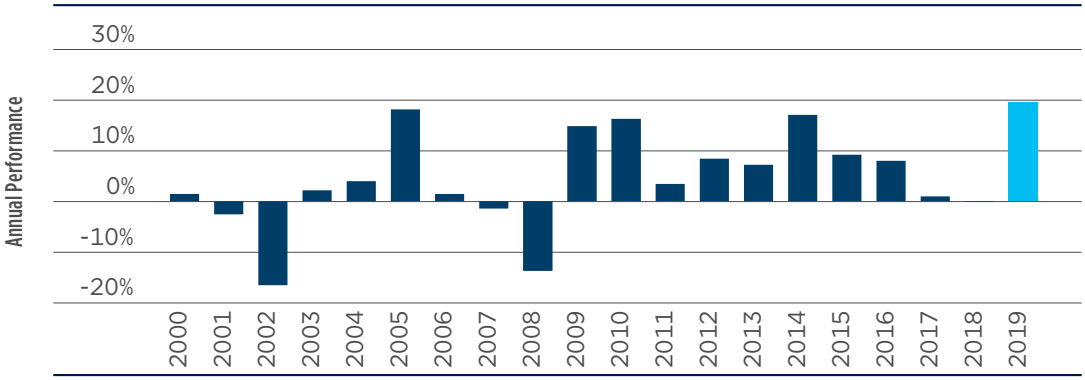
Source: Bernstein US Economic analysis.

The inheritance from the 2010s: a regime of abnormally strong risk-adjusted returns

"A traditional Euro-based global balanced portfolio had a good closing of a great decade."

The 2010s closed on a strong foot, with 2019 seeing a stellar performance. A Euro-based traditional global balanced portfolio (the **Traditional Balanced Portfolio** hereafter) comprised of 50% global stocks (MSCI World Net TR in Euro Unhedged) and 50% global bonds (Bloomberg Barclays Global Aggregate Bond in Euro Unhedged) delivered a strong 19.4% return in 2019, the highest annual performance over the last two decades (see Figure 4). Last year was the cherry on the cake of a strong decade for investors, during which the Traditional Balanced Portfolio delivered an appealing annual return of 8.8%, with a volatility of 6.5% and a Sharpe ratio of 1.3.

Figure 10: Traditional Balanced Portfolio (in Euro unhedged)
(50% Global Aggregate Bond Eur/50% MSCI World Eur)



Source: Amundi on Bloomberg data. Balanced portfolio represents equal weights of MSCI World EUR Index Net Total Return and Bloomberg-Barclays Global Aggregate Total Return Index EUR (unhedged indexes) with annual rebalancing. Data as of 31 December 2019. All the performance shown in this paper are gross of fees, inflation and taxes. **Past performance is no guarantee of future results.**

"Lower inflation and lower rates have been key contributors to the extraordinary performances of the last three decades."

Similar performances have been achieved by USD investors with the 50/50 US balanced portfolio (50% S&P 500 and 50% US Aggregate Bond), with the last decade delivering strong risk-adjusted returns (Table 2), supported by inflation and rates trending lower (monetary factors being the most relevant driver of performance).

Table 2: US portfolio key metrics in the last three decades

	1990s	2000s	2010s	1989-2019 (30Y)
Bond ann. return	7.7%	6.3%	**3.7%**	5.9%
Equity ann. return	18.2%	-0.9%	**13.6%**	9.9%
50/50 portfolio ann. return	13.1%	3.0%	**8.8%**	8.2%
50/50 portfolio ann. volatility	7.7%	8.3%	**6.1%**	7.5%
50/50 portfolio Sharpe Ratio	1.03	0.00	**1.33**	0.72

Source: Amundi on Bloomberg data. Balanced portfolio of 50% equity (S&P 500 index) and 50% bond (Bloomberg Barclays US Aggregate Bond Index). Data as of 31 December 2019. **Past performance is no guarantee of future results**.

"The past decade featured some key trends, including the supremacy of US equity and global high yield, the poor equity vs. good bond performance in EM and the reduction in volatility and market liquidity."

The extraordinary decade was characterised by some key trends:

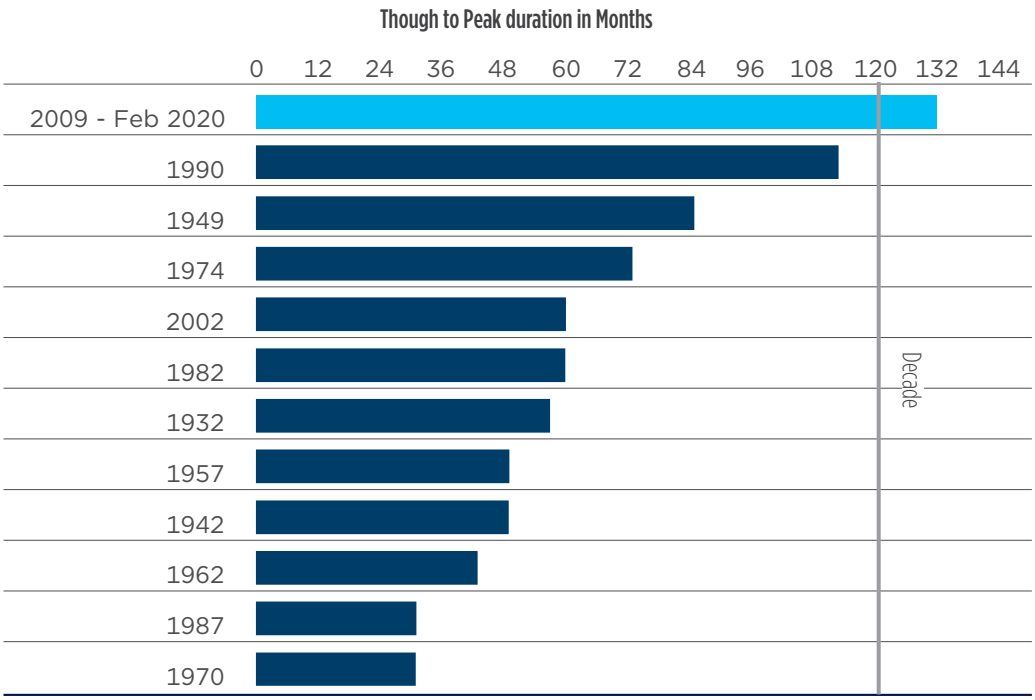
1. Abnormally long bull market with US stock supremacy;
2. A decade of volatility collapse and negative bond/equity correlation;
3. The credit market golden age;
4. Emerging markets conundrum: poor equity vs. strong bond performance; and
5. The liquidity dilemma and the rise of illiquid real assets.

"For the first time in history, the US bull market phase has been longer than a decade."

1. Abnormally long bull market with US stock supremacy

The annualised returns of balanced portfolios were especially boosted in the decade that just closed (Dec 2009 to Dec 2019), as markets did not experience any real bear trend (bear market defined as a phase with at least a 20% loss in the equity index). Returns were benign, with the S&P 500 delivering a strong 13.6% annualised return over the decade, amid an extraordinary rebound after the dislocation that occurred during the great financial crisis.

Figure 11: Longest bull market on records for the S&P500



Source: Amundi on Bloomberg data. Data as of 17 April 2020.

The long bull run that has just come to an end was characterised by the overperformance of the US market vs. the rest of the world. In fact, in the decade 2009-2019 a Euro-based investor would have earned an annual return of 12.2% in the Global MSCI World Index, against 15.6% for the MSCI USA Index (all indices in Euro, total return unhedged). Key contributors to this overperformance were the high growth stocks in the technology and tech-enabled consumer discretionary sectors, such as those in the FANG+ Index[1], which has delivered almost three times the annual return of the World Index over the five years since the FANG+ Index was launched (FANG+ returned 29.3% p.a. vs 10.4% for MSCI World).

"In the 2010s, volatility trended down across the board and it reappeared amid pandemic crisis."

2. A decade of volatility collapse and negative bond/equity correlation

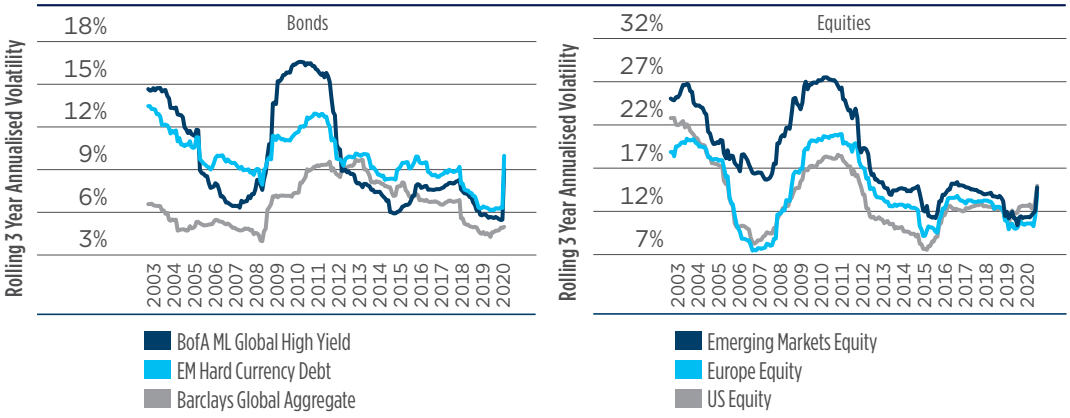
A key feature of financial markets after the crisis has been the collapse of volatility across the board, in an environment of continued quantitative easing (QE) by major central banks (Fed, ECB, Bank of Japan) and the proliferation of quantitative strategies (carry strategies selling volatility, CTAs, risk parity).

We note that after the great financial crisis the downward trend has been constant, with some periods of bumpier volatility in 2011-2012 during the Euro crisis, in 2015 during the Chinese stock market turbulence and more recently with Volmageddon in February 2017.

This trend has dramatically reversed over the last few weeks with the coronavirus outbreak, triggering deep market selloffs and volatility spikes.

[1]Source: Bloomberg. The NYSE FANG+ Index is an equal-dollar weighted index designed to represent a segment of the technology and consumer discretionary sectors consisting of highly-traded growth stocks of technology and tech-enabled companies such as Facebook, Apple, Amazon, Netflix, and Alphabet's Google.

Figure 12: Volatility moving lower in equity and bond markets

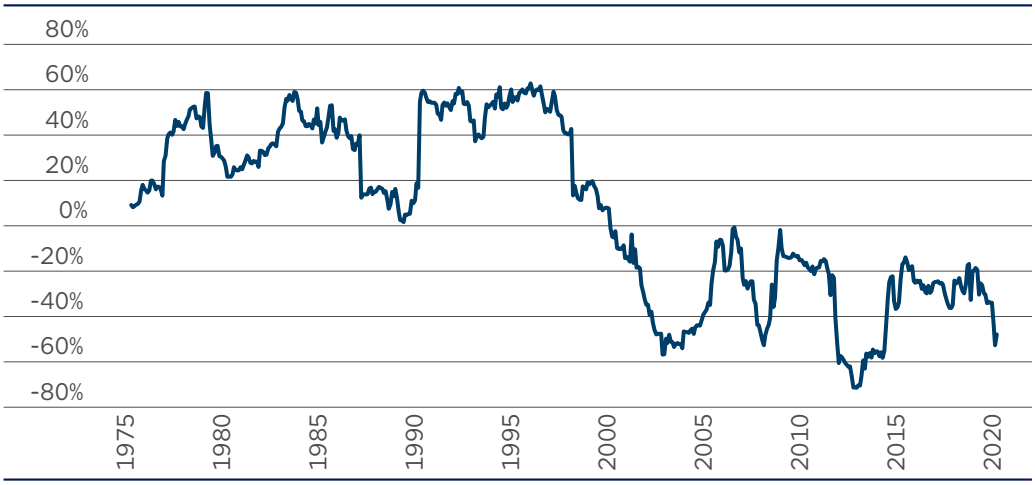


Source: Amundi on Bloomberg data. Global Aggregate indices from Bloomberg Barclays, EM bond index is the J.P. Morgan EMBI Global Diversified Composite, equity indices are from MSCI. All indices are total return in Euro unhedged. Data as of 17 April 2020. Three-year rolling volatility calculated on monthly data.

"Negative bond/equity correlation also helped boost the risk-adjusted returns of balanced portfolios over the last decade."

The last decade also saw the continuation of the negative bond/equity correlation regime that started at the end of the 1990s. This helped to keep overall portfolio volatility low and further enhance risk-adjusted returns in the last decade as high-quality bonds acted as a hedge in periods of poor equity performance.

Figure 13: Three-year rolling correlation between Bloomberg Barclays US Treasury Bonds Index and S&P 500 Index



Source: Amundi on Bloomberg data. Three-year rolling correlation on monthly data, as of 21 April 2020.

While at the asset class level diversification has overall been effective, this is not the case at the geographical level, where diversification has not worked as returns have been driven by unique winning factors: globalisation trends, interest rate dynamics (and inflation) and momentum and distortions propelled by prolonged quantitative easing (QE) programmes. Global trade has been the single factor driving global growth and therefore limiting the benefits of geographical diversification.

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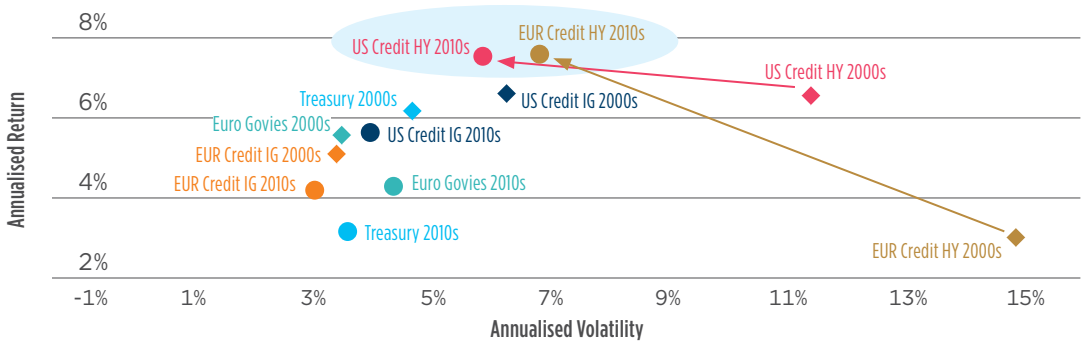
"The global high yield market delivered the most appealing risk-adjusted returns in the 2010s."

3. The golden age of credit (and high yield)

In terms of risk-adjusted returns, the winning asset class of the 2010s was high yield (both Euro and US), which improved both in terms of risk and returns vs. the previous decade. After having been particularly harmed during the credit crunch that characterised the great financial crisis, this asset class benefited from the prolonged period of economic expansion and the low default rates regime that followed the crisis. More generally, this financial cycle and the returns of the strategic asset allocation portfolio were driven by the corporate credit asset class, which benefited from interest rates and central bank rates trending lower, and also QE targeting the credit market. In a regime of artificially depressed default rates and zero interest rates, investment grade credit has apparently become a substitute for government bonds as a safe and liquid investment. However, this is a shift with considerable limits, as corporate credit does not have the same quality and liquidity as core govies, as has become clear in this Covid19-induced crisis.

Figure 14: Risk-return profile of fixed income indices 2000-2009 vs 2009-2019



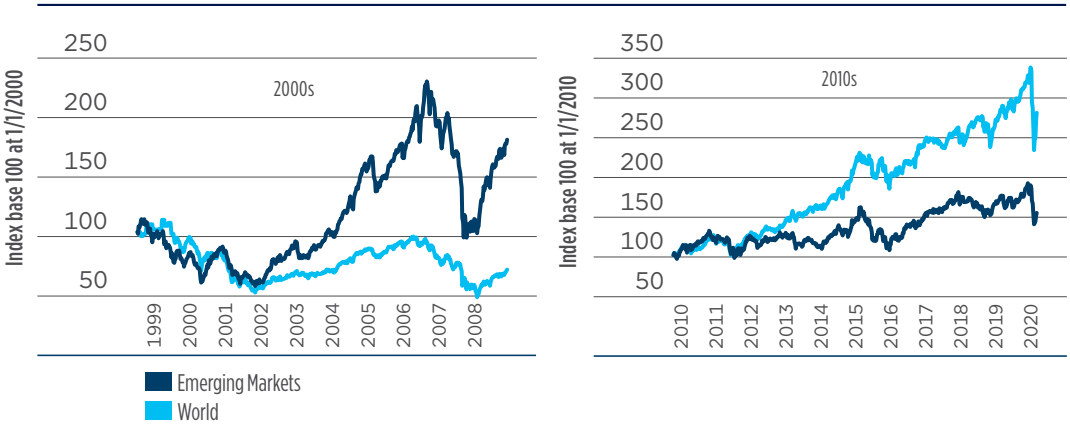
Source: Amundi on Bloomberg data. For indices definitions see the index list at the end of this document. All indices in local currency. 2000s = period 2000-2009, 2010s = period 2010- 2019. Data as of 31 December 2019. **Past performance is no guarantee of future results**.

"While in emerging markets the 2000s were the decade of equity markets, in the 2010s emerging markets bond (sovereign and corporate) returns were very strong."

4. EM conundrum: poor equity vs strong bond performance

The past decade was peculiar for EM assets. On the equity side, we could define the 2010s as a lost decade. In fact, while in the 2000s EM equities delivered overall strong returns vs. global equities, with extreme levels of volatility, in the 2010s they returned a meagre 6.2% p.a., despite the strong rally in global equity markets, with the World Index up 12.2% p.a. (both indices are in Euro terms unhedged).

Figure 15: Emerging markets equities – 2000s vs 2010s



Source: Amundi on Bloomberg data. MSCI indices in total return in Euro unhedged. Data as of 17 April 2020. **Past performance is no guarantee of future results**.

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The story is very different for emerging markets hard currency (EM HC) bonds, which delivered an appealing risk/return profile (see Table 3), despite the structural trends affecting this asset class. In particular, the EM HC bonds asset class experienced a strong reduction in its volatility profile thanks to less volatile rates dynamics in these markets and an increasingly diversified market.

Table 3: EM bonds – strong risk-adjusted returns in the last decade

	2010s annualised return	2010s annualised volatility
Global Agg. Bond	2.5%	4.6%
EM Sov. HC	6.9%	6.2%
EM Corp. HC	6.4%	4.6%

Source: Amundi on Bloomberg data. Data from 1 January 2010 to 31 December 2019. Indices in USD. EM Sov. HC = J.P. Morgan EMBI Global Diversified Composite, EM Corp. HC = J.P. Morgan Corporate EMBI Broad Diversified Composite Index. **Past performance is no guarantee of future results**.

The story underpinning this divergence is a story of falling inflation (average inflation in EM at 6.8% in the 2000s, at 5.2% in the 2010s and with 4.7% forecast for 2020), EM central banks cutting rates, moderate growth (all elements supporting EM bonds) and the strong dollar (challenging for local currency bonds and equity). The past decade has also marked the end of the EM group approach and the move towards a selective approach. In fact, investors have had to reassess the growth and earnings potential for each region and country taking into consideration growth fundamentals (total factor productivity down), debt dynamics and emerging idiosyncratic stories (i.e., Turkey, Argentina). Hence, the overall poor EM equity performance masks different situations, confirming that investors should move away from the global EM concept and be selective in their allocation to EM countries.

5. The liquidity dilemma and the rise of illiquid real assets

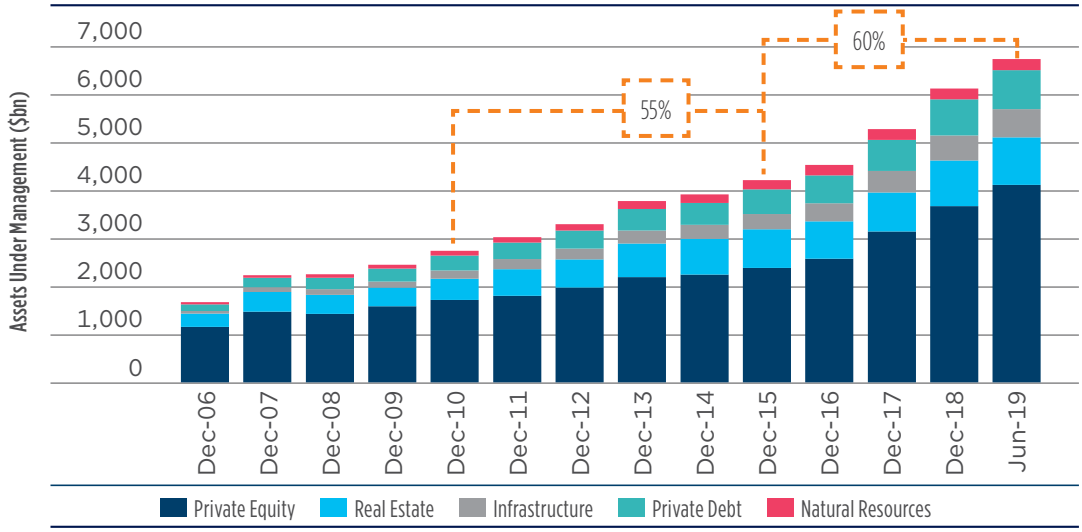
"The prolonged period of economic expansion, low rates and low volatility helped fuel demand for risk assets."

The strong returns and lower volatility also came at a time of profound transformation in another key axis of portfolio construction, one that is often neglected by investors: liquidity. On the asset side, we have already addressed the issue of liquidity shrinkage in the markets in the past, noting how changes in regulations after the great financial crisis led to a retreat in the market-making activity (which was in the past a positive factor across markets) of dealers and banks, which before the crisis were the main actors providing liquidity to the market, particularly during periods of stress.

On the demand side, we saw a frantic search for yield in listed assets that did not necessarily have liquid assets, and also an increase in private markets. The continuous QE programmes and the consequent expansion of negative yielding bonds in the government space pushed investors to increase their risk-taking and move into less liquid assets, with the average allocation to alternative assets by large pension funds moving from 8.9% in 2009 to 22.5% in 2018[4]. As a result, over the last decade private markets have experienced a period of fast growth, with assets under management (AUM) in private capital reaching a record level of $6.7 trillion in June 2019, more than three times the size of the AUM in 2010.

[4]Source: IMF Global Financial Stability Report, October 2019.

Figure 16. Private capital AUM by asset class, 2006 – H1 2019

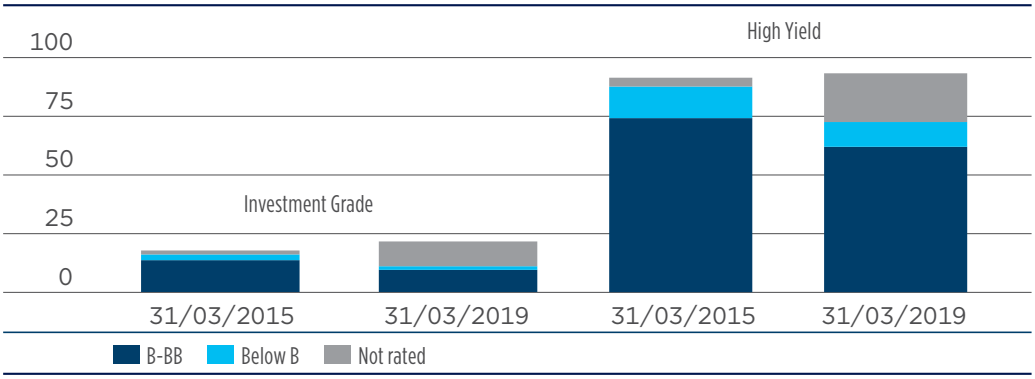


Source: Prequin. Data as of June 2019.

"In the search for higher yield, investors are increasingly moving into sectors that could potentially be exposed to lower market liquidity in case of market stress."

In addition, liquid income-seeking funds searched aggressively for yield in the various credit-oriented spaces, including lower credit quality areas that could potentially be less liquid in case of market stress. This high demand was one of the reasons for the extremely good performance of the global high yield bond market, with very low volatility in the 2010s, and also a low default environment. Abundant macro liquidity pushed volatility down but saw investor demand rise (high liquidity on the buying side).

Figure 17: Fixed income funds: low-rated portfolios by credit quality (% of fixed income portfolio)



Source: Amundi IMF Financial Stability Report, October 2019.

The problems arise when liquidity is needed and this is evident in the market during the current turmoil. Should the low liquidity phase last for longer, daily liquidity funds invested in less liquid spaces will be challenged as they might have difficulties closing positions in some less liquid instruments to face redemptions.

At the same time, the rise in illiquid investments by pension funds could also have implications on market liquidity in phases of stress. In fact, as the IMF recently pointed out: "*Given higher liquidity risks, pension funds will likely have to set aside more of their liquid assets to cover potential outflows during and after periods of stress, especially if market funding becomes more expensive. This would make it more difficult for them to buy assets traded at distressed price levels, limiting their ability to invest counter cyclically and thus play stabilsing role during periods of market stress*[5]."

[5]Source: IMF Financial Stability Report, October 2019.

We are facing a liquidity conundrum as on one hand, there is abundant macro liquidity (injected by central banks), while on the other, micro (market liquidity) has been shrinking and tends to disappear when most needed. Third, Covid-19 signals the outbreak of a liquidity crisis in the corporate sector, not in banks, at least for now, making liquidity the critical dimension that investors should incorporate into their investment process.

It also brings a definitive shift in market structure, with a critical role for the buy-side in the functioning and financing of the financial ecosystem, highlighting also its risks, which are different from the traditional bank-centred approach. This is pointing at the necessity for various authorities (central banks, regulators) to incorporate the consequences of this reality into their policies and direct transmission channels of action. This is what the Fed is doing, not fighting a past war but plugging facilities onto the buy-side in pursuing its policy actions.

Finally, it is bringing compelling evidence that liquidity in our industry must be fully integrated as a key dimension of any process, that liquidity mismatches do happen and that there is a trade-off between returns and liquidity. Investors should no longer consider liquidity as an exogenous and ex-post, irregularly measured element, but as a constant ex-ante dimension of portfolio construction.

Therefore, investors need to reassess the liquidity concept (from exogenous to endogenous factor) and include it in the investment process. This implies considering the trade-off between returns and liquidity. Liquidity should become one of the portfolio construction metrics and investors should make assumptions on the future dynamics of market liquidity as they do for all the other portfolio metrics (valuations, returns and volatility).

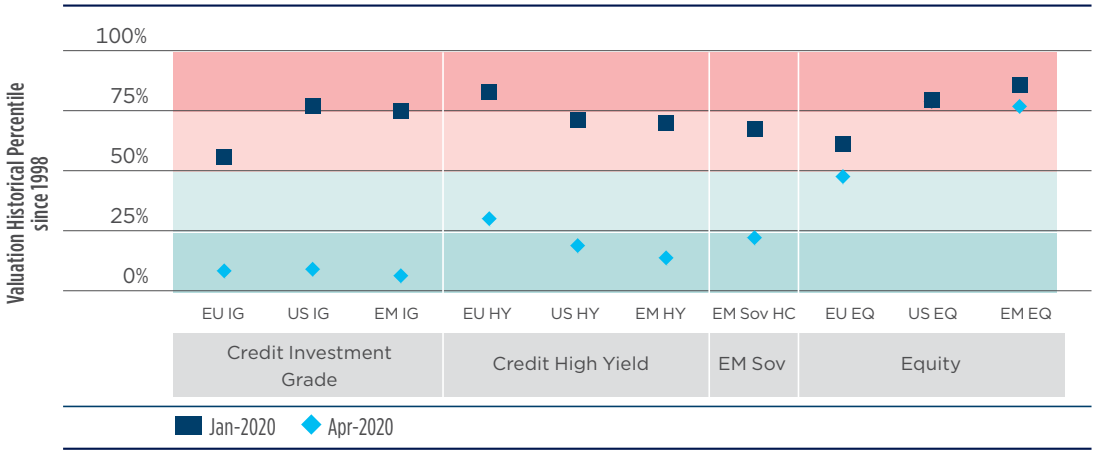
A bumpy start to the 2020s is resetting long-term performances

"At the beginning of the 2020s we are already seeing signs of cracks in the market environment of the last 10 years: volatility is back, liquidity is drying up and credit markets are under stress."

Some of the trends we saw in the 2010s are already disappearing as we enter the first quarter of the new decade with the market turmoil originated by the coronavirus outbreak. Volatility is back, market liquidity has dried up as risk-off sentiment has resurged and credit markets appear more stressed.

In this phase of regime shift, some long-term trends will become stronger. In particular, the trend of low rates at equilibrium, the demand for real assets and de-globalisation forces will be increasingly in focus. More innovative businesses will likely come out of the crisis strengthened and the EM market discrimination theme will be further reinforced.

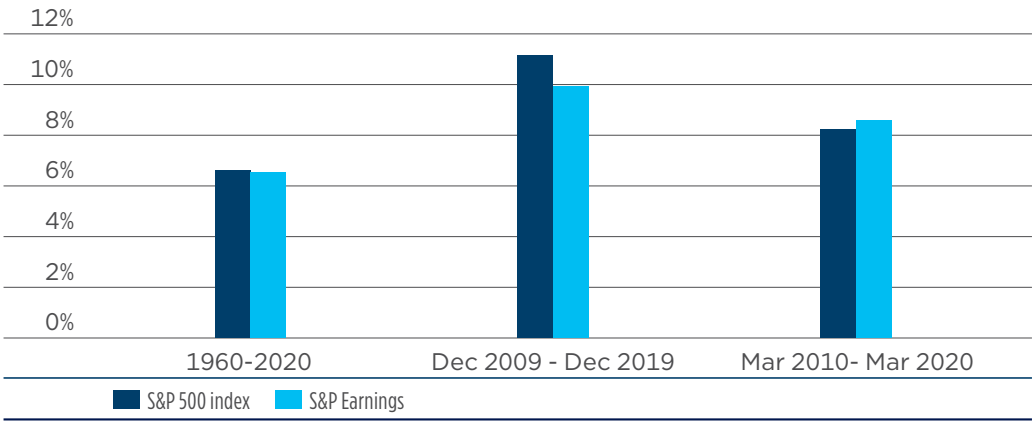
Figure 18: Valuation reset



Source: Amundi on Bloomberg data. Amundi, Bloomberg. EU IG, US IG, EM IG, EU HY, US HY and EM HY are based on BofA Merrill Lynch Corporate Bond indices (IG = investment grade, HY = high yield). EM Sov HC = JPMorgan EMBI Global Diversified. EU EQ, US EQ and EM EQ are based on MSCI indices for equity markets. All indices are for a specific region (EU = Europe, US = United States, EM = Emerging Markets). Analysis based on spreads for bond indices and on 12-month forward PE ratios for equity indices. Data as at 17 April 2020.

The volatility spike and bear market of the first quarter of 2020 have already had a significant impact on the long-term performance of equity markets. Returns for the S&P 500 have converged back to 10-year earnings growth. This mean reversion move has also affected the returns of the Traditional Balanced Portfolio, with annualised returns moving down to 6.7% (in the decade from Mar 2010 to Mar 2020) from the previous 8.8% (in the decade from Dec 2009 to Dec 2019), while at the same time volatility has surged from 6.5% to 7.1%. This is just the beginning of a new investment world, where investors should be ready to revise their investment tools and embrace new market themes in their portfolio construction to enhance future risk-adjusted returns.

Figure 19: Long-term S&P500 returns (price index) and earnings annualised growth

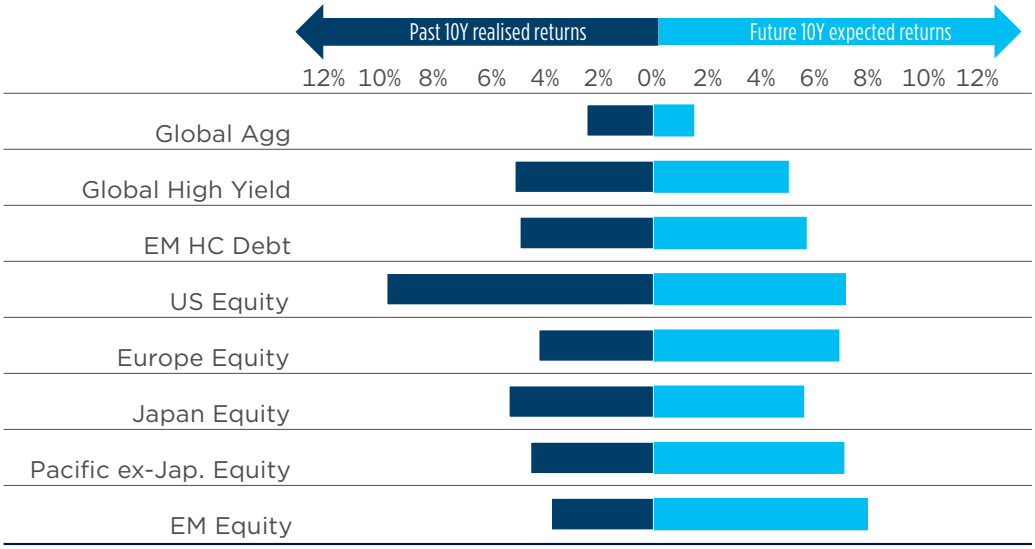


Source: Amundi analysis on Bloomberg data. Data as of 17 April 2020. Analysis on S&P500 price index and S&P500 Trailing 12 M EPS.
Past performance is no guarantee of future results.

Resetting performance targets: adding risk is not a panacea

Despite better valuations compared with the beginning of 2020, the prospect of low core rates for longer and lower earnings growth amid anaemic productivity growth leads to low returns expectations for the next decade. This is especially the case in the asset classes that have previously experienced an extraordinary boom, such as US equity, global high yield and the entire fixed income space, which benefited from the trend of interest rates moving down.

Figure 20: Historical vs expected future returns for main asset classes



Source: Amundi Asset Management CASM Model, Amundi Asset Management Institutional Advisory and Research Teams, Bloomberg. Data as of the 20th of April 2020. Based on: Macro figures as of last release, Interest rates as of the 31st of March 2020, equity, spread and FX updated as of the 15th of April 2020. Equity returns based on MSCI indices. All indexes are in Local Currency. Returns on credit assets are comprehensive of default losses. Forecasts for annualised returns are based upon estimates and reflect subjective judgments and assumptions. These results were achieved by means of a mathematical formula and do not reflect the effect of unforeseen economic and market factors on decision making. The forecast returns are not necessarily indicative of future performance, which could differ substantially. **Past performance is no guarantee of future results**.

"Returns expectations for the new decade are low across the board, amid low rates and low growth."

This will result in a **strong reduction in expected returns for the Euro Traditional Balanced Portfolio, which will fall from the 6.7% p.a. experienced in the period March 2010 to March 2020 to a meagre 3.5% p.a. in the next decade. Similarly, the US balanced portfolio will pass from the 7.2%p.a. in the last decade (8.2% over the last 30 years) of de-globalisation and inflation trending lower to 4.4% p.a. in the 2020s.**

Even taking into account that prolonged lower interest rate expectations can justify higher sustainable valuations for risk assets at equilibrium, a mean reversion is likely to push equity returns and earnings growth back to their long-term trends. This is what we have already experienced in the first quarter of 2020, with the mean reversion trend in action.

Overall, earnings growth and equity prices should move hand in hand over the long term and deviations from this will have to be re-adjusted with corrections.

In order to enjoy above-trend returns and earnings deviating from their long-term trend, the return on physical capital should itself deviate from the long-term trend. This return on physical capital is a function of four elements:

1. Trends in the labour force;
2. Sharing of added value between profits and wages
3. Trends in the stock of capital; and
4. Productivity.

Since the first three elements are already known, extrapolating higher returns means taking a bet on higher productivity. Levels reached before the recent corrections embedded a hope for higher productivity that did not materialise.

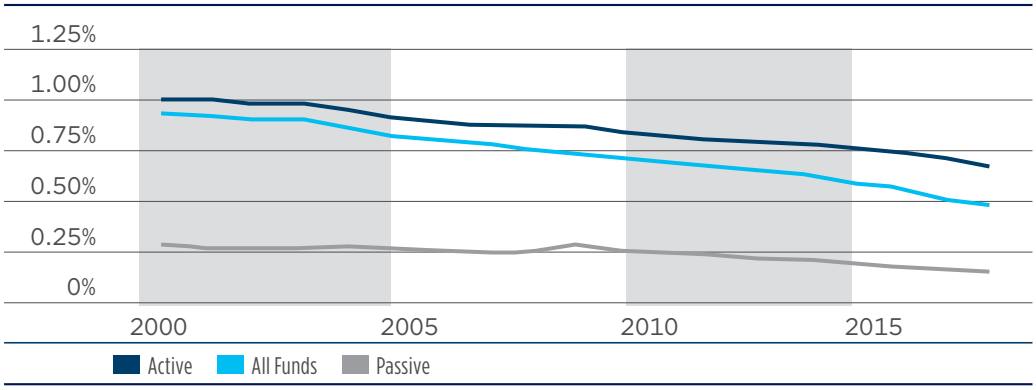
A relatively smooth pattern leading to a lower return regime, in a world of lower growth and negligible inflation, could alternatively be followed by a bumpier road: initially, accommodative monetary action propels asset prices to higher levels (and we might already have passed this phase at the beginning of 2020, with markets touching new highs), before a correction induces further monetary and fiscal interventions that eventually end up into a new inflationary regime, such as the one of the 70s. We have previously argued that this regime shift would occur when some trigger pushed fiscal and monetary policies to become even more aggressive; the coronavirus outbreak could be this trigger.

Investors in search of higher returns could follow different directions.

"In search of higher return potential, investors are likely to continue to cut costs and/or move to a riskier asset allocation."

1. The first is to optimise cost-adjusted returns considering all costs (inflation, taxes and fees). Cost reduction in the asset management industry is a trend already in place. The proliferation of passive strategies, and most recently very low-cost ETFs, had contributed to pushing down overall fees, even in the active management world. This trend has been marked in the US, where fees in mutual funds have been cut by about 40% over the last decade, according to Morningstar. Europe is following the same path, as the introduction of the MiFID regulation has further increased the pressure on total fees and led to a review of costs and benefits across the entire value chain, including advisory, services and tools. Looking ahead, this trend is set to continue, but further cost reductions will likely have a limited impact on the overall performance of a balanced portfolio as the starting point is already much lower compared with 10 years ago. However, it is still important in a world where any additional basis point of returns will be a valuable asset.

Figure 21: Asset-weighted average fees for US funds



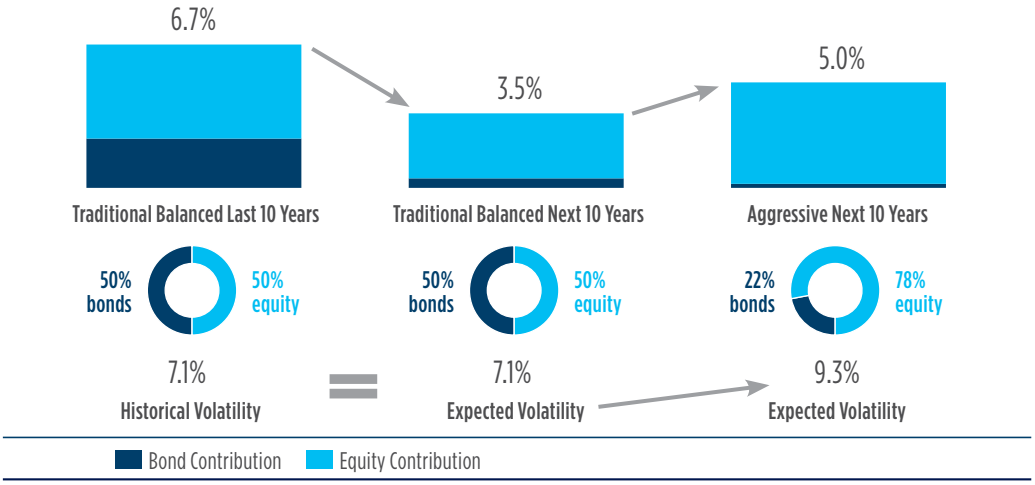
Source: Morningstar Annual Fee Study 2018. Amundi on Bloomberg data. See list of indices at the end of this document. Data as of 3 January 2020. https://newsroom.morningstar.com/newsroom/news-archive/press-release-details/2019/Morningstars-Annual-Fee-Study-Finds-That-in-2018-Investors-Paid-Less-to-Own-Funds-Than-Ever-Before/default.aspx

"To reach a 5% target return, Euro-based investors in global aggregate bonds and global equity would have to increase their equity allocation to 78%."

2. The second way to seek higher returns is to increase risk allocation through higher allocation to listed equities – at a price in terms of the higher expected volatility – or through some combination of listed equities and private equity and other illiquid real assets (less volatile than listed equities) to mitigate the potential volatility and improve the risk/return profile. However, investors should bear in mind that any portfolio of illiquid real assets (private equity, private debt, infrastructure and real estate) could improve the return/volatility profile but at a risk of false tranquillity. Investors are attracted by short-term lower volatility, but they should consider that in the illiquid world, the real impact of the Covid-19 shock will surface with a lag, coupled with the necessity to reprice, revisit valuations and review covenants, etc.

A Euro-based investor that aims to get a 5% annual target return (in the past this was the target return of many institutional investors) with an allocation to the two main Euro-based asset classes, global aggregate bonds and global equities, would have to increase their equity allocation to 78%.

Figure 22: Historical vs expected future returns for Traditional Balanced Portfolio and Aggressive Portfolio (with 78% equity allocation to reach the 5% return target)



Source: Amundi CASM Model, Amundi Institutional Advisory and Research Teams, Bloomberg. Data as of 17 April 2020. **Past performance is no guarantee of future results**.

"With a 78% global equity and 22% global aggregate bond portfolio, Euro investors will be exposed to much higher volatility compared with the historical volatility of a 50% equity/50% bond allocation in periods of prolonged market stress."

This **Aggressive Portfolio** (with 78% global equities and 22% global aggregate bonds) will have a greater expected volatility of 9.3% vs. the 7.1% of the Traditional Balanced Portfolio (50%/50% allocation), calculated by keeping the asset class volatility at the same level as the past decade. With this volatility assumption, the Aggressive Portfolio would have only a slightly better Sharpe ratio of 0.54, compared with the Traditional Balanced Portfolio's ratio of 0.51.

Table 4: Volatility and Shape ratio of Traditional Balanced (50%-50%) and Aggressive (78%-22%) portfolios under historical and stressed volatility regimes

Portfolios	Composition MSCI WORLD	Ann. volatility	Sharpe ratio	Stressed volatility (2007-2011)	Stressed Sharpe ratio
Traditional Balanced Portfolio Historical simulation	**50%** MSCI World/**50%** Barclays Global Aggregate	7.1%	0.96		
Traditional Balanced Portfolio Forward-looking		**7.1%**	**0.51**	**8.5%**	**0.42**
Aggressive Portfolio Forward-looking (Return target at 5%)	**78%** MSCI World/**22%** Barclays Global Aggregate	**9.3%**	**0.54**	**12.2%**	**0.41**

Source: Amundi CASM Model, Amundi Institutional Advisory and Research Teams, Bloomberg. Data as of 17 April 2020. **Past performance is no guarantee of future results**.

Volatility has already risen dramatically amid the coronavirus crisis and this new regime is likely to continue as markets reassess their expectations on economic growth and the impact of fiscal and monetary measures. Stress testing the volatility profile of the Aggressive Portfolio using the level of volatility that the asset classes experienced in the period 2007-2011, which covered a similar episode to the current one, the expected volatility would rise significantly to above 12% and the Sharpe ratio would deteriorate and become slightly worse than that of the Traditional Balanced Portfolio.

"One way that investors could optimise their future risk-adjusted returns is by enlarging their investment universe."

3. A third way that investors could optimise their risk-adjusted returns is by widening their investment spectrum. We have analysed eight main asset classes (listed in Figure 20) and compared what would have been the efficient frontier for the past decade vs. the one that we foresee for the next decade on the basis of our expected returns. The first consideration we can draw from this analysis is that not only will the efficient frontier shift lower, it will also become flatter. **Consequently, the remuneration for any additional unit of risk will be very low, making any additional risk-taking less appealing.** The second consideration is that in the past decade additional geographical and asset class diversification did not provide any significant benefit, as the Traditional Balanced Portfolio

Efficient frontier analysis assumptions

The efficient frontier analysis has some limitations as it tends to produce portfolios that are not always well diversified and not especially realistic, especially when some asset classes have a dominant risk/return profile. Nevertheless, with the addition of some constraint, this analysis is a helpful exercise that provides some quick highlights on key portfolio construction implications for the future.

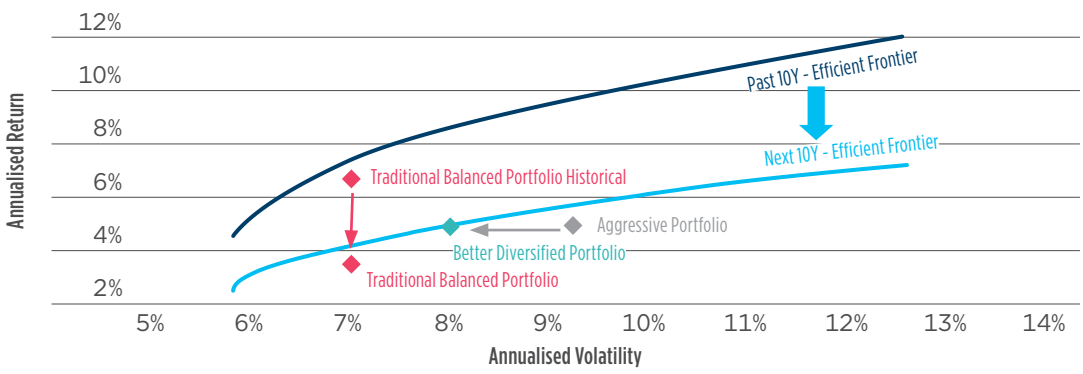
In our analysis we have considered:

- **Asset classes:** the eight asset classes of Figure 20
- **Expected returns** from the Amundi Asset Class Views base scenario
- **Volatilities and correlation** in line with the past decade
- **Constraints on potentially illiquid bonds:** cumulated allocation to global high yield and EM HC bonds should be below 20%
- **Constraints on EM asset classes:** cumulated allocation to EM HC bonds and EM equity should be below 30%
- **USD:** the USD is trading above its long-term valuation, with a weighted average USD overvaluation of 11%; we assume that this overvaluation gap will be mostly absorbed in the next decade. The currency contribution to returns for a non-USD investor can be significant so this will reduce the overall USD assets advantage on returns.

was not far away from the efficient frontier. US equity and Global aggregate bond returns where very attractive in the past decade, making additional diversification into EM assets and HY less remunerative in relative terms compared to what it looks like in the next decade, when this asset classes will be key to reach the 5% target return investors have in mind. In fact, looking at the forecast efficient frontier for the next decade diversification may help reduce the overall risk profile, as the Aggressive Portfolio (78%/22%) will move to a lower risk profile in the efficient frontier.

"The efficient frontier will be much lower and flatter compared with the last decade. The extraordinary performance of the past decade will be out of reach, but a 5% target will still be achievable. With a flat efficient frontier, diversification will be valuable to help reduce the volatility profile."

Figure 23: Traditional Balanced, Aggressive and Diversified Portfolios

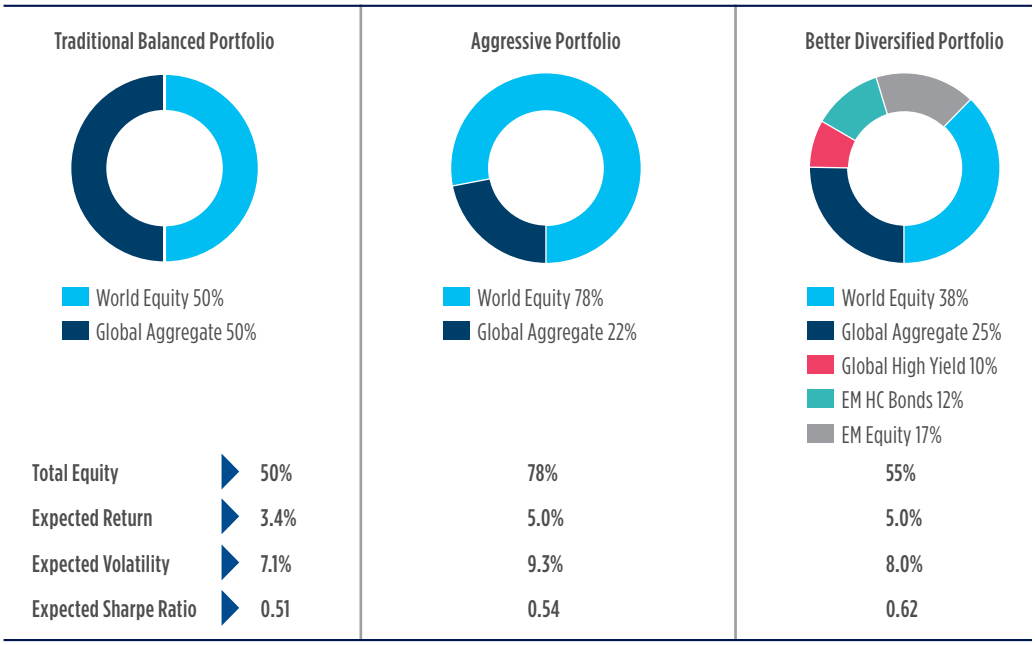


Source: Amundi CASM Model, Amundi Institutional Advisory and Research Teams, Bloomberg. Data as of 17 April 2020. **Past performance is no guarantee of future results**.

Moving along the efficient frontier, **the Better Diversified Portfolio, which could reach the 5% target return, would exhibit a lower volatility profile amid a much more diversified allocation, including EM assets and global high yield, as well as a lower equity allocation of 55% instead of 78%.**

"A diversified portfolio will be able to reach the 5% target return with a lower level of volatility and an equity allocation of 55%."

Figure 24: From a Traditional Balanced Portoflio to a Better Diversified Portfolio



	Traditional Balanced Portfolio	Aggressive Portfolio	Better Diversified Portfolio
Total Equity	50%	78%	55%
Expected Return	3.4%	5.0%	5.0%
Expected Volatility	7.1%	9.3%	8.0%
Expected Sharpe Ratio	0.51	0.54	0.62

Source: Amundi CASM Model, Amundi Institutional Advisory and Research Teams, Bloomberg. Data as of 17 April 2020.

Investment implications of the road back to the 70s

"Asset classes show different behaviours in different regimes, and consequently the role they have in portfolio construction may change."

Asset classes show different behaviours in different regimes, and consequently the role they have in portfolio construction may change. We have analysed the behaviour of different asset classes between 1960 and 2018, during different inflation regimes[6]. We have identified five inflation regimes: three normal and two hyperinflationary regimes (one in economic recovery and one in recession), both of which occurred in the 1970s.

Table 5: Inflation regime features

Regimes	CPI yoy (%)	PPI yoy (%)	PCE yoy (%)	Unit labour cost yoy (%)
Deflationary regime	<2	<1	<2	<1
Normal	2-3	2-3	2-3	2-3
Inflationary regime	3-6	3-6	3-6	3-6
Hyperinflationary recovery	6-10	6-10	6-8	6-9
Hyperinflationary recession	>10	>10	>8	>9

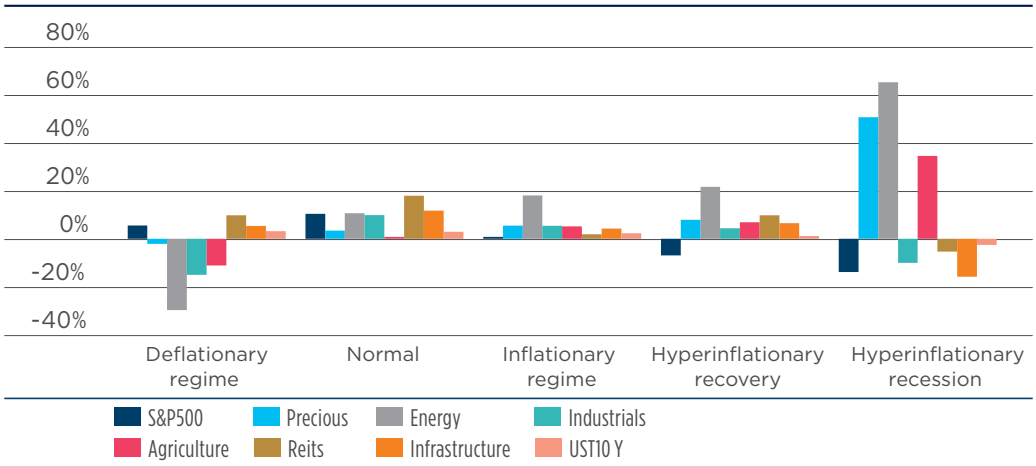
Source: Amundi Research, Inflation Phazer.

In the extraordinary hyperinflationary regimes of the 1970s, while growth (both nominal and real) was not necessarily lacklustre, production was less efficient than in the 1960s (declining EPS-to-sales ratio) due to wage pressures that pushed residential property prices higher.

In line with academic literature, our model shows that equities did not deliver well (in nominal, real and risk-adjusted terms) and multiples were depressed (PE and Shiller CAPE). Commodities, mainly precious metals (in a hyperinflationary recession) and, to some extent, infrastructure (in a hyperinflationary recovery phase) seem to have been the most remunerative assets. Overall, a back-to-the-70s scenario is not expected to be benign for many asset classes.

"A back-to-the-70s scenario is not expected to be benign for many asset classes."

Figure 25: Financial assets real returns in different inflation regimes



Source: Amundi Research. Data as of 17 April 2020. S&P 500, US global REITS from global financial data; US T10yrs from Bloomberg; global infrastructure (equities): total returns series proxied by a basket of 50% utilities and 50% transportation; precious metal: GSCI Precious Metals Total Return Index, proxied by gold before index starts; Energy: GSCI Energy Total Return Index, proxied by Brent Crude Oil before index starts; Industrial metals: GSCI Industrial Metals Total Return Index, proxied by copper before index starts; Agriculture: GSCI Agriculture Total Return Index.

[6]To feed cluster analysis, regimes are identified by US CPI yoy change, US PPI yoy change, US PCE Core yoy change and US ULC.

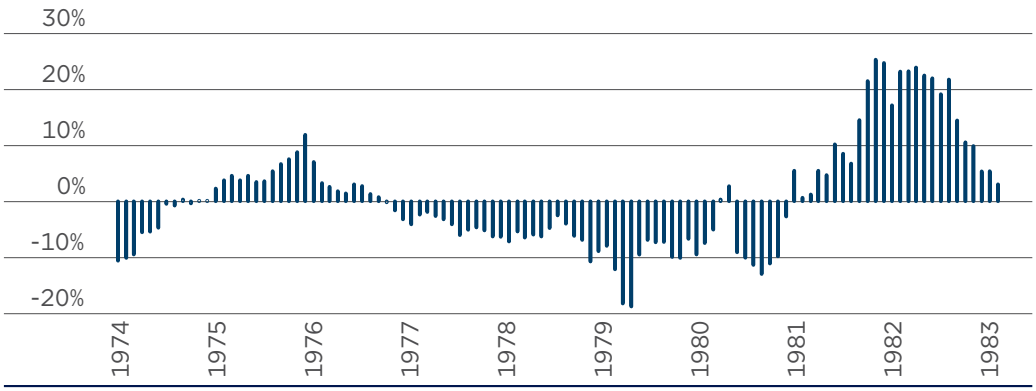
"Over the Great Inflation period, bonds and equities both disappointed. Real assets, commodities and gold fared much better."

Asset class role in portfolio construction: in the 70s, bonds and equities as 'substitutes'

The Great Inflation of the 1970s began in late 1972 and did not end until the early 1980s, although inflation had been rising since the mid-60s. Jeremy Siegel, in his book "*Stocks for the Long Run: A Guide for Long Term Growth*" (1994) called this period, "the greatest failure of American macroeconomic policy in the post-war period".

The US equity market (S&P 500 index) lost 43% in an 18-month period (from March 1973 to September 1974), making these among the worst performing years of the 20th century.
Government bonds were vulnerable too, with negative performances in real terms in the period from 1977-1980 as interest rates skyrocketed from 7.4% to almost 16% in 1981.

Figure 26: Bond investors and the terrible 70s (US Treasury real returns, yoy)



Source: Bloomberg, data from Jan 1974 to Dec 1983. Rolling one-year real returns calculated on the Bloomberg Barclays US Treasury Index excess return vs. CPI yoy growth.

By contrast, real assets, commodities and gold fared much better. In this phase, real estate benefited from double support: the stability of real yields and a reduction in the cost of loan repayments due to inflation (the real cost of debt).

Table 6: Asset class returns in the period 1972-1981

1972-1981	Annualised nominal return %	Annualised real return %	Annualised volatility %
House price	9.4	0.1	1.5
S&P 500 index	5.2	-4.0	16.6
US Treasury index	5.5	-3.7	6.7
Gold price	22.5	16.4	30.0

Source: Bloomberg. Period 31 December 1972 to 31 December 1981. Data refer to total return indices in USD. US Treasury index refers to ICE BofAML US Treasury and Agency Index, house prices refer to Case Shiller Housing Prices.

As documented in academic research on inflation and the price of real assets (Piazzesi and Schneider): "*Negative co-movement of house and stock prices drove a 20% portfolio shift out of equity into real estate. The Great Inflation led to a portfolio shift by making housing more attractive than equity. We see three main reasons for that: 1. Agents interpret higher inflation expectations as bad news for future stock returns. 2. Uncertainty on the inflation path also weigh on the stock market. 3. Changes in inflation expectations make housing more attractive because of capital gains taxes on stocks vs mortgage deductibility. Taken together these effects can explain the opposite movements of house and stock prices in the 1970s.*" However, the social cost of higher inflation was very high: many people were priced out of new cars and homes by skyrocketing interest rates and the aggregate household net worth relative to GDP dropped by 25% in 1970s.

"During the 70s regime, inflation, inflation expectations and their volatility constituted a central theme. In this phase, equities and bonds were two asset classes that could be substituted."

During the 1970s regime, inflation, inflation expectations and their volatility constituted a central theme. In this **phase, equities and bonds were two asset classes that could be substituted and had comparable behaviour**: in leading stock returns and more generally asset price returns, the monetary component (with interest rates as the proxy) prevailed on the real component, with earnings as the proxy.

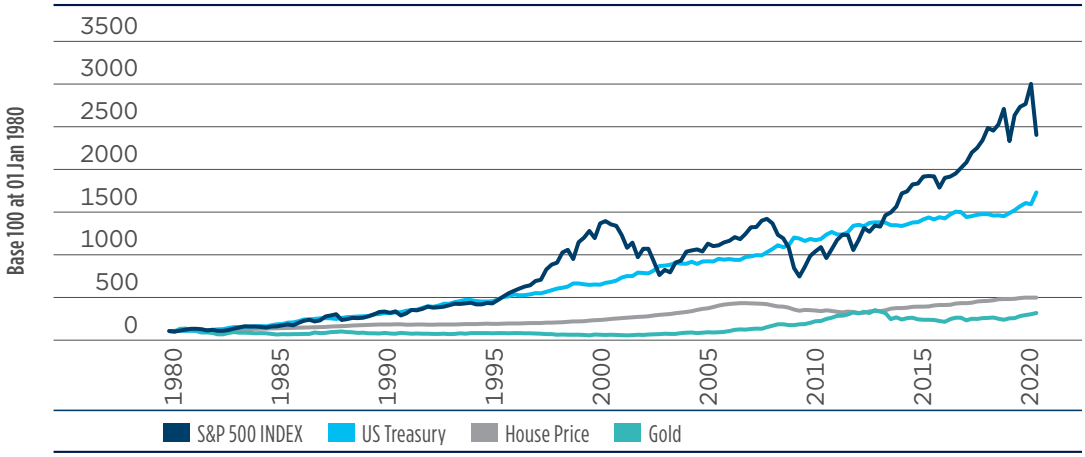
In other words, the "government bond" component tended to accentuate or accelerate the direction and the performance of the "risky asset" component, of which equities could be a proxy. **Such a portfolio was, in a nutshell, a mono-asset class** (since equities and bonds have similar behaviour and are driven by interest rates) and above all offered an arbitrage between equities and bonds, an arbitrage on the equity risk premium.

In periods of high inflation, the traditional diversification between equity and fixed income does not work, while real assets act as a hedge against inflation. In periods of significant disinflation, such as the 1990s, traditional diversification does not work either. Equities behave like bonds, as interest rates are the main driver. They are even better then bonds when interest rates decline on a trend basis, as evidenced by the strong negative correlation between bond yields and equity prices from the early 70s to the early 2000s, with interest rates leading by six months. It is therefore important to make a distinction between: 1) inflation/disinflation periods (1970s-80s); and 2) no inflation/deflationary periods (1990s-today).

After the Great Inflation: equities and bonds as 'complements'

The regime that followed the Great Inflation was instead supportive for stock prices and the S&P 500 trumped the real estate market.

Figure 27. The dominance of financial assets



Source: Amundi elaboration on Bloomberg data, as of 17 April 2020. S&P 500 index price, US Treasury index refers to ICE BofA US Treasury and Agency Index, house prices refer to the US Home Price from Shiller and updates from the S&P Core Logic Case Shiller National Index.

"In a macro-financial regime of low and stable inflation and inflation expectations, the two asset classes of equities and bonds tend to be complementary."

In a macro-financial regime of low inflation (even with some deflationary pressure), low volatility of inflation or inflation expectations and subdued inflation expectations, the two asset classes of equities and bonds tend to be complementary; **they tend to show a negative correlation as inflation is too low to represent the driving factor**. This regime is the one that we have entered following the crisis.

It reminds us of the one of the 1960s, with weaker long-term growth trends and low inflation with low volatility: these are periods when earnings are the dominating components of returns. There is a diversifying effect between bonds and equities playing in the portfolio since the two asset classes are more negatively correlated (positive correlation between bond yields and equity prices). This means that bonds are seen as a cushion for protection from risky assets exposure, with obvious limits and challenges as evidenced in the Euro debt crisis, when it became clear that not all government bonds are risk-free assets.

"A combination of real assets, inflation-linked securities and alpha strategies that can capture the risk premia evolution could help investors protect their portfolios against an inflationary regime."

Conclusion

A new regime shift, a road back to the 1970s, would have profound implications in setting strategic asset allocations and in portfolio construction, as the utility function of bonds and equities in reference portfolios changes significantly. In an inflationary regime, equities and bonds are interchangeable, interest rates remain the determining factor of returns and the diversification effect is weak. In a non-inflationary regime (and/or with deflationary tensions), equities and bonds are more complementary, with a diversification effect (decorrelation). However, the bond component loses the protection/cushion component for exposure to risky assets when interest rates are very low, the risk-free status of bonds has to be reconsidered and they should be used more for liquidity purposes. Therefore investors should consider different inflation regimes and their implications for asset classes in their portfolio construction.

Table 7: Investment strategies in different inflation regimes

	Back to the 70s		Today		
	Inflation (general and uncontrolled price increase)	**Disinflation (deceleration of price increase)**	**Low inflation (low and stable price increase)**	**Deflation (declining prices and declining activity)**	**Stagflation (low growth and high inflation)**
Cash	Buy	Sell	Sell	Massive Buy	Sell
Bonds	Massive Sell	Buy	Buy	Massive Buy	Buy...to some extent
Equities	Massive Sell	Massive Buy	Buy	Buy...to some extent	Massive Sell
Commodities	Massive Buy	Sell	Neutral	Massive Sell	Buy
Gold	Massive Buy	Massive Sell	Neutral	Buy	Massive Buy
Real estate	Neutral	Buy	Buy	Massive Sell	Sell

Source: Amundi Research, Real assets: what contribution to asset allocation, especially in times of crisis? Ithurbide and Bellaiche, 2017.

A road back to the 70s would require us to rethink or reinvent diversification. A combination of real assets, inflation-linked securities and alpha strategies that can capture the risk premia evolution could help investors to protect their portfolios against an inflationary regime.

The investor road to the new decade: new wine and new bottles

"Investing in the new decade will involve redesigning the investment approach around some key guidelines:

1. *make liquidity a key dimension of portfolio construction;*
2. *reconsider safe asset definition;*
3. *combine alpha and cheap beta;*
4. *exploit all asset classes to target investment goals;*
5. *exploit diversification across multiple axes; and*
6. *embrace new ESG themes."*

While each investor will have his/her own target returns, risk profile and constraints in terms of asset class exposure, in our view, there are some general themes that investors should take into consideration as we move towards a possible regime shift.

1. **Make liquidity a key dimension of portfolio construction.** Covid-19 signals the outbreak of a liquidity crisis in the corporate sector (not in banks, this time), making liquidity the critical dimension that investors should incorporate into the investment process. It also brings a definitive shift in market structures: one aspect is the fall in market making activities by banks coupled with the search for yield, the second aspect is the critical role for the buy-side in the functioning and financing of the economic financial system. However, this also comes with risks that are different from the traditional bank-centred approach. This all points to a necessity for the various authorities (central banks, regulators) to include the consequences of this reality in their policies and direct transmission channels of action. This is what the Fed is doing; not fighting the past war but plugging facilities into the buy-side in pursuing its policies. This is also providing compelling evidence that liquidity in our industry must be fully integrated as a key dimension in the portfolio construction process, that liquidity mismatches do happen and that there is a trade-off between returns and liquidity. In the past decade investors aggressively embraced illiquid investments in search of higher returns. While we believe this trend will continue, we think that investors should change their way of looking at their portfolio considering that the liquidity profile of each asset class and instrument is not static, but rather changes over time, and that illiquid features could be present not only in the real asset space, but also in some perceived liquid instruments that could become illiquid in times of crisis. As a result, liquidity should be one of the key metrics of portfolio construction, together with return potential and volatility, on which investors should make assumptions in terms of future developments. This means that investors should no longer consider liquidity as exogenous and ex-post, an irregularly measured element, but as a constant ex-ante endogenous dimension of portfolio construction. Liquidity should also be viewed not only as a defensive tool to mitigate volatility, but also as a key element to exploit investment opportunities when they arise.

2. **Reconsider safe asset definition.** As a corollary of the previous point, the crisis is not only making liquidity a key aspect to watch, but it is also bringing back questions about what safe risk-free assets are. In theory this should be a relative concept, dependent on liabilities, but in reality, Treasuries and Bunds are the only consensual risk-free assets. This concept should be distinguished from the concept of liquid assets, but in reality safe and liquid assets are intertwined, as the current crisis is effectively showing. Hence, the pool of effective, global safe (i.e., recognised as such by the investment community) and liquid instruments is limited: this is why it is normal that these assets come with a premium or, to put it another way, that investors should hold them irrespective of other classic metrics (valuation, expected path of the central bank, etc.).

3. **Build strategic asset allocation on the basis of three components: idiosyncratic alpha, cheap beta and income.** In a world of low returns investors will have to be active in their asset allocation choices to target higher risk-adjusted returns. This means that investors should make active allocation choices in terms of beta exposure or any replicable factor exposure (replicable alpha) and they should seek to cut costs on this type of allocation. On the other hand, investors should also pursue idiosyncratic alpha (not replicable) opportunities that become available, especially in markets where inefficiencies continue to exist (fixed income, emerging markets, small-mid cap, ESG). Finally, they would need to add new income engines (real assets, dividends) beyond the traditional fixed income component.

4. **Set clear objectives (income, downside risk tolerance, inflation protection) and incorporate these into portfolio design across multiple asset classes.** Investors should clearly set their objectives, for example, in terms of return target, income stream target or maximum loss acceptable. In fact, while in the past investors could select some specific asset classes to target each of these objectives (for instance, equities for growth in returns, bonds for income streams and capital preservation), moving ahead all asset classes should be considered in targeting each specific objective. For example, for investors targeting high returns, equity could continue to be a good choice, but corporate debt, especially if trading at highly discounted levels, could also be very appealing. For income, government bonds will be less remunerative and equity dividends could be available on a highly selective basis, while investors seeking higher income streams could consider illiquid real assets such as private debt, real estate or infrastructure. For capital preservation purposes, investors should bear in mind that correlation dynamics may change, especially if we move into a higher inflation environment at some point. Hence, investors should look for different sources of hedging, such as in currency exposure, derivatives strategies or commodities exposure (as a hedge against inflation risk, for example).

5. **Explore the benefit of diversification on different axes (geographic, factor and style) as we move away from a single factor (monetary) driving returns to multiple factors (growth, inflation, etc.).**
   We are coming out of an era in which two main factors dominated financial markets: the monetary factor (interest rates, inflation) drove asset class diversification; and the global trade factor drove geographical diversification. In an era of de-globalisation (global growth does not anymore mean global trade), with the possibility of inflation trends reversing at some point (from trending down to rising up) and higher volatility, diversification across different axes will have a greater role in portfolio construction to enhance risk-adjusted returns. In fact, as we abandon the regime where returns were mainly driven by monetary expectations, we enter a different environment, where different factors will become relevant and may affect the various asset classes and regions differently.

   Growth, for example, will be a key driver of returns in exiting a real economy crisis such as the one we are entering at the moment. Given their brighter growth outlook, emerging markets should offer an attractive risk/return profile – within our efficient frontier optimisation exercise, EM has been granted a significant allocation at 29%, with a preference for EM equities (17%) vs. EM HC bonds (12%). EM allocation could also help to further enhance the return potential, as there are a variety of additional asset classes in this space that could provide opportunities for active investors. These include local currency exposure (which could benefit from a potential depreciation of the US dollar), EM credit markets, EM credit HY and frontier markets.

   Therefore, investors should consider having a dedicated material allocation to EM assets in their strategic portfolio. Inflation will also be a factor that will come back in focus, in our view. In this respect, inflation-linked securities, commodities and real assets will be valuable asset classes to look at. Finally, the enlargement of the investment universe should include exposure to macro factors and asset class factors, as it has been demonstrated that factor diversification is more effective than traditional asset class diversification[7].

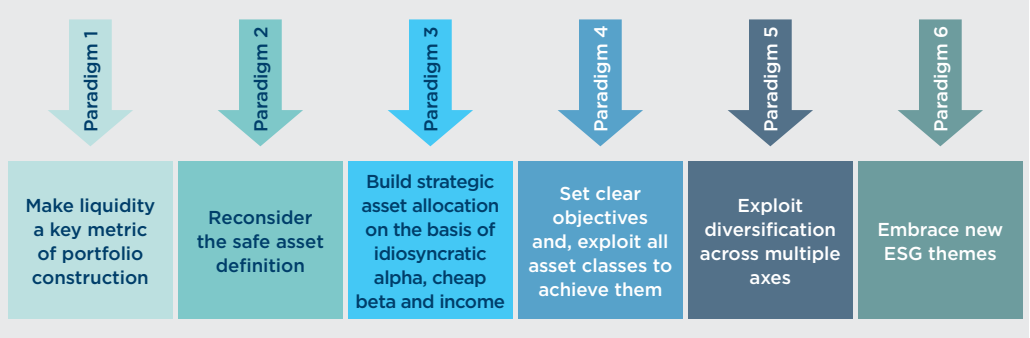
6. **Embrace ESG investing.** In our view, new themes will emerge in the new regime that will have strong ESG components. The first is the trend of climate change-related investments, something that is already in action and is set to continue as the issue is high on the agenda of all policymakers and public opinion. The second main trend that will be further reinforced after this crisis is the societal focus on higher social equality. Especially in the US, inequalities have been rising at a fast pace, and now those on low incomes face even greater risks during this pandemic as many citizens

[7]See also https://risk.edhec.edu/editorial-factor-investing-across-asset-classes.

do not have a health insurance. In general, more scrutiny will be given to the way companies act in the interest of all stakeholders and the community. This will translate into a greater impact on stock prices of some ESG risk factors, which will provide opportunities for active managers both in the equity and bond space. Covid-19 will impact the relevance of E vs. S vs. G. The S, in our view, will attract more interest and the focus on measuring the S component will grow.

"The aggressive search for yield and returns has now left room for uncertainty and overreaction. This could create further dislocation and offer opportunities for actively selecting attractive entry points."

Overall, for investors the 2020s will mean a new framework, as the exceptional performance that occurred after the extreme market dislocation that followed the great financial crisis is over. Any decade leaves some echoes behind it. At the beginning of the 2010s very few investors were willing to reenter equities or global high yield bonds as the memories of the crisis were still fresh. Nowadays, many investors that started the new decade still riding the same market themes of growth names in equity markets and the aggressive search for yield in bonds have been challenged by the current turmoil. The aggressive search for yield and returns has now left room for uncertainty and overreaction. This could create further dislocation and offer opportunities for actively selecting attractive entry points. Yet these opportunities will not be at overall asset class levels, but most likely at country, sector or even company-specific levels. The path investors have in front of them has a possible lower ending point (in terms of return potential) and it is likely to be a bumpy one. Confidence and convictions will be key to navigate this environment, where a new disciplined and comprehensive investment approach is required.



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List of indices used in the efficient frontier analysis

Name	Bloomberg Ticked
Bloomberg Barclays Global-Aggregate Total Return Index Value Unhedged EUR	LEGATREU Index
ICE BofA Global High Yield Index	HW00 Index
J.P. Morgan EMBI Global Diversified Composite	JPGCCOMP Index
MSCI USA Net Total Return Local Index	NDDLUS Index
MSCI Europe Net Total Return USD Index	NDDUE15 index
MSCI Japan Net Total Return USD Index	NDDUJN Index
MSCI Pacific ex Japan Net Total Return USD Index	NDDUPXJ Index
MSCI Emerging Net Total Return USD Index	NDUEEGF index
MSCI World Net Total Return EUR Index	MSDEWIN Index

All non-Euro indices have been converted in Euros.

Important Information

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