the day after

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Inflation: persistent headwinds but a possible inflationary cocktail

Amundi
ASSET MANAGEMENT

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Since the beginning of the coronavirus pandemic, all eyes have been on the unfolding health catastrophe and the consequences of confinement: economies halted, exploding rates of unemployment (in particular in the United States), and rising debt levels. In this extraordinary context, inflation is often overlooked. This is a dangerous mistake, in our view. For investors, now more than ever, it is crucial to keep a very close eye on this metric—in particular, since we may be at the beginning of a complete regime shift.

In this new edition of the "Day After" series, in which we explore the impacts of the coronavirus for investors, we outline our views on inflation in both the short and long term. **In the short term, the coronavirus pandemic is clearly likely to mean volatility in inflation figures**, given factors pulling in opposite directions. **In the longer term**, and after four decades of low inflation across most economies, **we may enter into a new high-inflation regime**.

In light of this, **investors will need to reassess their strategic asset allocation to include investments that could help mitigate inflation risk** (ie, real assets, commodities, gold, infrastructure, inflation-linked bonds), but also be ready to **tactically readjust their investment decisions** based on the inflation outlook.

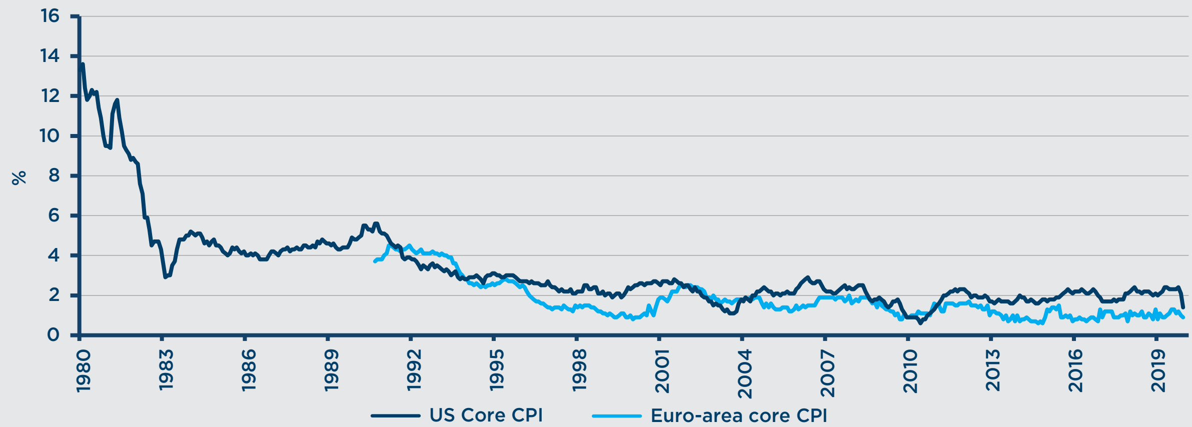
1. The end of disinflation?

Prior to the onset of the coronavirus pandemic, we had been living in a world of declining inflation.

The causes of the disinflationary trend, dating back to the early 1980s, are widely recognised as multiple. Some of the explanations have to do with technology, others with globalisation, and still others with public policies. The most frequently proposed explanations include:

- *Multiple-decade disinflationary expectations*, due to the successful building of more credible monetary policy frameworks (ie, the "Volcker revolution") after the oil price shocks and stagflation episodes of the 1970s.
- *Globalisation* and competition from low-wage countries, increasing the importance of world prices relative to domestic prices, and making it more difficult for advanced economies not to import disinflation from emerging countries where production costs are lower.
- *The bargaining position of employees* being further weakened by generally pro-corporate economic policies and structural labour market changes (ie, deindustrialisation vs low-skilled, low-productivity service sector jobs).
- *Technological developments*, and in particular electronic commerce, improving price transparency and intensifying

Figure 1: Long-term core CPI, yoy %



Source: Datastream, Amundi Research, as of 30 April 2020.

competition between suppliers and retailers.

- *Households' increased preference for saving*, for a variety of factors, including the aging of populations (although different studies focused on the aging factor lead to different conclusions)[1] and deleveraging (ie, only more saving) after financial crises. Those behaviours helped fuel asset price inflation rather than consumer price inflation, only contributing to more bubble-burst cycles.
- The increasing *weight of services* in the economy (prices in the service sector are revised less often than in other sectors and are therefore more persistent).

The coronavirus pandemic has the potential to upend many of the factors listed above, if not all. However, impacts will not be straightforward. Some consequences of the virus will undoubtedly prove inflationary, but others will not. Some will play out in the short term, and others need to be considered in a more long-term perspective. The issue is how to sort these factors out.

In the short run, the many economic disruptions caused by the virus crisis generate a combination of supply and demand shocks that can only cause inflation volatility.

In the long run, however, the current crisis and its aftermath could catalyse a new inflationary regime that would end the four decades-old worldwide disinflationary trend. As we wrote in the paper Covid-19: the invisible hand pointing investors down the road to the 70s, "the seeds of higher inflation and higher inflation expectations are already all around us".

The path forward is certainly not clear-cut, as a number of long-lasting disinflationary factors seem too entrenched to disappear while others could even be reinforced by the long-lasting damage from the current deep recession. Nonetheless, today's events may also result in other factors arising that could lead to a new long-term inflationary cocktail through the interaction of policy stimulus, new social and political equilibria, and the reorganisation of international supply chains.

2. Short-term outlook: significant inflation volatility incoming

In the short term, some mechanical factors and supply side shocks will lead to strong volatility. Indeed, we expect oil and other sector-related disruptions to generate strong headline inflation volatility while more cyclical factors will weigh on core inflation. To be clear, **we expect inflation to be down sharply in 2020, but up in 2021, primarily due to oil prices basis effects.**

First of all, the drop in oil prices will mechanically weigh on inflation over the next few months. Indeed, lockdown measures and travel restrictions have led to an unprecedented drop in global demand for oil, causing prices to plummet. The price of a barrel of Brent fell to its lowest level since the end of the 1990s, which will mechanically weigh on total inflation in the upcoming months. The contribution of energy prices already accounts, by itself, for nearly three quarters of the decline in headline inflation in the United States in the first four months of this year.

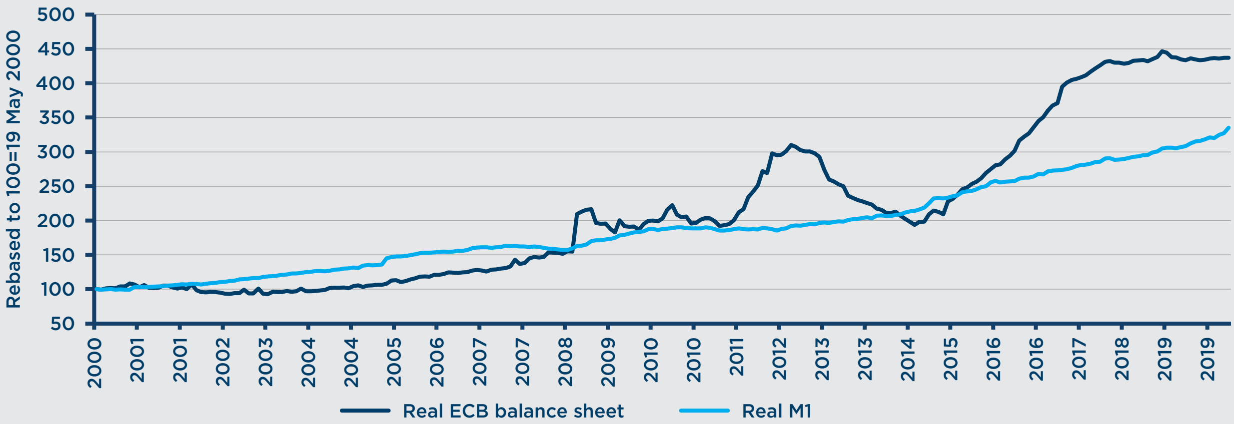
Assuming no further oil price declines from current levels, this contribution will continue

Example: the pandemic's effects on the pollination of fruit and vegetables by bees

Unlike in previous years, countries such as the United States and Canada may not be able to import from Australia, New Zealand, Mexico or Chile all the queen bees they need. Bee shortages could also emerge in the UK. Moreover, travel restrictions prevent seasonal workers from coming to work in beekeeping businesses.

1. See Juselius M. and Takats E., 2018, "The enduring link between demography and inflation", *BIS working paper.*

Figure 2: ECB balance sheet size vs, M1 Money Aggregate (real, CPI-deflated)



Source: Amundi Research, Datastream, data as of 22 May 2020.

to negatively affect the situation until the base effects disappear from indices yoy in the spring of 2021, opening the door to a significant positive contribution to yoy inflation prints later next year.

Second, the combination of demand and supply shocks will cause sector volatility.

Supply disruptions inherited from the lockdowns are likely to push up prices temporarily of items for which demand is inelastic—in particular, in the food sector. Several meat-processing plants have remained closed due to lockdown measures, with prices logically increasing, but this is temporary. However, some impacts of the coronavirus crisis could take longer to materialise.

Finally, one cannot exclude the possibility that this health crisis will lead to lasting changes in consumption habits (more use of short food supply chains). While governments will do their best to limit such rises on politically sensitive products and services, they may not be able to prevent them altogether.

Conversely, in many other sectors, the negative demand shock, and therefore disinflationary pressure, will dominate. The causes will be low confidence and the fall in household income that will more than offset the supply shock (this could be the case for durable goods such as cars as well as for leisure activities, among other).

In the short term then, different factors will pull in different directions. For investors, it will be extremely important to dissociate the mechanical effects from more organic ones, and the one-offs from longer-term trends. **All in all, we expect Headline CPI, respectively for the US and Euro area, to decline to 1% and 0.6% in 2020 before recovering in 2021.**

3. In the long run, ingredients for an inflationary cocktail

The virus crisis has occurred after four decades of inflation trending lower in most of the world.

There are many reasons why the long-lasting economic damage inherited from current events could only bring more of the same. However, opposite forces may also appear, as specific factors of this crisis, and policy responses to it may be sowing the seeds (or reveal pre-existing green shoots) of a new, more inflationary, regime.

On the one hand, the long-lasting economic damage that is likely to be brought about by the current crisis may well reinforce some of disinflationary factors. We take these factors one by one:

- *Disinflationary expectations*: The cyclical low inflation from the recession may further entrench long-term disinflationary expectations. If we are right that virus-related disruptions will be, overall, more disinflationary than inflationary over the coming quarters, then this may add to multi-decade growing disbelief in a resurgence of inflation.

- *Preference for savings:* This could also be structurally reinforced by the severity, and then memory, of the shock.
- *Deleveraging:* To face the crisis, governments, corporations and (although to a lesser extent) households have started to incur more debt. Pressure to reduce it in the coming years could impair public and private consumption and investment.
- *Fiscal dominance:* This will provide an incentive for central banks to maintain long-term rates at very low levels, be it through forward guidance or non-conventional measures. This may carry a signaling effect that will only reinforce disinflationary expectations (although it could also have an inflationary effect through other channels).
- Finally, the generally acknowledged disinflationary factors that are *aging and advances in communication technologies* have little reason to fade away after the crisis.

It can even be argued that the current crisis may bring risk of outright deflation. Put together, the above-mentioned factors are enough to build a strong additional disinflationary case in many countries. However, the possibility that inflation could become, and stay, negative, cannot be ignored, especially in places where it was already very low before the crisis, notably Japan and Europe. This risk will be all the higher that the crisis itself is long.

Nonetheless, the crisis may generate or accelerate a combination of stimulus policies while new political and social equilibria, and global supply chain developments could prove inflationary.

The brutality of the crisis has triggered an exceptionally large policy response with long-lasting implications. Moreover, the crisis may reveal a political fatigue (with pro-business and pro-globalisation policies) that was already quietly potentially leading to a reversal of the disinflationary trend even before the virus appeared (*see* Covid-19: the invisible hand pointing investors down the road to the 70s).

More specifically, inflation could emerge from at least three factors:

1) A prolonged period of combined fiscal and monetary stimulus.
2) Political choices more oriented towards supporting household income.
3) The re-shoring of production activities in DM.

1. **A prolonged period of combined fiscal and monetary stimulus could prove more inflationary than previous crisis-response packages**. Indeed:
   - **A reason why intense public debt monetisation over the last decade did not lead to inflation may be that large DM did not conduct combined fiscal and monetary stimulus for a long time**. Most of them did so only briefly during the 2009-2010 period, at a time where the very negative output gap was highly disinflationary. While non-conventional monetary policy measures (including debt monetisation) continued for several years, they were then accompanied by fiscal consolidation, which exerted its own deflationary pressure. All in all, the large increases in bank reserves generated by QE programmes did not lead to corresponding increases in 'transaction money' (ie, M1).
   - **Today's stimulus programmes are already larger (in both their monetary and fiscal aspects) than those deployed in 2009-2012 over a similar time frame, and are also very much open-ended**. While the exceptional fiscal measures intended to accompany the lockdowns should soon be largely rolled back, new stimulus policies— this time recovery-oriented—are already being discussed and even launched in some countries. Beyond that, governments may be very wary, due to past experience, of

shifting course to austerity too soon. Thus, some moderately stimulating fiscal stance, financed by monetization, could very well be maintained even after the negative output gap (and the corresponding disinflationary effect) is closed and the state of the labour market allows, again, for wage increases. Through the combined effects of expectations and effective real demand, the monetised fiscal stimulus process initiated by the crisis is thus likely to be more inflationary than that of previous stand-alone monetary stimuli the effects of which were partly diverted in the feeding of asset bubbles.

2. **Prolonged monetised fiscal stimulus could be all the more inflationary if decided under the influence of new social and political equilibria more favourable to household income and income expectations in a potential redistribution of the share of added-value between capital and labour in favor of the latter.** This could take several paths:
   - **First, professions very exposed to the crisis**, many of them low on the income scale, **will most certainly demand and obtain wage increases.** This is likely to fuel similar demands in other sectors, only made stronger by the fact that large fiscal spending during the crisis will have conveyed the perception that government coffers are unlimited. Several governments, like France, and several large companies have announced special bonuses for certain categories of low-paid and particularly stressed personnel in the current period. In the US, the HEROES Act passed by the House of Representatives proposes to establish a $200bn "Heroes' Fund" to boost pay and aid recruitment of 'essential' workers. Here, it will be necessary to see if the actions follow after ambitious declarations and promises.
   - **Moreover, the social protection schemes extended during the crisis may prove difficult to unwind.** More specifically, the crisis has seen the extension of social protection to temporary and independent workers and the launch of universal basic income prototypes. Such schemes are likely to be more demanded by voters in the future. There is the issue of raising low wages. Increasing the federal minimum wage to $15 an hour (from $7.25) is one of the promises of Democratic presidential candidate Joe Biden. At the European level, discussions on a European minimum wage, which could be set at 60% of the median wage in each country, have resumed (currently, six countries do not yet have such a policy in place).
   - Should governments yield to such demands, **lower-middle-class expectations of higher income may become permanent**, spilling over to wages and price expectations of all economic participants and reducing saving behaviours. Moreover, the fiscal multipliers of income directed to these categories of the population is high (ie, **more demand-driven inflation**), given their low propensity to save.
   - **The growing trend of academic discussions questioning the real cost of public debt (ie, *Modern Monetary Theory*)**, together with rising concerns over social inequalities, is likely to provide further theoretical and political justification to the sustained monetary financing of fiscal programmes. In addition to facilitating government support to household income, this would also provide a rationale for increasing public investment.

3. **Finally, inflation could also be supported by another potential consequence of the virus crisis—that is, the re-shoring of production activities in DM**. Indeed:
   - **The crisis showed the inability of many DM to quickly produce medical equipment and drugs**, and their excessive reliance on foreign production. Public opinion will most certainly expect

policies to restore national production autonomy.

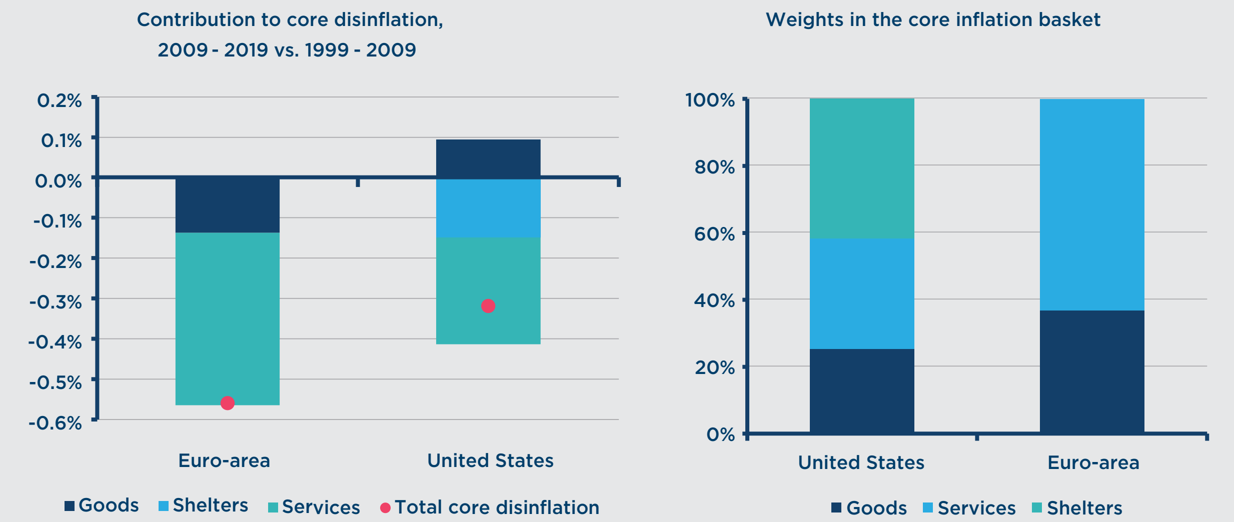
  - **On relocations, there is more political will in the United States and Japan than in Europe.** In the United States, the Trump administration explained that it could bear the costs of relocating all US companies that wish to leave China. In Japan, the additional budget thus provides ¥220bn to bring back production that was in China to Japan.

- **Yet, the effect of this re-shoring process on inflation, while positive, is likely to remain limited, as it is essentially a goods sector story against a backdrop where inflation indices (at least in DM) are now dominated by domestically produced services.** It is worth noting that lower prices of goods due to the offshoring of their production in EM was a larger explanation for the disinflationary trend in the 1990s or 2000s than in the 2010s, when it is the (mostly locally produced) services prices that, by far, exerted the main downward pressure on inflation indices

  - Moreover, the wage gap between DM and a number of manufacturing-intensive EM, starting with China, is far from being as large as in the "golden decades" of offshoring 30 to 10 years ago. Finally, the progress of automation may make it difficult, even for successful reindustrialisation projects, to generate any macroeconomically significant number of jobs with corresponding upward wage developments. Therefore, re-shoring is more likely to add to long-lasting inflationary pressure in combination with the other factors mentioned above than to be a major driver by itself.

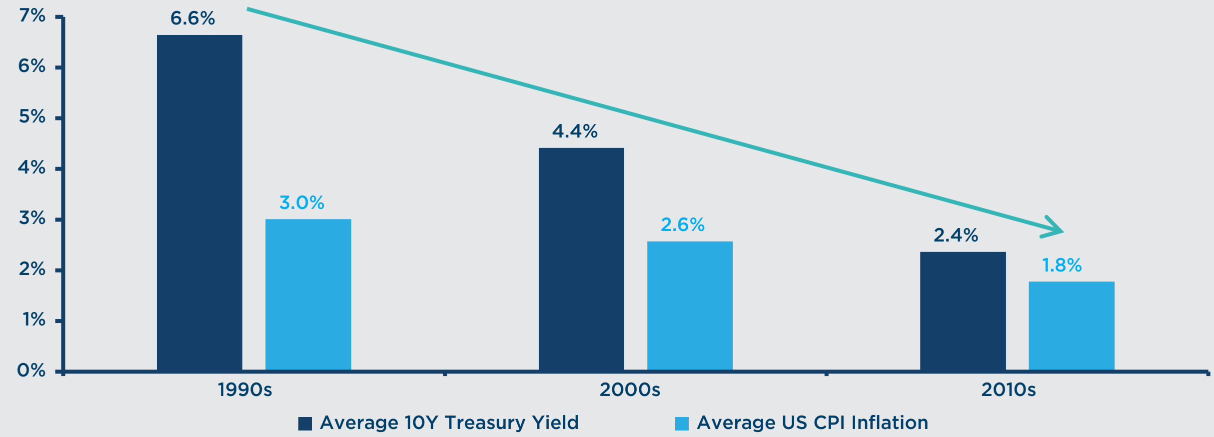
Given these many opposite forces, the case for a change in the inflation regime seems very open. It remains to be seen, when the fog of the crisis dissipates, whether changes brought about or revealed by current events will be large enough to bring an end to 40 years of disinflation, however deeply embedded they may be in the behaviour and expectations of economic participants. Beyond the cyclical factors, it seems plausible to expect that a crisis of such magnitude will bring about structural economic changes. It will question principles that seemed generally accepted, whether on how to envisage the support of governments for the private sphere, on nationalisation, on the organisation of world trade or even on the necessary control of public finances. The reflection on the revaluation of wages in certain professions was already present

Figure 3 and 4



Source: Amundi Research, Datastream, data as of 22 May 2020.

Figure 5: Inflation and Treasury yield dynamics over the last three decades



Source: Amundi on Bloomberg data. Data as of 31 December 2019.

before the coronavirus crisis and could now take on a new dimension. **All in all, we believe that, on balance, inflation should be slightly higher this decade than during the 2010s.**

4. Investment implications of living in a more uncertain inflationary world

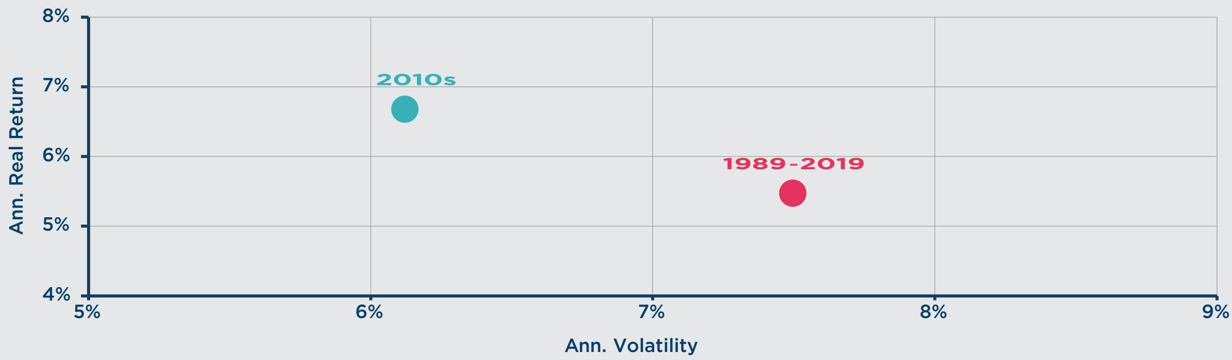
Over the past three decades, investors have benefitted from a supportive investment environment of inflation and rates trending lower. As a result, Treasury yields have been moving down, driving positive market performance in the fixed income space.

Negative bond/equity correlation and strong equity markets after the Great Financial Crisis helped to boost performances over the last decade and further suppress volatility. This buoyant market environment led to strong returns in real terms (above inflation) for a Balanced USD portfolio (see graph) with a low level of volatility.

This benign backdrop is coming to an end, as **the Covid-19 crisis is bringing volatility back**. In addition, looking at the next decade, investors will face lower return expectations on bond markets, as yields are extremely low. **Assessing inflation expectations over the short and long term therefore becomes crucial in order to build a resilient asset allocation in a world in which returns will be lower than in the past.**

Over the short term, inflation volatility may rise, but the overall level of inflation should stay subdued. **In this scenario, some asset**

Figure 6: US assets and balanced portfolio real returns and volatility over the last decade (2009-2019) and three decades (1989-2019)



Source: Amundi on Bloomberg data. Equity = MSCI US Index, Bond = Bloomberg Barclays US Aggregate Bond Index. Indexes are in USD, total return. Performances are gross of fees and taxes. Real returns = Ann. Returns – Average US CPI Inflation over the same period. Data as of 31 December 2019. Past performance is no guarantee of future results.

Table 1: Key implications of the long-term shift towards a new regime after the Covid-19 crisis

Trend	Investment Implications
Rising debt across the board	Need to focus on selection to avoid areas (business, sectors, countries) at risk of default. Liquidity management will also be crucial, as in case of any credit event, there will likely be some liquidity stress in the market.
Monetisation of debt	With high levels of debt, central banks will have to act to directly monetise fiscal deficits and keep interest rates low to maintain a low cost of debt service. This will potentially lead to higher inflation. While government bonds have been delivering good performances over the last three decades, they will be challenged in an environment of low rates and a potential rise in inflation.
Growth factor in focus after the crisis	While the monetary factor has been driving performance in the past, in a recovery phase after the crisis, growth will be the key driver. In search for areas of higher growth potential investors should consider a substantial allocation to EM assets that could help to enhance portfolio return potential in the future.
De-globalisation	Greater role of geographical diversification as countries will re-insource some strategic assets. End of strategies based on globalisation trend.
Higher focus on social and ESG dimension	In an era of already high levels of inequalities, the extreme measures put in place to offset the crisis effects on economies will have to be redirected towards projects and areas that can benefit the entire society. As a result, environmental and social themes are likely to experience further focus in the future.
Inflation resurgence	Need to add a dedicated allocation to assets that can help to mitigate inflation risk and be aware that bonds and overall equity will likely suffer in case of high inflation (see Table 2).

Source: Amundi. See also Covid-19: the invisible hand pointing investors down the road to the 70s

classes will continue to be supported by monetary actions. This is the case of investment grade credit and peripheral bonds benefitting from the umbrella of the Quantitative Easing programmes. In addition, traditional equity/bond correlation is likely to persist, as long as interest rate expectations remain anchored. As such, investors should look at safe government bonds as a source of liquid assets that can balance the risk asset allocation.

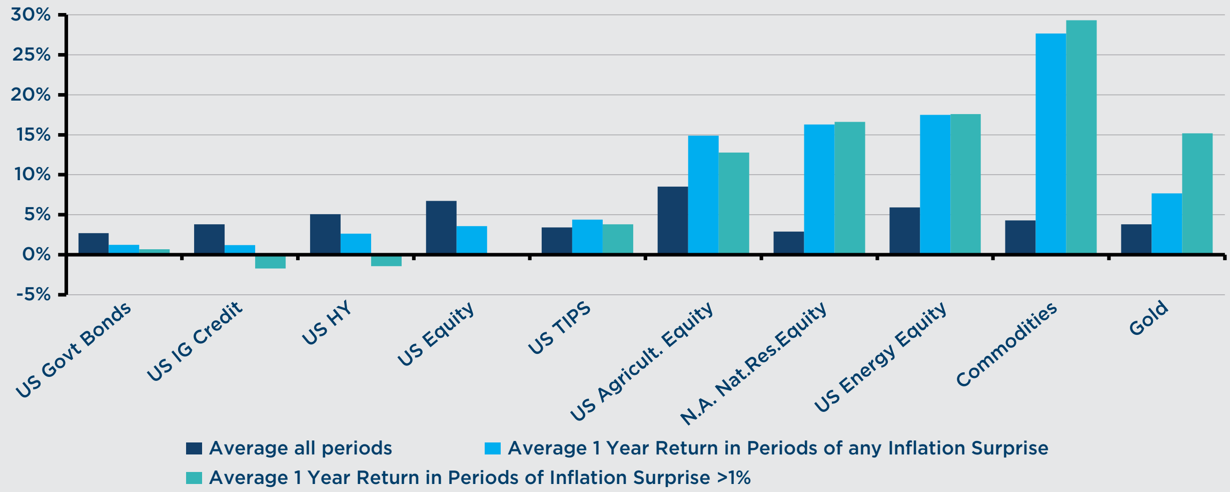
On a longer-term perspective, however, the era of investor returns propelled by the monetary factor is coming to an end and inflation risk will likely resurface, challenging investment returns. **The new regime will lead to profound changes that investors will have to consider in building asset allocation.**

In particular, **we believe it is crucial, especially for income investors with a long-term horizon such as pension funds, to consider adding a dedicated bucket of their allocation to investments that can potentially help mitigate inflation risk.**

In fact, even in periods that didn't experience a hyperinflationary environment such as in the 1970s, inflation surprises could have significant impacts on the performances of different asset classes. In particular, **in periods of inflation surprises, traditional assets, such as government bonds and broad equity indexes, may underperform while investments that are linked to real assets dynamics (liquid and illiquid) have the potential to outperform.**

We have analysed the real returns (annualised returns less inflation) of different US-based asset classes in periods of inflation surprises and compared them to all the periods over the last 23 years (from 1997 to 2020) when

Figure 7: Real returns of asset classes in periods of unexpected inflation



Source: Amundi on Bloomberg data. Analysis on monthly data from 31 March 1997 to 30 April 2020. Periods of Inflation **Surprise** are defined as periods when the University of Michigan Survey of One-Year-Ahead Median Inflation Expectations is lower compared to the actual year-over-year CPI inflation rate reported 12 months later; the Inflation Surprise is the difference between the two. US Equity = S&P500, US Govt Bond= Bloomberg Barclays US Treasury, US IG Credit = Barclays US Aggregate Credit, US HY = Barclays US Corporate High Yield, TIPS =BofA Merrill Lynch US Inflation Linked Treasury, US Agricultural Equity = S&P500 Agricultural Products Index, N.A. Nat. Res. Equities = S&P North American Natural Resources Sector, US Energy Equity = S&P500 Energy Index, Commodities = S&P GCSI Commodity Index. All indexes are total return in USD unhedged. Analysis on monthly data. **Past performance is no guarantee of future results.**

US inflation (based on US CPI) ranged from -2% to +5.6%. The years of inflation surprise have been identified as years when the realised inflation (measured by the Bureau of Labor Statistics year-over-year change in US consumer prices (CPI) has exceeded the inflation expectations forecast the previous year (measured by the University of Michigan Change In Prices). **When this occurs, government bonds, corporate bonds and the overall broad equity index suffered, with real returns that on average turned negative when the inflation surprise had been greater than 1% (see chart).** On the contrary, real asset-backed investments, such as gold, commodities and equity sectors linked to the real economy (agricultural, energy and natural resources) as well as inflation-linked bonds (US TIPS), exhibited on average the strongest performances, outperforming their average performance considering all inflation environments.

For this reason, we believe that long-term investors who could face different inflation cycles in the future could potentially hedge the risk related to inflation surprises through an allocation to asset classes backed by real assets. This will be key especially as financial repression that will come with the crisis will keep interest rates low, further challenging the ability of government bonds to deliver positive real returns in case of inflation resurgence.

Table 2: Asset allocation in case of resurgence of inflation

Assets to be included in a dedicated inflation bucket:	Assets that will be challenged in periods of inflation surprise:
– Short-term bonds and, most importantly, inflation- protected bonds – Real estate exposure – Infrastructure investments – Commodities and gold – Equity and bonds of companies in sectors linked to the real economy/inflation such as agriculture, materials	– Government bonds (especially long duration) – Broad credit markets – Broad equity markets

Source: Amundi, as of 29 of May 2020.

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