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Global Markets Strategy
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The Long-term Strategist

Financial repression, risk aversion and zero yields

Long-term Strategy
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- **The global savings glut is showing up only in relatively safer assets, cash and government debt, and not in risky assets, credit spreads or equity yields.**
- **In Japan, Europe and the US, the real weighted cost of capital (WACC) of corporates has been in a range for 25 years, despite steadily falling cash and government bond yields to historical lows.**
- **Corporate yields have fallen, but their impact on overall funding costs has been offset by falling tax shields, due to lower corporate tax rates in recent decades.**
- **The strong global preference for relatively safer assets can be explained by a combination of rising risk perceptions/aversion and Financial Repression which forces banks and insurers to favor safer assets.**
- **Central bank QE and EM FX reserve buying, which greatly favor government debt, are part of this force, and should maybe instead be called Financial Redirection.**
- **It is only natural that, post the worst recession since WWII, people become more risk aware and de-risk their finances. Financial regulators, despite good intentions, likely remain pro-cyclical.**
- **Both risk perception and financial repression are probably waning by now, late in the cycle, but should be coming back with a vengeance in the next recession. QE will then be coming faster, in larger size, and across more countries, keeping yields lower for longer until dramatic fiscal expansion changes the equation.**
- **Previously published as part of Joyce Chang et al., What if US yields go to zero? Jan 2020.**
- Video.

Bond yields have been falling over the past 35 years, from their peaks in the 1980s, but the more dramatic fall to zero and then negative in Japan and Europe happened only in the last decade, post the Global Financial Crisis (GFC). This raises the question of whether the fall in global bond yields is just a post-GFC event, and thus more a cyclical than a secular phenomenon that will fade over time.

We will argue here that indeed a combination of post GFC caution, de-levering and macro-prudential tightening has raised global savings, but equally important, has redirected a large part of global savings into government debt, cratering yields there to levels that no private market has ever produced.

See page 9 for analyst certification and important disclosures.

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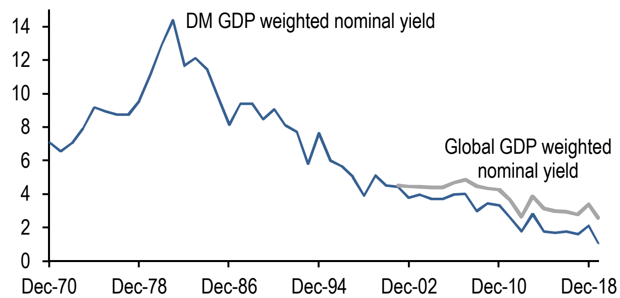
Secular drivers

The fall in bond yields over the past few years is not new. It has been taking place almost straight line for 40 years, from the peak in inflation rates around 1980 (Figures 1 and 2). The first phase of this rally came from central bank action to rein in inflation, led by Paul Volcker at the US Federal Reserve. In the first 20 years, through the late '90s, both nominal and real yields fell broadly by similar amounts. Over the past 20 years since, DM inflation stabilized and remained near central bank targets, though bonds yields continued to fall to new lows.

Much has been written about the secular drivers of the fall in global bond yields. David Mackie and Joseph Lupton (see Mackie and Lupton, The persistence of very low nominal policy rates pp. 14-23, *J.P.Morgan Perspectives: What if US yields go to zero? Jan 2020*) look at the secular forces behind the fall in real short rates, which ultimately drive bond yields. The fall in real yields is probably related, on the demand side, to the drop in capital spending and with it, the fall in productivity growth and thus long-term growth expectations. On the supply side, desired savings rates likely rose due to aging demographics, higher inequality and higher public savings among EMs.[1] Lupton and Saijid show that indeed the most significant part of the global savings glut emanates from Emerging Markets and that this drove up the global savings rate to 26% in 2015. Bean (2016) also argues that the fall in interest rates coincided with an increase in the high-saving middle-aged population, a weaker propensity to invest since GFC, China's integration into global financial markets, and portfolio shifts towards relatively safer assets.[2]

Figure 1: Global government bond yields

%, nominal, 10-year maturity, GDP weighted, 1970 – 2019. EM is measured through our GBI EM index.



Source: J.P. Morgan, OECD, last observation is Oct 2019.

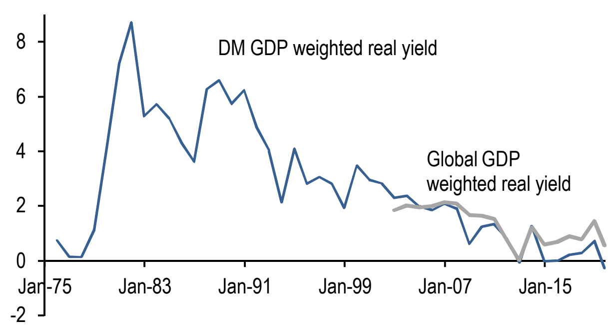
Figure 2: DM CPI Inflation

Percent oya, Jan 1970 – Nov 2019.

Source: J.P. Morgan, last observation is Nov 2019.

Figure 3: Real global government bond yields

%, 10-year maturity minus 5-year rolling headline inflation, GDP weighted, 1970 – 2019. EM is measured through our GBI EM index.



Source: J.P. Morgan, OECD, last observation is Oct 2019

Investor attention to the low-yield phenomenon has skyrocketed in the last five years because yields have continued to fall to levels never seen before and arguably defying economic logic. There is thus a case to be made that the record-low yields seen in recent years are not merely a continuation of its secular drivers, but are more driven by the unique characteristics of the current

[1] Lukasz Rachel and Thomas Smith, *Secular drivers of the global real interest rate*, BoE WP Paper no. 571, Dec 2015. Feroli, US: Global dimensions of the low domestic r*, 9 July 2019.
[2] Charles Bean, Living with Low for Long, The Economic Journal, Issue 582, May 2016, Pages 507-522.

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business cycle. In this note, we thus want to focus on what is special about the current cycle in pushing yields to record lows and whether these factors should be expected to wane, if not reverse, over the coming decade.

Accompanying papers—by Ugai, Fuzesi, and Fujita—expand on some of the arguments we made in our July note (*What if US joins the zero-yield world*, J. Loeys, 12 July 2019), in particular whether Japan and Europe have fallen into a modern version of Keynes' Liquidity trap.[3] One such force is the possibility that as bond yields hit zero and the curve fully flattens, commercial banks become weak and are unable to pass on central bank liquidity to the private sector. A second force is that at zero or negative yields, the saver's reaction to a lower return on savings may become perverse with lower yields inducing higher rather than lower saving rates. We find evidence for this in Japan (see Fujita and Shatil, Japan's search for yield intensifies, pp. 103-106, *J.P.Morgan Perspectives: What if US yields go to zero? Jan 2020*) but only mixed in the Euro area.

In this note, we want to highlight a different factor that we would argue is probably two other drivers of low government bond yields that have become more acute in this cycle—a **rise in risk perceptions and aversion** on one side and a post-GFC QE and macro-prudential de-risking of financial intermediaries, also known as **Financial Repression**.

Real business funding costs have not fallen

Our argument is as follows. We accept that the secular driver of higher global savings rates—from aging, rising longevity versus unchanged retirement dates, rising EM and rising saving—remain in place, if they have not gotten stronger. Consider now a given amount of excess savings this past decade. If investors have not changed their asset preferences or risk aversion, then these extra savings should have been allocated across asset classes in the same way as in past decades. All asset prices should have risen and all asset IRRs should have fallen in line with each other. That is not the case.

Consider the four main financial asset classes that end investors hold—cash, government debt, corporate bonds and equities. Cash and government bond yields are indeed at historical record lows. Credit yields are lower, but spreads to government bonds are wider than in past cycles (see Figure 4 for the dollar world). **Equity yields, in contrast, remain at the same averages of past cycles**.

Figure 4: US High Grade Credit spreads over USTs

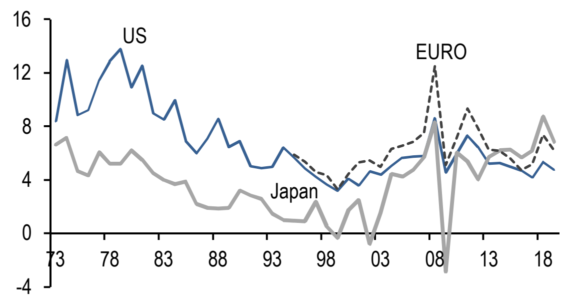
bp, monthly, 1973 – Oct 2019.

Source: J.P. Morgan.

Figure 5 shows the trailing earnings yields of equities for the US and Japan since the 1970s and the Euro area since 1997. The earnings yield—the inverse of the PE multiple—is the simplest way to calculate a *real* IRR for stocks. Clearly, equity yields have not been coming down since the early 1990s and have been in a wide range, not displaying any clear trend. Figure 6 depicts the real high-grade corporate bond yields for these areas, calculated as the nominal yield minus their rolling 5-year inflation rates. Real corporate bond yields have come down in recent years, greatly so in Japan and the Euro area, but less so in the US.

Figure 5: Earnings Yield (EY) in US, Japan and Euro area

%, annual, 1973 – 2019



Source: J.P. Morgan, MSCI, last observation Nov 2019.

[3] John Maynard Keynes, *The General Theory of Employment, Interest and Money*, 1936.

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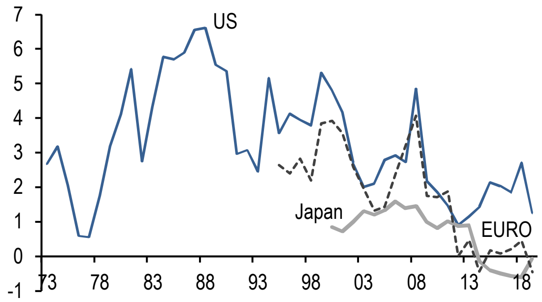
Figure 6: Real high grade yields in US, Japan and Euro area

%, annual, nominal yields minus rolling 5Y headline inflation, 1973 – 2019

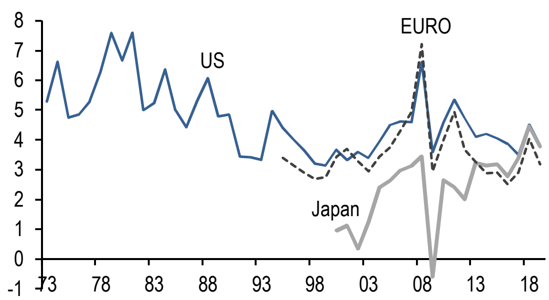


Source: J.P. Morgan, Bloomberg Barclays, ICE BofAML, last observation Nov 2019.

Corporate Finance teaches that companies should judge investment opportunities relative to the **weighted average cost of capital (WACC)** of debt and equity funding with the weights equal to their relative shares in total funding and taking debt costs on an after-tax basis. Figure 7 calculates these real WACCs for the three regions, deducting 5-year rolling inflation from nominal yields.

Figure 7: Weighed Average Real Cost of Capital (WACC)

%, annual, 1973 – 2019

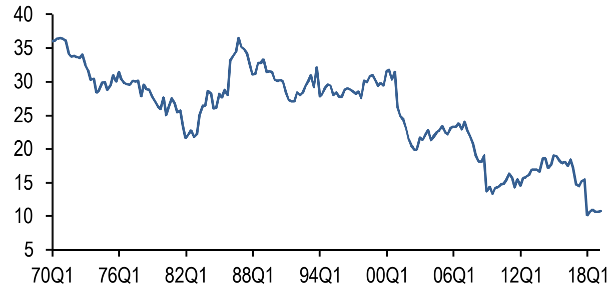


Source: J.P. Morgan, MSCI, Bloomberg Barclays, ICE BofAML, IMF, European Commission, OECD, Last observation is Nov 2019.

We find in each area that the real WACC has not come down since the early 1990s and has actually been rising in the case of Japan. While corporate debt costs have been coming down, so have corporate taxes in each of these three countries, especially in the US, where the effective tax rate of US businesses has been coming down from 35% to 10% (Figure 8). Lower tax rates do benefit the expected after-tax return on investing, but by themselves actually raise the after-tax funding cost as they reduce the tax shield created by the ability to deduct interest payments to calculate taxable income.

Figure 8: Effective corporate tax rate in US

%, quarterly, Q1 1970 – Q2 2019

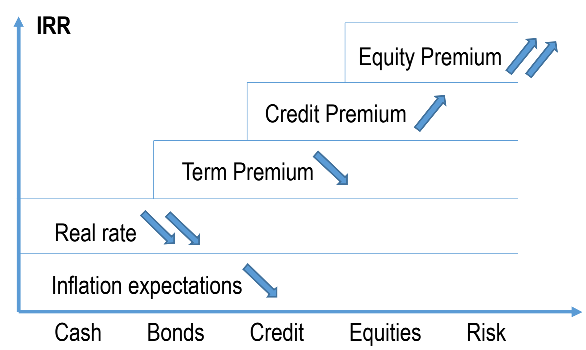


Source: J.P. Morgan, BEA.

In short, in contrast to the dramatic fall in government debt funding costs in major DM markets to under past historical lows, **from a company's point of view, their overall real costs of funding across the capital structure has not come down at all**.

Visually, we can represent the collapse in relatively safe bond yields and the lack of any fall in equity yields through a component view of yields as in Figure 9. A government bond yield consists of the sum of a series of real short rates, long-term inflation expectations, and a term premium. For corporate bond yields we need to add credit spreads and for equity yields one adds the equity risk premia. The first three yield components, for government bonds, have indeed been coming down over the decades, but the last two risk premia have been rising, and in the case of equities by enough to keep the overall equity yield unchanged over the decades.

Figure 9: Visual presentation of different asset yields and the secular moves in their components



Source: J.P. Morgan

Central banks surely tried to improve private sector funding costs through their unprecedented monetary easing, but this appears not really to have worked. Why not?

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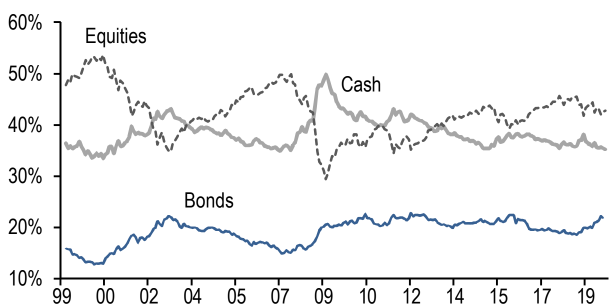
Risk perceptions and financial repression

There are **two possible explanations**: Investors either **naturally became more cautious** after the GFC, or they were **induced/forced by governments to take less risk, which meant in practice to buy more government debt**. Given the depth of the 2008-09 crisis and the recession—both considered the worst since the Great Depression—it would only be natural for economic agents to have revised up their perception of risk, to become more cautious and to demand higher risk premia than before. In other words, investors likely learned a lesson and may well remain risk averse for quite some time. The story is usually told that after the Great Depression of the 1930s, investors who lived through it changed their behavior for a full generation, until that generation had effectively died out.

We do find support for increased risk aversion among economic agents. Figure 10, below, shows the allocation of the global investor, ex the commercial and central banks, based on global outstandings of equities, bonds and M2, minus banks' holdings. Equity allocations are near 20-year averages, but are low for this phase of the cycle. Bond holdings in contrast are high, while cash holdings are low, likely a response to the lack of any yield on cash.

Figure 10: Equity/Bond/Cash Allocation of Global Investor, ex banks

Monthly, Mar 1999 – Nov 2019, based on global outstandings.

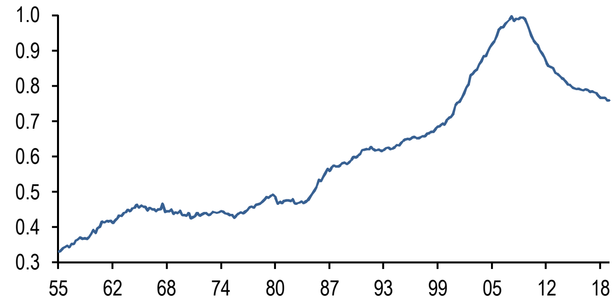


Source: J.P. Morgan, Fed, ECB, BoJ.

Figure 11, below, shows how US households have been steadily de-levering since the crisis and have almost unwound the rise in debt of the previous decade.

Figure 11: US Household Debt as a share of GDP

Quarterly, Q4 1955 – Q2 2019.



Source: J.P. Morgan, Federal Reserve Board.

Overall, a rise in risk aversion in this cycle is unlikely to be the only reason for the lack of any pass-through of lower bond yields to equity yields. Ten years removed from the GFC, caution should be fading, as one can see from steadily rising allocations to equities and near record low allocations to cash. However, this does not explain why bond allocations are at 20-year highs, despite record-low bond yields and some $12tr in negative-yielding bonds in the world.

More broadly, with this being the longest expansion the US has ever seen, and record-low US unemployment, we find it hard to understand why a free market would produce cash rates and bond yields at levels never seen before, not even in the Great Depression. In the 1930s, long US bond yields traded above 3% in the early part and only fell below 2% during WWII, when this market was controlled by the government (Figure 12). Economic conditions are today clearly much better than in the 1930s. As a result, a case can be made that one need to look more at non-market forces, in particular new regulatory and legal restrictions, to explain why yields are so low.

Figure 12: Long UST yields, since the 1920s

%., Monthly, Jan 1926-Dec 2019

Source: J.P. Morgan, Morningstar, IMF.

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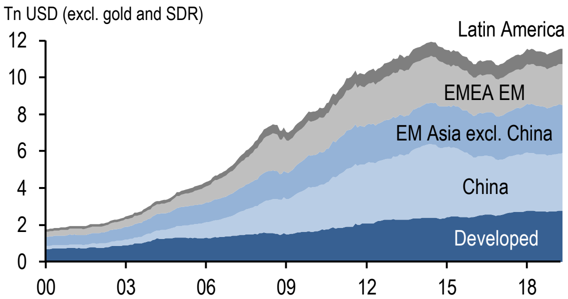
Post the GFC, monetary authorities have gone to extreme measures to stimulate spending through rate cuts and asset purchases. At the same time, central banks' regulatory functions, in coordination with other financial sector regulators and legislators, pursued a massive program to reduce risk taking by banks and insurers. Reduced risk meant moving away from risky assets such as equities and credit, which is how the private sector funds itself, in favor of government debt, which is how the public sector funds itself. The effect of these restrictions was reinforced by government organized financial intermediation, through EM central bank reserve accumulation and DM QE buying.

While the intentions of prudential regulations and de-levering post GFC were laudatory, the unintended effect was to counteract the effort of monetary policy makers to ease funding conditions for the private sector. In effect, **what one hand gave away, the other hand took back**.

What evidence do we have for our view that Financial Repression is the significant driver behind the move to zero and negative bond yields in the world? Figures 13 and 14 show EM foreign exchange reserves over the past 20 years and G4 central banks balance sheets. Figure 13 shows countries across the globe added $5trn in FX reserves in the years after the GFC, up until 2014, after which holdings stabilized as global trade similarly stopped expanding as a share of global GDP. Most of this $5tr was invested in government debt, some 60% of this in US Treasuries.

Figure 13: Global Foreign Exchange Reserves

Monthly, Jan 2000 – Sep 2019

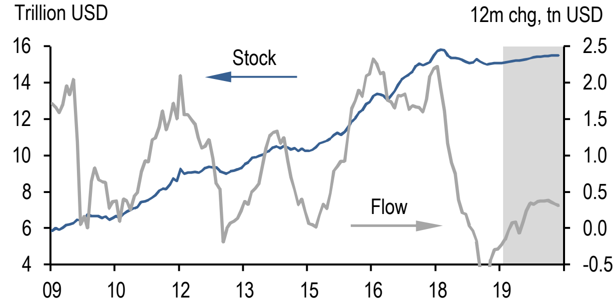


Source: J.P. Morgan. Last observation is Nov 2019.

More important in magnitude has been the $10trn in balance sheet expansion (aka QE) of the G4 central banks, almost all of which has been invested in government bonds (Figure 14).

Figure 14: G-4 Central Bank Balance Sheets

USD, Monthly, Feb 2009 – July 2019, projection afterwards.



Source: J.P. Morgan, Federal Reserve, ECB, BoJ.

It is probably too harsh to call QE buying and EM FX reserve accumulation a form of financial repression. Maybe it should simply be called financial "redirection." At the same time, EM central banks with large national excess savings, equal to their current account surpluses, are preventing their currencies from appreciating, and are thus in the process of "grabbing" their country's excess saving to invest them in DM government bonds. DM central banks' QE asset purchase programs are less coercive and more redirective, but still issue/print cash, that are held voluntarily by end investors, but also by banks that are required to do so under tightened liquidity requirements. These central banks then primarily invest the receipts of their money creation in their own government's debt.

Across commercial banks and insurance companies post GFC, regulators and supervisors have tightened up rules to make it more costly—through risk-based capital and liquidity requirements—for these financial institutions to hold riskier assets, in particular forms of credit and equities (see, for example, Chang and Roever, "Rapid growth in markets coincides with lower liquidity due to regulatory changes," *J.P. Morgan Perspectives: Paradigm Shifts: What lies ahead*, J. Chang et al., 5 April 2019). These rules generally consider government bonds to be risk-free and perfectly liquid. Figure 15 shows how these rules induced US bank dealers to drastically cut inventories (net positions) of corporate debt, while Figure 16 shows the steady rise in the G4 bank holdings of government debt and agencies. The more recent fall in the latter is the mirror image of G4 QE buying of government bonds.

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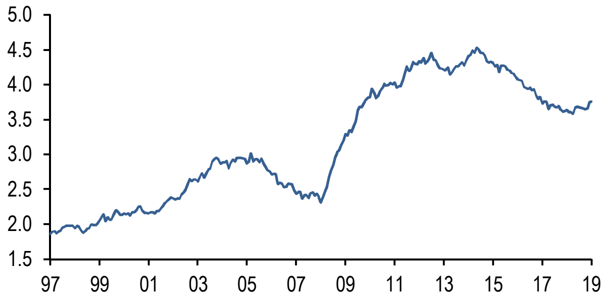
Figure 15: Average Net positions of US Dealers in Corporate Debt in US

USD billion, Quarterly, Q3 2001 – Q4 2019

Source: J.P. Morgan, Federal Reserve New York. Last observation is Dec 4, 2019.

Figure 16: G4 Commercial Bank Govt. bond holdings, currency adjusted

USD Trillion, Monthly, Sep 1997 –Sep 2019

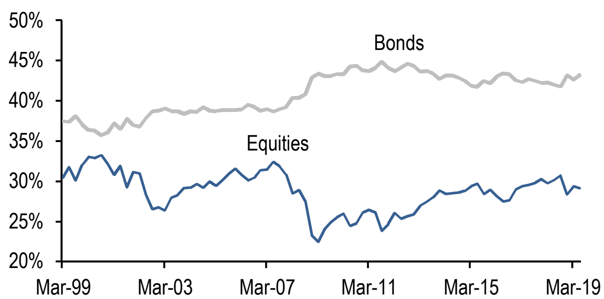


Source: J.P. Morgan, ECB, BOJ, BOE, Federal Reserve.

Figure 17 shows how this induced pension funds and insurance companies to raise their bond allocations relative to equities.

Figure 17: G4 pension funds and insurance companies' asset allocation

% of total assets, Q1 1999 – Q2 2019



Source: J.P. Morgan, ECB, BOJ, BOE, Federal Reserve.

Financial repression and risk aversion in the next decade

Post-GFC risk aversion and financial repression and redirection help explain why much of the global savings glut this past decade ended up in relatively safer debt. Some of these forces should have been waning over the past three to four years, with EM FX reserves peaking in 2015, G4 central bank balance sheets peaking last year, and no further drastic tightening in macro-prudential regulations. However, global bond yields have not stopped falling, and Figure 10, above, shows that non-bank allocations to bonds have risen further, despite continued declines in yields, to record highs and levels in the past only seen in a recession.

Looking across the next few years, excluding at first a recession scenario, **the prior ought to be that risk aversion and financial repression should become weaker forces in driving yields lower**. Despite their intentions, regulations tend to be pro- rather than anti-cyclical. Macro-prudential regulations are intended to lean against the wind and to tighten up on private sector risk-taking in good times and to be more lenient in bad times. The reality is more mundane, as risk managers and regulators are not insulated from markets and the overall economy and take part in the positive thinking and euphoria that define the peak of the economy and markets. After a crisis/crash, we all want to fight the last war and years later, during good times, we complain about these restrictions holding back a healthy market.

The current US Administration has been pushing to eliminate some of the perceived excesses of the post-GFC regulatory framework, while EU regulators are starting to recognize that their bank regulations are compounding the damage of the ECB's negative rates on their banking system. In markets, the steady rise in equity and credit prices, despite no gains in earnings and a weaker economy in 2019, are showing that risk perceptions are waning.

However, all this reverses once a recession starts. Given a strong perception that QE worked well and did not create any excessive inflation expectations nor financial instability, we should expect that with policy rates already rock-bottom in Europe and Japan, and nearly so in the US, **QE buying will come faster in the next recession, in more countries, in larger magnitude and will likely last longer than during the last one.** Many EM countries will likely join in, once they have depleted the interest rate tool. There is a possibility that the next wave of QE buying will be spread across a wider set of financial assets, but this analyst doubts this, given the many restrictions in central bank assets. Hence, global bond yields, across DM and EM, GDP weighted, would likely fall to new lows in the next recession.

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