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The Return of Price Discovery

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- The looming trifecta of quantitative tightening (QT), soaring U.S. budget deficits and the upcoming wall of maturities (in Treasuries and corporate debt) could drive interest rates higher and thereby, precipitate significant market dislocations.
- During the last two years the U.S. 10-year bond yield has increased by about 150 bps, largely for "good" reasons (strong growth prospects). However, if rates continue to increase, we expect it to be largely for "bad" reasons (rising fixed income supply), which should favor short-duration equity strategies.
- The transition to QT also implies higher volatility in most asset classes, as a key objective of quantitative easing (QE) was to suppress it.
- Nonetheless, the upside to interest rates is limited by two factors: secular stagnation (primarily due to low productivity and demographics) and high existing debt levels. The latter explains why we're already experiencing early signs of market stress, even though the process of QT has only just started.
- Corporate debt is likely to be at the epicenter of upcoming market dislocations. Issuance in many jurisdictions has soared with QE, resulting in a wall of maturities that is set to wallop credit markets. Excesses in the HY market are conspicuously acute, particularly worrisome given that spreads are close to historically tight levels and are strongly correlated with volatility.
- Since 1960 there have been 16 distinct episodes of rising bond yields. Equities have tended to fare well when inflation is benign, but underperform in high inflation environments. This illustrates why the inflation trajectory over coming quarters is so critical to the equity market outlook.
- Overall, this challenging backdrop for fixed income markets presents a strong case for shareholder yield strategies which we believe offer superior returns to those offered by sovereign or corporate bonds. To illustrate, the combined dividend plus buyback yield is now 380 bps above 10-year German bunds and 115 bps above 10-year U.S. Treasuries.
- Further, an environment that features higher interest rates (for "bad" reasons), rising volatility and wider corporate bond spreads should be quite constructive for lower-duration equities, which are typically the focus of shareholder yield strategies.
- Finally, given today's challenging late-cycle environment, we believe it is imperative that investors focus on companies that: (a) have demonstrated an ability to produce free cash flow on a sustainable basis; and (b) possess superior managements with a proven track record of allocating that cash flow wisely between return of capital options and reinvestment/acquisition opportunities.

Global growth is strong, the U.S. unemployment rate is now at multi-decade lows and default rates are showing no sign of nervousness or systemic stress. Then why are we so worried? The problem is that these conditions also held true in 2007 just before the Global Financial Crisis (GFC), and in 2000 as the dot-com bust was about to break loose. In fact this is almost always the case late-cycle, reflecting Hyman Minsky's admonishment that, given our increasingly complex and sophisticated financial system, stability is inherently destabilizing.

> "Success breeds a disregard of the possibility of failure."
>
> *— Hyman Minsky, 1992*

This time is not different

Minsky's willful skepticism is difficult to reconcile with the orthodox economic models that dominate college textbooks, in which there are no bubbles, no speculation, no crashes, and no crises. In these models, market forces are fundamentally stabilizing and self-correcting, always returning the economy back to equilibrium. However, Minsky provided a compelling and damning critique of the *a priori* presumption that the financial system is inherently stable. He demonstrated that in contemporary highly leveraged and finance-centric economies, stability is fleeting and that over the course of cyclical upswings, such as the one we have been experiencing, the fiscal position of firms and thus of the economy as a whole becomes increasingly fragile.

Hyman Minsky died in 1996 and his rather heretical writings were largely ignored by mainstream economists during his lifetime. However, the reason for his posthumous fame is quite straightforward to fathom. During the post-Bretton Woods era, financial crises of the sort predicted by Minsky have been anything but rare. In fact there have been eleven major crises during the last thirty-five years, including Japan's in the early 1990s, the Asian financial crisis in 1997-98, the bursting of the tech bubble in 2000-02, and the European sovereign crisis of 2010-14. Most notably, it was the GFC of 2008-09 that assured Minsky's elevated status as this generation's most renowned economic Cassandra.

A dramatic and ominous *mise-en-scène*

This paper outlines three reasons to believe the stage is set for a Minsky moment: (i) the transition from QE to QT, which means the G4 central banks collectively are shifting from being net buyers to net sellers in fixed income markets; (ii) the deteriorating U.S. budget deficit position, which is leading to an alarming increase in Treasury issuance during upcoming monthly auctions; and (iii) the massive rise in corporate debt issuance over the last decade, which has resulted in a wall of maturities that is about to wallop fixed income markets.

An additional reason to be nervous is that the current expansion is already into its 109th month, making it the second longest since at least 1850 (the beginning of reliable economic accounts). By July of next year it will claim the top spot, overtaking the 120 month expansion of the 1990s that ended rather abruptly and painfully with the bursting of the dot-com bubble. Maybe this time will be different, but we are deeply skeptical.

Together, these developments make a rather compelling case that we are late-cycle and that there is a significant risk of much higher interest rates than consensus is currently expecting (the Bloomberg consensus has the U.S. 10-year Treasury at 3.2% by end-2018 and 3.5% by end-2019), which could precipitate significant market dislocations and the next financial crisis. We are much less confident regarding the specific timing, although the second half of 2019 strikes us as a reasonable base-case. In particular, we believe the trajectory of wage growth and inflation over coming quarters will be crucial determinants of the speed of monetary policy tightening and hence, of the timing and severity of any market dislocations.

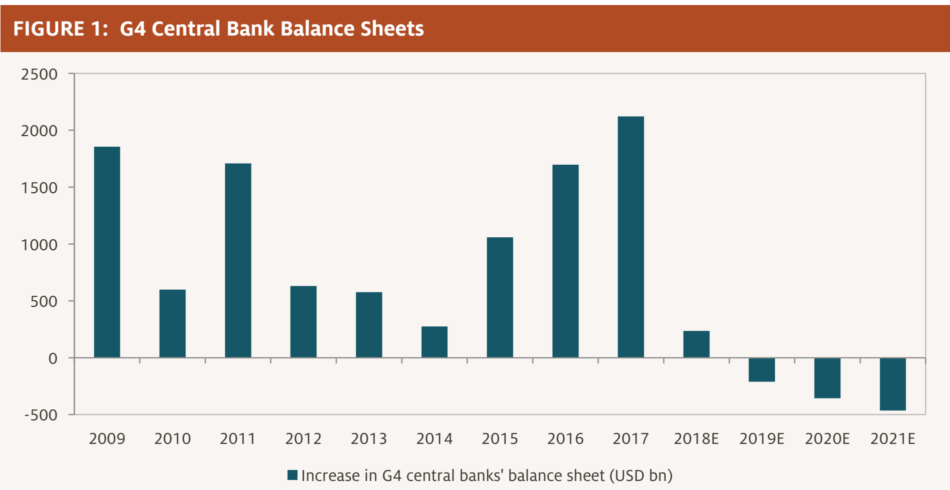
I. The Transition from QE to QT: Playing the Movie in Reverse

> "By any measure, real long-term interest rates are much too low...We are experiencing a bubble, not in stock prices but in bond prices."
>
> *— Alan Greenspan, July 2017*

Subsequent to the GFC, the G4 central banks implemented aggressive QE policies to suppress interest rates and muzzle market volatility. The Federal Reserve's transition to QT began in 2014 and has been cautious, gradual and data dependent. In fact, the Fed waited until October 2017 to commence the multi-year process of normalizing its balance sheet. Statements by the European Central Bank have given us every reason to believe they will proceed in a similarly prudent and unhurried fashion (although the next ECB president, taking

The combined G4 central bank balance sheet is massive and has increased inexorably for a decade, but is finally beginning to be unwound. The yoy tightening impulse from 2017 to 2019 will be dramatic.

FIGURE 1: G4 Central Bank Balance Sheets



Source: FRB, ECB, BOJ, BOE, Bloomberg, Epoch Investment Partners, as of April 30, 2018.

over in October 2019, may elect to speed things up). Further, the Bank of England terminated its QE program in 2017 (the last increase occurred immediately after the June 2016 Brexit vote), but plans to hold its portfolio steady at £435bn for the time being. Finally, we expect the Bank of Japan to continue JGB purchases at a significant, but declining pace. The G4's QE policy, in aggregate, is finally about to be unwound, albeit glacially so (**Figure 1**).

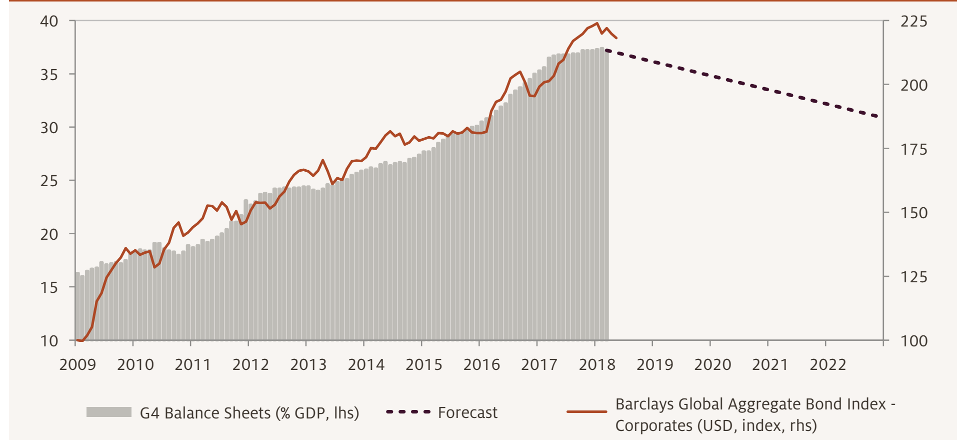
There continues to be much debate regarding the impact of QE policies on the real economy. The initial hope was that, by keeping interest rates and volatility unnaturally low, corporations would bring capital expenditures forward, with households acting similarly regarding rate sensitive outlays such as autos. However, recent empirical evidence suggests many of these linkages were weaker than policy makers initially estimated and that the overall impact on the real economy has been rather marginal.

Nevertheless, it is very difficult to argue that QE policies, by suppressing interest rates and quelling volatility, didn't have a hefty impact on financial markets. To illustrate, since 2009 there has been a 96% correlation between the size of the global corporate bond market and the G4's QE policies (**Figure 2**). Although some commentators claim that such correlations are spurious, we strongly disagree. For a start, the economic logic from QE to financial activity is robust and compelling. Further, the size of the combined G4 central bank balance sheet is 90%+ correlated with a host of different financial markets (including the size of the global high yield market and the value of the MSCI World equity index). For these reasons we believe the relationship is anything but spurious.

As the Fed and the other three central banks transition from QE to QT, what is likely to be the impact on interest rates and volatility? An analysis by Fed economists that seems to be near the consensus of central bank thinking on the subject suggests that the QE programs reduced the 10-year term premium, and therefore the bond yield, by roughly 100–125 bps. This strikes us as a fair estimate, and we think about half of that has likely already been unwound. Regarding volatility, the VIX averaged 11.1% during 2017, which is leagues below its post-1990 mean of 19.3%. Although the VIX has declined markedly this month, it has averaged 16.6% YTD, which is well on its way toward normalization. Overall, the QT process suggests the next several years are likely to witness significantly higher interest rates and volatility.

QE suppressed interest rates, evoking a deluge in corporate bond issuance, resulting in a 96% correlation.

FIGURE 2: Correlation of G4 Balance Sheet Size and Corporate Bond Issuance



Source: FRB, ECB, BOJ, BOE, Bloomberg, Epoch Investment Partners, as of May 31, 2018.

II. U.S. Fiscal Imbalances: To Infinity and Beyond

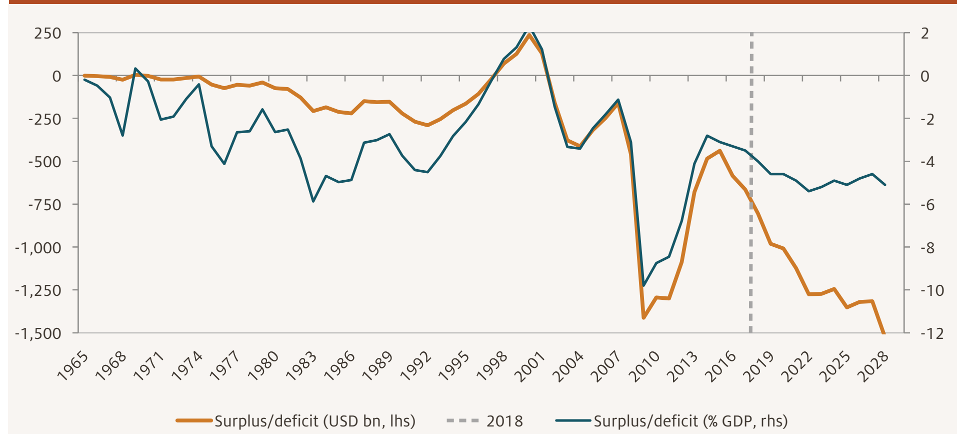
"A billion here, a billion there, pretty soon you're talking real money."

— Senator Everett Dirksen, 1964

We now turn to the second reason why we believe there is a substantial risk of much higher interest rates which could precipitate consequential market dislocations in coming quarters. According to the Congressional Budget Office (CBO), the U.S. federal budget deficit, in nominal U.S. dollars, will increase dramatically from $665 billion in 2017 to $1,123 in 2021 (**Figure 3**). The deficit will likely exceed $1 trillion next year, before marching past the $1.5 trillion mark in 2028 and the mind-boggling $6 trillion threshold by 2048. As a percentage

The U.S. budget deficit is set to deteriorate rapidly with trillion dollar federal budget deficits to be the norm from 2019, but is already the worse ever excluding wars and recessions

FIGURE 3: U.S. Budget Surplus/Deficit



Source: Congressional Budget Office, Bloomberg, Epoch Investment Partners, as of December 31, 2017.

of GDP, the deficit over the next decade will remain in a 4%–6% range (which is already unprecedented ex-recession and ex–wartime), before deteriorating steadily toward 10% of GDP by 2048.

However, there is almost no chance of the CBO's long-term forecasts being correct, as markets simply won't allow it. Under the type of debt profiles associated with either the CBO's 10-year or 30-year forecasts, eventually bond yields will rise to levels that are prohibitive for activity and debt sustainability. This will force the government to cut spending dramatically, raise taxes and/or attempt to create inflation.

The core problem is that revenues haven't come even close to keeping up with spending, and the gap between the two keeps getting wider. Expressed as a percentage of GDP, revenues have been in a 15-20% range since 1965, with the CBO forecasting this band to hold through 2048. However, spending has been consistently higher, in a 16–24% range during the last five decades. Spending is currently 20.6% of GDP (4 percentage points higher than revenues), but is forecast by the CBO to climb steadily to 23.6% in 2028 and just under 30% by 2048 (which is more than 10 percentage points higher than revenues, hence the soaring deficit). The fastest rising expenditures are, in order, net interest expense, Medicare and Social Security.

As ugly as the CBO's base-case scenario might seem, the odds are that it is too optimistic. The deficit will be even worse than currently forecasted if: there is a recession (increasingly probable during the next couple years), interest rates move markedly higher (very likely), the individual tax cuts from the Tax Cuts and Jobs Act (TCJA) are made permanent (as the president and House leadership have vowed to do), government investment is raised (currently at historical lows and a priority for the president, but not Congress), a military conflict occurs (say with Iran), or student loans are transferred onto the government's balance sheet (which appears unavoidable). On the other hand, the deficit could be lower than the CBO's current forecast if entitlement reform occurs (but this is opposed by President Trump and a large majority of his supporters), health care costs are lowered significantly (which is difficult to do) or productivity growth improves (which is impossible to forecast, but could happen).

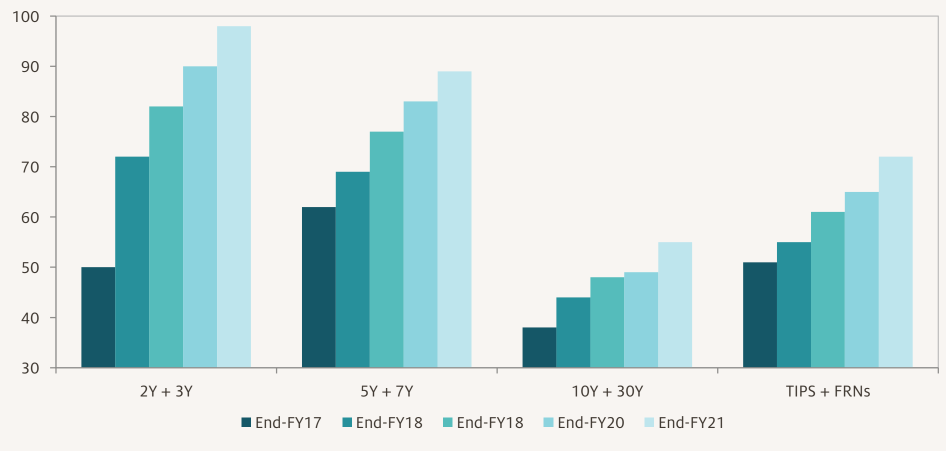
Overall, an outcome considerably worse than the CBO's forecasts seems likely, which is why most private sector trajectories are even more alarming. For example, for 2019 the CBO forecasts a deficit of $981 billion, or 4.6% of GDP, while the Bloomberg consensus is $1,050 billion, or 5.0% of output. We fear that even the street consensus is too optimistic. This is important because the likely size of the budget deficit is crucial to understanding how much larger Treasury auctions will be in coming years and hence, how much upward pressure there will be on the yield curve.

In addition to the budget deficit, Treasury issuance will be impacted by the Fed balance sheet runoff associated with QT. To illustrate, the value of Treasuries held by the Fed that are maturing will increase from $191 billion in 2017 to $362 billion this year and $411 billion in 2019. Further, a declining proportion of maturing Treasuries are projected to be reinvested (it was 100% in 2017, but probably just over 50% in 2018, and around 30% in subsequent years). Altogether, this awkward arithmetic means that the net Fed runoff is projected to increase from $0 in 2017 to $168 billion this year and $286 billion in 2019.

As a consequence, it seems probable that the rising Federal budget deficit together with sizeable net selling by the Fed is likely to add considerable upward pressure to the yield curve over the next one to three years. Further, taking these two factors into account allows us to estimate how significantly Treasury issuance needs to increase through 2021 (**Figure 4**). It is indeed unnerving that the monthly auction amounts for all maturities and for all types of Treasuries are likely to soar, with the near doubling of issuances at the short end (two- and three-year) being especially alarming.

The U.S. federal budget deficit will likely be over a $1 trillion in 2019, rising to $1.5 trillion by 2028. This, plus Fed portfolio runoff, necessitates ever rising Treasury auctions, especially of two- and three-year bonds.

FIGURE 4: Estimated Monthly U.S. Treasury Auction Amounts (USD bn)



Source: U.S. Treasury Department, Goldman Sachs, Epoch Investment Partner, as of May 9, 2018.

The dollar trap: Exorbitant privilege or curse?

The U.S. dollar's dominant role in global financial markets means there is a constant flow into dollar assets, which helps fund the twin (federal budget and current account) deficits. To illustrate, U.S. dollar assets still account for 63% of global central bank currency reserves, down only moderately from 71% in 1999, in spite of dire warnings about the growing role of the euro (20% of reserves) and yuan (a paltry 1.2%). Further, the dollar maintains a dominant share of payments through SWIFT and the greenback is on one side of the trade in nearly 90% of all transactions in the $5 trillion a-day global currency market.

Some commentators argue that this is an "exorbitant privilege" because it allows the U.S. government and corporations to fund themselves more cheaply than they otherwise would be able to do. However, it could also be viewed as a curse (analogous to the oil or resource curse), in the sense that it reduces a crucial source of market discipline that could rein in an otherwise profligate government. That is, it allows the government to easily finance its enormous budget deficit with little pressure to make difficult decisions to reduce spending and/or increase revenues. The dollar's dominant status also distorts the country's savings/investment balance and makes it easier to build up and fund its massive current account deficit. Finally, it means all this can happen with nary a worry about precipitating a funding crisis.

III. The Problem Next Time: Corporate Bonds at the Epicenter

The third worrisome development is the dramatic increase in corporate bond issuance that has coincided with the G4's QE policies. From 2010 to 2017, annual corporate debt issuance in the U.S. averaged $1.4 trillion (with a high of $1.7 trillion in 2017), representing a 96% increase from its 2000–2007 average. The increase was particularly notable for high-yield debt, with issuance rising by 151% over the same time periods (that is, from its annual mean of $106 billion over 2000–2007 to $266 billion a decade later).

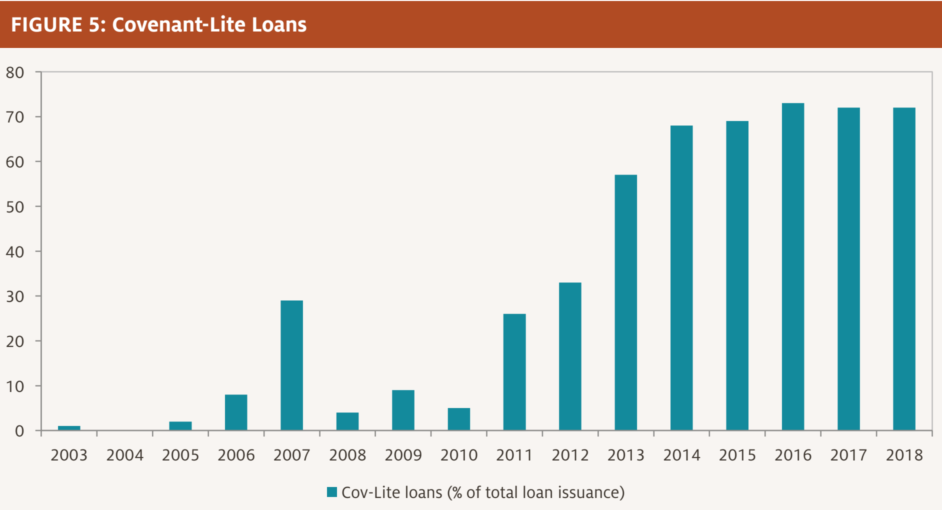
As a result of this soaring issuance, the size of the U.S. investment-grade market has more than doubled from $2.5 trillion in early 2009 to a staggering $6.0 trillion today. The growth has been even more spectacular for the high-yield market, whose size more than tripled over the same time period (from $0.4 trillion in 2009 to its latest value of $1.3 trillion). Further, the leveraged loan market has doubled in size to just over $1.0 trillion.

We believe the growth of the U.S. corporate debt markets since 2009 was turbo-charged by the Fed's QE policies and, as we showed in Figure 2, there has been a 96% correlation between the size of the global corporate bond market and the G4's QE policies. Further, QE also promoted a decline in credit quality, with the proportion of investment-grade bonds rated BBB rising from 32% in 2009 to 44% today. This development is troublesome for two reasons. First, it raises worries about fallen angels, as the BB market is only 19% the size of BBB (roughly $0.6 trillion vs. $3.0 trillion), suggesting depth and liquidity could be severely tested by even mild dislocations. Second, lower credit ratings mean a higher percentage of investment-grade debt will likely default when top-line growth inevitably rolls over, even if the slowdown is only a moderate one.

Another key indicator that has deteriorated is the share of the loan market that has weak covenants. In 2010 only 5% of loan issuances were covenant-lite, but this has soared to over 70% during the last three years (**Figure 5**). In fact, today only 28% of new bonds possess decent covenant protec-

One consequence of QE is that investors have become more willing to accept looser terms and covenants with over 70% of loans issued now cov-lite, up from 5% in 2010

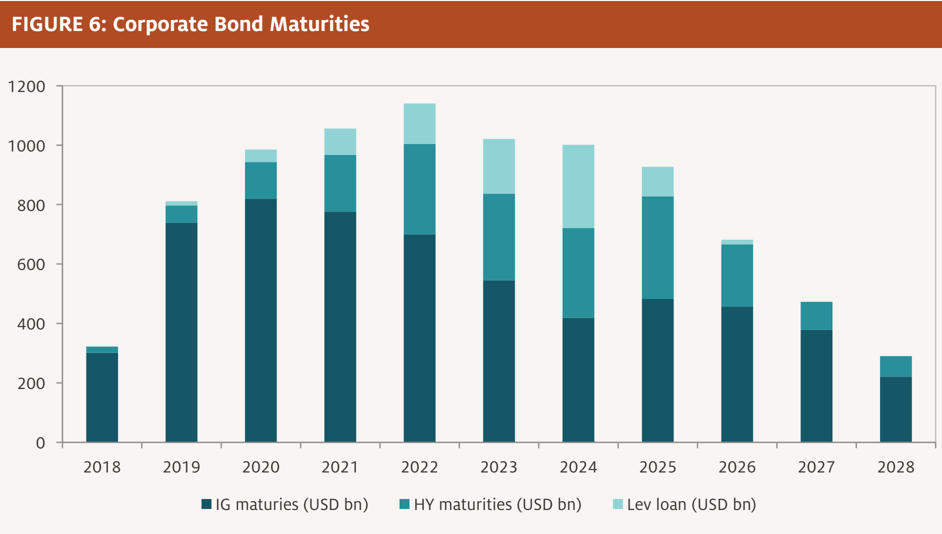
FIGURE 5: Covenant-Lite Loans



Source: Credit Suisse, as of May 31, 2018.

The value of U.S. corporate bonds maturing is expected to more than triple, surging from $323 billion in 2018 to roughly $1 trillion from 2020–2024. This is likely to place stress on the U.S. corporate debt market.

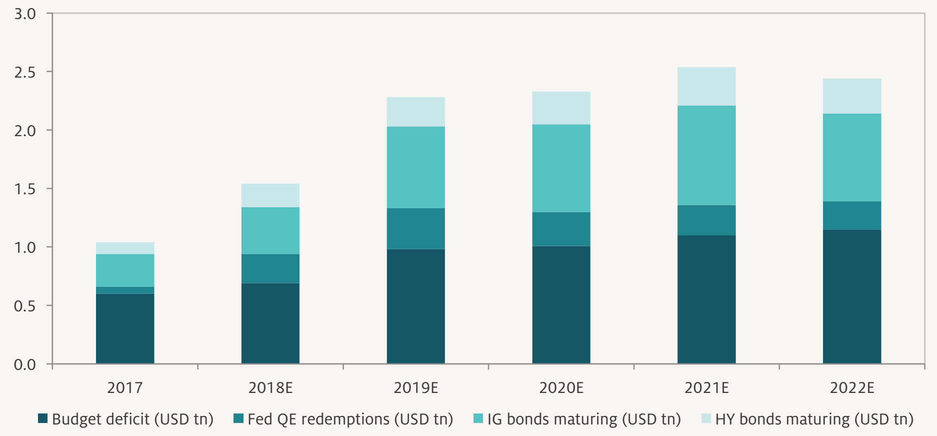
FIGURE 6: Corporate Bond Maturities



Source: Goldman Sachs, Epoch Investment Partners, as of May 31, 2018.

The rising U.S. budget deficit comes at the same time as Fed redemptions and a soaring number of corporate bonds maturing. All together this means we're headed for an explosion in U.S. fixed income supply particularly from 2017 to 2019 through 2022.

FIGURE 7: Budget Deficit, Redemptions and Maturities



Source: Deutsche Bank, Epoch Investment Partners, as of April 27, 2018.

tions. Minsky would argue that this is classic late-cycle behavior and fully consistent with his view that long periods of financial stability, especially those that result from extraordinarily accommodative policy, are inherently destabilizing, as borrowers and creditors both learn to disregard the possibility of failure.

Moreover, even if investors get lucky and the deterioration in credit quality and the predominance of cov-lite loans do not cause too many problems, the approaching wall of maturities likely will. For the U.S. corporate debt market, 2018 promises to be a manageable year in terms of maturities. However, things get messier rather quickly (**Figure 6**), which raises awkward questions about the ability of companies to rollover and refinance their paper seamlessly and without driving spreads markedly higher.

Of course, maturing corporate debt won't be the only source of fixed income supply. To obtain a more accurate picture of forthcoming market pressures we also need to take into account the soaring federal government deficit as well as redemptions from unwinding the Fed's QE policies (**Figure 7**). This is likely to place considerable pressure on the yield curve to shift up meaningfully and possibly by much more than is imbedded in consensus expectations.

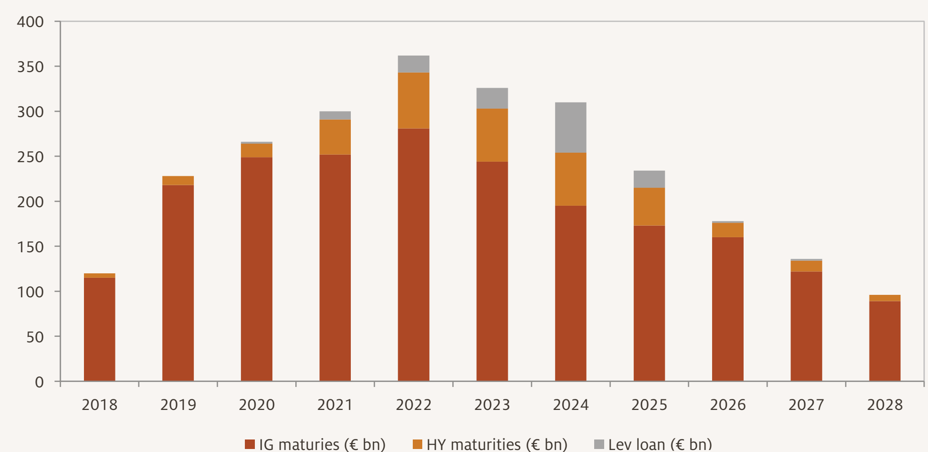
Furthermore, we also need to assess forthcoming supply in other markets, as it wasn't just in the U.S. that governments and corporates were tempted by unprecedentedly low interest rates. We could provide a comprehensive overview of all debt markets on the planet, but that would take several dozen pages and test the patience of our readers. So instead we will provide one example, showing that the European corporate bond market has also grown recklessly fast during the past decade, and that QE policies bear much of the responsibility for the resulting excesses.

On that note, issuance in the European investment-grade market has risen significantly this decade and is expected to come in at a whopping €620 billion this year. Further, high-yield issuance has more than doubled from €42 billion in 2010 to an estimated €108 billion for 2018. As a result, the size of the high-yield market has increased by 311% over the last decade, soaring to approximately €400 billion. Similarly, funding in the leveraged loan market sky-rocketed from €13 billion at the beginning of the decade to €102 billion last year. Rapidly growing debt markets are always worrisome, but these numbers are particularly eye-popping and alarming.

One reason why the European corporate bond market has grown especially quickly is the tailwind provided by the ECB's Corporate Securities Purchase Program (CSPP). As part of its QE policy, the ECB commenced buying corporate bonds in June 2016, and now holds a startling €157 billion worth, of which 46% are rated BBB, which is at the bottom of the investment-grade ranking. One direct consequence of the CSPP is that corporate bond yields were driven to rock bottom levels, with many yielding less than U.S. Treasuries. In fact, the European high-yield index currently yields just 3.3%, which is only 40 bps above the U.S. 10-year (a normal

The value of European corporate bonds maturing is expected to triple, from €120 bn in 2018 to €362 bn in 2022 placing pressure on credit spreads.

FIGURE 8: European Credit Maturities



Source: Goldman Sachs, Epoch Investment Partners, as of May 2, 2018.

premium is 250 bps). The CSPP has distorted the price discovery process and it is difficult to see how such a low yield is sustainable once the ECB transitions to QT, as is expected during the next couple quarters.

Regardless, and similar to the situation in the U.S., 2018 promises to be a manageable year in terms of maturities in Europe. However, the outlook from 2019 is much more challenging (**Figure 8**). As a consequence, we expect European investment-grade and high-yield spreads to move considerably higher in the months and quarters to come.

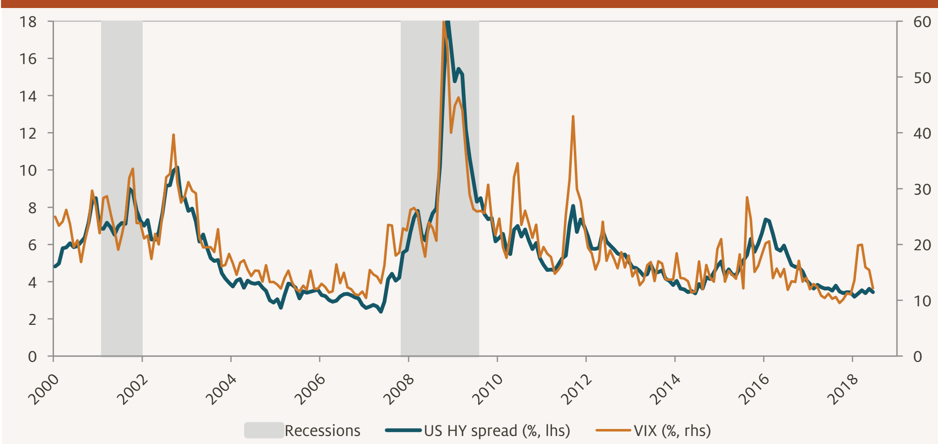
A second reason to expect much wider spreads, both in Europe and the U.S., is that they have been highly correlated with volatility metrics (**Figure 9**). A key objective of QE was to suppress market volatility, thereby encouraging investors to move out on the risk curve. Consequently, the transition to QT should imply significantly higher volatility in most asset classes. Additionally, we are in the late stages of the credit cycle, which is when uncertainty typically rises, often dramatically so. Further, given that being long credit amounts to taking a short-volatility position, the odds appear stacked against taking such risks, especially when the spread being received by investors is so close to historically tight levels.

While the argument above focused on U.S. and European credit markets, two points are worth clarifying. First, very few large cap stocks are rated below investment-grade. In fact, only 4% of S&P 500 companies (by market value) are classified as high yield. Further, over the last decade, the leverage (measured by net debt/ebitda) of large cap stocks in the U.S. has actually declined, while that of small caps has increased significantly. This suggests U.S. large-cap equities should not be overly affected by the potential disruptions in the high-yield market.

Second, the observations regarding U.S. high-yield also apply to markets in other geographies. We have already discussed Europe, where the high-yield index offers a yield that is only 44 bps above that of the U.S. 10-year Treasury. This pickup is only one-sixth of the average since 2010 (260 bps) and provides investors with precious little to compensate them for the considerable additional risk they are taking. Further, the emerging markets high-yield spread hit a post-GFC tight earlier this year, although it has sold off considerably during the past two months. Emerging markets high yield may well represent the proverbial "canary in the coal mine" for high-yield markets in the U.S. and Europe.

The VIX and U.S. HY spread have been 89% correlated since 2000. We expect both to head markedly higher over coming quarters reflecting the impact of QT and surging corporate bond maturities. At near historical tights, U.S. HY spreads are seemingly oblivious to the forces about to be unleashed

FIGURE 9: U.S. High Yield Spreads



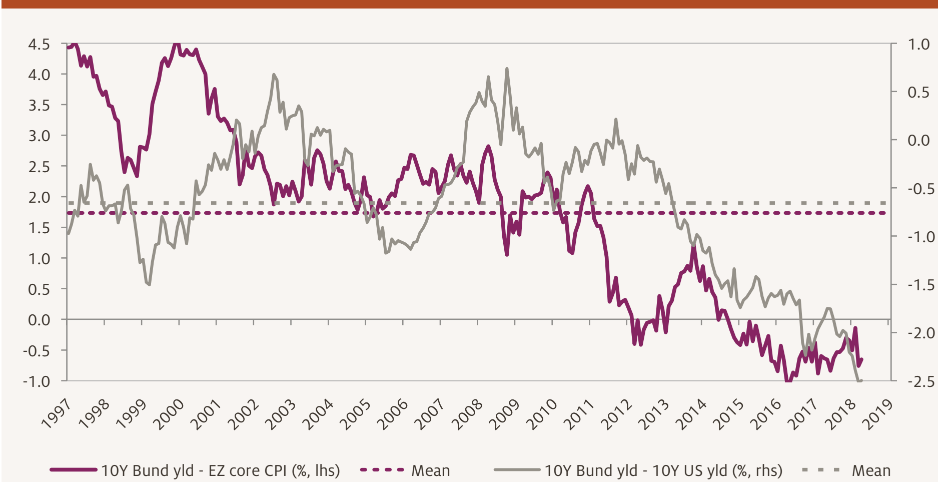
Source: NBER, Bloomberg, Epoch Investment Partners, as of May 31, 2018.

The problem next time: No shortage of candidates

Outside of credit, there remain plenty of markets that could face significant dislocations with the transition to QT and the return of price discovery. One of the most extreme is in Germany where 10-year bund yields are 250 bps below their 20-year mean. This is in spite of the domestic

Unfettered by fundamentals – The 10Y bund yield is extraordinarily low relative to its own history, as well as Germany's strong fundamentals, domestic inflation and U.S. 10-year Treasury yields

FIGURE 10: Ten Year German Bund Yields



Source: NBER, Bloomberg, Epoch Investment Partners, as of May 31, 2018.

unemployment rate, currently 5.2%, being at its lowest since reunification in 1991 and CPI ex-energy of 1.7% being well above its 20-year mean of 1.2%.

The 10-year bund yield is typically 175 bps above eurozone core inflation, but is currently an astonishing 65 bps below (**Figure 10**). Further, the bund yield is normally 65 bps below Treasuries (reflecting historically lower inflation and trend growth), but the gap has now plunged to 250 bps, which is an extraordinary 2.6 standard deviations below the 20-year mean. For these reasons we believe bunds merit a special place in the pantheon of asset classes that have been emphatically distorted by QE and are set for significant dislocation as the process of policy normalization plays out.

A second area of concern consists of the smaller Anglo economies (Canada and Australia) and several Scandinavian countries (especially Sweden and Norway). As a group their household debt to GDP ratio is well over 100% (significantly higher than it was a decade ago), with debt service ratios already worrisome. These metrics are also elevated for the corporate sector, which places many at considerable risk if interest rates rise significantly from today's extremely low levels, as we believe is likely.

Are Emerging Markets the canary in the financial coal mine?

Finally, we are worried about the fragility of emerging markets that possess excessive hard currency debt and insufficient reserves, particularly in an environment in which U.S. dollar liquidity is tightening. We have already seen large, disruptive currency moves in Argentina and Turkey, even though the transition to QT is just getting started. There will almost certainly be additional casualties as we get further into the QT process, with countries such as Brazil, South Africa and Indonesia frequently mentioned.

While this will certainly challenge emerging market fixed income and currency markets, the good news for equity markets is that most of these countries have small weights in the MSCI Emerging Markets Index. Further, as Professor Kenneth Rogoff recently argued in Project Syndicate, "As long as the underlying global interest-rate picture is so benign, it is hard to see the big Kahuna of bond-default waves coming just yet." This observation highlights the crucial role likely to be played by the trajectory of wage growth and inflation in determining how quickly and aggressively market dislocations occur.

U.S. equity market returns during episodes of rising bond yields

Since 1960 there have been 16 distinct episodes of rising bond yields. In nine of those episodes, starting inflation was greater than 3%, and in a large majority of these cases, real equity returns were negative. However, there were seven episodes that were more similar to today's low inflation situation. In these cases, starting inflation was less than 3.0% and real equity returns were positive in all but one episode.

As Wilmot Macro Advisory emphasizes, the key takeaway here is that equities have tended to fare relatively well when bond yields are rising in a low inflation environment. This further explains why we believe the path that wages and inflation take which will significantly impact the pace and aggressiveness of monetary policy tightening, is so critical to the equity market outlook. It is through such reflationary pressures that the business cycle, which this paper has only fleetingly discussed, directly impacts the credit cycle and typically heralds its denouement.

While we remain moderately constructive on the outlook for equities, the perspective for bond returns is much less compelling. Moreover, this environment allows us to make a strong case for shareholder yield strategies, which appear compelling relative to both sovereign and corporate bonds. To illustrate, the combined European dividend plus buyback yield (4.30%) is now leagues above the 10-year bund yield (0.48%). It is even superior to the European high-yield index for which the option-adjusted spread is currently 3.65% and the outlook is anything but rosy. Similarly, the combined dividend plus buyback yield for the S&P 500 is now 4.11%, which is well above the 10-year Treasury yield of 2.95%. Further, the U.S. high-yield index is now 3.40% above the 10-year Treasury but, in our view, it faces a challenging environment and is unlikely to outperform cash, let alone a shareholder yield strategy.

Who provides liquidity during periods of forced selling?

We believe severe liquidity disruptions are likely to be a key attribute of the next crisis. This reflects several market trends over the last decade, including the roughly $2 trillion shift from active to passive and systematic strategies, which reduces the ability of the market to prevent and recover from fire sales. For example, passive and quantitative investors are now 60% of the U.S. equity asset management industry, up from 30% a decade ago. Many of these strategies (e.g. volatility targeting and risk parity) are designed to sell on "autopilot," a situation that makes disruptive fire sales more likely. In fact, following even a moderate shock, programmatic strategies would sell into weakness, adding fuel to and potentially triggering a fire sale. This could be exacerbated by a rush to the exits by panicked ETF investors and such herd effects could easily overwhelm markets.

Further, in a crisis, would any of these strategies become suppliers of liquidity, helping markets find a bottom and begin to recover? The evidence suggests not. Who then would be the supplier of liquidity in a crisis? Dealer inventories have shrunk, and few hedge funds would be willing to step in aggressively, especially in the type of time frame that would be required. Consequently, there is probably only one willing supplier of liquidity in a crisis, your friendly local central banker.

Issues regarding the provision of liquidity during a crisis are of particular concern given the changing ownership structure of the U.S. corporate bond market. Foreign investors are now the biggest holders of U.S. corporate bonds, with a 31% share (it has more than doubled from twenty years ago). Some commentators wonder how well they know the dozens, if not hundreds, of individual names in their portfolio and if, in the event of a sharp market decline, they would join the "autopilot" crowd and also become aggressive sellers. After foreigners, the second largest category is life insurance companies at 22%, followed by mutual funds at 17%. Banks own a relatively tiny 5%, which is about half their share from ten years ago, suggesting a credit market sell-off would not constitute a systemic risk for them.

Investment implications: The return of price discovery

This note has argued that there is a significant risk that the looming trifecta of QT, the challenge of funding the U.S. fiscal deficit and the upcoming wall of maturities could drive interest rates markedly higher than consensus expects. But how high is that? A nominal 10-year Treasury yield of 4% is certainly feasible and, while it would assuredly result in even more cracks in the edifice, it wouldn't be a disaster for most financial markets. The U.S. in particular would avoid a crisis given its global reserve currency status which all but assures a constant bid for U.S. dollar assets. On the other hand, a real yield of 4% would likely result in the wheels coming off and be a major disaster for numerous markets.

The upside to interest rates is limited by two factors: secular stagnation (primarily due to low productivity and demographics) and high existing debt levels. The latter explains why we're already experiencing early signs of market stress, even though the process of quantitative tightening has only just started. This is consistent with the view of John Williams (currently president of the San Francisco Fed, set to take over the helm at the New York Fed on June 18). He believes that r*, the natural rate of interest (the real rate expected to prevail when the economy is at full strength) is likely to remain low for quite some time, and estimates it to currently be a meager 0.5%.

Williams view suggests that even a nominal rate of 4.0% would be extremely restrictive, especially when there is so much debt in the domestic and global economy. High leverage and strong overseas requirements for USD liquidity imply a low ceiling for how high rates can climb without provoking a crisis. Ultimately this means we should expect the process of QT and central bank hikes to proceed very slowly by historical standards, and to remain highly dependent on both data (especially wage growth and inflation) and market behavior. This scenario should be constructive for equity markets as it suggests multiples will come in a little lower, something that might already have happened.

This note examined the implications of the triple whammy of QT, soaring U.S. budget deficits and the impending wall of maturities. These developments suggest that: (i) interest rates could be headed higher, but for a "bad" reason (an increase in fixed income supply), rather than a "good" one (stronger growth, which typically benefits longer duration assets); (ii) volatility is likely to increase and (iii) corporate bond spreads will probably widen. We believe all three of these features are quite constructive for lower-duration strategies, like those focused on shareholder yield.

When could dislocations in fixed income markets become more pronounced? This year is likely too early, as QT is just beginning the first tentative steps of its long journey and the TCJA is providing a strong impulse to economic growth that doesn't fall off until 2020. The recent tax legislation is also driving a spike in both the repatriation of trapped cash and buyback activity (we're estimating a record $800 billion this year), both of which are likely to moderate through 2019 and 2020. Further, S&P 500 revenue and earnings growth are expected to be stellar this year (10% and 21%, respectively), before falling precipitously in 2019 (to 5% and 8%, correspondingly).

If 2018 is too early, what would be the likely catalyst for market turmoil to intensify in 2019? There is always the possibility of a specific event, for example a global trade war or the ascension of the new ECB president next October (the front-runner, by far, is the hawkish German, Jens Weidmann). However, such triggers are inherently unknowable. Rather, we believe the key factor will likely be the trajectory of wage growth and inflation over coming quarters. If reflationary forces accelerate, causing central banks to crank up the QT process and to hike policy rates by more than the market is currently expecting, then 2019 would be accorded the highest probability. On the contrary, if reflationary pressures remain benign, then central bankers can probably relax and proceed glacially, implying the inevitable crunch can occur later rather than earlier.

Given this, we believe investors should focus on companies that: (a) have demonstrated an ability to produce free cash flow on a sustainable basis; and (b) possess superior managements with a proven track record of allocating that cash flow wisely between return of capital options and reinvestment/acquisition opportunities. Epoch has always favored companies that consistently generate free cash flow and possess competent capital allocation policies, believing they are the most probable winners and the ones most likely to provide investors with the best returns. In today's challenging, late-cycle investment environment we believe these principles are ever more important.

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