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The multi-asset essay

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Don't panic about high-yield defaults

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Do you believe double-digit default rates lie ahead for the US high-yield bond market? We do not. This essay explains why and therefore, how investors can benefit from this current mispricing of default risk.

There is no question that the energy and commodity sectors are in a full-fledged default cycle and that credit spreads are trading near the wides of the post-crisis period. But that is not necessarily a harbinger of disaster.

The three major default cycles of the past 25 years erupted only after the Treasury yield curve inverted following aggressive Fed tightening. That is not the case today. Those cycles were also preceded by sharp increases in corporate borrowing from channels other than the bond market as the business cycle grew frothy. This time, there is still little sign of froth on that front either. Even commodities sector lending was not necessarily out of control – it's just that even a year ago no reasonable person expected that oil prices to be languishing near $30 a barrel. It is difficult to envision a major default cycle absent these catalysts.

A flurry of potential worries since the start of the year – US growth slowdown, renminbi devaluation, emerging markets outlook to name just a few – have added to the pressure on high yield. Defaults would certainly move higher if some of these macro risks were to escalate, but the surprise might be the relatively moderate default rate in all but the most extreme 2008-like scenario.

The real risk in high yield in a more extreme scenario isn't defaults per se but the market fear factor, which could trigger a sharp widening in spreads and mark-to-market volatility until investors reach a more rational assessment of the real default risk. Hence, those primarily concerned about mark-to-market exposure should carefully weigh their assessment of the risk of another major financial crisis before investing in high yield.

However, for buy-and-hold investors and those more focused on default risk, high-yield spreads near 800 basis points are attractive. At these spreads a high-yield portfolio can withstand an ongoing default rate of eight per cent indefinitely and still generate a 200 basis points risk premium. And of course if history is any guide, any spike in default rates above that level should be brief.

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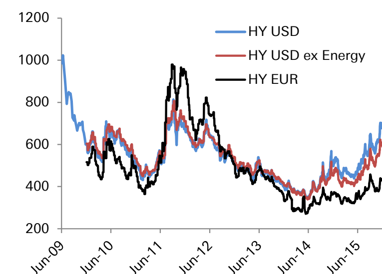
By some indicators the US high-yield market is flashing an urgent yellow light: Caution! Danger Ahead! The spread on the overall high-yield index is near 800 basis points after hitting a high of 850 recently (Figure 1). In part, these wider spreads reflect the higher default rate which has jumped to over four per cent on the back of a 16 per cent default rate in the energy and commodity sectors. There are some who see four per cent as a threshold which, once crossed, could lead inexorably to ten per cent or higher defaults and thus a full scale default debacle.

Figure 1: US high-yield spreads are near their widest post-crisis

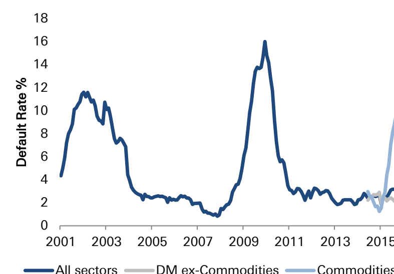


Source: Deutsche Bank

An alternate view is that US high yield, with or without the commodities sector, remains within the trading range we have seen since 2010. The European market is similar. In other words, high yield has been behaving much as it has throughout the post-financial crisis period which has witnessed several episodes of major market stress. These include Greece in 2010, the US rating downgrade in 2011, the eurozone crisis in 2011/12, and the China equity meltdown in August 2015. During these periods, high-yield spreads gapped out as investors feared a re-run of the 2008-09 experience when spreads and defaults soared.

This time around, things are a bit different in that spreads have widened on account of macro concerns combined with genuinely higher defaults in the energy and materials sectors (Figure 2). Investors must distinguish these two issues. Sure, macro concerns do keep mounting – prominent on the radar recently are US growth slowdown, China devaluation fears, slumping commodity prices, health of emerging market economies, European banks, the shift to negative interest rates and Brexit. But the view on the broader high-yield market should have very little to do with the commodity cycle or the longevity of the recovery. Rather, it should have everything to do with whether one believes policymakers will keep muddling through or if they are about to make an error that plunges the global economy into another 2008-09 crash.

Figure 2: Defaults for commodities are soaring

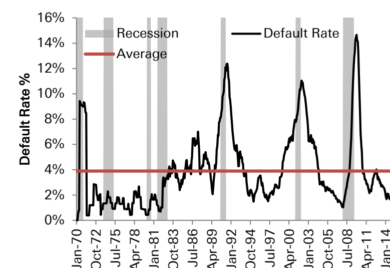


Source: Deutsche Bank

If one believes policymakers will not make a significant blunder then high-yield is probably not on the verge of a default debacle, even if macro risks are on the rise. Even in the event of a major crisis, it is likely defaults will not reach the levels of recent cycles. Looking closely at past credit cycles provides some useful lessons.

Since 1970 there have been four major default cycles and one minor one in the mid-1980s (Figure 3). Note that while the default rate has averaged about four per cent over these 45 years, it is not a mean-reverting relationship – default rates are either low or high. Some have warned that hitting four per cent is an ominous sign beyond which defaults will likely keep rising much higher. However, the four per cent default level was breached thrice in the 1980s and again in 2012 without significant further increases. There is nothing sacrosanct or cataclysmic about hitting four per cent; every cycle has to be evaluated on its merits.

Figure 3: Default rates are either high or low – not mean reverting

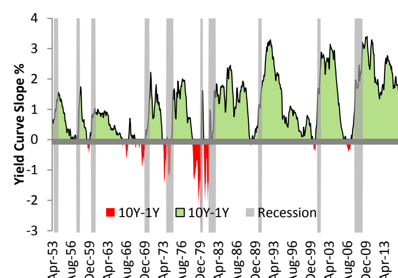


Source: Deutsche Bank, Moody's Investor Service

The business and default cycles of the past 45 years have mostly shared two broad characteristics – the Treasury yield curve has flattened and inverted and there has been explosive growth in corporate debt other than bonds. In the past three cycles a third factor has been asset bubble conditions in one or more sectors which caused these cycles to be particularly vicious. None of these three conditions conclusively exists now.

Yield curve – Every recession and default cycle of the past half century has been preceded by a flattening and inversion of the yield curve (Figure 4). As the economy heats up, the Fed starts raising the Fed Funds rate. At some point inflation expectations fall, and longer term rates stabilize. Eventually the Fed goes too far and the yield curve slope flattens and inverts. The only false signal was in 1966 – the Fed was raising rates and GDP growth did drop to 0.3 per cent in mid-1967 – but it was a close call. The yield curve also flattened to near zero in 1998 as the Asian currency crisis slowly unfolded and in response to the Russian default and Long Term Capital Management collapse but it soon rebounded.

Figure 4: The yield curve has always flattened before a recession

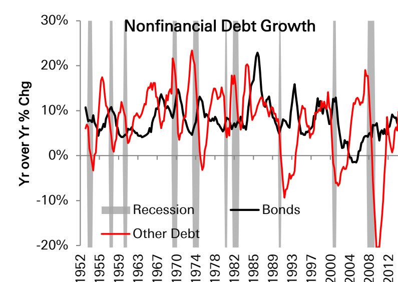


Source: Deutsche Bank, Haver Analytics

Currently, the ten year/one year yield curve is moderately steep at about 1.25 per cent. The obvious rejoinder (and one we frequently make ourselves) is that the yield curve indicator may be meaningless in an era of extraordinary monetary policy. But with more central banks turning to negative rates and yields on ten-year Japanese government bonds and German bunds testing the zero boundary it is no longer a stretch to think that the US Treasury curve could quickly flatten further if investors seriously anticipated a recession or were convinced that the Fed had to go negative soon.

Froth – a second reliable marker of past recessions and default cycles is frothy growth in the corporate debt market (Figure 5). We compare year-over-year growth in nonfinancial corporate bonds outstanding and other nonfinancial corporate debt, including bank loans, commercial mortgages, commercial paper and structured products. It turns out that virtually every business cycle since 1950 ended with explosive growth in other debt. Corporate bonds, meanwhile, tend to grow roughly eight to ten per cent annually throughout the business cycle. Why? The corporate bond investor universe is specialized and finite. Investors do not easily move in and out of this asset class. New money has traditionally come mostly from predictable inflows into pension funds and insurance premiums and from reinvesting coupons, and that has kept an effective cap on the supply that the corporate bond market can absorb.

Figure 5: Other corporate debt surges near the end of the cycle



Source: Deutsche Bank, Haver Analytics

As the cycle proceeds and companies become more confident and aggressive in seeking out new investments, they turn to other sources of financing, including bank loans, mortgages and the like. And, their confidence tends to be mirrored by banks which are also eager to lend.

The one exception was in the late 1980s when the thrift crisis and major problems at some money center banks may have inhibited this traditional late cycle debt spree. But in this case there was exceptionally strong growth in corporate bonds, partly because of the rise of Michael Milken's junk bond machine, and partly because corporate finance practice started to replace equity with lower-cost debt. It is quite possible that the hangover from the financial crisis is inhibiting growth in corporate debt in this cycle and that there could be a recession and default cycle absent this factor. The counterpoints are that the lack of manic debt growth makes a recession and default cycle less rather than more likely; and should this scenario occur the cycle will likely be less severe than the past three cycles.

Major meltdown – The past three major default cycles have also been marked by a major meltdown in one or more sectors. In the early 1990s the defaults were largely concentrated in small companies that issued junk bonds for the first time. In 2001-02, the cycle was exacerbated by a wave of defaults in the

telecom sector and to a lesser extent technology. And in 2008-09 the auto and autoparts sectors were hard hit.

Are energy and commodity producers the equivalent eye of the storm this time? Not to sugar-coat this crisis, but it is worth keeping several points in mind. First, lending criteria to these sectors tends to be conservative. During the healthy part of the cycle energy companies tend to have lower leverage for a given rating due to the potential for volatile commodity prices. In other words, it could be a lot worse. Second, there is no particular reason to think that lending to energy and commodity borrowers was overly frothy – it's just that when most loans were made almost no one anticipated oil prices languishing near $30 per barrel. Alternatively, if oil prices were trading with a floor around $60, there might still be a few stressed borrowers looking to restructure their liabilities but the impact on the overall default rate would be minimal.[1] Third, the default and recovery process for energy and commodity companies tends to be quite different to that of other sectors, in that rising defaults help put a floor under commodity prices and bring the cycle to an end.[2]

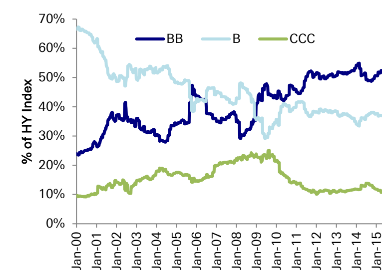
As a thought exercise, if the oil price found a floor at around $60 per barrel and most other current stresses still existed (Chinese concerns, slow growth, Brexit, migrants in Europe etc.) would markets be worried about an impending eruption of the default cycle? Probably not.

To summarize, looking at the market rationally, there is little reason to suppose that the broader high yield market is on the verge of another epic default cycle. The Treasury yield curve is not signalling a recession and there is little evidence of froth and excessive borrowing/lending in the corporate debt market. That's not to say it won't come eventually. One lesson evident from Figure 4 is that long benign recoveries have been followed by big default cycles, so there is clearly a link between longevity of a recovery and eventual default risk. But, a) we are not there yet, and probably not close either; and b) when this cycle does eventually break down, it is likely that the energy/commodity cycle will have run its course, implying that next cycle may not be fuelled by a collapse in those sectors.

A final point is that the high-yield market today is higher quality than it was going into the financial crisis (Figure 6). In mid-2007, the BB, B and CCC sectors accounted for 42%, 38% and 20%, respectively, of the high yield market. Today, those shares are about 53%, 36% and 10%. While this is not a factor in whether or when there is a default cycle it does suggest that the next cycle could be milder than the previous three.

The primary risk for the broader high-yield market, therefore, is another global crisis, probably resulting from a major policy-making error. If such a scenario were to occur in the foreseeable future – say, over the next year – there is little question that high yield defaults even outside the energy/commodity sectors would spike. But for the reasons outlined above, we think it very unlikely that that default cycle would look anything like 2008-09.

Figure 6: Today's high-yield market is higher quality than in 2007



Source: Deutsche Bank

[1] Banks have increased loan loss reserves for energy loans recently, and this probably has been a factor in the weak performance of bank stocks in 2016. However, energy related loans amount to only a few percentage points of the overall loan book at major banks, and most of the exposure is to investment grade rather than high yield. A commodity sector default cycle is unlikely to cause a banking crisis.

[2] "*Why commodities will recover*," The multi-asset investor essay, 17 February 2016.

So onto the most important question: is high yield a buy with current spreads near 800 basis points? The answer depends on who is buying.

It is an unqualified yes for buy-and-hold investors who can select companies and bonds that in their view have little exposure to default risk. The answer is a qualified yes for buy-and-hold investors in high-yield exchange traded and other funds because investors will never know exactly what they own. The call becomes much tougher for investors who need liquidity or are concerned about mark-to-market volatility.

A simple way to quantify the default risk inherent in high yield is to calculate the breakeven default rate consistent with the spread plus any required risk premium. Keeping it simple: $S = d * (1-R)$, where S is the spread, d is the default rate, and R is the recovery rate. Over the course of the cycle high yield recovery rates average about 40 per cent, but tend to be lower when defaults rise sharply. To be conservative we assume 40 per cent and 25 per cent recovery rates. Looking at Figure 7, if the nominal spread is 800 basis points and the recovery rate is 25 per cent, the breakeven default rate is 10.7 per cent annually, meaning the investor earns positive carry as long as the default rate is below that level. At a 40 per cent recovery rate, the investor earns positive carry as long as the default rate is below 13.3 per cent. High-yield investors typically seek a risk premium of 200 basis points, implying a risk-adjusted spread of 600 basis points. Now, the breakeven default rate is eight per cent and ten per cent assuming a 25 per cent and 40 per cent recovery rate respectively.

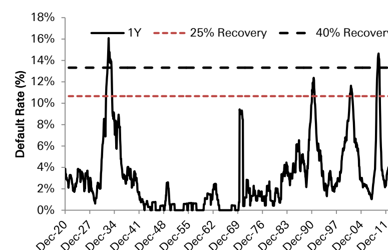
Figure 7: Breakeven default rates are high given spreads are near 800 bp

		Recovery Rate	
		25%	40%
Spread (bp)	800	10.7%	13.3%
Risk-Adj Spread (bp)	600	8.0%	10.0%

Source: Deutsche Bank

How does that compare with historical experience? Figure 8 shows the rolling one year high-yield default rate since 1920, with dotted lines representing the breakeven default rate at which carry becomes negative. At a 40 per cent recovery rate an investor would have suffered negative carry only during the worst of the depression in 1933 and for a few months in early 2010. More to the point, at a spread of 800 basis points, the investor would earn back the negative carry within a few months when default rates dropped. At a more conservative 25 per cent recovery rate, an investor would also have had a few months of negative carry in 1991 and 2001.

Figure 8: Defaults rarely breech current breakeven levels



Source: Deutsche Bank, Moody's Investors Service

DB's high yield strategists are forecasting the one-year default rate rising to over seven per cent in the next year, with non-commodity default rates rising to four per cent and commodity sector to about 20 per cent. They are not assuming a recession, but their assumptions are conservative. Note that an investor buying high yield at 800 basis point spreads will continue to earn positive carry in this scenario.[3]

The key factor driving defaults will be an inability to refinance maturing debt. The risk is that capital markets shut down at critical periods for some companies. But that does not mean most companies that need to refinance debt during those won't be able to. Even if a company with solid cash flows cannot sell bonds, in most scenarios it will be able to raise short to medium term financing from banks and private equity firms in all but the most extreme stress scenarios. They may have to borrow at undesirable spreads and on unfavourable terms but they won't be forced into default. It is easy to lose

3 "*Chickens come Home to Roost*" for a more detailed analysis of the commodity default cycle and DB's default forecast.

sight of this reality when media headlines are blaring about the one company in 20 that couldn't refinance its debt.

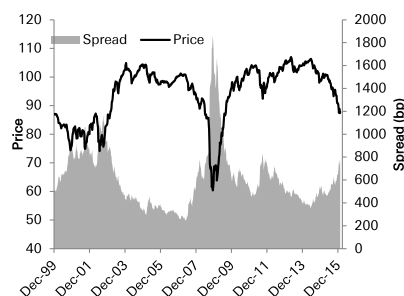
Even if we can say with some confidence that high yield is not on the verge of a default blowout, and that the next cycle will likely be milder than the past three, there is no assurance that the market will avoid the price and spread volatility of the 2008-09 period (Figure 9). Between a panicky reaction to rising defaults and limited liquidity high spreads and prices could go anywhere. But the muted default outlook also implies that any precipitous gapping of prices/spreads would be short-lived as markets realize that defaults will be on the low side. High-yield would be a massively attractive buy in this scenario – if one could move quickly enough to capture the dip.

We also caution that high-yield spreads are not likely to recover much from present levels unless the oil prices rebound to over $50 and some of the outstanding macro concerns resolve themselves. As long as oil prices remain under pressure, high-yield is unlikely to see the influx of "hot money" that might drives spreads significantly tighter. This is a carry story, not a capital gain opportunity. Figure 10 outlines the potential capital gain/loss from today's price level.

For much of the post-financial crisis period the combination of yield and low defaults has attracted "hot money" into high yield. Now, that this tourist money is leaving the sector, these outflows along with limited market liquidity have contributed to the recent higher volatility. That has also left the high-yield market positioned once again as the province of investors who understand it or who value carry and can tolerate a the mark-to-market volatility.

In our view, it would take an extreme scenario to provoke a default cycle anything like 2008-09. So while every investor should make their own ongoing assessment of the risk of another 2008-09 crash and recession, those who agree with our assessment of the inherent risks in the US high-yield market should find current spread levels an attractive buying opportunity.

Figure 9: Moderate defaults won't prevent another 2008-09 spread blowout



Source: Deutsche Bank

Figure 10: Potential capital gain/loss with the high-yield index at 87.5

Projected Index:

Price	Spread (bp)	Capital Gain/Loss
100	500	14.3%
90	750	2.9%
80	1000	-8.6%
70	1400	-20.0%
60	1800	-31.4%

Source: Deutsche Bank

Appendix 1

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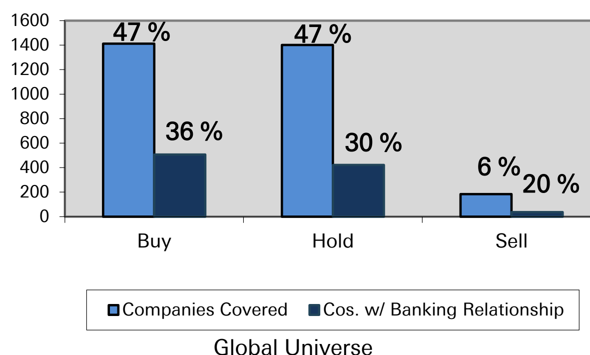

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