



United States

Credit  
HY Strategy  
IG Strategy

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# US Credit Strategy

## Year-Ahead Outlook 2015

### A summary of our views on drivers of US credit markets next year:

- As we prepare to close the chapter on 2014 and think about major trends that are likely to drive credit market performance next year, we are looking at the global economy that is challenged by multiple factors. While the US economy appears to be in decent shape and some positive momentum in countries like UK, India, and Indonesia, other large segments of global GDP are struggling to gain footing, including EU, Brazil, and even to some extent China. Several major economies, including Japan and Russia are fighting recessionary trends.
- Divergent central bank policies are likely to underpin performance differentiations regionally, including expectations of tightening Fed against further stimulus measures by the ECB, BOJ, and certain EM countries. Presence of stimulative policies in these regions, coupled with uneven global macro picture underpins our subdued expectations of long US rates increases as well as supports the argument for further continued strong bid for credit in general.
- The most important macro risk at this stage is being presented by a sharp decline in oil price, which is down by 37% since June. Our commodity strategists see a possibility of further price declines and our own analysis shows that such expectations find support in historical parallels to previous bear markets in oil. In addition, a deeper look into marginal costs of US shale producers and an assessment of their best strategy for survival suggests that overproduction could persist for some time.
- Our earlier analysis, updated here, has shown that weakest US shale producers could be entering a zone of deep distress at oil prices below \$60/bbl, with the more recent datapoints suggesting that we could have an additional \$5 room before this happens. If prices were to stay sustainably below these levels for a few months/quarters, chances of a broad sector restructuring increase materially. This scenario would have repercussions for the timing of overall HY default cycle.
- Additional catalysts for negative credit market reaction to lower oil prices include deeply distressed situations in Venezuela, with a high probability of debt restructuring by its national oil producer, PDVSA. Other focus developments include Russia's state-owned enterprises and Brazil's Petrobras, where sustainability of IG ratings could be put into question.
- We find current dislocation between deep distress in Energy assets and marginal reaction in broad market indexes to be inconsistent with each other. Either energy has to rebound noticeably, or it could pull broader market indexes lower. Exceptions to this assessment are rare.
- We are marking our spread targets to 575bp in HY (+95bp) and 150bp in IG (+25bp). Returns could be negative over the next few months.
- We believe HY defaults have seen their lows for this cycle at 1.7% in September, and are now heading towards a 3.5% level next year.



## Year-Ahead Outlook 2015

As we prepare to close the chapter on 2014 and think about major trends that are likely to drive credit market performance next year, we are looking at the global economy that is challenged by multiple factors. The US economy has returned to solid growth numbers in Q2 and Q3 (3.9 and 4.6% respectively), following a sharp weather-inflicted contraction in Q1 (-2.1%). Our economists are forecasting it to average about 3.5% growth next year. European economy remains in a lethargic condition, showing barely positive growth rates in the past two years (+0.1..+0.3% range), while Japan went back into recession following a brief QE-inspired rebound in late 2013.

Away from developed markets, we are seeing major EM economies losing their former luster of fast growth, with China flirting with 6-handle growth, its slowest in more than 12 years outside of 2008 episode. Russia is now widely expected to slump into recession under pressure from sanctions and declining oil prices; Brazil has printed three negative GDP quarters out of five, while Mexico and South Korea are showing 2%-3% growth figures. The few bright spots out there are the UK (+3%), India (+5.3%), and Indonesia (+5%), all not having large enough footprint to pull the rest of the world behind them.

In this environment of slow global growth, we are seeing major central banks struggling to normalize their interest rate policies. The Federal Reserve has completed its latest round of QE and is hoping to start raising short-term rates sometime in 2H 2015, an expectation that is currently being challenged by sharply lower oil prices promising to deliver both downward pressures on inflation as well as a potential hit on real growth from slower capex in the energy sector. The ECB is widely expected to expand its balance sheet through purchases of wider set of bonds, and the BOJ is in the midst of its ongoing experiment with unconventional policy measures. Most EM central banks are either in loosening mode (China, Mexico, Chile, Turkey) or tightening for wrong reasons, i.e. defending currencies (Russia, Brazil).

This growth and monetary policy backdrop leaves investors with scarcity of safe yields, being pushed to lengthen duration or credit exposures to reach their return goals. This set of circumstances underpins a relatively subdued view from our rates team, forecasting only modest increases in longer segments of the US Treasury curve (+65bp in 5yr, +50bp in 10yr). This expectation provides perhaps the single most important factor working to support continued bid for credit, although it has its limitations, as we will discuss next.

### Estimating macro impact from sharply lower oil prices

A 37% decline in WTI oil price since late June raises a number of important questions on sustainability of future growth in the US economy. Our commodity strategists believe we could continue to see it going lower from here, following a recent OPEC's decision to leave their production targets unchanged. Their arguments are based on the assumption that production levels are likely to stay elevated going into 2015 before US shale producers get a chance to make necessary adjustments. In addition, presence of hedges (future production sold forward) should allow some to maintain existing cash flow balance for some time even in this price environment.

A sustained drop in price beyond \$60/bbl could put substantial pressure on viability of many US shale producers, although it will take time to materialize, as in the short run many producers could continue to maintain production levels taking only marginal costs into account. In other words, for as long as a barrel of oil sells for more than it takes to extract and transport it, without

Figure 1: Official DB macro forecasts

	2014	2015
US Real GDP	2.4	3.5
US Unemployment Rate	5.8	5.4
US Core CPI	1.8	2.0
2yr Trsy	0.55	1.55
5yr Trsy	1.60	2.25
10yr Trsy	2.30	2.80

Source: Deutsche Bank



consideration to sunk costs on land and equipment, such producers could choose to maximize their volumes in order to narrow their revenue shortfalls.

In Figure 2 we are showing parallels between the current selloff in oil, which has lasted six months and brought the price down 37% to previous instances over the past 30 years. Leaving aside the 2009 episode, which was largely driven by speculative run-up in oil in 2008 and a subsequent collapse due to financial meltdown<sup>1</sup>, we only found four other instances of pronounced bear markets in oil (Figure 2). On average, they lasted for 15 months and saw prices declining by 50%. In the more mild cases, an episode lasted for 8 months (1985-86) or saw price declining by the same 37%. Based on these historical parallels, it is not out of question to suggest that we could be approaching the latter stage of this bear market in oil, although it would be safer to assume that it could last for another quarter or two, and it could see prices dropping further from here. A 50% decline from \$106/bbl peak level in June implies a \$53/bbl price.

What makes this bear market in oil more concerning from the macroeconomic perspective is that it is not happening in a vacuum but rather follows earlier sharp declines in other industrial commodities such as iron ore, aluminum, and copper. Figure 2 also shows how long previous episodes of bear markets in metals and natural gas have lasted to provide a better context to this discussion. For one, a 50% price drop is a consistent level across the board, i.e. it appears to be the level that was previously required in all these major commodities to clear the supply-demand mismatches. Secondly, it also signifies that a decline in oil could be driven by other negative macro developments, and not just by oversupply coming from new shale production.

Perhaps no less important than getting the direction of oil prices right is the realization what kind of knock on effects its decline so far should have on the US and global economies. Historically, it has been the case that lower oil provided a net benefit to the US and EU economies, both of which were large net importers of energy. This remains the case in EU today, however we wonder to what extent this relationship might have changed for the US in recent years. Just looking at energy companies in our IG and HY indexes, we are seeing their cumulative capital expenditures since Jan 2010 at \$4.7 trillion, with \$1.15trln coming in the last four quarters alone. The latter figure translates into 6.5% of the total US GDP, not an immaterial figure. We realize that not all of this capex went into US shale plays, however it is just as important to acknowledge that not all US shale players are captured by our IG/HY index data. What part of this capex budget gets cut next year is subject to uncertainty, however even a relatively modest cut of 10% could translate into a noticeable 65bp impact on broader GDP figures.

What makes this issue even more consequential to the US economy, is that the negative impact of lower oil is unlikely to remain confined just to the Energy sector alone. Some of the more obvious casualties will include capital goods and materials sectors, where suppliers of drilling equipment, pipes, storage containers, machinery, cement, water, and chemicals used in shale production are all likely to experience a negative impact. Now, readers should be careful to avoid double-counting the same dollars here, as a dollar of capex by oil producer is 80 cents of inventory sold from its suppliers; only incremental value-added is captured by the GDP. Add to this list railroads, where volumes exploded in recent years as large quantities of oil were ferried by rail cars.

Figure 2: Previous bear markets in industrial commodities

Comdty	Start	End	Duration, mo	Drawdown, %
Oil	Nov 85	Jul 86	8	-56
Oil	Oct 92	Dec 93	14	-37
Oil	Jan 97	Dec 98	23	-58
Oil	Nov 00	Jan 02	14	-48
Nat Gas	Oct 97	Aug 98	10	-52
Nat Gas	Apr 01	Jan 02	10	-61
Nat Gas	Jun 11	Apr 12	10	-60
Aluminum	Aug 88	Feb 90	18	-45
Aluminum	Aug 95	Mar 99	43	-38
Copper	Aug 92	Oct 93	14	-37
Copper	Aug 95	Feb 99	43	-54
<b>Avg for oil</b>			<b>15</b>	<b>-50</b>
<b>Avg for all</b>			<b>19</b>	<b>-50</b>
<b>Current episode</b>				
Oil	Jun 14	Dec 14	6	-37
Aluminum	Apr 11	Dec 14	44	-28
Copper	Jul 11	Dec 14	41	-32

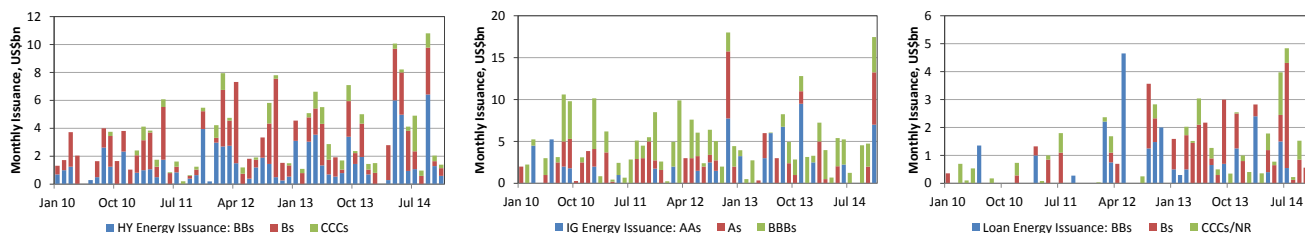
Source: Deutsche Bank

<sup>1</sup> It would make our conclusions even stronger, had we decided to include the 2008-09 episode.



All these are relatively obvious casualties of a pull back in energy producers' budgets. Perhaps somewhat less straightforward would be utilities – we wonder how much electricity was used to power all this new shale-related manufacturing, production, transportation, and refining activity? Taking one more step towards less directly impacted sectors, we think about financials, and not even in a sense of direct loan exposures to cash-flow challenged producers. Energy producers have raised \$550bn in new debt across USD IG, HY, and leveraged loan markets since early 2010 (Figure 3). Lower capex budgets would imply lower need (and ability!) to borrow, thus squeezing a revenue source for investment banks.

Figure 3: Energy issuance volumes in USD HY, IG, and leveraged loan markets



Source: Deutsche Bank, Dealogic, S&P/LCD

And now to the least obvious, or perhaps even counterintuitive, candidates: think about consumer discretionary sectors, such as retail, autos, real estate, and gaming. States with the strongest employment growth in the US in the last few years were all states heavily involved in shale development – average unemployment rate in Dakotas, Nebraska, Utah, Colorado, Iowa, Montana, Oklahoma, Wyoming, and Texas is 4.1%, compared to a national aggregate of 5.8%. Average unemployment rate in oil-producing states today is lower than the national aggregate was at any point in time in the last twelve years.

While we still believe that lower oil prices would provide a net benefit to consumer discretionary areas, we think that historical parallels between energy prices and their positive net effects could be challenged in this episode given significant changes to structural characteristics of the US economy. Just as we believe consensus has consistently underestimated positive externalities of the US energy revolution in the past few years, it is positioning itself to underestimate the other side of this development now.

**The best survival strategy implies more production near-term**

While opinions could differ on what the net impact of persistently lower oil prices could be on overall US economy, one outcome is becoming increasingly clear: the shale industry is up against a few difficult quarters, where it would have to prove its viability to investors, who have become a lot more skeptical about its prospects. The market is currently laser-focused on how far oil needs to fall to make a significant number of these oil producers unable to maintain their existing capital structures. Longevity of low prices adds another dimension of complexity to this issue.

To better understand this point, consider the following: all-in costs of production are relatively high for most US shale producers, averaging between \$70-75/bbl, and being north of \$60/bbl for vast majority of them. Few experts are expecting immediate cuts to production, as most of it has been hedged forward, thus making E&P companies immune to short-term price swings. Estimates vary, but most observers agree that production could be largely hedged for the next two-four quarters.



Another issue is that in short run the best survival strategy for most of these producers would be to continue pumping as much oil as they can for as long as its price covers their marginal production costs. These would cover only the actual extraction costs, general & administrative expenses, and debt service payments. Such a calculation ignores sunk costs, like land lease and equipment as well as normal rate of return on capital that was originally assumed for the whole life of a project. For most US shale producers, marginal costs are substantially lower than their all-in costs, with 90% of them having ability to “keep the lights on” at oil prices below \$40/bbl, and half of them below \$30.

These observations – hedged near-term production and survival at marginal cost – help us make two important conclusions: (1) it is going to take low oil prices for longer before its negative impact fully filters through the system; and (2) OPEC’s strategy of pricing out marginal producers, if maintained, could require even lower oil price than it is today. Adding a third observation we made earlier, in comparing the current episode of bear market in oil to previous instances (a 50% drop to \$53/bbl by mid-2015), we come to a conclusion that it could be too early to call this the end of this episode.

### Energy D/EVs

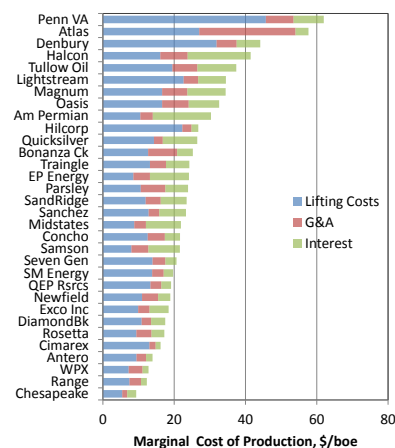
Next, we take this opportunity to update our [analysis](#) of impact of lower oil price on single-B/CCC energy issuer debt-to-enterprise values (D/EV). To reiterate its main findings, we observed the impact of an oil price decline between late June and early November and a coincident deterioration in issuer D/EV values to determine at what point a further drop in this commodity would push D/EVs to above 65% for the whole sample of US B/CCC energy issuers. The answer we arrived at back then suggested \$60/bbl level. The target of 65% D/EV came from our separate analysis of historical incidents of defaults, where we found that issuers bound for debt restructuring have started the last two years of their life with an average D/EV of 65%. Conversely, we have also shown how issuers entering the 2008 cycle with D/EV of 65% or higher, have experienced a cumulative two-year default rate of 30%, well above the rest of the market.

Having seen oil dropping another 15% from early November levels, we have observed, D/EVs continuing to rise by another 5 percentage points, to reach 60% at the moment (Figure 4). This represents a somewhat slower pace of deterioration in D/EVs than was suggested by relationship from June to Oct, which implies that we could have a little more room for oil to decline to see the ratio rising to 65%. Given the last few weeks of additional data, this relationship points towards \$55/bbl as such a level. While this new datapoint gives the market a bit more breazing room, it doesn’t change the overall conclusion that HY energy sector could be very close to crossing the point of no return, after which its default rates could rise significantly. And to reiterate, prices would have to remain depressed for a period of time to be fully reflected in cash flows. We estimate such period to be measured in a few months.

### Emerging markets considerations

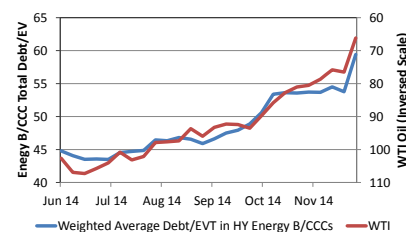
The discussion we have had to this point focused primarily on the impact to US economy and its domestic shale oil producers. An additional wrinkle to this whole story is being added by an enormous pressure experienced by EM oil-producing countries and companies. The first and perhaps the most critical case is Venezuela, with its only oil-producing monopoly, Petroleos de Venezuela (PDVSA). Long-time followers of our work are well aware that we maintained a view that this was going to become a restructuring story sooner or later, the only question, in our mind, was just when. The main argument we employed was that the US imports most of its oil from top four destinations:

Figure 4: Marginal cost of production among US shale producers



Source: Deutsche Bank, company filings

Figure 5: Energy Bs/CCCs Debt/EV



Source: Deutsche Bank



Canada, Saudi Arabia, Mexico, and Venezuela (in order of import volumes). As we watched US domestic production volumes growing, and imports declining, we posed a simple question: given the geopolitical and national security considerations, which one of these four would likely experience the biggest squeeze to its ability to continue to supply oil to the US? The answer seemed pretty obvious to us all along.

Now, with a sharp decline in oil prices, the whole dynamic simply gathers faster momentum towards its eventual resolution: with a populist government in place that has built its budget in a way that would require oil at \$117/bbl to break-even next year, and no material ability to offset the short-fall through reserves or a sovereign wealth fund, we become even more convinced that this situation is headed towards its eventuality: a debt restructuring. What will make this development more relevant to corporate credit investors is the following little-known fact: PDVSA, with \$35bn in USD-denominated bonds outstanding, happens to be the largest global HY issuer, with no other qualifications. It might be falling outside of most investors' DM-focused benchmarks, but it is nevertheless well represented in all global HY and EM corporate bond portfolios. The only piece of good news here is that its bonds are already trading at 50 cents on the dollar, for an average OAS of 2,200bps, which makes further distance-to-default somewhat more limited, although likely still measurable.

#### Russia

Another casualty of the recent decline in oil price is Russia, where this development adds to earlier woes of sanctions imposed in response to its invasion of Ukraine. The situation there is less extreme as the country continues to rely on \$420bn of central bank reserves and another \$80bn in its sovereign wealth fund. Nevertheless, markets have taken a longer-term view on this situation, by devaluing its currency by 50% since the day it decided to venture into Ukraine. This is underpinned by president Putin's appearance of unwavering determination to stick to his chosen course of military confrontation with neighboring countries regardless of the costs. Well, the reality of the situation is that those costs are rising rapidly, whereas benefits of those actions are still taking time to materialize, aside from his artificially-induced popularity ratings.

The markets are putting this strategy in doubt, wondering whether economic recession, lost savings, and high inflation are going to make a dent in ability of Russia's political elites to maintain order and stability. Additionally, the depth of Russia's currency reserves would be tested by maturing debt of its largest state-owned enterprises (Gazprom, Rosneft, Sberbank, and Vnesheconombank), who currently owe a combined \$160bn in USD and EUR debt, with no ability to refinance it in the US or EU markets due to sanctions. Russia's decision to announce a 20% sale of its largest oil producer Rosneft on the weekend following most recent OPEC's meeting and subsequent oil price collapse, further suggests budgetary pressures there could be more significant than they may appear from outside. All in all, while not an immediate issue of debt repayment, ability of these issuers to maintain their IG ratings going forward could be challenged.

#### Petrobras

One more potential catalyst in EM we will mention here is Petrobras, the largest oil producer in Brazil. The company is rated mid-BBB by two agencies, and low-BBB by the third one. It has \$63bn of USD/EUR debt outstanding and \$80bn total in all currencies, making it one of the largest global non-financial debt issuers. Just as in previous case, this is not an issue of restructuring but rather rating resiliency. Adding to pressures from lower oil prices are the recent headlines on possible corruption charges being brought against the



company. This increases the chances of the HY market being tested by an \$80bn EM fallen angel. The largest fallen angel to ever enter HY was Ford in 2005 with \$45bn in total bond debt at the time. Even Ford's transition, being a US issuer, caused the HY market to reprice 130bp wider.

For context, Petrobras is trading at 380bps today, just on top of an average DM energy BB name. Gazprom bonds are trading at 570bp today, and Rosneft is at 700bp. Our earlier research has shown that an average fallen angel enters HY with a spread premium of about 200bp on top of existing BBs. An average EM BB yields about 120bp on top of a DM BB.

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## Default forecast

Taking all these developments into account, and adding to the mix our assessment of the stretched state of corporate balance sheets, following four years of relatively aggressive issuance trends, we have recently made an [argument](#) that the lows in default rates in this cycle are now behind us. Starting off of a low 1.7% print on Moody's US issuer default rate, we believe this indicator is now headed towards 3.5% in a year from now. A bear market in commodities, described in detail above, coupled with potential trigger events in EM could deliver a kind of shock that is significant enough to accelerate the timing of a full-scale default rate escalation. The single and most important factor that remains on the other side of this debate – a very supportive Fed policy – is buying us time and some confidence that the market could withstand a larger shock, all else being equal.

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## Valuations

One of the most interesting disconnects that we are currently witnessing on the valuation landscape is that broad market indexes – in equities and in credit – have largely ignored a bear market that has hit energy assets. S&P500 energy stocks are down 19% since their late June highs, while overall index is 5.8% higher and at its all time highs. In credit, energy bonds have widened by 50bp in IG and 310bp in HY, whereas non-energy bonds are wider by 20bp and 60bp respectively. Taking into account the fact that energy is the single-largest sector in all of HY, second-largest in IG, and third-largest in S&P500 (on a level 2 industry basis), this strikes us as an unusual outcome.

In fact, when we went back in history to confirm our suspicions, we found that it is indeed a rare occurrence. In HY, looking at top-three weight sectors trading 200bp above the rest of HY, the only instances that fit these criteria going back to 2000 are Financials in 2009, Media and Autos in 2008, Autos in 2005 (F/GM downgrades), Telecoms in 2001/2002, and Materials in 2001. This makes Autos in 2005 the mildest instance, where a large sector went into distress and the broad market widened by “only” 130bp. Autos were 10% of the market and peaked out at 630bp, whereas Energy today is 15% and trades at 710.

A similar exercise in equities – top three sectors down 20% or more – yields hits in Financials in 2010 and 2007 and Technology in 2000 – all instances where a distress in one sector pulled the rest of the market lower. The smallest impact was left by Technology in early 2013, where the sector dropped 25% and S&P 500 responded with just a 7% pullback.

These observations form the base underneath our view that something has to give here. Either the market is too negative on Energy, or it is not diligent enough in thinking about broader implications. The only argument that stands against this view is that the rest of the economy is supposed to benefit from

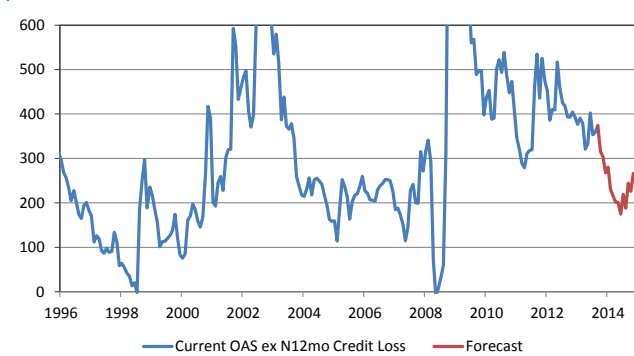


lower oil, which as we have shown earlier, has its own limitations. All in all, between oil showing few signs of bottoming yet, potential EM shocks, and the combination of distress and weight of energy in the US, we come to a conclusion that the path of least resistance for credit spreads from here.

**Excess spread = OAS minus future credit losses**

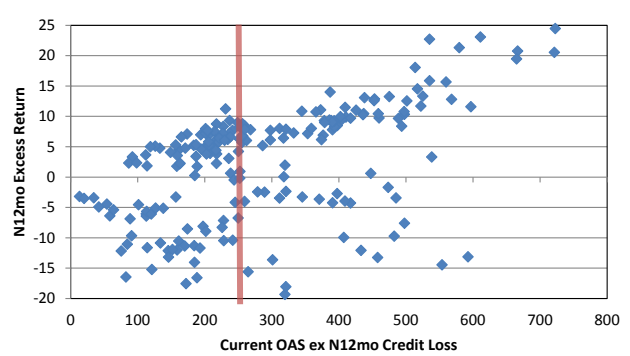
A time-tested approach we have utilized over years to think about “fairness” in valuations takes the current level of HY spreads and subtracts next-12-month (N12mo) credit losses (default rate \* (price – recovery)/price). For the most recent observation we are using our default forecast of 3.5%, translating into  $3.5\% * (101.2 - 40)/101.2 = 210\text{bps}$  (Figure 6). At current USD DM HY OAS of 480bp (Bloomberg ticker: DBHYSM) this translates into 270bp excess spread over expected credit losses. Figure 7 goes on to show how excess spreads stacked up against subsequent 12mo excess returns (HY ex Trsy duration-matched) over the past 20 years. It also highlights with a red line where we sit today on that distribution, given our defaults assumptions above. We read this as being close to an area where excess promised spread offers relatively slim chances of realizing positive excess returns.

Figure 6: Excess spread (OAS ex N12mo credit losses)



Source: Deutsche Bank

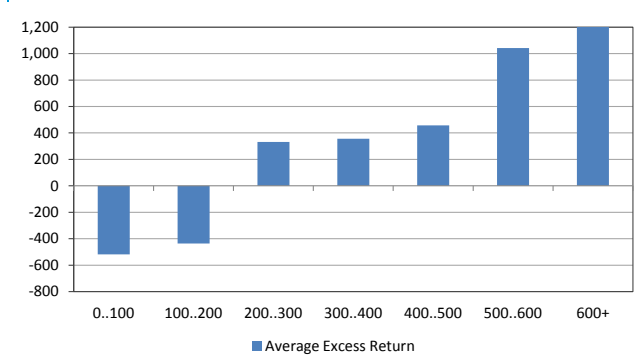
Figure 7: Excess spread vs N12mo excess returns



Source: Deutsche Bank

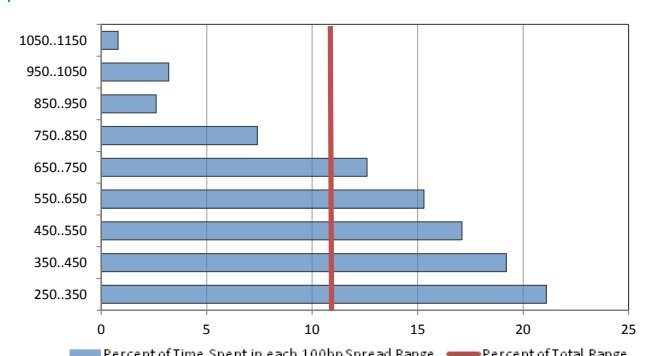
Another way to look at this distribution is presented in Figure 8 below. There we combine excess promised spreads into buckets of 100bp steps, and measure average next-12-months excess returns in each of these buckets. This could be an easier way to gauge that today’s 270bp spread puts us in the last bucket that averages positive subsequent excess returns. So positive excess is possible, but confidence in realizing it is relatively low.

Figure 8: Avg N12mo excess return by excess spread



Source: Deutsche Bank

Figure 9: How often the HY market trades in each range?



Source: Deutsche Bank





This chart also helps us think about boundaries – both where things would start to look interesting and where we would have an even stronger conviction that the market is exhausting itself. A 75-100bp wider spread would put us right in the middle of 300..400bp excess spread bucket, a level we would become more comfortable with. Conversely, a 50-80bp tightening from here would push us over into a range where excess returns generally come in negative.

Given the arguments on broader market disconnect with a bear market in energy, we treat this as additional reason to be cautious on US spreads near-term. Figure 9 shows how if HY were to widen by 75-100bp from here, its new level would still be in a well-populated range: this market has spent roughly 16% of the time trading in the 550..650bp range historically, whereas any 100bp range represents roughly 11% of total (250 to 1150).

We expect to be in a much better position to assess a net effect of distress-in-energy vs benefit-to-consumer argument in a few months from now, and it is possible in our mind to see an outcome where the latter argument prevails, and the market re-engages in a bullish move tighter in spreads. For the time being however, this expectation of a potential near-term widening in HY brings us back to overweighting higher quality going into the next few months.

#### Valuations in IG and loans

In IG, our established framework of thinking about relative value against HY is to apply leverage to IG yields to an extent that equalizes yields between the two asset classes over time. The solution to this problem is a plug – at 2.2x IG vs 1x HY – makes yield differential zero over the past 5 years. The actual differential over time is shown in Figure 10, and currently suggests modest tightness in IG against HY. Combining this observation with our general preference for higher quality at this time, as well as lower weighting of energy in IG (11% vs 15% in HY), we assume a standard 1:4 spread beta between the two going forward, and thus arrive at a 25bp widening forecast for DM USD IG (from 125bp today to 150).

We generally maintain a positive stance on loans, following their decent YTD total return of +2.2% despite a persistent string of outflows since April. What continues to make them attractive from our point of view is that their YTD excess returns – at roughly 2% - are actually stronger than either IG at +1.0, or HY at +0.6%. We believe conditions are in place for negative flows from loans to subside in 2015, and their current spreads – at 500bp – to provide better cushion against widening. With expectations of Fed rate increases in the latter part of 2015, we are marking our spread forecast for loans as unchanged, at 500bp. In our view, a positive correlation to wider spread in HY should be offset by tightening spreads into rising labor, as coupon floors disappear.

#### European vs US HY

European credit has generally performed stronger in recent months, as energy represents a much smaller weight in EU indexes and the ECB is positioning further loosen its policy through additional QE measures, as opposed to the Fed, which is moving in the opposite direction. In addition, we note that concerns over net-negative side effects of lower oil prices on the US economy we presented in detail earlier are largely not applicable in EU. Overall we think EU credit is better positioned here to provide more stable performance, especially in the next few months when we expect energy distress to more fully reflect itself in the broader US indexes. We also see EU single-Bs as being particularly attractive here, with average spreads of 150bp against US non-energy single-Bs, a view we share with our European credit strategy colleagues Jim Reid and Nick Burns in London.

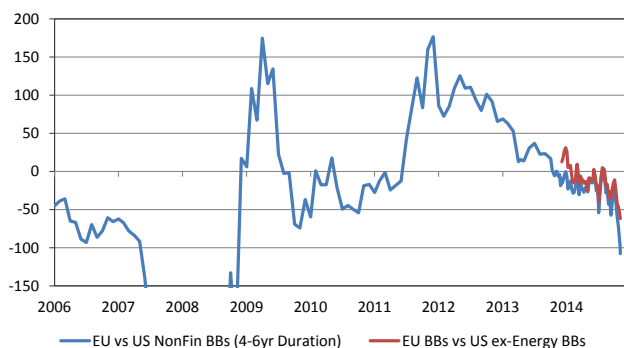
Figure 10: “Levered” IG vs HY



Source: Deutsche Bank

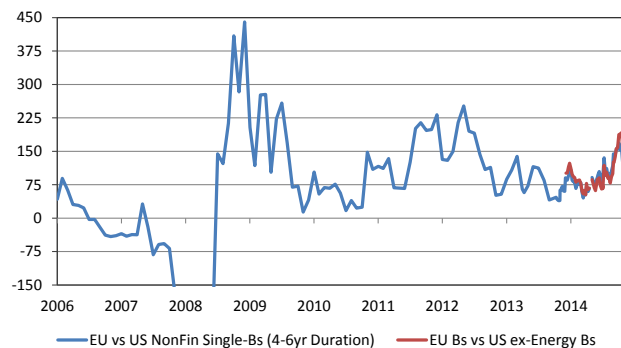


Figure 11: EU vs US BBs (including ex-Energy)



Source: Deutsche Bank

Figure 12: EU vs US Single-Bs (including ex-Energy)



Source: Deutsche Bank

### Extreme scenario

A question we heard often in recent weeks is if a particular sector goes into full-on distress mode, where does it normally bottom out against the broad market? One way to address this question is through Figure 14, where we show sector spreads on the day when the whole sector reached its peak spread, broken out by rating categories. Most examples of course come from the 2008 experience, in addition to Telecoms in 2002. Interestingly, they are consistent across sectors, with an average 1,500bp spread in BBs, 1,800bp in single-Bs and 3,400bp in CCCs. Note that today's energy spreads are 29% on their way to those peaks in BBs, and 47-49% in single-Bs and CCCs. This suggests to us BB credits could be more affected if a second leg of weakness were to arrive in energy.

Figure 13: Peak spread levels in earlier sector distress instances

		BBs	Bs	CCCs
Real Estate	12/31/2008	1,573	2,006	4,702
Media	11/30/2008	1,128	2,029	3,508
Autos	12/31/2008	1,546	2,036	2,473
Telecoms	07/31/2002	1,398	1,014	3,966
Gaming	11/30/2008	1,895	1,870	2,485
<b>Average</b>		<b>1,508</b>	<b>1,791</b>	<b>3,427</b>
Energy	12/04/2014	430	833	1,694
Energy pct of avg peak		29	47	49

Source: Deutsche Bank

### Total/excess returns forecasts

Figure 14 provides our standard total and excess return calculation that incorporates actual starting levels, assumptions of spread and rates targets, as well as default forecast to arrive at its results.

Figure 14: Total and excess return forecasts

	HY	IG	5yr Trsy	10yr Trsy		Loans	2yr Trsy
<b>Spreads/Yields</b>					<b>Spreads/Yields</b>		
Current	480	125	160	230	Current	500	55
Target	575	150	225	280	Target	500	155
Change	95	25	65	50	Predicted Change	0	100
Normal HY vs IG Beta = 4:1					<b>Rate Duration</b>		
Duration	4.6	6.5	4.8	8.5	Rate Duration	1.0	
Change in Yield	160	83	65	50	Spread Duration	2.7	
Change in Price	-736	-540	-312	-425	Avg Par Coupon	440	
Current Yield	698	428			Libor/Tsy Change	100	
Current Price	106.0	107.5			Total Change in Yield	100	
Default Rate	3.5	0.0			Repricings	-50	
Recovery	40	-			Capital Gain	-150	
Credit Loss	-218	0			Current Yield	440	
Price Return	-9.0	-5.0			Default Rate	3.5	
<b>Total Return</b>	<b>-2.0</b>	<b>-0.7</b>			Price	99.9	
<b>Excess Return</b>	<b>-0.5</b>	<b>1.1</b>			Credit Loss	87	
					<b>Total Return</b>	<b>2.0</b>	

Source: Deutsche Bank



**CDX-cash basis**

HY cash has been underperforming HY index derivatives. How much of this can be attributed to sector weighting differentials? The beaten-up energy sector accounts for roughly 15 percent of the DM HY cash index (weighted by market value), whereas the CDX HY index, which weights each issuer equally, has just 5 percent of its components in the energy sector. This factor goes some way to explaining the relative underperformance of HY cash vs HY CDX in recent months. In the chart below, we reweight the HY cash index more in line with the CDX indices by weighting the HY energy sector at 5% and all HY sectors ex-energy at 95%. The red line in the chart below shows the difference between the actual HY cash index and this reweighted index, and points to about 25 bp of underperformance attributable to the sector weighting. The same analysis on a duration constrained HY index (as 5y CDX is the benchmark) shows a 35 bp differential.

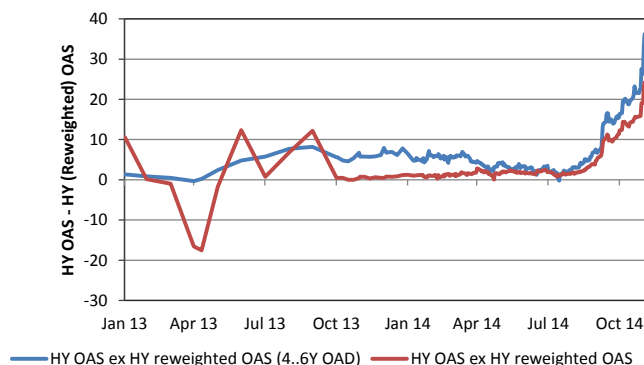
**Figure 15: HY sector weights vs CDX and S&P 500**

Sector weights of HY cash vs CDX and SPX			
	DM HY Cash	vs CDX HY 23	vs SPX
Energy	15.8%	+10.8%	+6.5%
Financials	12.8%	+1.8%	-3.9%
Telecommunications	11.7%	+5.7%	+8.4%
Materials	9.1%	+1.1%	+5.9%
Health Care	7.6%	+3.6%	-6.1%
Media	6.2%	-1.8%	+2.5%
Technology	4.8%	-4.2%	-14.7%
Commercial Services	4.7%	-1.3%	+3.1%
Capital Goods	4.6%	+3.6%	-2.4%
Real Estate	4.2%	-7.8%	+3.9%
Automotive	3.8%	-2.2%	+2.4%
Gaming, Hotels & Leisure	3.4%	-1.6%	+2.9%
Retail	3.2%	-4.8%	-3.0%
Utilities	2.7%	-0.3%	-0.0%
Food	2.6%	-3.4%	-3.0%
Transportation	1.5%	+1.5%	-0.7%
Consumer Products	1.4%	-0.6%	-1.7%
Grand Total	100.0%		

\* financials for CDX indices include insurance but exclude banks

Source: Deutsche Bank; Bloomberg Financial;

**Figure 16: Spread differential between HY cash and a reweighted HY cash index with CDX-like energy weight**



Source: Deutsche Bank

We can use the new reweighted HY cash index to determine to what degree the marked outperformance of HY CDX can be attributed to sector composition. Since the series 23 roll in early October, the basis between HY CDX and HY cash has shifted about 56 bps (in favor of CDX outperformance over cash). Using the reweighted HY CDX for basis calculation, we find the basis shift is about 40 bps. The conclusion from this would be that about 30% of the basis shift since the series 23 index roll might be attributable to sector composition, and that HY CDX should be trading cheaper than it is currently to cash despite the advantage of a structurally lower weight to energy.



**IG rating and duration positioning**

The cheapening of IG credit since late June has broadly reshaped the valuation map we have highlighted this past year. The sector we had highlighted as the market's richest -- short-duration, high quality, has moved from trading at pre-crisis tightness to levels that are more broadly in-line with the rest of the IG market. Spreads in most duration-quality pairs out to 7 years in duration trade modestly below the median levels observed for the respective sectors over the 2004-14 period. The curve on this basis remains steep, indicated by the greater than 50% readings from the 7-year sector and out. Valuations here imply that investors are continuing to demand a discount for moving out the curve, a sign that the 2013 taper tantrum continues to be front of mind.

We think the next leg wider in spreads is more likely to be a risk-off bullish-rates environment than one in which a sharp Treasury sell-off sparks a flight from spread product. As a result, we like that balance of risk in entering duration extension trades. At the same time the cheapening of credit creates a less punitive carry environment for holding higher quality IG paper; mid-single A bonds with 3-4 year duration now have similar percentile scores for spreads as mid-BBB bonds, whereas in May the higher quality segmented traded 11 percentage points richer in percentile terms. Following a year of hefty BBB outperformance we would favor single-A bonds in a weak credit environment.

**No more cushion for IG fundamentals**

Elevated debt levels relative to cash flows remain a key vulnerability for IG issuers. Leverage ratios among non-financial issuers have been stuck in the top quartile over an eight-year historical range despite 12m EBITDA growth of better than 5 percent for four consecutive quarters. It would take only a 3.5% EBITDA shock to push leverage in IG above the highs of 2009, while a more significant shock of 10% to EBITDA would drive leverage to 1.9x, more than a tenth of a point higher than any period since 2006. Spread compression amid leverage increases is among the clearest measures we can find of the scale of investor risk sentiment, and highlights the vulnerability of the IG asset class to a shift in sentiment as the credit cycle approaches a turn.

Compensation per turn of leverage, as well, has rarely been more aggressive in investment grade credit over the horizon we are looking at. We calculate this metric for those issuers with at least 1x leverage, and find that at Q3 spread per turn of leverage had dropped 40 bps from 3 years ago, and sits just 10 bps wider than the lows of 2006. Spread per turn of leverage compressed for four consecutive quarters following the 2013 'taper tantrum', and increased modestly in September 2014. Sectors with the most aggressively priced spreads relative to leverage as of Sep 30 include media, healthcare and telecoms, while those with the most generous spreads per leverage turn include transportation, capital goods and retail. One can map sector valuation versus investment risk using ratings as a proxy. Holding duration constant (e.g. using 1-5Y bonds only), we calculate spread levels and ratings (expressed as numbers, with 4 being AA3 and 9 being BBB2) for each IG sector. Media sector bonds also come out toward the richer end in a regression of spread level against sector credit quality. On this measure, energy, materials and financials trade wide relative to rating (each for identifiable sector specific factors), while technology, food and media trade the tightest given average rating.

Figure 17: Current IG percentiles

	1..2	2..3	3..4	4..5	5..6	6..7	7..9	9..14
AAAs	36%	40%	29%	40%	40%	43%	46%	74%
A1	33%	39%	38%	28%	35%	46%	53%	72%
A2	32%	41%	35%	41%	43%	42%	57%	64%
A3	34%	35%	31%	44%	43%	43%	58%	72%
BBB1	42%	35%	32%	35%	34%	43%	61%	66%
BBB2	34%	32%	32%	31%	38%	48%	64%	79%
BBB3	39%	43%	43%	48%	45%	48%	66%	74%

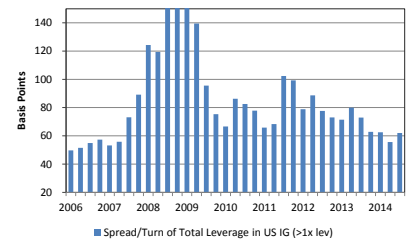
Source: Deutsche Bank

Figure 18: IG percentiles: 5/2014

	1..2	2..3	3..4	4..5	5..6	6..7	7..9	9..14
AAAs	0%	0%	0%	4%	18%	27%	30%	57%
A1	2%	2%	2%	0%	13%	3%	32%	50%
A2	0%	1%	0%	2%	27%	21%	39%	50%
A3	16%	15%	9%	20%	38%	35%	36%	49%
BBB1	10%	2%	1%	20%	20%	15%	38%	54%
BBB2	27%	11%	11%	18%	25%	36%	42%	51%
BBB3	16%	22%	18%	37%	37%	36%	35%	50%

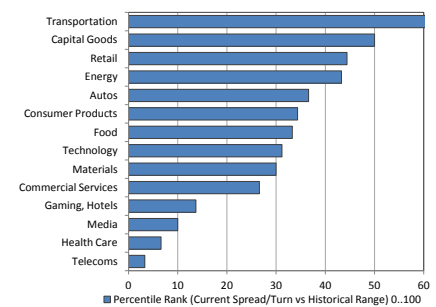
Source: Deutsche Bank

Figure 19: IG OAS per turn of leverage



Source: Deutsche Bank

Figure 20: Sector percentiles of spread per turn of leverage



Source: Deutsche Bank

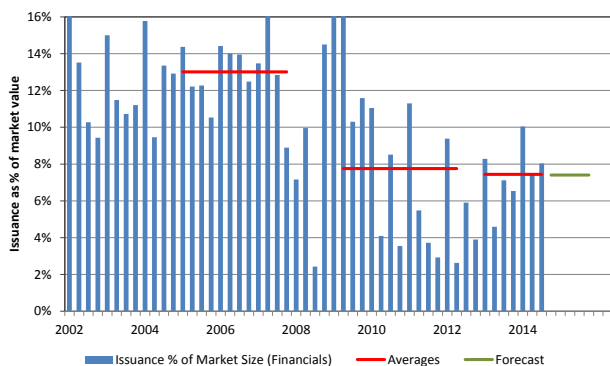


### Issuance forecasts

We anticipate the second consecutive year of \$1trillion in new IG debt issuance, although overall issuance activity should drop modestly from 2013 levels. IG financial issuance should decline about 1% in par value terms (after rising an estimated 25% in 2014), while non-financial issuers should come to market with about 5% less in par value terms. Non-financial issuers are on track to increase 2014 issuance by 1% over 2013, assuming typical seasonality for December. We come to our forecast levels via assumptions for issuance as a percent of market size for both financial and non-financial segments.

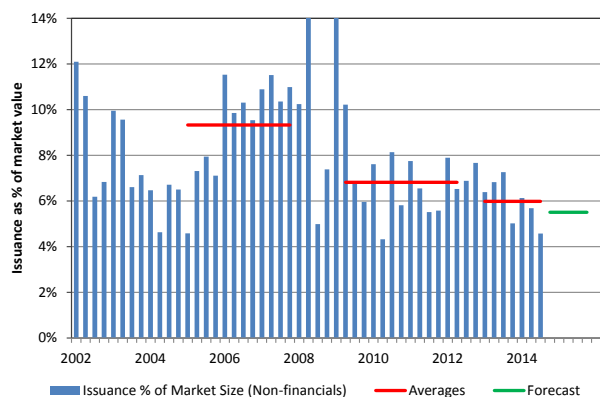
For financial issuers, we are assuming issuance is maintained at the 2013-4 average level as a percent of market size. For non-financial issuers, we expect the issuance share to drop modestly as a share of market size. For both segments, issuance as a share of market size has been declining over time, with financial issuers averaging 13% over 2005-7, 7.8% over mid-2009-12, and 7.4% over 2013-4. Continued pressure on banks to raise long-term debt to satisfy regulatory demands should keep this ratio from falling, as would be natural for a growing market. Banks have already begun to respond to the anticipated regulatory requirements. Among four of the largest U.S. banks, the average maturity of fixed-rate bullet paper increased 0.3 years from 2013, and 0.75 years from 2012, according to Bloomberg data. And issuance of 10-year and longer financial paper jumped 40% in 2014, versus a 10% increase of paper shorter than 10 years.

Figure 21: IG financials issuance volume as % of market



Source: Deutsche Bank

Figure 22: IG nonfin issuance volume as % of market



Source: Deutsche Bank

In HY, we are forecasting a material drop in HY refies, to about 2/3rd of its rate so far this year, and a modest pick-up in non-refi activity. All in all, this leaves us with a \$300bn USD DM estimate for 2015, compared to \$316bn issued so far this year. In loans, we are forecasting an even more significant slowdown in refi activity, to roughly half its recent pace, while non-refi are expected to drop by a third, mostly as a function of stronger regulatory focus on compliance with lending guidance. All in all, this leaves us with a \$325bn forecast for next year, against a \$375bn volume so far in 2014.



# Appendix 1

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