

March 2016

Canary or Phoenix? Balancing the Key Drivers of Credit in 2016

- Corporate credit spreads¹ over Treasuries have moved significantly wider over the last year (and particularly in the last few months), driven by such factors as persistent weakness in commodity prices, concerns over slowing economic growth in China, uncertainty around the future path of central bank monetary policy and fears of a possible US recession. From a valuation standpoint, credit looks very compelling relative to history. However, value in the absence of fundamentals is not enough.
- In our view, credit valuations provide adequate compensation in this climate of elevated fundamental risk, but assessing credit value depends on one's view about where we are in the credit cycle and how long the current phase will last. There is a lot of market uncertainty on the length of the cycle, the probability of recession and what events and policy actions may precipitate it. The wide range of possible outcomes is a major reason for the sizeable risk premia² currently attached to credit.
- For investors interested in taking on credit risk, in addition to balancing credit valuations with the underlying fundamentals, we think it is important to examine the major sources of upside and downside risk to credit in 2016. We think the key indicators which will drive market performance are:

 Commodity Prices, (2) Global Growth, (3) Lending Conditions, (4) Central Bank Policy and (5) Liquidity. We discuss these market drivers in the pages that follow.
- In summary, we face an environment of uncertainty which requires a cautious approach. It is not clear whether corporate credit is the canary-in-the-coalmine that will lead capital markets down, or a phoenix that can offer a dramatic rally from current levels.
- Near-term, we think it's important to watch the canary as accelerating defaults and the loss of capital market access by the weakest companies will likely produce more volatility. Longer-term, we believe the credit cycle will recover from a purging of weaker issuers. A phoenix-like rally in bond prices typically compensates the patient investor that maintains exposure to credit through the default cycle.

EXHIBIT 1: THE POPULAR CONCERNS ABOUT CREDIT MAY NOT BE THE MOST PERTINENT

The impact of deteriorating lending conditions is more concerning to us than liquidity in credit markets

What We Think the Market is Worried About (In Descending Order of Importance)		What Keeps GSAM Credit Teams Up at Night (In Descending Order of Importance)	
Commodity Prices			Commodity Prices
Liquidity		>	Global Growth
Global Growth	\sim	7	Lending Conditions
Central Bank Policy	/	\times	Central Bank Policy
Lending Conditions		Ż	Liquidity

Source: GSAM, as of February 2016.

¹ "Credit spread" is the difference in yield between US Treasury bonds and corporate credit bonds of the same maturity.

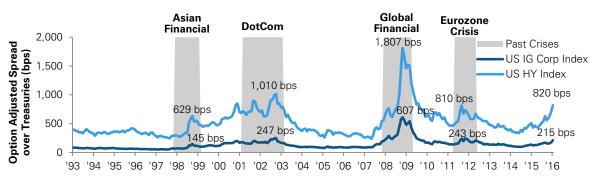
² "Risk premia" are the extra compensation investors receive relative the compensation that would be received from a comparable risk-free asset.

The economic and market forecasts presented herein have been generated by GSAM for informational purposes as of the date of this presentation. They are based on proprietary models and there can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. **Past performance does not guarantee future results, which may vary.**

Valuations suggest corporate credit is attractive

Corporate credit spreads over Treasuries have moved significantly wider over the last year (and particularly in the last few months), driven by such factors as persistent weakness in commodity prices, concerns over slowing economic growth in China, uncertainty around the future path and effectiveness of central bank monetary policy and fears of a possible US recession. In fact, current spread levels are in line with those seen in past recessionary periods (see Exhibit 2). Markets are currently priced for a higher than 50% probability of US recession in 2016 given where spreads currently are versus past periods of recession.

EXHIBIT 2: SPREADS CURRENTLY AT LEVELS IMPLYING RECESSION RISK



Option Adjusted Spread over Treasuries (bps)

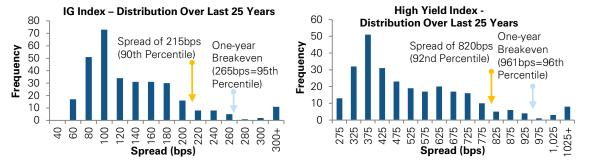
Source: GSAM, Barclays as of February 12, 2016. US IG Corp Index: Barclays US Aggregate – Corporate index; US HY Index: Barclays US High Yield 2% Issuer Cap. **Past performance does not guarantee future results, which may vary.**

The recession phase of the economic cycle will come at some point, and we think the risks have increased, but we think the probability of recession occurring this year remains low. Our view is based primarily on the continuing expansion in the US service sector, which is much larger than the manufacturing sector, and the fact that low oil prices are negative for the energy sector but have significant offsetting benefits for consumers and non-energy corporations.

Given markets are pricing in a substantially higher chance of recession than we believe, credit might appear attractive especially when one considers where spreads are relative to history. Investment grade and high yield credit spreads are currently at the 90th and 92nd percentiles of their historical distribution, respectively. In other words, since the inception of their respective indexes, investment grade and high yield spreads have been wider than they are now only 10% and 8% of the time. Furthermore, one-year break-evens are at 50 basis points (bps) and 141bps wider, respectively. This means in order for excess returns to turn negative, investment grade spreads would have to widen an additional 50bps to the 95th percentile (see Exhibit 3).

EXHIBIT 3: VALUATIONS SUGGEST LOW LIKELIHOOD OF A NEGATIVE RETURN

Spreads would have to move to the 95+ percentile of historical wides to produce a negative return.



Source: Barclays, GSAM as of February 12, 2016. US IG Corp Index: Barclays US Aggregate – Corporate index; US HY Index: Barclays US High Yield 2% Issuer Cap.

Based strictly on these metrics corporate credit may appear very attractive. However, value in the absence of fundamentals is not enough.

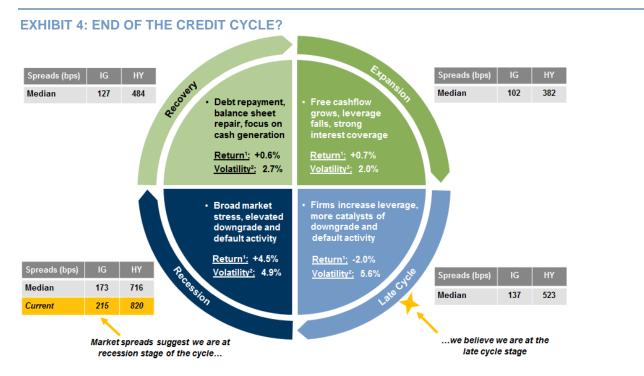
What about the fundamentals?

The US corporate credit cycle appears to be in its mature stages (see Exhibit 4). Companies are finding it more challenging to generate earnings growth and have become more aggressive about issuing debt to fund transactions that can benefit stockholders, including share buybacks, mergers and acquisitions (M&A) and dividends. According to Dealogic, global M&A volume surpassed \$5tn for the first time on record in 2015 at around \$5.03tn; up 37% from 2014's \$3.67tn.

Whether or not valuations are attractive relative to credit fundamentals depends largely on one's view about how long the late cycle phase will last. Each phase of the corporate cycle has been prolonged, with a slow recovery in credit after the 2008–2009 financial crisis, and a gradual expansion of corporate leverage. It is possible that the next phase—a transition to rising defaults—could be extended as well.

The balance sheets of non-financial corporates are stretched for this part of the cycle, before the economy experiences a downturn. So there is less room for error with regard to credit quality and ratings should a recession occur. The question is how much of this has the market already priced in.

Although we anticipate a significant rise in US high yield energy sector defaults in 2016 because of the drop in oil prices, we expect the default rate in most other sectors to rise more gradually over the next few years. Nevertheless, the credit cycle has begun to turn. Defaults are expected to increase and in our estimation could rise to 10%-12% should the US fall into a recession. The key issue is the timing and severity of the recession. There is a lot of uncertainty on the length of the cycle, the probability of recession and what events and policy actions may precipitate it. The wide range of possibilities is a major reason for the sizeable risk premia currently attached to corporate credit.



Source: ¹ Return indicates the average annualized excess return of the Barclays US Investment Grade Corporate Index from August 1, 1988 to January 31, 2015, in the month following the designated phase of the business cycle. ² Volatility indicates the average annualized volatility of the Barclays US Investment Grade Corporate Index from August 1, 1988 to January 31, 2015, in the month following the designated phase of the business cycle.

For Illustrative Purposes Only. Source: Barclays Capital, GSAM, Bloomberg. Spreads as of February 12, 2016.

From a global perspective, European corporations in our view continue to behave conservatively, with less M&A activity and share buybacks. Although the ratio of corporate debt-to-earnings has increased in Europe, we believe that has been primarily due to weaker margins. The European market also appeals on the basis that it is still in the expansionary phase of its cycle, whereas the US market is in its late cycle phase, facing tighter financial conditions and potential downside risks to economic growth.

Accommodative policy from the European Central Bank (ECB) should also help support risk appetite among investors. In high yield, European corporate credit should benefit from its lower exposure to the energy sector relative to US, which accounts for just 1% of the domestic high yield market, compared with roughly 15% of the US high yield market, according to representative Barclays indexes. While these factors leave us modestly constructive on European credit, other considerations prevent us from taking a more positive stance. On a historical basis, European credit spreads ex-energy are highly correlated to US credit spreads. As a result, continued weakness in US credit markets would likely have some spillover effect into Europe. Moreover, spreads in European credit markets started the year at significantly tighter levels than in the US.

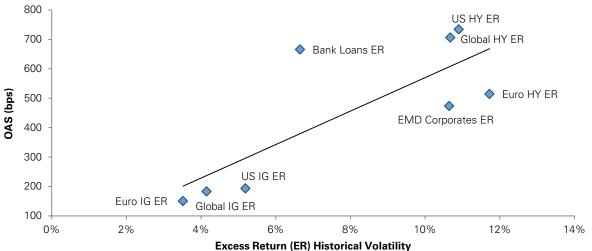
Asian credit spreads are relatively less correlated to US spreads. China is the largest issuer in the region. Chinese corporations have grown their borrowing dramatically in the past five years, but most of it has been from domestic banks; international corporate bonds are still a very small proportion of the country's debt stock. Exposures are concentrated in financials (investment grade) and property (high yield); credit quality trends are stable in investment grade but declining in high yield, though the property market has seen very little true distress thus far. Valuations seem fair but unexciting, with spreads slightly tighter in 2015, in contrast with the widening seen in US and European credit (or, indeed, in other developing markets like Brazil).

So is this an opportunity, or a moment for caution? Could corporate credit be the canary in the coalmine indicating the end of a cycle, like the US mortgage backed securities (MBS) market was in 2006? Or do positive signals presage another leg to the economic cycle which could see outsized returns?

The market seems to be indicating ex-commodities the market offers fair value, with elevated risk. We are challenging ourselves to identify good "buy" opportunities in this market, while remaining sensitive to what feels like binary potential outcomes, both on a single-name and a market-wide basis. On a relative value basis, high yield and bank loans look favorable versus investment grade and European high yield given where spreads are relative to risk (see Exhibit 5).

EXHIBIT 5: RELATIVE VALUE IN CORPORATE CREDIT

Bank loans along with US and global high yield offer better value for risk relative to IG and European HY



Source: Barclays, Credit Suisse, GSAM as of January 29, 2016. Volatility is defined as standard deviation. Past correlations are not indicative of future correlations, which may vary. **Past performance does not guarantee future results, which may vary.**

Key Drivers of Credit Markets in 2016

We think the key indicators which will drive market performance are: (1) Commodity Prices, (2) Global Growth, (3) Lending Conditions, (4) Central Bank Policy and (5) Liquidity. Our observations on these key indicators follow:

1. Commodity Prices

We currently observe unusually elevated correlations between the price of oil and the price of various assets – equities, currencies, and particularly credit – reaching in some cases 85% to nearly 100%. We don't have a constructive view on oil prices: we would echo Goldman Sachs Investment Research's (GIR) call for oil to trade in a range of \$20-\$45/barrel in 2016, and we anticipate an average West Texas Intermediate (WTI) oil price in 2015 of \$35/barrel. This range is bounded by our current estimate of the "half cycle cost" of a barrel of oil near \$20 (i.e., just covering lifting and operating expenses), and the "full cycle cost" (which covers drilling, exploration and a greater share of selling, general and administrative expenses) of closer to \$45 per barrel. Simplistically, below \$20/barrel we think producers will turn off the spigot on some currently producing wells, resulting in the needed supply correction to point towards a balanced market; at \$45, some producers may begin drilling again, given the massive reduction in drilling, operating and overhead costs most energy firms have realized in the last 18 months.

The quoted oil "strip" points to WTI oil prices remaining below \$50/barrel until at least 2020 – but the strip has historically tended to over-weight current conditions (i.e. its predictions tend to be wrong!). We expect a slightly more benign outcome, with estimated year-end prices of \$40 (2016), \$45 (2017) and \$50 (2018) – still a very difficult environment for energy companies. If prices remain depressed, we would expect to see as much as 20% of the high yield energy sector default in 2016, a further 15% in 2017, and a cumulative three-year default experience (including 2015) of fully 50% of the sector. If we include expected defaults from metals & mining, commodities sector defaults could represent as much as 3.5% of the high yield market in 2016, i.e. about two-thirds of our full-year high yield default estimate of 5.0-6.0%. Away from commodities defaults are also moving up, but from a very low base and not dramatically; some signs of stress can be seen in fragile sectors like retail and other cyclical industries. The above default estimate assumes a trend-like US economic environment.

Investment grade credit has less exposure to energy than high yield, in part due to the significantly larger size of the investment grade credit market overall. Nevertheless there is increased downgrade risk as we forecast that as much as \$150bn may migrate from investment grade to high yield over the next 24 months, focused in the commodity sectors. This may pose some indigestion challenges in the face of declining demand for lower-rated credit, but offers potentially attractive investment opportunities in high quality energy companies with strong balance sheets which will survive a period of low oil prices.

2. Global Growth

China is the linchpin of global growth at the moment, and – though we acknowledge their deep reserves and the control they can exert via their command economy model – we are not sanguine on the next chapter for China. Growth activity over the past twelve months appears to be decent but well below reported numbers. Chinese leadership appears to be engineering a smooth transition towards increased reliance on domestic consumption over exports, however their policies are increasingly unpredictable and haven't been well received by the market. Commentary from key vendors to the country is highlighting slowing demand and the failure of consumer spending to offset the well-advanced decline in infrastructure spending. The signals from China to commodity-exporting emerging markets are worrisome in our view; combined with rapid debt growth in recent years and an increasingly strong dollar, the economic headwinds for the likes of Brazil and Russia remain daunting.

The US economy has been the global bright spot in recent years, but recent signals have been mixed even as the US Federal Reserve has begun to tighten policy. The bright spots have been related to jobs and the consumer: unemployment and underemployment have declined to quite healthy levels, consumer confidence and the consumer balance sheet are solid. Housing and auto sales have been strong for several years; while retail spending has somewhat disappointed, consumers are spending on 'experiences' (restaurants, leisure), and increasing their savings rate, which could mute any downturn. On the flip side, commodities producers (metals & mining in addition to oil and gas) are experiencing a deep correction due to excess supply, manufacturing and exports have slowed with the strong dollar and softer

global demand, and corporate revenue and profit growth momentum has stalled. While the consumer still dominates the US economy, weakness in the manufacturing and industrial economy can ultimately undermine employment growth, confidence and the propensity to spend.

Europe, while struggling with structural challenges and persistently low inflation, has experienced modestly positive growth and a recent run of upside surprises. We are constructive on Eurozone growth, though we see a modest slowdown to 1.4% in 2016. The economy is likely to be supported in the coming year by increased government spending, especially on services to accommodate the large influx of refugees, and consumer demand may well continue to beat market expectations. Policymakers face renewed pressure to ease again as financial conditions have tightened. The implication for Eurozone yields is continued downward pressure for the foreseeable future, and levels well below zero in many markets (see Exhibit 6). Accommodative ECB policy combined with an ultra-low rate environment should be supportive of European credit markets as investors seek out higher yielding assets.

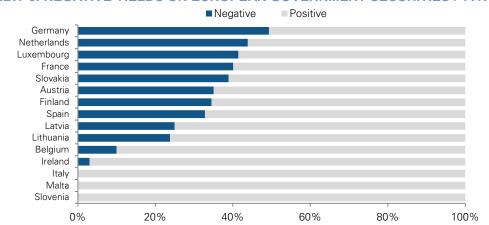


EXHIBIT 6: NEGATIVE YIELDS ON EUROPEAN GOVERNMENT SECURITIES >1YR

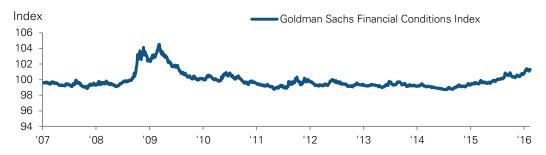
Source: GSAM, Bloomberg, as of January 2016. Yield shown is yield to worst.

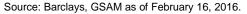
3. Lending Conditions

We believe the recent tightening of lending conditions is not broadly recognized by the market: this shift helps to explain the current wider spread environment, and would likely need to improve to justify any persistent move tighter. Market-based drivers of tightening are of course in focus. Financial conditions have tightened meaningfully in the US year-to-date, driven by dollar strength and weakness in risk assets and commodities (see Exhibit 7). We track other indicators that send a cautionary signal as well: for example, the Fed's Senior Loan Officer Survey shows that lending activity remains robust, but lending standards have begun to tighten and forbearance in the face of credit challenges is declining, and when liquidity is withdrawn it can have a big negative impact on growth.

EXHIBIT 7: FINANCIAL CONDITIONS HAVE TIGHTENED

Sustained tightening may discourage the US Fed from hiking rates





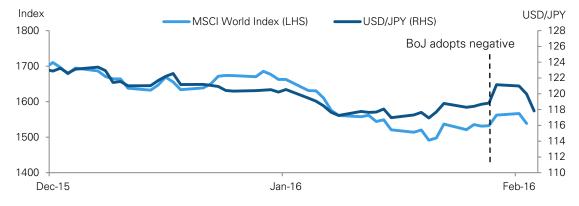
4. Central Bank Policies

We expect the ECB and the BoJ to do more easing (in fact the BoJ has just joined the "negative interest rate policy" club), and the People's Bank of China (PBoC) will likely inject more liquidity. The Fed has been sending more of a mixed message: highlighting slower global growth and a strong US dollar, they noted the policy challenge posed by difficult external inputs, but also left the door open for as many as four rate hikes in 2016. We believe the number will not exceed two. The outcome will likely hinge on US economic strength, and the risk of recession has risen over the past year.

Given years of accommodative policy and ultra-low (even negative) rates, questions have been arising as to whether further easing is actually helpful or potentially "bad medicine" for economic systems at this point. Indeed looking back over the past seven years, asset prices have shown more of a response to stimulative policies than the underlying economies where the policies are implemented. And more recently, even the effect on asset prices has proven relatively short-lived. For example, assets almost fully retraced within a week following the BoJ's announcement of a move to negative rates (see Exhibit 8).

EXHIBIT 8: SHORT-LIVED EFFECTS OF BOJ MOVE TO NEGATIVE RATES

Incremental easing may have diminishing returns in terms of reviving growth and stimulating inflation.



Source: GSAM, Bloomberg, as of February 3, 2016.

On balance we believe that further easing still has the potential to be materially beneficial in terms of stimulating price action and market activity. However we are reaching a point where yields are so low central banks are running out of room to ease further, at least via the channel of rates policy. According to Bank of America Merrill Lynch, roughly 25% of all fixed income debt is negative yielding. There may be a benefit to credit in this environment—primarily investment grade credit as it is more sensitive to central bank policy than high yield. As rates remain negative or potentially get more negative, there is the potential for more investors to move into investment grade debt in search of positive yields. However, this trend of reaching for yield could be tempered if monetary policy and further negative rates become perceived as increasingly ineffective or even counter-productive.

5. Liquidity

Ironically, the topic which has been high on investors' worry list is a relative bright spot among these key indicators. Credit markets have experienced some tightening of liquidity conditions but relatively minimal compared to other asset classes where investors are less prepared to take risks. In the investment grade corporates market, bid-ask spreads have widened as market participants have reduced their risk appetite and are demanding higher risk premia for spread sector assets. Nonetheless, trading volumes still remain healthy and we have seen no recent decrease in volumes.

Credit markets had an anxiety attack following the well-publicized gating and closing of a daily-liquidity US high yield mutual fund. We believe that fund was very much the exception, in its composition and the strategies employed by its managers, and don't expect any meaningful knock-on impact to the broader credit market. We perceive high yield market liquidity to be decent: the average high yield daily trading volume at what we view as healthy levels, in line with historic trends. ETFs, which continue to experience a disproportionate amount of investor flows, have seen their price remain quite close to net asset value (NAV) and have not been hit by large net "redeem" requests, despite (in their passive form) being quite exposed to energy and other troubled larger issuers. US high yield mutual fund flows have been net negative for three years now (cumulatively about -\$45bn, according to JP Morgan), but we see this as a fairly healthy rebalancing of the ownership base.

Technicals are likely to experience some further deterioration in 2016-2017 as the daily-liquidity investor base in high yield has been steadily shrinking while the underlying asset class has grown and may continue to grow via "fallen angels"—securities that are downgraded from investment grade to high yield. However, there is still likely to be a fairly diverse set of investors taking views on individual credits and the market overall.

Conclusion

In summary, we think this environment requires a cautious approach. It is not clear whether corporate credit is the canary-in-the-coalmine that will lead capital markets down, or a phoenix that can offer a dramatic rally from current levels. We are late in the credit cycle and low commodities prices along with wide spreads will likely precipitate a deleveraging cycle and an accelerated rate of default in 2016. And with all of this occurring with reduced monetary policy support from the Fed, the stage is set for a potentially volatile year. Conversely, with yields as high as they currently are, much of the worst case is priced in, and a positive swing in confidence could generate strong returns.

While we do not believe the US is experiencing or will experience a recession in 2016, we do note that there are fewer safe havens within corporate credit. We believe present conditions merit a cautious approach, wherein tactical positioning and security selection will be key.

In investment grade, we maintain a bias to triple-B rated credit as well as a preference for the intermediate part of the corporate term structure. We hold overweight positions in banking, consumer products and pipelines (mainly as a result of single-security, bottom-up views rather than thematic sector-level decisions), while we are underweight the energy, electrics and media non-cable industries.

In high yield, we have moved up in credit quality, favoring single-B and double-B rated credits, and steadily reduced our exposure to triple-Cs. We have a preference for bank loans, which are less vulnerable to the oil story and benefit from less exposure to rate volatility given their floating rate nature, seniority in the capital structure, and have a higher overall quality profile compared to high yield debt.

We favor select securities in sectors positioned to benefit from continued US economic growth and lower oil prices, such as consumer and real estate-related sectors and certain defensive industries such as cellular telecoms and cable. We are cautious in allocating risk to cyclical sectors that are more sensitive to global growth worries such as energy, technology, chemicals and metals & mining.

We also find investment opportunity in European credit which will benefit from European Central Bank stimulus and an early stage economic rebound, though it trades at a tighter spread than US credit, and in bank loans, which are less vulnerable to the oil story and benefit from less exposure to rising rates given their floating rate nature and a higher overall quality profile than high yield.

Near-term, we think it's important to watch the canary: the trend of ratings downgrades, the acceleration of defaults and the loss of capital market access by the weakest companies seem to be entrenched characteristics of the current high yield market, and the feedback loop into broader capital markets and the real economy is likely negative. Longer-term, we believe the credit cycle will recover from a purging of weaker issuers and capital access will improve. A phoenix-like rally in bond prices typically compensates the patient investor that maintains exposure to credit through the default cycle.

Glossary

Basis Points: one basis point equals 1/100th of a percent.

Option-adjusted Spread: the difference in yield between a given fixed income security and the risk-free rate of return, adjusted to account for any embedded options, such as a call option. West Texas Intermediate: a grade of crude oil used as a benchmark in oil pricing.

Deleveraging Cycle: when a wave of companies attempts to decrease its financial leverage. The best way for a company to delever is to pay off existing debt. If it is unable to do this, there is a significant risk the company could default.

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Barclays US Aggregate - Corporates Index: This is the Corporate component of the Barclays US Credit Index.

Barclays US High Yield 2% Issuer Cap Index: This index is the 2% Issuer Cap component of the US High Yield Index. The Barclays US High Yield Index covers the universe of fixed rate, non-investment grade debt.

Goldman Sachs Financial Conditions Index: a weighted sum of a short-term bond yield, a long-term corporate yield, the exchange rate, and a stock market variable.

MSCI World Index: The MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets.

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