

Macro Credit Framework: Let's Be Reasonable

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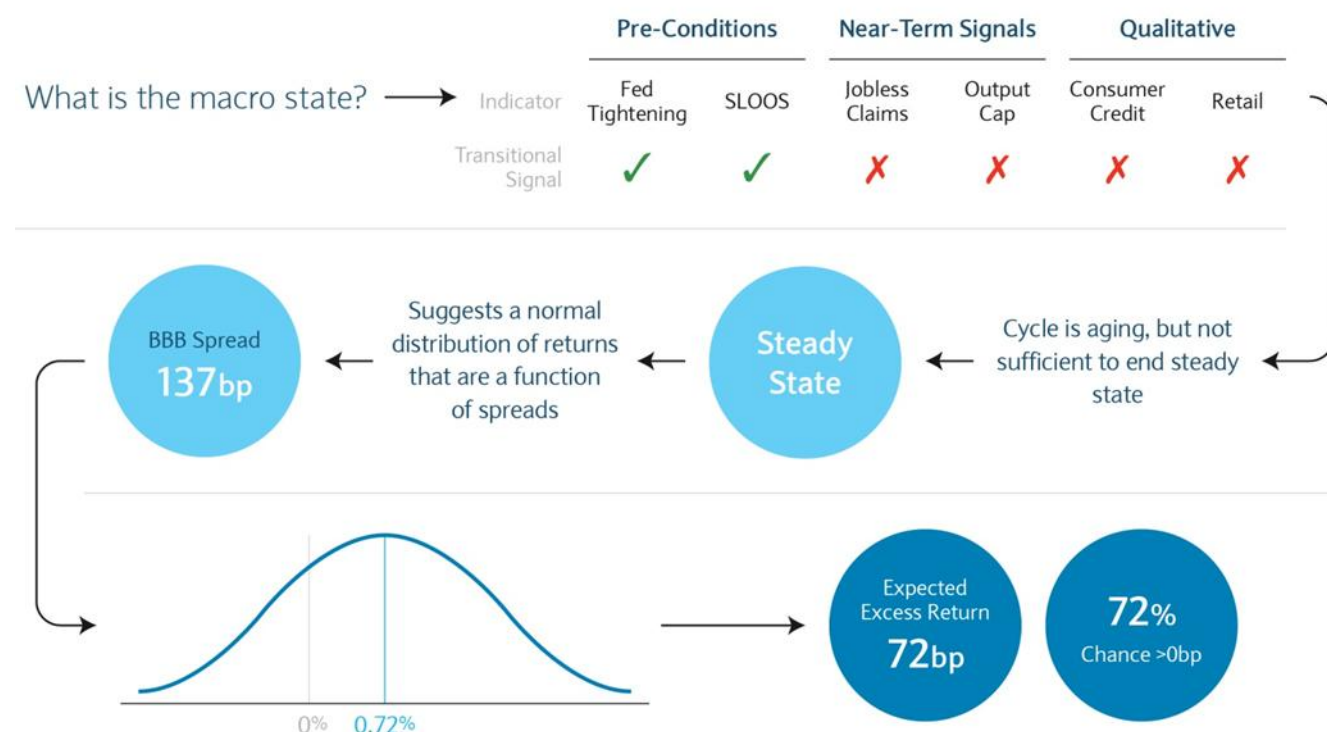
With credit valuations near post-recession tight, we believe this is a good time to update our macroeconomic framework for credit returns. The core of our framework is that:

- For the purposes of forecasting credit performance, we can reduce the business cycle into two regimes: a steady state in which the economy is growing consistently and a transitional state that includes recessions plus the 12 months before and after. Macroeconomic indicators can signal which state the economy is in.
- Spreads evolve differently in the transitional state than in the steady state.
- Valuations are the key driver of returns for both steady and transitional states, but the distributions shape of those returns varies across regimes.
 - In the steady state, returns are more normal for a given valuation, and treating returns as normal should be adequate for rough estimates of returns and loss probabilities.
 - Transitional state distributions are more skewed, making the distribution of expected returns rely more heavily on starting valuations.

Applying the framework to the current environment suggests a 70% chance of positive excess returns for BBB credits, with an expected return near carry (Figure 1).

FIGURE 1

The Macro Framework Suggests That We Should Expect 60-70bp of Six-Month Excess Returns for Corporate BBBs



Source: Barclays Research

Defining Business Cycle Regimes

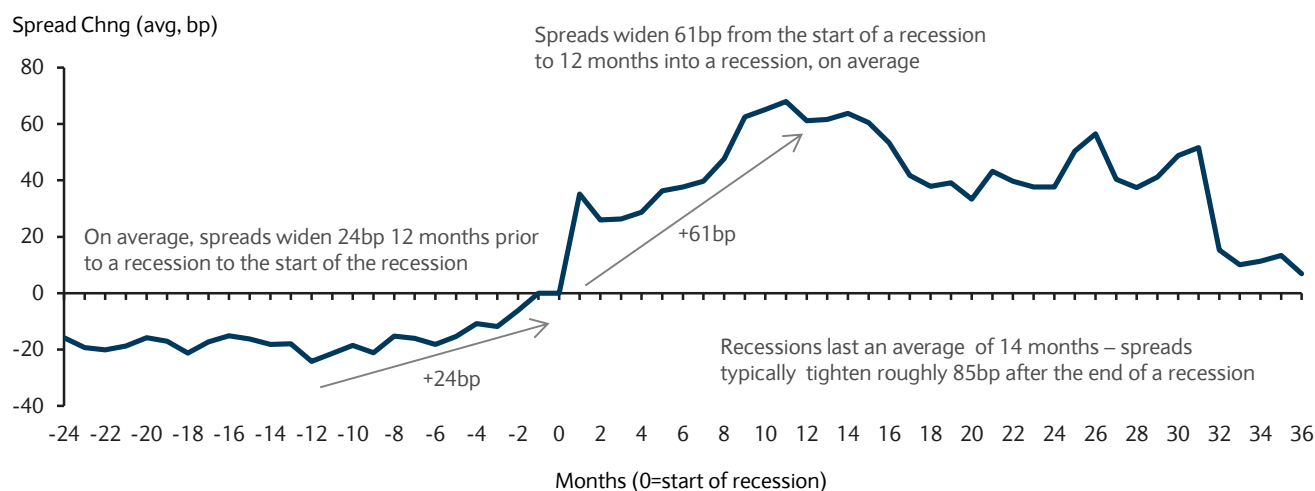
For the purposes of making return forecasts, we believe that only two regimes really matter:

- Steady state is the default, covering periods of consistently positive economic growth that are the “expansion phase” of traditional business cycles. These phases have periods of both slower and faster growth, but without the sustained deterioration that marks a recession.
- Transitional states have been less frequent (especially in the past 30 years) and consist of recessions plus the 12 months preceding and following them.

There are a number of reasons to condense the macro environment to only two regimes:

- There are clear differences in how credit returns behave in the two regimes, with credit more likely to widen, and more likely to linger at wider spreads, during transitional states (Figure 2). But further subdivisions do not seem to add much information – for example, for a given valuation, there is not much difference in returns from “early” in a recession to “late” – so it is sensible to use fewer states.
- It makes it easier to define the conditions of being in each state, which makes it more likely that we will make the correct call. In general, we think it is relatively straightforward to understand when we are in a recession or its aftermath. That means the only difficult call is whether we have moved from a steady to a transitional state.

FIGURE 2
Changes in Corporate Bonds Spreads around a Recession

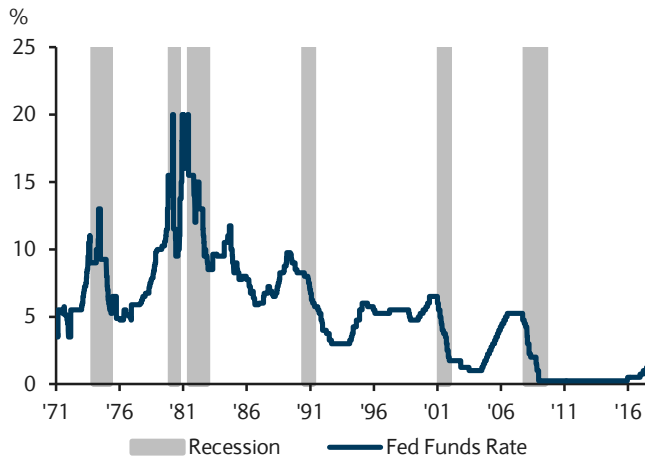


Source: Moody's, Barclays Research

Economic Indicators – Clues for Transitional Periods

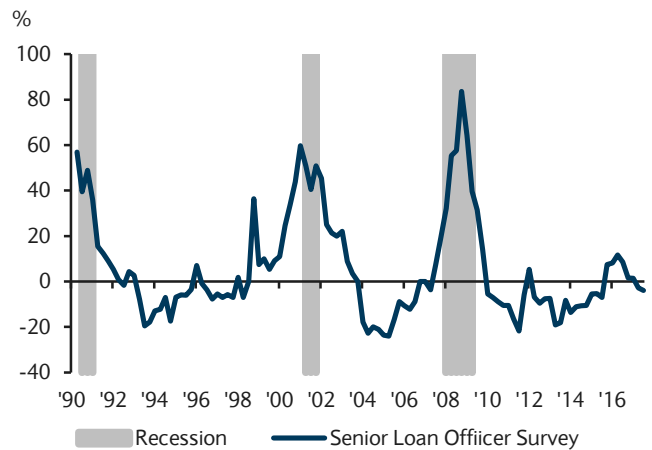
The most challenging part of our framework is determining whether we have entered the transitional state, but we think there are useful indicators for when that happens. There are a number of layers to the process. First, the preconditions need to be in place. Then the timely indicators give us information about whether we are within 12 months of a recession. Finally, a qualitative evaluation informs us whether our preferred signals are likely to have their usual reliability.

FIGURE 3

The Fed Is Currently in a Hiking Cycle

Source: Bloomberg, Barclays Research

FIGURE 4

Senior Loan Officer Survey

Note: The senior loan officer survey reports net percentage of banks tightening lending standards on loans to business customers. Source: Bloomberg, Barclays

Preconditions for a Recession

Fed hiking cycles and tighter bank lending standards have historically been preconditions for recessions. The past six recessions have been preceded by Fed hiking cycles, and leading up to the past two recessions, bank lending standards have tightened (Figures 3 and 4). Intuitively, this makes sense – the economic benefits of looser Fed policy and accelerating lending conditions lean against the possibility of a recession.

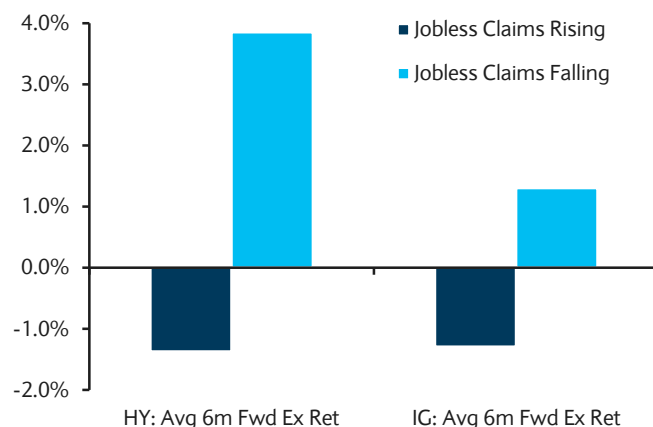
While these indicators are necessary for a recession, they do not by themselves signal that a recession is imminent – both can be in place for multiple years before a recession begins. While these preconditions are currently being met, we must look at more timely measures that signal the economy is entering a transitional state.

Near-Term Indicators*Jobless Claims*

We believe that jobless claims are one of the best indicators of a regime shift, because they generally start to rise about a year before the economy enters a recession. This makes them particularly well timed for the move to a transitional state. Their usefulness as an indicator for credit is supported by the tendency of rising jobless claims to predict negative future returns for credit (Figure 5), consistent with our analysis that spreads generally widen from tight during the transitional state.

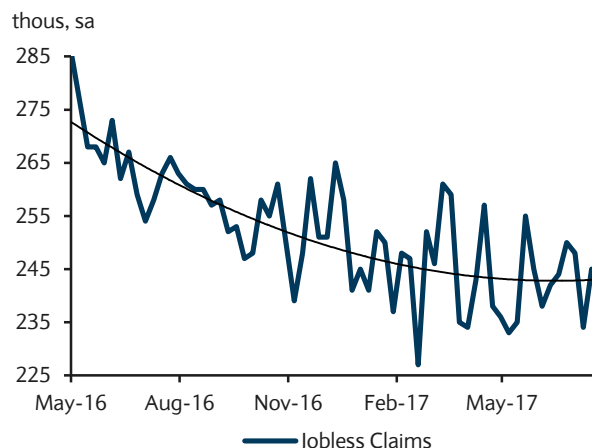
The decline in jobless claims has been impressive since 2009, and the measure is at all-time lows after adjusting for total jobs in the economy. With less slack in the series, the decline in claims has lost momentum, suggesting that further improvements could be limited (Figure 6). However, claims have remained low or flat for multiple years in the past, so flattening alone is not sufficient to indicate a rise in claims. Consequently, we do not believe that jobless claims are currently signaling that we are entering a transitional period (although that assessment could change quickly).

FIGURE 5

Lower Credit Returns for Rising Jobless Claims

Source: Bloomberg Barclays Indices, Barclays Research

FIGURE 6

Decline in Jobless Claims Is Losing Momentum

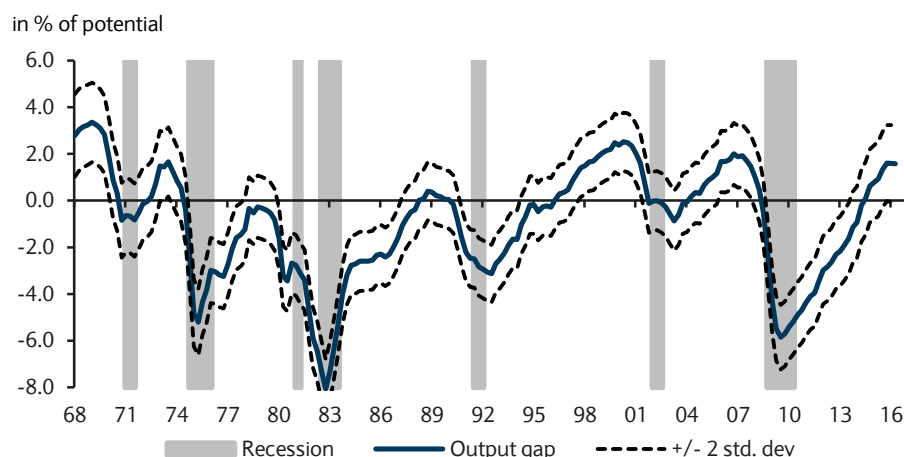
Source: Bloomberg, Barclays Research

Output Gap

The second timely indicator that we use for our macro credit framework is the output gap – a measure that Barclays Economics uses as a framework for the US business cycle (Figure 7). The output gap uses a multivariable approach – with inputs such as working hours, output, employment, unemployment, and the labor force – to measure the actual output of the US economy versus the potential output.

We find that the output gap tends to follow the business cycle closely. The indicator typically peaks about three quarters prior to a recession, on average, and starts to roll over during the transitional state (Figure 8). Coincidentally, spreads also tend to widen when the output gap is declining (Figure 9). Currently, the output gap has closed and is near the 2005-06 peak, meaning that the current business cycle is mature. However, the indicator does not seem to be rolling over at this point and is not indicating that we are entering a transitional state yet.

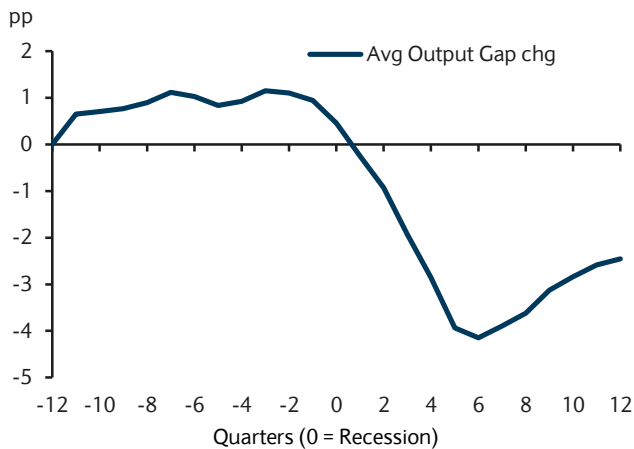
FIGURE 7

The Output Gap Is Near 2005-06 Peak

Note: Barclays estimates based on method described in "When absolute zero isn't low enough," *Equity Gilt Study 2016*. Estimates of potential output and the output gap are based on a multivariate approach in which inputs on working hours, output, employment, unemployment, and the labor force are used to decompose potential growth into its components. Source: Barclays Research

FIGURE 8

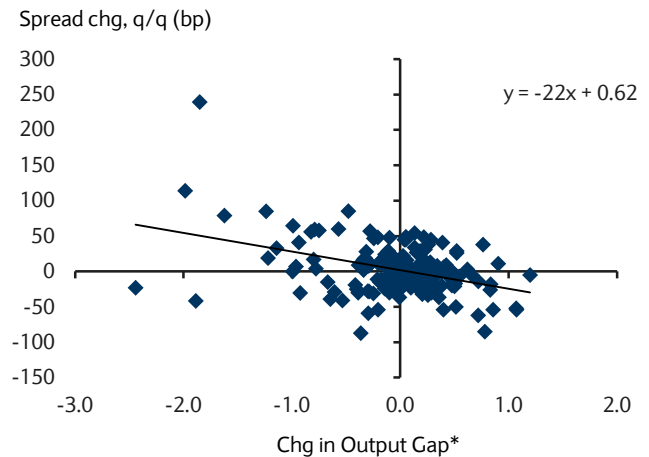
The Output Gap Tends to Roll Over Two to Three Quarters Prior to a Recession



Source: Barclays Research

FIGURE 9

Change in Spreads versus Change in Output Gap (q/q)



Note: * Q/q percentage point change. From 1967 to 2017 (BBB corporate spreads). Source: Moody's, Barclays Research

Qualitative Factors

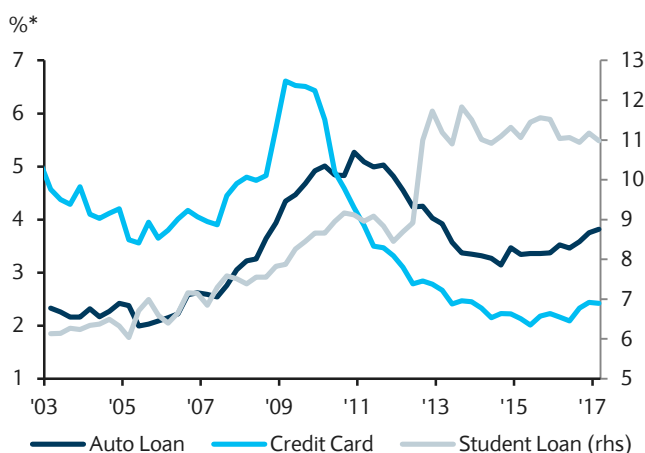
In relation to position within the business cycle and whether the economy is entering a transitional period, it also makes sense to monitor qualitative factors that could pose risks to the current steady state of the economy.

Consumer Credit

Trends in consumer credit have become a cause for concern. Consumer debt outstanding has risen for credit cards, auto loans, and student loans, giving consumers less room to use debt to support spending. Delinquency rates have also begun to rise in all three cohorts (Figure 10), with the auto loan sector particularly worrisome. Along with significant growth in auto credit outstanding, auto loan quality has worsened, and auto sales have lost momentum. While these trends are somewhat troublesome, the size of the auto loan market pales in comparison with the mortgage market, a major issue in the last recession. And despite some deterioration in the quality of the ABS market, losses so far have been

FIGURE 10

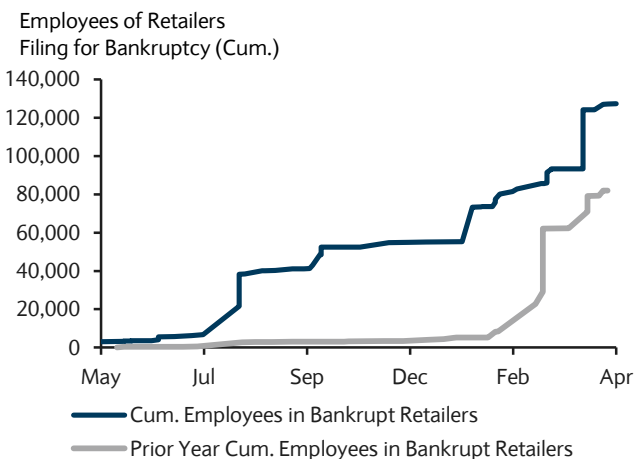
Delinquency Rates Have Started to Rise



Note: * Federal Reserve percent balance 90+ days delinquent loans.
Source: Federal Reserve

FIGURE 11

More Retail Employees Are Losing Jobs, but Not Enough to Affect the Wider Economy



Source: Bloomberg, Barclays Research

modest. Therefore, we do not believe that concerns in the auto sector will push the economy into a transitional state at the moment, but any further developments should be closely monitored.

Retail Sector

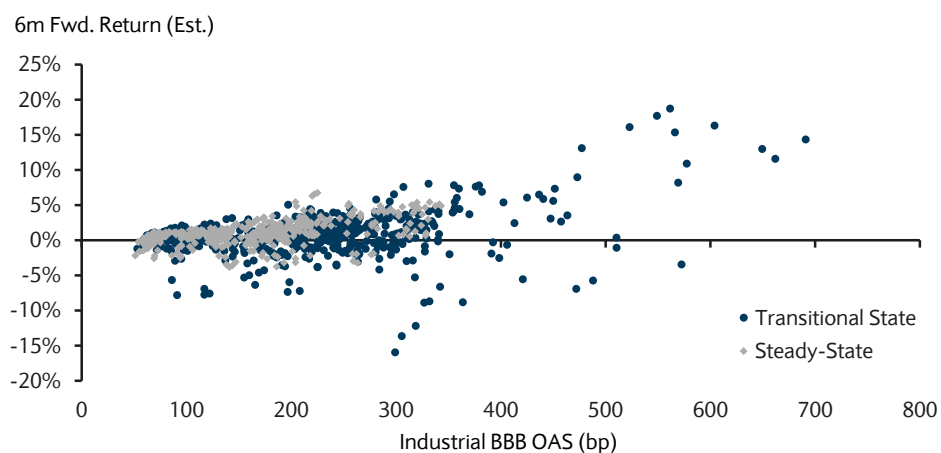
Weakness in retail has been a theme in 2017, with the sector facing revenue losses to e-commerce competitors and lower returns on assets because of overcapacity. Because the retail sector is such a large employer – up to 10% of American workers are in the sector in some capacity – there is a reasonable question about whether a sector restructuring could spill into the broader economy. We examined this question in greater depth in *US Economics and Credit Strategy: Technology-based change leaves retail looking overextended*, and our conclusion is that so far jobs are not being lost at a fast enough pace to create exogenous recession risk. For example, the number of retail workers affected by bankruptcies has increased quickly, rising above 200k over the past 18 months (Figure 11), but given that the US sees about 250k new jobless filings a week (a record low), that is not yet enough to cause broader problems.

Returns Are More Volatile during Transitional States

The next component of our framework is to understand what the most reasonable distribution of returns is likely to be within each state. The first thing we observe is that returns are related to starting valuations in both regimes (Figure 12). We also note that for a given valuation, they are more volatile, and more likely to be negative, in the transitional state.

FIGURE 12

Returns Are Linked to Valuations in Both the Steady and Transitional States, but Transitional Volatility and Downside Are Higher for Any Starting Spread Level

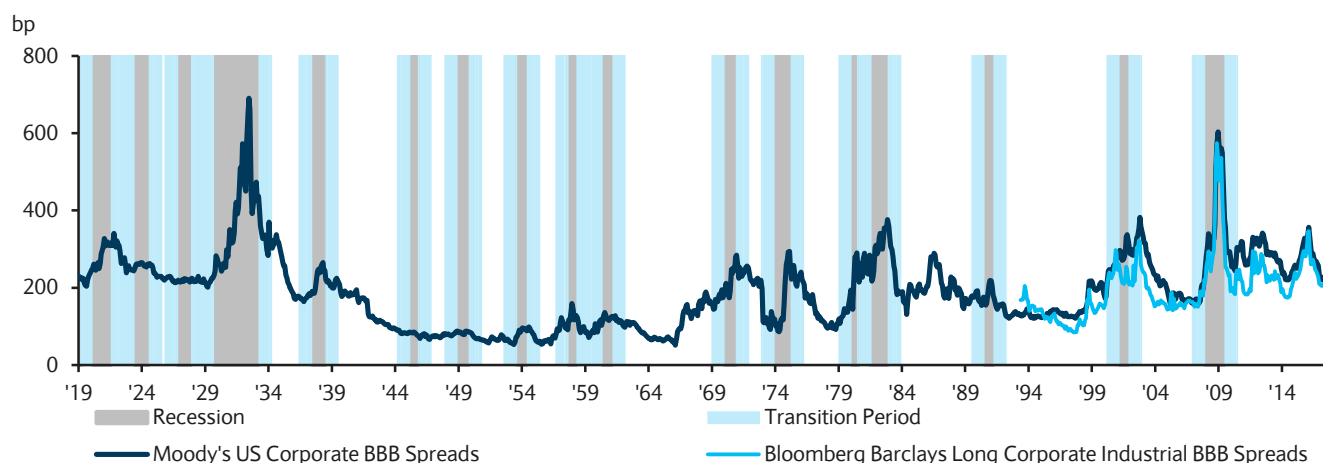


Note: Data ranges from 1919 to 2017 – returns are estimated by spreads multiplied by the closest in date-matched duration of the Bloomberg Barclays BBB Long Index; transition period is 12 months prior through 12 months following a recession. Source: Moody's, Barclays Research

We base this analysis on Moody's data on spreads for industrial BBB long bonds. The series starts in 1919, which allows us to calibrate spread performance around 17 recessions. This is a significant advantage over using the Bloomberg Barclays Indices, which cover only three recession cycles. The disadvantage is that the Moody's data do not provide carefully structured return calculations, so we need to estimate returns using carry, spread changes (assuming the same duration as the BBB long index), and historical default rates to account for losses.

FIGURE 13

Moody's Historical Spread Data Covers More Recessions Than the Bloomberg Barclays Indices History



Source: Moody's, Bloomberg Barclays Indices, Barclays Research

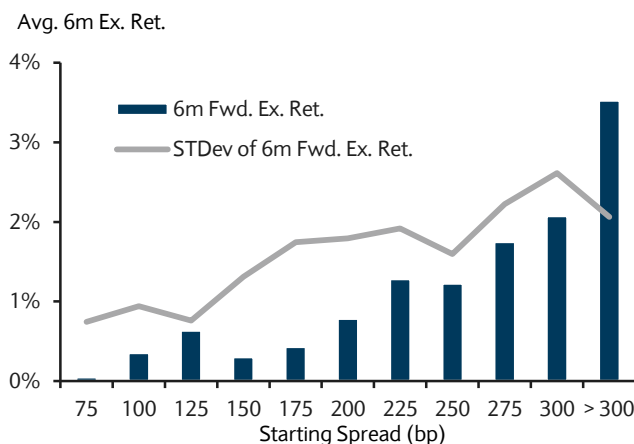
Digging a little deeper into the **steady state**, both returns and volatility rise consistently with starting spreads, in a very orderly relationship (Figure 14). We also note that they look fairly normally distributed, although with some extra downside tail risk (Figure 15).

By contrast, in the **transitional state**, returns are less clearly related to valuations (Figure 16). This seems to be related to more pronounced skew during these periods. But the degree and direction of skew also appear to be a function of valuation:

- When spreads have been in the bottom third of their range historically (under 215bp), we have seen widening that is, on average, enough to more than offset carry (the average estimated six-month return from these situations has been -25bp). There have also been more large losses and widening events than we would expect if returns were normal in these times.

FIGURE 14

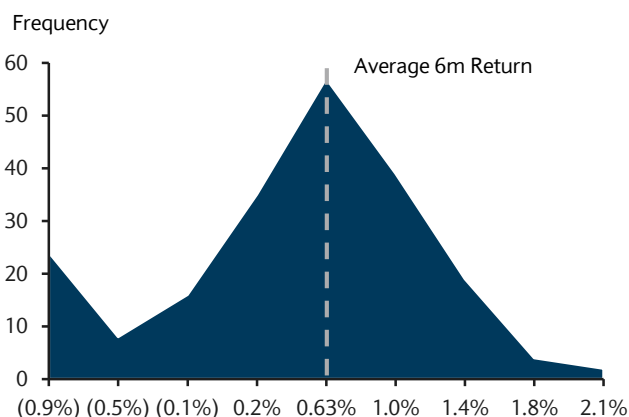
During Steady-State Periods, There Is a Clear Relationship between Spreads and Returns



Source: Moody's, Barclay's Research

FIGURE 15

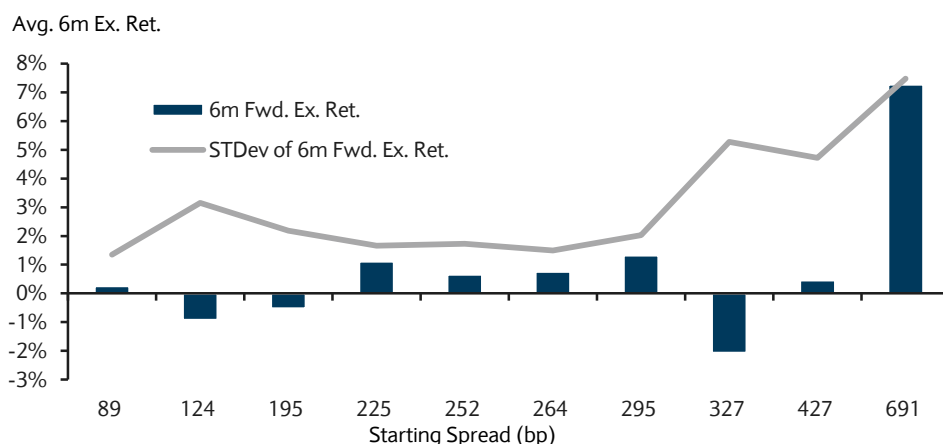
For a Given Starting Spread, Returns Look Mostly Normal (with a Small Negative Skew) during Steady-State Periods



Note: Distribution of estimated returns for starting spreads <100bp. Source: Moody's, Barclays Research

FIGURE 16

The Relationship between Spreads and Returns Is Much Less Orderly in Transitional States

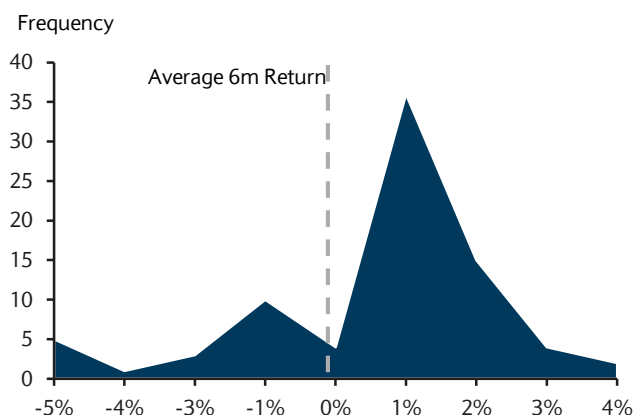


Source: Moody's, Barclays Research

- When spreads have been in middle third (between 215 and 285bp), they have widened on average, but usually not enough to offset all the returns from carry. As a result, the average estimated six-month return has been about 90bp. At the same time, the occurrences of large gains have been balanced fairly evenly against the number of large losses.
- When spreads have been in the widest third (wider than 285bp), they have usually tightened, generating an average estimated six-month return of more than 200bp. They have also had higher-than-normal probabilities of large gains or tightening events.

FIGURE 17

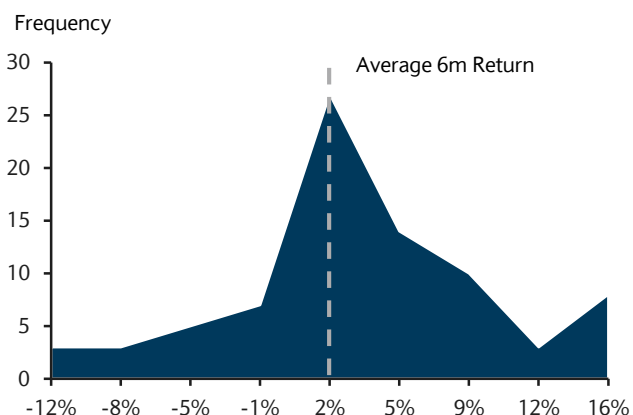
During Transitional States with Tight Spreads (<215bp), BBB Returns Have a Negative Skew . . .



Source: Barclays Research

FIGURE 18

. . . But There Is a Positive Skew during Transitional States with Wide Spreads (>285bp)



Source: Barclays Research

Putting It All Together

Our macro framework uses the following steps:

1. Form a view about the macro state using the macro indicators, modified for any qualitative considerations about whether they should remain relevant.
2. Use that view, plus valuations, to select the most appropriate distribution of returns.
3. Get the central estimate for returns, and use the distribution shape to calibrate the chances of a loss.

Using this framework, we believe that both preconditions for a transitional state – Fed and bank lending standard tightening – are being met; however, jobless claims, the output gap, and the qualitative conditions do not seem to be sufficient to signal the end of the steady state, despite the aging cycle. This suggests a normal distribution of returns, and with BBB valuations currently at 137bp, expected return is near carry (or approximately 72bp), with a 72% probability of positive excess returns.

Conceptually, we can extend the idea of returns near carry from BBBs to the rest of the index. Given that the index is trading at 109bp, the equivalent six-month excess return for the Bloomberg Barclays US Corporate Index would be 57bp.

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