INSIGHTS FROM BLACKROCK SYSTEMATIC ACTIVE EQUITY

Seeing beyond the ordinary

New perspectives on macro investing
Introduction

Techniques aiming to deliver excess returns have evolved significantly, and over the course of the last decade, BlackRock’s Systematic Active Equity (SAE) team has sought to capitalize on the changing landscape. Much of the focus has been on identifying differentiated alpha insights from non-obvious relationships uncovered via machine learning techniques in combination with novel sources of alternative data. While these techniques have become popular among quantitative equity investors, they are often beyond the reach of typical macro investors, those focused on the broad economic and geopolitical backdrop. These alternative tools only increase in importance during unusual times, such as the coronavirus crisis, allowing quicker analysis of a faster-changing investment backdrop.

Top-down and bottom-up

Because BlackRock SAE has already built the technology infrastructure needed to process massive amounts of data to produce investment insights for individual securities, we are able to use this approach to produce differentiated insights within the macro space as well. At its core, this approach is intuition grounded in economic fundamentals, supplemented by novel techniques and data sources, implemented in a systematic, unbiased fashion.

Using a rigorous research process, we seek to generate uncorrelated investment ideas that offer a strategic advantage in timing important sources of asset price returns that are impacted by broad economic trends. Ultimately, BlackRock SAE is able to marry security-level bottom-up insights with macro-level top-down views in order to inform our positions on major drivers of returns, such as country, industry and style factors.

We outline four important topics that are central to macro investing to illustrate the SAE approach. Each of these help form our differentiated approach to systematic macro investing:

1. Uncovering different macro regimes
2. Assessing monetary policy sentiment
3. Measuring macroeconomic uncertainty
4. Using alternative data for macro research and idea generation
1 Uncovering macro regimes

Understanding macroeconomic regimes is critical to any active investment strategy. Quantitative investors typically look for strategies that have consistent performance over long periods of history, but don’t react quickly to changes in the macroeconomic environment. One of the important aspects of SAE’s macro focus is to help provide dynamic strategy allocation that accounts for different market conditions. We do so by borrowing techniques from the machine-learning community and literature to take a different approach for the identification of macroeconomic regimes. Traditional methods typically require a number of assumptions on both the variables that define a regime (e.g., PMI, GDP growth, inflation), as well as the specific structure of regimes (e.g., expansion vs. contraction; risk-on vs. risk-off).

The SAE approach relaxes the constraints along both dimensions. First, rather than restricting our model to a small number of indicators, we use dozens of variables representing several categories, including: headline economic indicators, leading economic indicators, investor and business surveys, economic forecasts, inflation, consumer sentiment, and market return series across different asset classes. Rather than forcing the current macro environment into a fixed definition of regimes, we let a full library of features define the regime on any given day.

Second, our regime measure is continuous. The state variables for each day are compared to the full history to identify the most similar past environments, agnostic to pre-defined categories.

Finally, forecasting transitions into different economic environments is a long-standing challenge in the macro investment community. Our approach uses a non-linear model, clustering time periods in an unsupervised way — reducing the reliance on the recent past to inform today’s environment, and allowing the model to make timely shifts, more commensurate with regime changes. The illustrations below compare the traditional, static approach to regime identification with our broad and dynamic lens.

**The traditional regime approach**

**The SAE approach**

A continuous spectrum of regimes

Source: BlackRock SAE, as of August 2020. The chart demonstrates periods of macroeconomic “similarity,” based on a large corpus of economic indicators. Darker periods are more similar to each other. For example, this shows 2019 to be most similar, to the last cycle period of 2005-2007.
Assessing monetary policy sentiment

Traditional measures of monetary policy forecasting have relied on well-behaved inflation targeting, such as Taylor Rule-based decision making. With interest rates pinned to the lower bound for a decade and inflation remaining benign throughout the current business cycle, central banks have turned to more unconventional tools. As a result, sentiment around monetary policy has become a key driver of asset returns.

To better capture sentiment around the monetary policy cycle, we have used natural language processing techniques on large corpuses of broker reports, news, publications and speeches by monetary policy committee members to attribute sentiment around future monetary policy decisions. The trickiest aspect of this exercise is filtering tens of thousands of documents down to those that are relevant to central bank behavior and specifically to individual countries’ policies. We use the same techniques that power machine translation in tools such as Google Translate. Machine translation tools learn new languages by matching words with similar context to languages it already knows. We do the same here by teaching the algorithm to recognize sentences that are related specifically to monetary policy, as opposed to other economic factors, and filter out only those sentences.

As such, we are able to produce a sentiment measure around monetary policy that complements more classic measures with greater dynamism. The examples on the following page show how traditional methods missed some of the nuances that our techniques were able to exploit.
In 2012, new prime minister Shinzo Abe announced an economic growth program that would engage in unprecedented monetary policy via quantitative easing and bond buying. As the output gap turned positive and rates remained low, a Taylor Rule–implied rate suggested higher rates and a strong yen. This missed the impact of Abenomics, which we captured via text-based sentiment, forecasting approximately a 50% depreciation of JPY vs. USD over the period.

With positive growth and nearly full employment, the Taylor Rule implied normalized rates in the U.S. starting in 2011. This failed to capture the impact that multiple bond-buying programs had on keeping rates depressed. Policy sentiment showed much more dynamism over the period, suggesting a weaker dollar in the first part of the decade, and a stronger dollar as the programs roll off the Fed’s balance sheet and a rate-normalization cycle begins.

Source: BlackRock SAE as of October 31, 2019. Past performance is no guarantee of current or future results.
Measuring macroeconomic uncertainty

Uncertainty about the macroeconomic environment is traditionally hard to measure simply because macroeconomic series are released at low frequency (e.g., the quarterly GDP prints). At the same time, the behavior of companies and policymakers alike is deeply affected by macroeconomic uncertainty, with the former typically delaying investments and the latter loosening policy in uncertain environments.

The use of financial market proxies such as equity implied volatility indices (e.g., VIX and its non-U.S. equivalents) tend to be suboptimal, as they are coincident with, rather than lead, the performance of the underlying equity markets.

SAE has developed innovative tools for natural language processing that have typically been applied to text and transcripts associated with specific companies. Measuring macroeconomic uncertainty is possible using similar techniques augmented with adjustments that allow us to isolate information pertinent to countries rather than companies and appropriately design text queries. These techniques can be applied to different text corpuses, such as news or broker reports.

The investment insights offered by our unique measures of macroeconomic uncertainty tend to be very different from the traditional measures of financial market volatility. Three recent examples illustrate these divergences, and demonstrate how SAE uses differentiated insights to understand risk and tune portfolio exposures.

Improving measures of macroeconomic uncertainty
Seeking to capture what the broad indexes miss

The chart shows activity around the Brexit referendum in June 2016. The FTSE equity implied volatility only surged approaching the event and collapsed immediately thereafter. In contrast, the SAE measure of UK macroeconomic uncertainty shifted up before the event and, given the referendum outcome, kept climbing, reflecting the increased uncertainty of a UK exit and its potential impact on British companies’ investment dynamics.

Source: Bloomberg and BlackRock SAE as of July 31, 2016. Past performance is no guarantee of current or future results.
This example illustrates activity around the U.S. election in November 2016. Similar to the Brexit case, the VIX spiked around the event, whereas the SAE measure of U.S. macroeconomic uncertainty further increased after the election to reflect a heightened lack of clarity about government policies.

This panel compares macroeconomic uncertainty between the U.S. and the Euro area. While financial market variables such as VIX and VSTOXX are highly correlated and, therefore, not very informative for cross-sectional implications, the SAE measures show interesting dynamics in the second half of 2018. Specifically, we found Europe gradually becoming a riskier economy, reflecting a number of geopolitical risks in the region.

Source: Bloomberg and BlackRock SAE as of December 31, 2016. Past performance is no guarantee of current or future results.

Source: Bloomberg and BlackRock SAE as of October 31, 2018. Past performance is no guarantee of current or future results.
Using alternative data to form differentiated macro views

SAE has broadened the search for alternative data sources, not only to pinpoint more granular and differentiated views on individual companies, but to improve our understanding of the macroeconomic environment. We are often able to capture more timely and granular views on macroeconomic conditions by using data that has a direct link to the broader economy, such as to track consumer sentiment, government contracts to reflect government spending, or maritime shipment counts to capture trade activity. The example below offers an illustration: SAE takes advantage of the basic fact that many companies outsource international shipping to logistics companies. By aggregating shipping information about goods collected before shipments are made, we can obtain an early, detailed look at what trade relationships across countries look like. In some cases, especially in some emerging markets where official information is unreliable, unavailable, or not as comprehensive as data we receive from developed market governments, data sources like these can increase our confidence in our macro views.

The following chart depicts the year-on-year growth of shipments, from China to the rest of the world, as political rhetoric around a trade war with the U.S. intensified. The data show that, by the beginning of 2017, in anticipation of future tariffs, shipments out of China had already begun to flatten. By 2017, growth had become negative. Finally, in mid-2018, when the outlook for resolution became more positive, the number of shipments again began to recover, though growth had clearly slowed.

In conjunction with many other alternative and traditional types of data, we use insights like shipment instructions to generate a comprehensive forecast of economic growth that captures many aspects of the economy, and do so in a way that gives us alpha views across countries and regions.
An early look at trade relationships
Global shipments from China

Source: BlackRock SAE as of October 31, 2018.

A new take on macroeconomic insights

BlackRock’s SAE team is known for using novel techniques and alternative data sources in systematic, unbiased stock selection. But markets are driven by more than idiosyncratic risk in individual stocks. Understanding the macro environment is essential, and getting those bets right can provide significant diversification benefits to the alpha we harvest from individual securities. Recognizing the opportunity available in timing large factors, such as country, industry, and style — we’ve been able to take advantage of our lead in developing large data and fast computation capabilities, to project alpha views onto the macroeconomic market.

We have developed unique ways to characterize macroeconomic regimes and quantify uncertainty. We have been able to systematically understand nuanced policy behavior to complement traditional price-based views. And we have applied alternative data to give an early read on economic growth across countries. While SAE has developed a track record of innovation in this area, with just a few examples provided here, we are constantly seeking new sources of alpha at both the security selection and macro level. Our goal is to deliver uncorrelated, differentiated insights at all levels of the market, from identifying granular company alpha to forecasting the global economic outlook.
About BlackRock Active Equities

BlackRock Active Equities offers clients an opportunity to seek above-market returns in pursuit of their individual goals. Our active equity solutions are built upon a legacy of innovation and enduring commitment to risk management. Expertise across systematic and fundamental disciplines offers clients choice — and the potential to access differentiated sources of investment return.

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