Dove in the deep end

Using text analysis of central banks chatter to trade FX   14 Jul 2015

Central bank communications move markets. When central banks use forward guidance, their words influence expectations around future monetary policy and it becomes key to quantify the meaning of those words. To measure the sentiment of central bank communications in a quantitative and unbiased way, we use Prattle Central Bank Sentiment Indices to study this market impact. Prattle uses proprietary algorithms to apply natural language processing to central bank communications to construct objective "mood" scores.

In this paper, we seek to understand the relationship between financial markets, economic sentiment and the "mood" of central bank communications. Using Prattle's data, we construct Prattle Derivative Indices (PDI) which measure the short term smoothed trend in central bank "mood". We use a mixture of PDI and moves in rate differentials to create a G10 FX trading model, which has risk adjusted returns of 1.16 and annualised returns of 4.5% since 2002, on an unleveraged basis. By contrast, a model which uses only rate differentials to trade FX has much lower risk adjusted returns (of 0.72) over the same period.

We conduct event studies to illustrate how our model outperformed during some key shifts in Fed policy. Lastly, we discuss how Prattle's data can be used to quantify the change of leadership at central banks, by examining gthe change in "mood" at the ECB, when Draghi became ECB president.

This paper has been kindly sponsored by Prattle - "Tradable Data from Market Chatter". A full version of this paper is available for free on request.

Introduction

Interpreting central bank communications is key for anyone trading macro assets, given they can have a significant impact on markets. However, this is not simply a question of examining rates decisions. Central banks can also give clues about future monetary policy through press conferences, press releases, meeting minutes and so on. Sometimes, rates might remain unchanged, yet markets can move because of a shift in the language used by a central bank.

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Please contact saeed@thalesians.com if you are interested in learning about our quant consulting services and more about our research. We can implement every model for clients (including the models described here). Full versions of this paper are available to full subscribers. For more details about the Thalesians please visit our website *http://www.thalesians.com* and

Figure 1: US 10Y yields rose in taper time

Source: Thalesians, Bloomberg

Figure 2: Prattle trading strategies
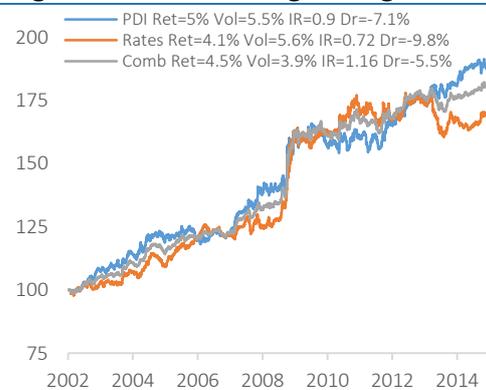
Source: Thalesians, Prattle, Bloomberg

This is an abridged version of the full paper. Contact me for a full version (for free!)

About Prattle

Why?

When the Fed first started to talk, it didn't make much sense–on purpose. Former Fed chairman Alan Greenspan was a master of this intentional unintelligibility, and his rhetoric, known as "Fedspeak," was specifically designed to shroud the central bank's moves in mystery.

In this information starved era, analysts–"Fed watchers"–were desperate, looking to the most innocuous details to support their monetary policy projections. Strange as it may sound, even the width of Greenspan's briefcase was considered a source of insight by Fed watchers. But this opacity would not last. In the twilight of his tenure, Greenspan began favoring clarity over convolution, and his successors have continued this trend towards transparency.

Unfortunately, Fed watching hasn't progressed nearly as much as the Fed has. When the Fed talks now, analysts still look to the minor details–rather than major themes–as the crux of their qualitative conclusions.

Prattle was born out of frustration with these practices. Rather than hinging our assessments on a few words or a phrases, Prattle evaluates the entire scope of central bank communications using an expertly trained, domain-specific language interpreting program. Built to treat the Fed's words like data, this methodology produces the objective, comprehensive and quantitative assessments of central bank communications that the Fed watching world has been waiting for.

Prattle Central Bank Sentiment Index

From the ECB to the Central Bank of Taiwan, Prattle provides trade signals on the sentiment of the biggest central banks around the globe. These versatile and user-friendly signals are essential for financial professionals with international interests, and, used together, they construct a comprehensive picture of how the words of the most powerful institutions in finance move markets.

Prattle Team

Evan A. Schnidman Ph.D. – Founder and Chief Executive Officer

Evan is a noted scholar with publications in political economy, macroeconomics and finance. While completing his Ph.D. at Harvard University he held several faculty positions teaching economics and public policy. At that time Evan also pursued a career in political and economic risk consulting. Upon completion of his doctoral degree, he started Prattle and began work on his forthcoming book "How the Fed Moves Markets" (co-authored with William MacMillan) due out in December, 2015.

William D. MacMillan Ph.D. – Co-Founder and Chief Technology Officer

Bill is a renowned scholar in applied statistics and government regulatory policy. His work has been published in disciplines ranging from statistics to political economy and public

health. After completing his Ph.D. at University of Michigan he worked as a bio-statistician, fraud analyst and data scientists for several Fortune 500 companies. Bill joined Prattle in 2014 and has been integral in developing new data and systems.

About Saeed Amen and the Thalesians

The Thalesians are a think tank of dedicated professionals with an interest in quantitative finance, economics, mathematics, physics and computer science, not necessarily in that order.

Saeed Amen is a Managing Director and a Co-founder at Thalesians Ltd.

Saeed is currently publishing ground-breaking quant strategy notes at Thalesians Ltd., drawing upon nearly a decade of experience both creating and running systematic trading models successfully with real cash. Independently, he is also a systematic FX trader, running a proprietary trading book trading liquid G10 FX. He is the author of **[Trading Thalesians - What the ancient world can teach us about trading today (Palgrave Macmillan).](#)**

Saeed started his career at Lehman Brothers. He worked on the FX desk developing systematic trading models for both G10 and EM and was part of the team who developed the MarQCuS suite of models. He was also responsible for a systematic FX prop trading book and conducted research around high frequency FX including economic events. Later he was at Nomura as an Executive Director in Quantitative Strategy, also in FX, developing their model infrastructure and also running systematic FX prop risk. He graduated from Imperial College with a first class honours master's degree in Mathematics and Computer Science.

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