NO LONGER HUMMING THE SAME TUNE:

THE IMPACT OF WEAKENING GLOBAL MONETARY POLICY COORDINATION

NATHAN STRUEMPH
SEPTEMBER 2014

EXECUTIVE SUMMARY

In this piece, we cast a discerning eye towards the increasing policy divergence at major developed market central banks. To-date, monetary policy has been broadly accommodative in response to the financial crisis and subsequent slow recovery. However, divergent growth and inflation prospects have begun to fray this unity. Once at the epicenter of the financial crisis, the United States and United Kingdom are beginning to show signs of improving economic fundamentals. The same cannot be said of Japan and the Euro-zone, where the scars of the crisis are being compounded by poor demographics and less dynamic business environments to leave potential growth anemic.

What does this mean to an investor? Active investment management in globally focused mandates will be important to navigating the developing economic and monetary policy divergence.

SETTING THE STAGE: MONETARY POLICY RESPONSE TO THE CRISIS & MUTED RECOVERY

- In response to the financial crisis, central banks embarked on historically accommodative monetary policy.
- As the market's assessment of potential growth and inflation has evolved, 10-year rates for the United States and United Kingdom have risen significantly above the Euro-zone and Japan.
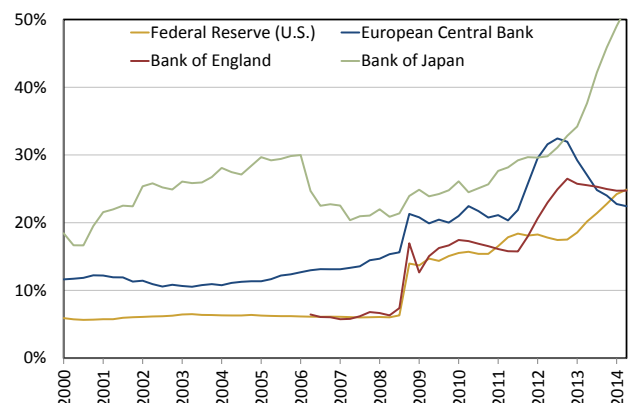
As a result of the financial crisis and subsequent lackluster economic recovery, investors have witnessed record low yields and an unprecedented convergence of central bank policy in developed markets (Exhibit 1). Along with ultra-low policy rates, the four major developed market central banks have all embarked on sizable balance sheet growth (Exhibit 2). This has prominently included quantitative easing — i.e., unsterilized purchases of government securities and other assets — by the Federal Reserve, Bank of England, and Bank of Japan. To-date, the European Central Bank has used long-term repo operations due to the challenge of its multiple country constituency and treaty restrictions.

EXHIBIT 1: CENTRAL BANKS SLASHED RATES IN RESPONSE TO CRISIS
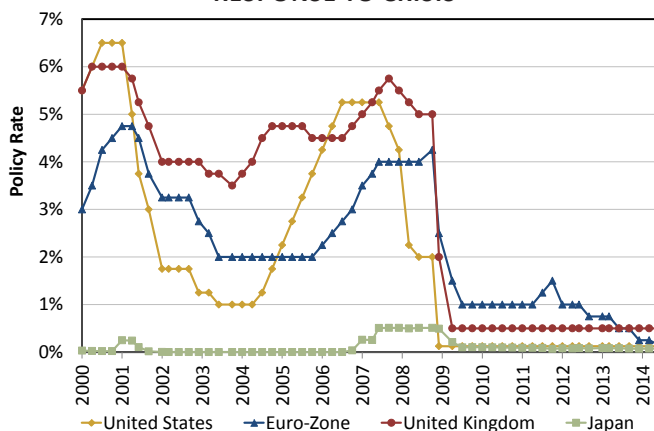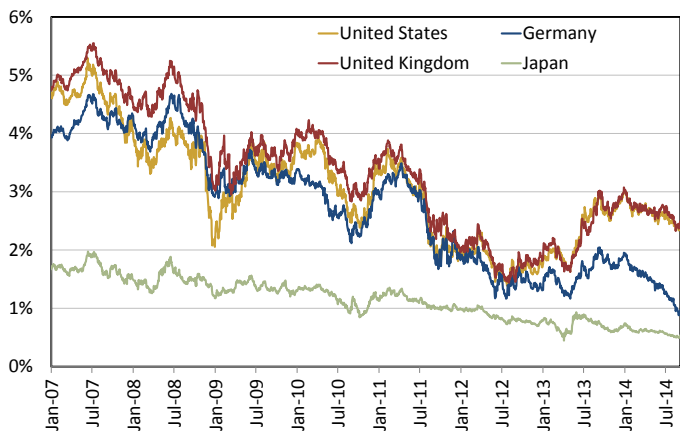

Source: Bloomberg

### EXHIBIT 2: CENTRAL BANK ASSETS TO GDP

The combination of activist central banks and poor economic fundamentals in the aftermath of a balance sheet recession led to a sustained period of not only low short-term rates, but also record, or near-record, low 10-year rates (Exhibit 3). As time has passed, though, a divergence in economic expectations and higher realized inflation (Exhibit 4) has forced investors to have a more central bank specific view on the continuation of accommodative policy.

EXHIBIT 3: 10Y RATES DIVERGING

Source: Bloomberg

EXHIBIT 4: YEAR-OVER-YEAR CORE INFLATION
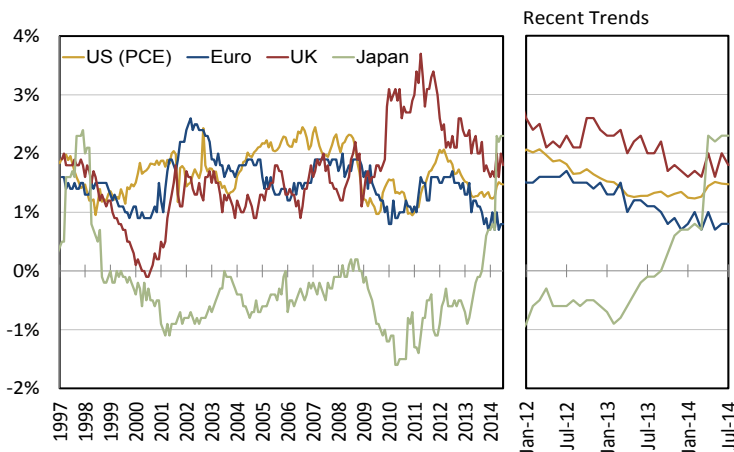
Note: Japanese inflation significantly skewed by sales tax hike from 5% to 8% in April 2014 as well as yen depreciation in 2013.

RISING CACOPHONY: REASONS FOR DIVERGENCE IN MONETARY POLICY

- Growth and inflation expectations indicate the United States and United Kingdom should be hiking rates sooner and at a faster pace than priced into the market.
- In contrast, further balance sheet easing is called for in the Euro-zone.
- The path of short-term rates priced into futures indicates central banks have been successful in convincing the market rate hikes will be delayed and gradual.

There is growing evidence that the current environment of highly correlated central bank policy could be challenged in the coming year. While the policy stance of developed market central banks remains relatively similar today (Exhibit 5), the FOMC has been tapering its quantitative easing program since late-2013 and the Bank of England has warned however inconsistent its message, that interest rates may rise earlier than expected. This is certainly not the case for the European Central Bank and Bank of Japan, who are still wrestling with sub-par growth and disinflation/deflation concerns. The European Central Bank continues to cut interest rates with an aim towards weakening the Euro. Further, the European Central Bank is aiming to start its own limited version of quantitative easing via the purchase of asset-backed securities in the near future to help unclog the policy transmission mechanism. The Bank of Japan has had far fewer difficulties with launching meaningful quantitative easing. While expansion of its current purchase program (announced April 2013, targeted at achieving 2% inflation) is not currently being contemplated, the sheer scale of the program, doubling base money supply over two years, is larger than anything put in place before it.

THE IMPACT OF WEAKENING GLOBAL MONETARY POLICY COORDINATION

Summit *Strategies Group*

EXHIBIT 5: WHERE IS CENTRAL BANK POLICY TODAY?

	Federal Reserve	European Central Bank	Bank of England	Bank of Japan
Policy Rate	0.00% - 0.25% (Stable)	0.05% (Recently Reduced)	0.50% (Stable)	0.00% - 0.10% (Stable)
Quantative Easing	Net $15B/Month* (Declining)	In Planning Stages	Net $0B/Month (Stable)	Net $70B/Month (Stable)
Other Balance Sheet Expansion	None Currently	LTROs	None Currently	ETF/REIT Purchases
Change In Balance Sheet % GDP Since 1Q2007	18%	10%	19%	26%
Policy Guidance	Accommodative	Accommodative	Mixed	Accommodative
Trend in Guidance	Tighter	Looser	Mixed	Unchanged

*Beginning October 2014

The rationale for the divergence in monetary policy is rooted in the evolution of the underlying economic fundamentals in each respective central bank's constituent economy. As a tool to facilitate discussion, we use a variant of the Taylor Rule, a monetary policy rule, [see Appendix for description] populated with actual and Bloomberg consensus data to roughly estimate the projected appropriate monetary policy position. We then compare the Taylor Rule path with the current policy position, the Bloomberg economist consensus path, and the futures implied path. There is a lot going on in these comparison charts, so let's walk through an example (Exhibit 6).

EXHIBIT 6: UNDERSTANDING THE TAYLOR RULE CHARTS

Federal Reserve Fed Funds Rate

—US (Actual + Economist Forecast)   – – Futures Implied   ⋯⋯US (Taylor Rule)
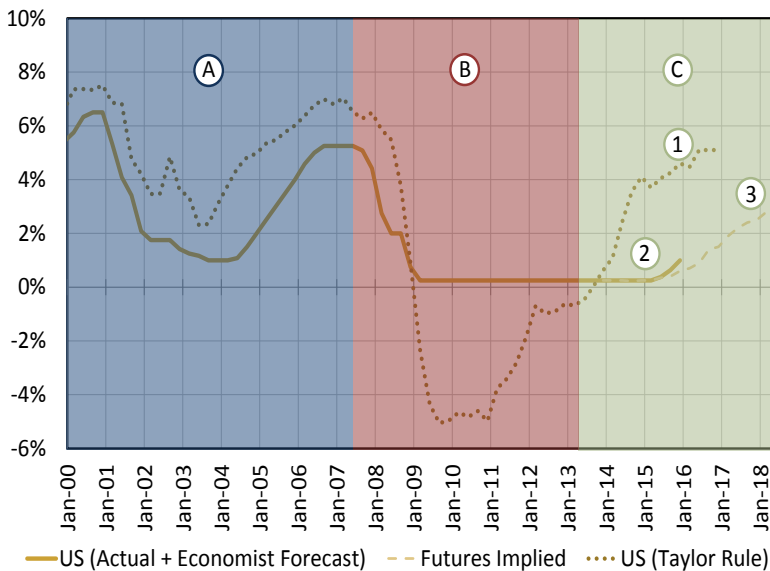
Source: Bloomberg, Internal Calculations

Looking at the chart for the United States, **(A)** we find running up to the financial crisis the fed funds rate was serially below what the Taylor Rule implied would have been appropriate policy. **(B)** As the crisis struck and the Great Recession took hold, the Taylor Rule dove deeply into negative territory. In response, the FOMC slashed the fed funds rate down to a 0%-0.25% range and engaged in aggressive quantitative easing.

(C) Fast forwarding to today, a rapidly improving unemployment rate and some firming in inflation have caused the Taylor Rule implied fed funds rate to rise well above the current policy rate. This has spurred discussion both inside and outside of the Federal Reserve on the need to potentially hike rates sooner than the FOMC would like and on the validity of the unemployment rate. Important to note in the forecast section, is the difference between **(1)** the Taylor Rule implied rate (using Bloomberg consensus forecasts of unemployment and inflation), the **(2)** Bloomberg consensus fed funds rate (using many of the same economists), and **(3)** the market implied rate from eurodollar futures. The gap between the Taylor Rule and the market implied rate demonstrates the FOMC's success in communicating the delayed start to and slow ramp up in the fed funds rate.

> **One objective of the ABS purchases, covered bond purchases, and LTROs is to "significantly steer the size of [the ECB's] balance sheet towards the dimensions it used to have at the beginning of 2012."**
>
> **Mario Draghi**
>
> **European Central Bank President**
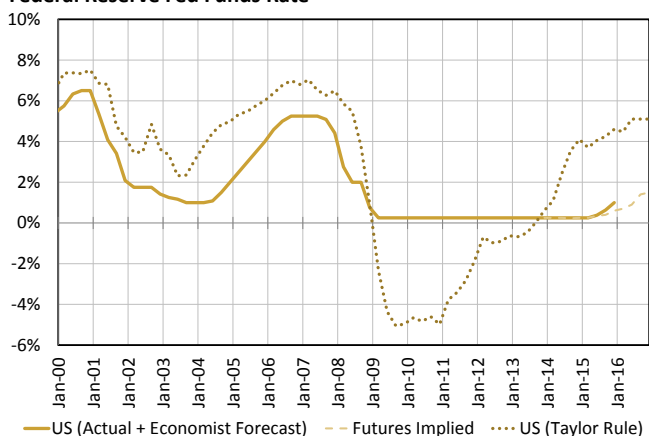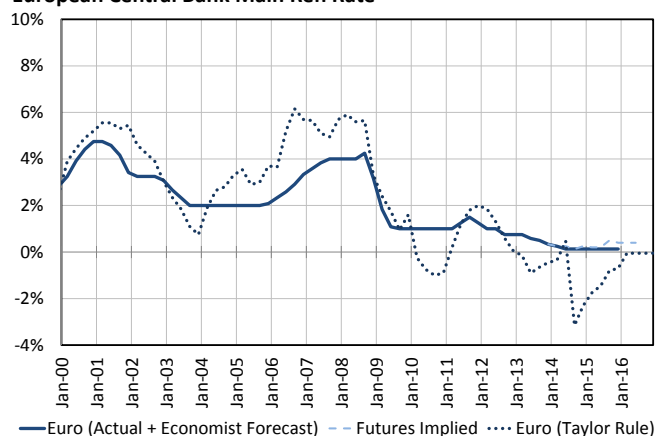
Turning back to the comparison, what can be gathered from the following charts (Exhibit 7) is (1) economic fundamentals would suggest the Bank of England and Federal Reserve should begin hiking short-term rates soon (Taylor Rule line above current policy line), (2) the Bank of England and Federal Reserve have been successful in convincing markets that rates will remain low even as their respective economies recover (economist consensus path and market implied path below Taylor Rule line), and (3) the European Central Bank is in need of further balance sheet easing to support the Euro-zone (Taylor Rule line well below a zero policy rate).

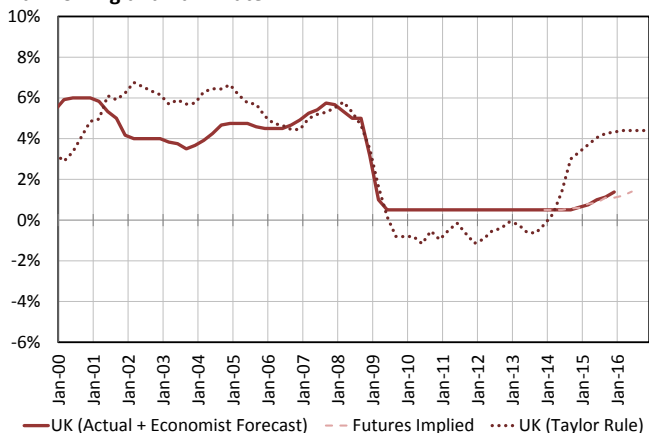**EXHIBIT 7: COMPARING MONETARY POLICY RATE FORECASTS**
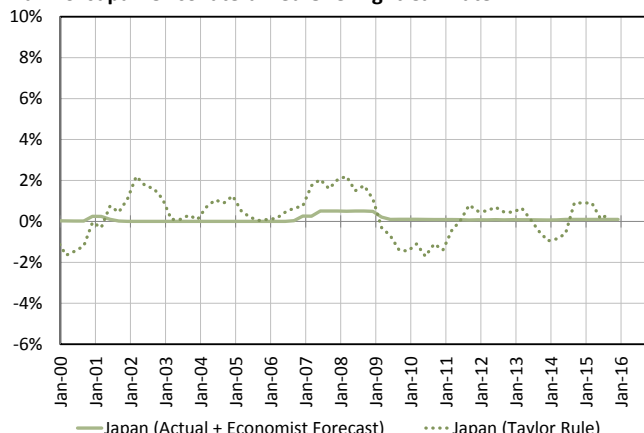
Federal Reserve Fed Funds Rate

— US (Actual + Economist Forecast)   – – Futures Implied   ···· US (Taylor Rule)

European Central Bank Main Refi Rate

— Euro (Actual + Economist Forecast)   – – Futures Implied   ···· Euro (Taylor Rule)

Bank of England Bank Rate

— UK (Actual + Economist Forecast)   – – Futures Implied   ···· UK (Taylor Rule)

Bank of Japan Uncollateralized Overnight Call Rate

— Japan (Actual + Economist Forecast)   ···· Japan (Taylor Rule)

Source: Bloomberg, Internal Calculations

WHERE'S THE CHORUS?: STRUCTURAL DIFFERENCES ACROSS DEVELOPED MARKETS

- The United States and United Kingdom are better positioned demographically and structurally for growth than Europe, especially Germany, and Japan.

While it is clear from the Taylor Rule charts that the United States and United Kingdom are expected to recover while the Euro-zone and Japan languish, the underlying cause deserves discussion as well. One critical component is the differences in demographic trends (Exhibits 8 and 9). The United Kingdom and United States, especially, are better positioned demographically for economic growth now and in the future. On the other hand, the Euro-zone faces the challenge of a notably older population and its largest economy, Germany, is headed for a demographic crisis. Japan has already hit a major demographic wall that is sapping growth. With a population that remains highly adverse to immigration as a solution to Japan's labor shortage, this problem will only grow with time.

EXHIBIT 8: DEMOGRAPHIC ISSUES - 2014

Demographics: U.S. 2014

Population: 318,892,103

Demographics: U.K. 2014

Population: 63,742,977

Demographics: Euro-zone 2014

Population: 336,924,329

Demographics: Germany 2014

Population: 80,996,685

Demographics: Japan 2014

Population: 127,103,388
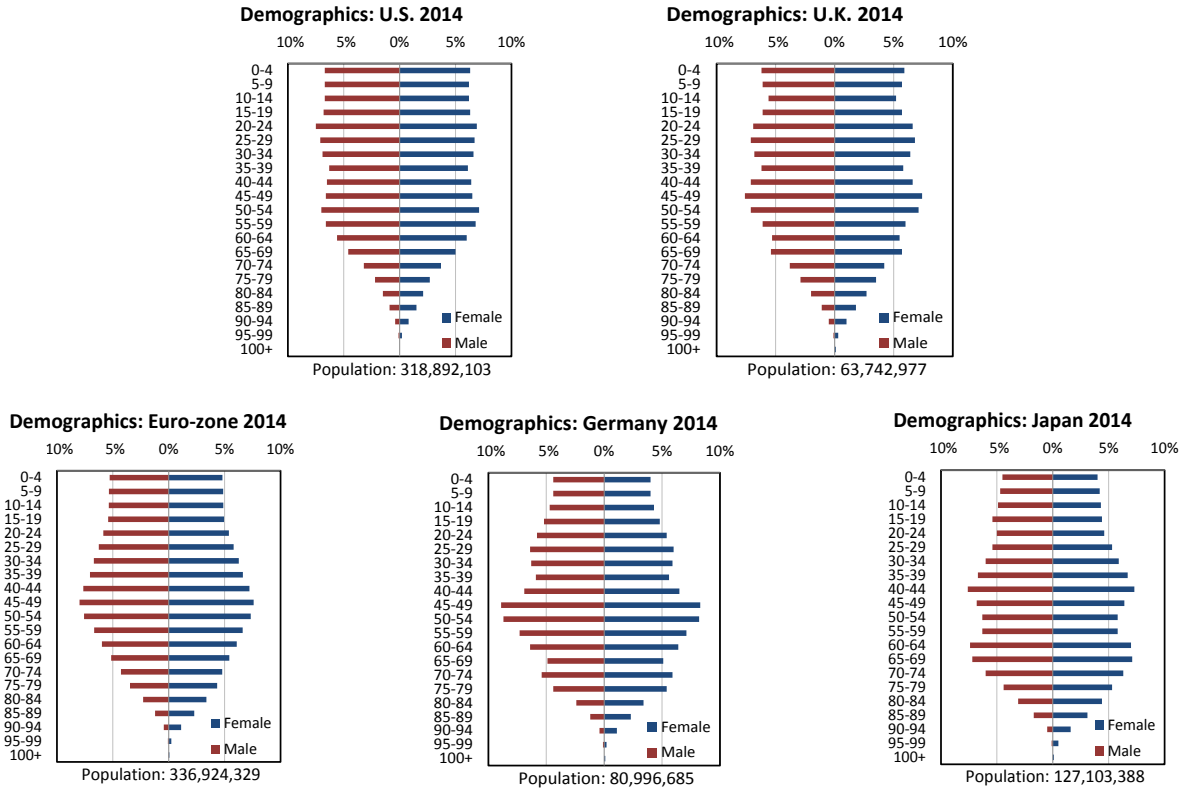
EXHIBIT 9: DEMOGRAPHIC ISSUES - 2030
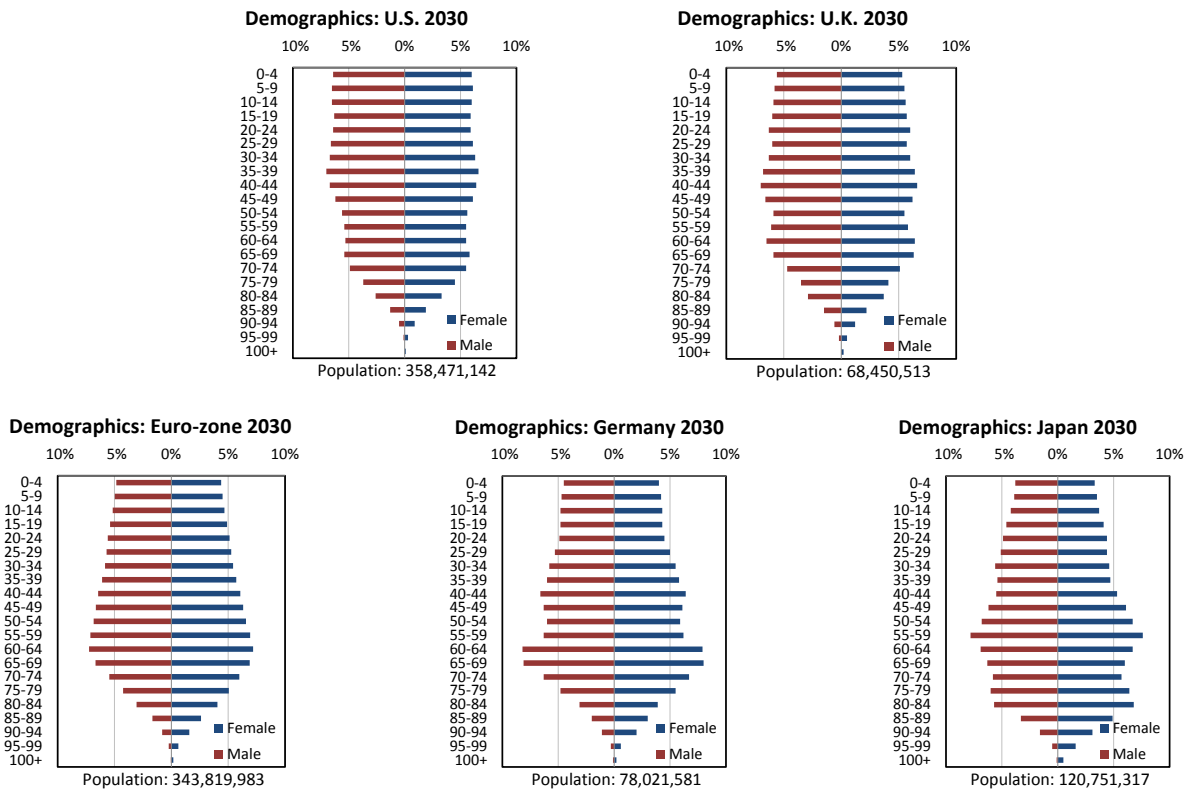
Demographics: U.S. 2030

Population: 358,471,142

Demographics: U.K. 2030

Population: 68,450,513

Demographics: Euro-zone 2030

Population: 343,819,983

Demographics: Germany 2030

Population: 78,021,581

Demographics: Japan 2030

Population: 120,751,317

Source: U.S. Census

Better demographics are not the only reason the United States and United Kingdom are expected to outperform the Euro-zone and Japan economically. The United States and United Kingdom are also notably easier to conduct business in with better access to credit and better protections for investors (Exhibit 10). The European Central Bank has noted the need for structural and fiscal reforms across Europe to increase competitiveness even as it engages in increasingly accommodative monetary policy.

EXHIBIT 10: EASE OF DOING BUSINESS COUNTRY RANKINGS

Country	Ease of Doing Business Rank	Starting a Business	Dealing with Construction Permits	Getting Credit	Protecting Investors
United States	4	20	34	3	6
United Kingdom	10	28	27	1	10
Germany	21	111	12	28	98
Japan	27	120	91	28	16
France	38	41	92	55	80
Spain	52	142	98	55	98
Italy	65	90	112	109	52

Source: World Bank

Number = Country Ranking, lower is better

EXPLOITING THE DISCORD: ACTIVE MANAGEMENT CRITICAL TO INTERNATIONAL FIXED INCOME

- Uncertainty around central bank policy will heighten the importance of active management in globally focused mandates.

The increased degree of uncertainty surrounding both short- and long-term central bank policy discussed above will make active management in globally focused fixed income mandates critical. Managers will need to weigh (1) rumblings that both the Bank of England and Federal Reserve may need to hike rates earlier and faster than market expectations and (2) the push for greater accommodation by the European Central Bank among other risk factors as they set their allocations. Further, emerging markets, as shown by their reaction to the taper tantrum, are not immune to the policy decisions of developed market central banks. These sources of uncertainty will only compound the importance of active management and manager selection in globally focused fixed income mandates (Exhibit 11).

EXHIBIT 11: EXCESS RETURN DISPERSION WITHIN FIXED INCOME

Category	Average Median Excess Return (BPS)	25th Percentile - 75th Percentile
Core	32	154
Core Plus	63	263
High Yield	62	457
International	**90**	**609**
TIPS	16	128

History: 10 - 20 Years Depending On Data

Source: eVestment, Internal Calculations

CONCLUSION

The divergent outlook for growth and inflation in the United States and United Kingdom versus the Euro-zone and Japan has already led to a separation in long-term rates. As we inch closer and closer to lift-off for the Federal Reserve and Bank of England, central bank policy rates are expected to diverge as well, though not as fast as implied by inserting consensus economic expectations into a Taylor Rule. The divergence in rates is not expected to be a short-lived phenomenon and presents important investment ramifications for international fixed income as well as other globally focused mandates. With all the crosscurrents in developed market central bank policy, active management will be crucial to returns.

APPENDIX: INTRODUCTION TO THE TAYLOR RULE

The Taylor Rule is a monetary policy rule that dictates the appropriate nominal short-term (policy) rate based on a series of assumptions. It is named for John Taylor, who proposed its original iteration in 1993. The original formula follows:

$$i=r^*+\pi+ \theta_\pi (\pi-\pi^*)+\theta_q (q-q^*)$$

or:

- Nominal short-term (policy) rate (i) =
- equilibrium real rate (related to the potential economic growth rate) (r*) +
- current inflation rate (π) +
- inflation divergence weight (θ_π) *
- inflation divergence (Current inflation minus target inflation) ($\pi-\pi^*$)+
- GDP or unemployment divergence weight (θ_q) *
- (GDP output gap) or (unemployment rate – non-accelerating inflation rate of unemployment [NAIRU]) ($q-q^*$)

The purpose of the Rule is to tie monetary policy to deviations of inflation and economic growth from norms linked to the potential growth rate of the economy. For example: inflation above target would dictate raising the policy rate. Alternatively, unemployment higher than NAIRU would dictate lowering the policy rate. The classic version uses 2% for the equilibrium real rate and target inflation rate, and 0.5 for the inflation and GDP/employment factors. Target inflation and NAIRU are tied together as representative of the economy growing stably at potential growth (approximated by the equilibrium real rate).

The assumptions in the Taylor Rule as well as its usefulness are hotly debated topics, but the rule does help facilitate discussion by translating our observations on the divergence of economic outlooks into interest rate terms. As such, the values displayed in Exhibit 7 should not be looked at simply in absolute terms but also for directional trend.

For our projected Taylor Rules, we use Bloomberg consensus views on inflation and unemployment, and OECD or central bank views for the NAIRU (non-accelerating inflation rate of unemployment) and inflation target. Weights on the divergence in inflation or unemployment from target have been adjusted to approximate each central bank's reaction function.

ABOUT THE AUTHOR

Nathan Struemph

Nathan joined Summit's Traditional Manager Research group in June 2014 covering fixed income. Previously, he served as an Economist at Genworth Financial helping craft the economic and housing market outlook for the Mortgage Insurance unit. Before joining Genworth, Nathan served as a Financial Economist in the US Treasury's Office of Debt Management. While at the Treasury Department, Nathan handled research and issuance recommendations for the Treasury Inflation Protected Securities portfolio as well as day-to-day surveillance of the Agency MBS purchase program. Nathan has a BS in Economics from the University of Missouri and a Masters in Political Economy from Washington University in St. Louis.