

## **The Q Group Participant Perspective**

### 2015 Fall Seminar

The objective of the Participants' Perspective is to put forward a thoughtful impression of what the speaker said that has relevance to the average seminar participant and to encourage the reader to delve deeper into presentations and subjects they find interesting. The focus is on [1] practical significance to practitioners; [2] appropriateness and rigor of quantitative methods; and [3] novelty of results and techniques. Participants' Perspective serves several objectives, but is not a formal academic review. Our guidelines for writing the Perspectives include:

- Provide audience-level impressions, based on discussions and notes made during the presentation. These are not written from the author's perspective, but from that of the practitioner: how can this help to deepen my appreciation for the subtleties of my profession?
- The reviews fit into a framework that encompasses the perspectives of the Q-Group members: Importance, Investigation, Innovation, and Insights. This framework focuses on what the audience should expect from an interesting and well-delivered presentation.
- Brevity rules: we provide a quick review accessible to busy readers in one page. In today's busy world, we all need to zero in on important information and go past that which is less relevant.

2015 Fall Seminar Participants' Perspective is presented in alphabetical order by the name of each speaker and by session title on the Q website under 2015 Fall Seminar Review.

### **2015 Fall Seminar Participants' Perspective**

**Title:**               **INFLATION, REAL INTEREST RATES AND THE  
SHILLER P/E**

**Speaker:**           **Robert Arnott, Research Affiliates LLC**

**Importance:**       Why this matters:

Investors often look at unconditional valuation metrics such as the Shiller P/E to infer if the stock market is cheap or expensive. Arnott argues that the fair value of the Shiller P/E should be conditioned on the levels of inflation and real interest rates. When making asset

allocation decisions, the P/E relative to its adjusted level is a more appropriate metric.

**Investigation:** "Speaker analyzed XXX data to address the questions yyy, zzz, etc."

Arnott looked at Shiller P/E ratios (CAPE = cyclically adjusted P/E = current price divided by 10 year average real earnings) for the US and developed nonUS stock markets. He showed that historically the level of the P/E was related to the level of inflation and the level of real interest rates. He also showed that for investment horizons longer than a year, in sample, stock market returns were more highly correlated with the difference between the current P/E and the adjusted P/E than relative to the unconditional P/E.

**Innovation:** Are there new techniques of interest in the data or approach to the problem?

Arnott used a Gaussian model to fit a three dimensional surface to the Shiller P/E, inflation and real rate data. The first step was to create a 10 x 10 inflation versus real rate grid, and the second step was to fit the model by minimizing the weighted sum of squared errors between the fitted and observed P/Es.

**Insights:** 1-2-3, what are the three most important things the speaker offered?

1. The Shiller P/E, and by implication other valuation metrics should not be applied on an unconditional basis. Rather the fair P/E will depend on the level of inflation and real interest rates.
2. There is a sweet spot for P/E ratios that has modest levels of inflation and real interest rates. Higher or lower values were observed to result in lower P/Es.

**Audience rating:** 4.18

**Title:** **ASSESSING ASSET PRICING MODELS USING REVEALED PREFERENCES**

**Speaker:** **Jonathan Berk, Stanford University**

**Importance:** Why this matters:

This paper demonstrated that investors seem to use the CAPM when evaluating mutual fund manager performance, and by implication, they behave as if risk matters, and the CAPM is the proper asset pricing model. Importantly, adding the Fama-French factors to the CAPM did not increase the explanatory power of the model, suggesting that the FF factors are not priced risk factors.

**Investigation:** "Speaker analyzed XXX data to address the questions yyy, zzz, etc."

Berk looked at the relationship between mutual fund flows and alphas calculated as returns in excess of various asset pricing models to see which had the strongest relationship. The hypothesis is that fund alphas provide investors with new information that the manager has skill. In which case, positive alphas should result in flows into the fund, and negative alphas should result in withdrawals. From that perspective, the asset pricing model that is most similar to the one used by investors should produce alphas that most highly correlate with unexpected fund flows.

**Innovation:** Are there new techniques of interest in the data or approach to the problem?

Berk used unexpected fund flows as a technique to understand the asset pricing model used by investors. Hence the term "Revealed Preference". In addition, rather than using a narrow set of country, regional and style funds to model the behavior of each mutual fund, he mapped each fund onto the full set of Vanguard index funds.

**Insights:** 1-2-3, what are the three most important things the speaker offered?

1. A model that better explains the cross section of stock market returns is not necessarily a better asset pricing model. The model may be over fitted.
2. He investigated the CAPM, CAPM plus the Fama-French Factors, and models that do not include risk adjustments. The finding was that the CAPM using the CRSP index as the market portfolio produced alphas whose signs were most highly correlated with the

direction of unexpected fund flows. The differences between it and the other asset pricing models were highly statistically significantly significant. Importantly, the CAPM produced better results than the CAPM plus the Fama-French factors.

3. As part of his introduction of the topic, Berk described his work with van Binsbergen. The showed that fund managers did add value (the total dollar alpha before fees generated by mutual managers was positive), and the relative skill was highly predictable.

**Audience rating: 3.62**

**Title:** INVESTING IN A WORLD OF NEGATIVE RATES

**Speaker:** Vineer Bhansali, Managing Director, PIMCO

**Importance:** Why this matters:

Negative *nominal* bond yields are a conundrum of classical finance. Yet, in several developed markets, a significant proportion of the sovereign bonds are currently trading at negative nominal yields. This presentation argues that they are not anomalies, offers several explanations of negative yields, and discusses how bonds with negative yields might behave.

**Investigation:** "Speaker analyzed XXX data to address the questions yyy, zzz, etc."

Bhansali documented the existence and persistence of negative nominal interest rates for sovereign debt in several developed markets. In addition deposit rates in Switzerland are -75bps. He then went on to provide evidence to support each of the potential justifications for the negative rates.

**Innovation:** Are there new techniques of interest in the data or approach to the problem?

In addition to explaining why negative nominal interest rate exist and can persist, Bhansali developed an asset allocation framework where investors should sell insurance (earn a risk premium) when carry is working, and purchase insurance when the trend is negative. He simulated a model that was long markets when both carry and trend

were positive, and was short markets when both carry and trend were negative.

**Insights:** 1-2-3, what are the three most important things the speaker offered?

3. Explanations for negative yields:
  - Technical: Buying by sovereigns.  
Other investors face constraints or have preferred habitats.
  - Economic: Demographics – disproportionate buying by older investors. Disaster/deflation insurance premium.
4. Under rare disasters, each asset can be viewed as an insurance asset (return of your money) or an investment asset (return on your money). Portfolio construction is less about risk adjusted returns, and more about the appropriate mix of sales and purchases of disaster insurance.

**Audience rating: 3.84**

**Title:** **CROSS-SECTIONAL ASSET PRICING WITH INDIVIDUAL STOCKS: BETAS VERSUS CHARACTERISTICS**

**Speaker:** **Tarun Chordia, Emory University**

**Importance:** Why this matters:

Much quantitative work on equities is done through variants on the Fama/French analytic formulation of risk factors. Chordia and his co-authors investigate whether the cross-sectional of stock market returns are better explained by betas relative to the FF factors (which purport to measure priced risks) or by direct use of company characteristics.

**Investigation:** "Speaker analyzed XXX data to address the questions yyy, zzz, etc."

Chordia analyzed monthly data on 5000 stock price series and corporate data from 1963 through 2013 to determine which is more highly correlated with realized returns: multi-factor betas versus the Fama-French factors or company characteristics.

**Innovation:** Are there new techniques of interest in the data or approach to the problem?

Previous works have shown that beta calculations are less efficient and induce measurement error. Other authors have used aggregated characteristics to try to correct this shortcoming. Chordia, in contrast, directly uses individual company data.

By incorporating both betas and stock characteristics into the analysis, Chordia can calculate the percentage of variance explained by characteristics vs. factor betas.

**Insights:** 1-2-3, what are the three most important things the speaker offered?

1. The results show that characteristics strongly outperform betas versus the FF factors in explaining cross-sectional stock market returns.
2. Chordia recommends that analysts forget about factor betas and apply a methodology based on company characteristics.
3. From an implementation standpoint, Chordia's method would construct portfolios directly from company data; for example, simply buy small stocks. The alternative, beta-centric method would be to purchase stocks that have historically behaved like small stocks. Chordia would choose the former.

**Audience rating: 3.02**

**Title:** **TARGET DATE FUNDS: CHARACTERISTICS PERFORMANCE**

**Speaker:** **Edwin J. Elton and Martin Gruber, NYU**

**Importance:** Why this matters:

The evidence shows that many participants make sub-optimal choices in their 401k plans. Target date funds provide better options, yet are increasingly criticized. Elton/Gruber conclude that they are not as bad

as the popular press would have you believe, and provide significant advantage to many participants.

**Investigation:** "Speakers analyzed XXX data to address the questions yyy, zzz, etc."

Speakers gathered monthly holdings and expense data on 20-25 year horizon target date funds from 50 fund families utilizing 229 different share classes.

**Innovation:** Are there new techniques of interest in the data or approach to the problem?

Long term evaluations of target date funds can be confounded because the funds may experience systemic changes in portfolio composition. E/G address this problem by estimating fund betas from their portfolio components.

**Insights:** 1-2-3, what are the three most important things the speaker offered?

1. Given the use of lower cost share classes, the incremental cost of target date funds over a do it yourself variant is modest. There was no evidence of skill in the choice of funds inside of the target date funds. Deviations of the funds' asset mix from the glidepath detracted value.
2. The investor world is better off using a buy and hold strategy in the five major investment types, and still better off using index funds.
3. Investors suffer when the target fund sponsors restrict fund selection to funds in their own stable, the usual agency problem. The problem is compounded by target fund managers directing flows to newly established funds and inferior family funds. Index funds are often not included, suggesting that target funds tend to choose higher fee active funds.

**Audience rating: 3.59**

**Title:** **SYSTEMIC RISK AND THE MACROECONOMY**

**Speaker:** **Bryan Kelly, University of Chicago**

**Importance:** Why this matters:

The Financial Crisis of 2008-2009 highlighted the importance of being able to identify periods of higher than average systemic risk in the Financial Services sector. It is important to understanding the behavior of the economy, but also important for asset allocation decisions.

**Investigation:** "Speaker analyzed XXX data to address the questions yyy, zzz, etc."

Kelly used a list of 17 previously proposed measures of systemic risk for the US, and 10 measures for the UK and EU. By aggregating the variables, and by using estimation techniques that focuses on the tail outcomes, he was able to construct a systemic risk factor that was strongly related to future macroeconomic outcomes.

**Innovation:** Are there new techniques of interest in the data or approach to the problem?

Kelly used Quantile Regressions to produce the results. Quantile regressions have the benefit of putting more weight on the extreme observations than traditional OLS regressions. It was important to aggregate the predictor variables. Each captured some aspect of financial distress, but none were robust on their own. To combine the variables, Kelly tested Principle Components and Partial Quantile Regressions (adding and weighting the variables in sequence). The Principle Components produced better results.

**Insights:** 1-2-3, what are the three most important things the speaker offered?

1. By aggregating the indicators of financial distress, and using quantile regressions, Kelly was able to develop a Systemic Risk factor that was strongly related to future downside risk.
2. In terms of a single indicator, the volatility of stocks in the financial sector is probably the most useful.
3. Kelly's measure was more predictive of future shocks than changes in the Fed Funds Rate, suggesting that suggesting that the Fed



could be more proactive in responding to periods of heightened systemic risk.

**Audience rating: 4.44**

**Title:**           **FORCED LIQUIDATIONS, FIRE SALES & THE COST OF ILLIQUIDITY**

**Speaker:**       **Richard R. Lindsay and Andrew B. Weisman**  
**Janus Liquid Alternative Investments**

**Importance:**    Why this matters:

Investors in hedge funds must believe that the funds' returns will be sufficient to compensate them for their illiquidity. The other side of the coin is that in adverse conditions a fund may receive collateral calls that forces sales of securities at unfavorable prices, and may even cause the fund to collapse. These fire sales happen infrequently, so it is difficult to know how much reduce the funds' expected returns for this contingency.

The authors pose a solution to this dilemma in the form of implicitly being short a barrier put option. The cost of the put naturally translates into a de facto price for investing in a less liquid portfolio that may have to be liquidated at adverse prices.

**Investigation:** "Speaker analyzed XXX data to address the questions yyy, zzz, etc."

The authors analyzed data on 3500 hedge funds to estimate their vulnerability. Their proxy measure for fund vulnerability was based on serial correlation in the funds' returns, combined with fund volatility. Highly volatile funds and funds with a high degree of positive serial correlation are most at risk of being force to sell at prices that are significantly below the last appraisals. Their studies showed that the magnitude and frequency (not the timing) of forced liquidations are reasonably predictable.

**Innovation:**    Are there new techniques of interest in the data or approach to the problem?

Serial correlations in returns are induced by asset valuations that are smoothed, resulting in an accounting artifact that can significantly

overestimate fund asset values. Fund data can be used to provide forward-looking estimates of vulnerability.

**Insights:** 1-2-3, what are the three most important things the speaker offered?

1. Fund vulnerability -- of being forced into an abrupt sale into sharply declining markets – can be estimated fund’s serial correlations. The higher the serial correlation, the more likely there is smoothing, and market prices may be significantly less than recent valuations.
2. In cases of fraud or collapse, transactions in illiquid markets have caused losses to hedge fund investors averaging around 50% of stated fund values.
3. This barrier option model provides a straightforward method of combining priors about the market to price this core risk.

**Audience rating:** 4.49

**Title:** **DEFLATION RISK**

**Speaker:** **Francis Longstaff, UCLA**

**Importance:** Why this matters:

The worst economic episodes in US history have been accompanied by deflation. As a result, knowing the risk of future deflations is crucial to asset allocation decisions. In addition, asset prices must incorporate the expected probability of future bouts of deflation. As a result, understanding the probability of future deflationary episodes is important to setting asset prices.

**Investigation:** "Speaker analyzed XXX data to address the questions yyy, zzz, etc."

Longstaff used inflation swaps to infer the probability distribution of future levels of inflation. With those data, he was able to focus on the deflation tail of the distribution. He used inflation swaptions to infer risk-neutral probabilities. Using the difference between the two sets of probabilities, he was able to provide an estimate of the risk premium for bearing market (deflation) risk.

**Innovation:** Are there new techniques of interest in the data or approach to the problem?

The approach of deriving the probability distribution from the inflation swaps markets seems to provide better estimates of expected inflation than survey data or breakeven spreads (yield of nominal Treasuries minus the real yield of TIPS). In addition, the swaps market provides insights into the entire term distribution, while survey data and the breakeven spread only provide an estimate of the mean.

**Insights:** 1-2-3, what are the three most important things the speaker offered?

4. Currently, the risk premium for bearing inflation risk is close to zero, however the deflation tail risk is priced similarly to other types of tail risk.

5. The current forecast of deflation risk is material.

**Audience rating:** 4.48

**Title:** **MONETARY POLICY DRIVERS OF BOND AND EQUITY RISKS**

**Speaker:** **Caroline E. Pflueger, University of British Columbia**

**Importance:** Why this matters:

Federal Reserve policy can be divided into three regimes: pre-Volcker 1960-1978, Volcker/Greenspan 1978-2001 and neo-Keynesian 2002-present. Each regime creates different investor environments. Thus the ability of Treasury bonds to hedge economic and equity risks has huge implications for investors.

**Investigation:** "Speaker analyzed XXX data to address the questions yyy, zzz, etc."

Authors gathered standard US economic and fed policy data from 1960 to the present, and data from other economies to evaluate how these different regimes resulted in different responses to macroeconomic shocks and changes in monetary policy.

**Innovation:** Are there new techniques of interest in the data or approach to the problem?

The authors create a structural macroeconomic model with parameters that describe:

- How much the Fed worries about recessions and cuts rates to prevent them;
- How much the Fed worries about inflation and raises rates to prevent it;
- How gradually the Fed moves when it changes rates.

These variables manifest quite differently in the three regimes, and in how the economy responds to shocks due to money supply, short-term monetary considerations and inflation target (long-term monetary) considerations.

**Insights:** 1-2-3, what are the three most important things the speaker offered?

4. Not surprisingly, changes in the guiding philosophy of the Fed cause remarkably different economic activity and financial results.
5. Asset allocation exercises often treat the risks of asset classes as stable, even if the expected returns are thought to vary over time.
6. Bond risks and correlations with the stock market have moved over time, and depend on macroeconomic shocks and the stance of monetary policy.
7. While there is no reason to expect any immediate change, investors must keep a careful eye out for a change in the bond beta back towards the historical norm.
8. You can't rely on Treasuries being negatively correlated with stocks.

**Audience rating: 3.84**

**Title:** THE EQUILIBRIUM REAL FUNDS RATE:  
PAST, PRESENT AND FUTURE

**Speaker:** Kenneth D. West, University of Wisconsin

**Importance:** Why this matters:

The macro-economists' consensus is that we are heading towards a "new neutral" Federal Reserve policy, an era of lower equilibrium real

Fed funds rate. The authors analyze past behavior of the real short-term interest rate to develop and estimate of the prospective equilibrium value – full employment and stable inflation – of the real rate 5 to 10 or 12 years from now.

The New Keynesians relate consumption growth to trend or equilibrium growth rates. Unfortunately, the historical interplay between economic growth/consumption and Fed funds rate is tenuous, leading toward a policy of heading toward a rate of 2-4%. Uncertainty about equilibrium suggests that the Fed should prefer later and steeper normalization of the Fed funds rate.

**Investigation:** "Speaker analyzed XXX data to address the questions yyy, zzz, etc."

The paper looks at developed market data going back as far as 150 years, including discount rates, commercial paper rates and Fed funds rate. The data show decades long swings in nominal and real rates. Looking at seven peak-to-peak periods since 1969 shows that GDP growth occurred when real rates were 1, 3, and 5 percent. Not very helpful to forecasters.

**Innovation:** Are there new techniques of interest in the data or approach to the problem?

Unfortunately, the data do not lead to strong empirical relationships. Other factors, difficult to isolate, play a large, perhaps dominant relation to real rates. Intuition abounds where formal analysis flounders. According to the authors, it's a tough time to pin down an equilibrium rate.

**Insights:** 1-2-3, what are the three most important things the speaker offered?

1. If you're uncertain move slowly.
2. An "inertial" rule that puts more weight on lagged rates leads to adaptive policies that depend on observed inflation and employment rates.
3. When the starting point for funds rate is zero, an inertial policy yields a later but steeper normalization. In the authors' opinion, the risks to global growth and inflation suggest that hiking rates too early is riskier than hiking too late.

**Audience rating: 3.04**