

Dear Q-Group members and friends;

The objective **Participants' Perspective** is to put forward an impression of what the speaker said that has relevance to the average participant in the audience. The focus is on [1] practical significance to practitioners; [2] appropriateness and rigor of quantitative methods; and [3] novelty of results.

Participants' Perspective is not a formal academic review, and serves several objectives:

- Please note that these are audience-level impressions, based on discussions and notes made during the presentation. This is 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 are fit into a framework, which encompasses the perspectives of 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: one page max. In today's busy world, we all need to zero in on important information and go past that which is less relevant.
- One key goal is rapid distribution: for these Perspectives to be available within days of the end of the session, and to provide a quick view accessible to busy readers.
- Q needs to reach out beyond the seminar attendees, particularly to:
 - The organizations that generously fund the Q-Group through their participation.
 - Those who might like to attend but can't for various reasons, especially those who might wish to become Q-Group members.
- Please differentiate between these impressions and the fine work of David Modest and Russ Wermers with the program summaries. If what you read here intrigues you, go first to their finely crafted synopses, and then go on to the slides and papers which are readily available on Q-Group.org. In fact, the whole goal here is to encourage the reader to delve deeper into subjects they find interesting.

Title: HACKING REVERSE MORTGAGES

Speaker: DEBORAH J LUCAS
MIT, MIT Golub Center for Finance and Policy

Importance: Why this matters:
Reverse mortgages are loans made by the private sector, but are guaranteed by the federal government. Lucas used them to illustrate the types of conflicting objectives and mispriced options that can be embedded in these and similar hybrid investment vehicles.

Investigation: "Speaker analyzed XXX data to address the questions yyy, zzz, etc."
Lucas described reverse mortgages (Home Equity Conversion Mortgages – HECMs), highlighted their potential importance in unlocking retirees' wealth that is tied up in home equity, and their limited utilization in practice – the "Reverse Mortgage Puzzle".
She created a valuation model, and ran simulations to value the mortgages. Her conclusion is that they are unnecessarily expensive. The average borrower loses a fair net present value of -\$27,000, which is -18.6% of the line of credit (LOC); while the private lender gains a net present value of \$31,000, 21.4% of the LOC; and the government loses \$4000, -2.8% of the LOC.

Innovation: Are there new techniques of interest in the data or approach to the problem?
Lucas created a Monte Carlo simulation to model cash flows over the life of a loan, which allowed her to vary borrower type, mortality, moving rates, and drawdown behavior.
She then discounted the cash flows at a risk-adjusted rate to look at the economics, and used government discounting rules to compute the reported budgetary cost.

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

1. Because of government rules that mandate high fees to lenders, impediments to competition and misplaced incentives, reverse mortgages are expensive to the borrower, and the embed options (guarantees) tend to be mispriced. By assertion the options in similar government backed vehicles, are likely to be mispriced as well.
2. There is a "Ruthless" HECM strategy that has a positive net present value to a borrower, but it would not meet the capital/income needs of borrowers that need to access the capital in their homes.
3. HECMs and other government credit programs cost more than what is reported on the federal budget.

Audience rating: 4.03

Title: **MONEY CHANGES EVERYTHING**

Speaker: **WILLIAM N. GOETZMAN**
Yale School of Management

Importance: Why this matters:

Today's financial industry has roots that go back for millennia. Goetzman's book "Money Changes Everything" shows how finance satisfies evolving human problems of

- Time: moving money from the present to the future and vice versa;
- Space: creating solutions for financing activities across differing cultures and locations; and
- Value, both in terms of expectations and risk.

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

Goetzman is noted as an historian as well as an economist. His search for historic evidence of the evolution of finance goes back to Sumarian grain contracts from 5000 BCE, involving guarantees of performance and interest computations invoking the time value of money.

Goetzman's "data" does not translate into "databases" as much as to "evidence."

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

Goetzman's quest is a matter of passion and indelible curiosity, two virtues which all should practice. Going back to the earliest evidence explains the source of economic/financial features.

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

4. What we think of as today's solutions have roots that go back to ancient innovations to solve financial problems.
5. These innovations trace back to problems of societal weaknesses that are then addressed by clever mental precepts and mathematical solutions generated by fine minds.
6. Thinking about how problems are -- and have been -- defined. The solutions that were devised can suggest insights into means of identifying and solving contemporary problems.

Reference: Money Changes Everything: How Finance Made Civilization Possible; Princeton University Press, 2016

Audience rating: 3.66

Title: LAZY PRICES

Speaker: LAUREN H. COHEN
Harvard Business School

Importance: Why this matters:

10K and 10Q reports are dull reading. Those who write these reports, usually lawyers or accountants, default to a “Same as late year” format, hence the “laziness” referred to in the title. However, when there are notable additions/edits, the tendency is to bury bad news in some obscure section of the (average 175 page) report. This is a strong signal that companies are revealing substantive changes in their businesses. Thus “laziness” also applies to those whose job it is to analyze those reports, but frequently glaze over the mind-numbing boilerplate.

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

Cohen analyzed all 10K's and 10Q's downloaded from the SEC's Edgar website from 1995 to 2014 and analyzed the changes under four criteria: positive, negative, uncertainty and litigious by the extent of the change.

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

The author applies four different measures of similarity between the two documents (sets.) These test could easily be performed on lexicographical analytics by an analyst charged with finding significant information hidden in an obtuse document.

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

1. Firms overwhelmingly just repeat what they most recently reported. Significant information is often revealed inconspicuously, often in the risk factors section.
2. A portfolio that buys “non-changers” and shorts “changers” earns 30 to 70bp over the following year.
3. This has broad implications for financial behavior, along with our ability to extract valuable information from subtle behavior.

Audience rating: 4.61

Title: WHAT DRIVES ANOMALY RETURNS?

Speaker: LARS A. LOCKSTOER
UCLA

Importance: Why this matters:

It is important to understand if stock market anomalies are a result of changes in expected cash flows or from changes in discount rates. Based on a clean surplus model of asset values, this study concludes that security-level anomaly effects are driven mainly by changes in expected cash flows (fundamentals).

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

The analysis was performed on cross-sectional financial data of individual companies using data from CRSP, Compustat, and Fama/French. From this they create annual long/short anomaly portfolios (decile 1 minus decile 10). The portfolios are dollar neutral, nearly market neutral, and levered to have market-like volatility.

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

Using annual data, the authors directly estimate the impacts on stock prices from shocks to discount rates and expected cash flows using a vector autoregression (VAR). The model imposes a present-value relationship based on a clean surplus valuation model. The VAR provides estimates of the impacts of changes in discount rates and expected cash flows at horizons ranging from 1 to 20 years, for firm characteristics related to anomalies, such as value, profitability and investment.

The Book to Market and Profitability variables had the largest impact on expected returns. Book to Market and Relative Value had the largest impact on expected earnings.

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

1. Stock-level anomaly returns are driven largely by fundamentals, specifically changes in expectations of future cash flows. Changes in discount rates amplify cash flow variation.
2. Suggests fundamental analysis is likely to be a fruitful way to forecast anomaly returns. These are hard to time over short horizons
3. Index-level returns are primarily driven by change in discount rates. It will be easier to time the market than anomalies.

Audience rating: 3.53

Title: **BETTING AGAINST CORRELATION:
TESTING THEORIES OF THE LOW-RISK EFFECT**

Speaker: **CLIFF ASNESS**
AQR Capital Management, LLC

Importance: Why this matters:
They introduce a new factor Betting-Against-Correlation (as an alternative to the more widely accepted (Betting-Against-Beta). Because the low-beta anomaly is widely accepted and widely used by investors, it is important to know whether it is due to over-priced high volatility stocks (leverage constraint), or due to underpricing of stocks with low correlations with the market (lottery effect).

Investigation: "Speaker analyzed XXX data to address the questions yyy, zzz, etc."
Stock betas are determined by their volatilities and their correlation with the market. Asness tested competing explanations for the low beta effect in the U.S. and globally. High volatility stocks as a source of leverage (leverage aversion theory) depends on beta (volatility x correlation). High volatility stocks as lottery tickets depends on idiosyncratic volatility (volatility x skew).

In regressions against other low-risk variables and control variables, BAC and SMAX exhibited statistically significant alphas. BAV had a negative alpha, and LMAX and IVOL were statistically insignificant.

Innovation: Are there new techniques of interest in the data or approach to the problem?
Introduced BAC – betting against correlation as a new factor. Used 2-way sorts: volatility then correlation to disentangle the volatility versus correlation contributions to performance. Long low correlation, short high correlation portfolios within volatility quintiles had significant alphas (CAPM and FF 3-factor), while long low volatility, short high volatility within correlation quintiles did not.

Calculated SMAX and LMAX (short and long-term MAX / volatility) as improved measures of short and long-term skew. The exhibited significant alphas in regressions using the FF 5-factor model in the US. (The global results were weak.)

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

1. Both leverage constraints and behavioral effects play separate roles.
2. BAC (Betting against Correlation) and SMAX (scaled MAX) had significant Sharpe Ratios (.93 & .78), and significant 5-factor alpha t-stats (5.45 & 4.78).
3. Leverage aversion seems to be the better explanation for BAB. The performance of both BAB and BAC are related to dealer margin, not sentiment. Correlation is needed for leverage aversion, but not for lottery effect.

Audience rating: 4.36

Title: REAL ANOMALIES

Speaker: JULES VAN BINSBERGEN
University of Pennsylvania, Wharton School

Importance: Why this matters:

Van Binsbergen presents a study that approached the question: If low beta stocks are under-valued and high beta stocks are over-valued, are there mis-allocation of capital resources implications for the size of the economy? Does this anomaly lead to overvalued firms having too low a cost of capital and thus over-invest, and vice versa?

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

The first step is to evaluate the mispricings. The approach was to estimate the distance between the CAPM model and the data via decile analysis on 42 different dimensions, and converting the differences into dollars of mis-investment.

These deviations were then valued by applying **Tobin's q**, the ratio between a physical asset's market value and its replacement value.

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

The relationship between asset under/over valuation and its effects on the economy is a new area of investigation. The data is messy and the logic is heroic, but the problem approaches an area that should be of great interest to economists and investment professionals.

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

1. By the authors' assumptions, the misallocation of capital assets is significant, perhaps as much as 4.5%.
2. The author postulates that firms add economic value, while proper pricing of assets is the domain of the active managers, which they achieve by identifying mispricings. This adds exogenous factors to the process from the perspective of the economy. Thus the *economy* benefits from active management, as do *passive* managers, but *active* managers of all types provide efficient market benefits to the economy without related compensation for doing so.

Audience rating: 3.54

Title: THE PRICE OF LONG-RUN TEMPERATURE SHIFTS
IN CAPITAL MARKETS

Speaker: RAVI BANSAL
Duke University and NBER

Importance: Why this matters:

The dangers of climate change seem to be far into the future and there has been little thought given to how that might affect the value of securities. How much should we spend to avert unfolding and/or abrupt impacts on physical and biological systems? When should we spend it: what is the global preference for early resolution of uncertainty?

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

Finance thinking is often based on studies of the past to figure how things interconnect. Dealing with implications that extend far into the fuzzy future and are not yet reflected in current data requires some out-of-the-normal thinking.

The current market can be viewed as optimal for the current climate. But climate changes may impact human welfare and society in forms such as disease, migration, and reduced food supplies. So we would expect capital markets in the future, if not now, to contain information about the importance of climate risks. The study centers on the relationship between growth and risk effects.

Some industries, such as oil, mining and utilities have high heat-exposure, while other industries such as communications and manufacturing have low exposure.

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

Develops long run risk estimates based on a climate change model to quantify the social cost of carbon.

Estimates temperature sensitivity of equity valuation. Explore the impact of long-run temperature shifts using forward looking asset returns.

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

1. In global and US markets, equity prices show a significant negative response to low-frequency temperature fluctuations.
2. Distant climate change risks carry a significant risk premium.
3. The social costs of carbon are sizable and suggestive of high incentives to curb emissions.

Audience rating: 3.06

Title: **NEWS VERSUS SENTIMENT:
PREDICTING STOCK RETURNS FROM NEWS STORIES**

Speaker: **STEVEN L. HESTON**
University of Maryland

Importance: Why this matters:

The use of textual analysis to create signals of positive or negative sentiment has shown promise and can be expected to become more prominent in the future. Recent evaluations of textual analysis services have indicated short term information value, but little longer term value. This paper discovers situations where news content has longer term effects.

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

Thomson Reuters provided Heston and coauthors with a database of sentiment indications for 7 years, covering over 900,000 stories.

The paper distinguishes between "bag of words" methodology vs more sophisticated lexical and sentiment pattern analysis.

The analysis distinguishes on negative/positive signals, capitalization deciles, and cumulative impact.

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

The analysis is straightforward; what is innovative is the use of lexical analysis to distinguish positive from negative signals.

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

1. Positive news affects prices within a week, but the study shows that negative news predicts low stock returns up to one quarter. The delayed reaction to news around subsequent earnings announcements is most significant.
2. Comparison of return patterns across different types of news may enhance our understanding of how markets process non-quantitative information.
3. Do not buy stocks with negative news in the past quarter.

Audience rating: 3.60

Title: **ASSET MANAGERS:
INSTITUTIONAL PERFORMANCE AND SMART BETAS**

Speaker: **JOSEPH J. GERAKOS**
University of Southern California, NBER

Importance: Why this matters:

Assets delegated to institutional managers comprise 29% of worldwide investable assets, and the managers collected \$162 billion in fees. It is important to understand what value, if any is being added.

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

Using a database provided by a large global asset consultant, Gerakos evaluated the performance of managers of institutional assets, both gross and net of fees. They calculated performance using: asset class benchmarks, strategy benchmarks, CAPM regressions, and style regressions.

The managers outperformed asset class benchmarks. The alpha from CAPM regressions were positive for all asset classes (gross and net), but only global fixed income was statistically significant net. The regression alpha of US fixed income became insignificant when run against appropriate strategy benchmarks. The style analysis produced negative equity alphas and insignificant fixed income alphas.

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

The authors used a consultant's performance database. The consultant imposes a level of quality control, and information in the data allowed them to control for backfilling and survivorship. Also, using the consultant's database allowed them to calculate their performance metrics gross and net of fees.

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

1. On average, the managers outperformed asset class benchmarks, but it was due to style loadings. The equity managers had significantly negative alphas, and the fixed income managers had insignificant alphas after adjusting for style exposures. Since the style exposures were estimated in sample, they cannot determine if they were strategic or tactical.
2. If assets delegated to institutional managers outperformed their asset class benchmarks by 131 basis points per annum, everyone else's returns are 53 basis points lower ($29\% \times 131\text{bps} = 71\% \times 53\text{bps}$), all gross of fees.

Audience rating: 3.82