A C Q U A E Q U I T Y

An Anthology of Articles

by Lorenzo Ferlazzo

(2012 – 2016)

Trust

The Investment Ecosystem

The very specific science of phytology is shaping a broader and greater understanding and appreciation of natural ecosystems that are mostly taken for granted. Understanding how and why these ecosystems exist, remain healthy and thrive requires more contemplation, but at a basic level, there is an implicit trust that they will remain in place for many more decades into the future.

Three papers in particular articulate the scientific phenomenon that underpins most of the natural landscape; *Architecture of the Wood-Wide Web* (Kevin Beiler et al), *Mycorrhizal Networks: Common Goods of Plants Shared with Unequal Terms of Trade* (Florian Walder et al), and *Inter-Plant Communication Through Mycorrhizal Networks Mediates Complex Adaptive Behaviour in Plant Communities* (Monika Gorzelak et al).

All three papers in fact include, in one form or another, descriptions of symbiotic relationships that condition the vitality of entire plant ecosystems, and how these complex interactions can be subject to disruption from invasive agents. As one paper explains,

> *Mycorrhizal associations of plants have large-scale eco-system-wide consequences. The magnitude of their importance is likely due to the proclivity of most terrestrial plants to form them. The origins of this symbiosis are thought to be ancient and have been proposed as a mechanism for facilitating land colonization by plants 400 Mya (400 million years ago).*

Papers

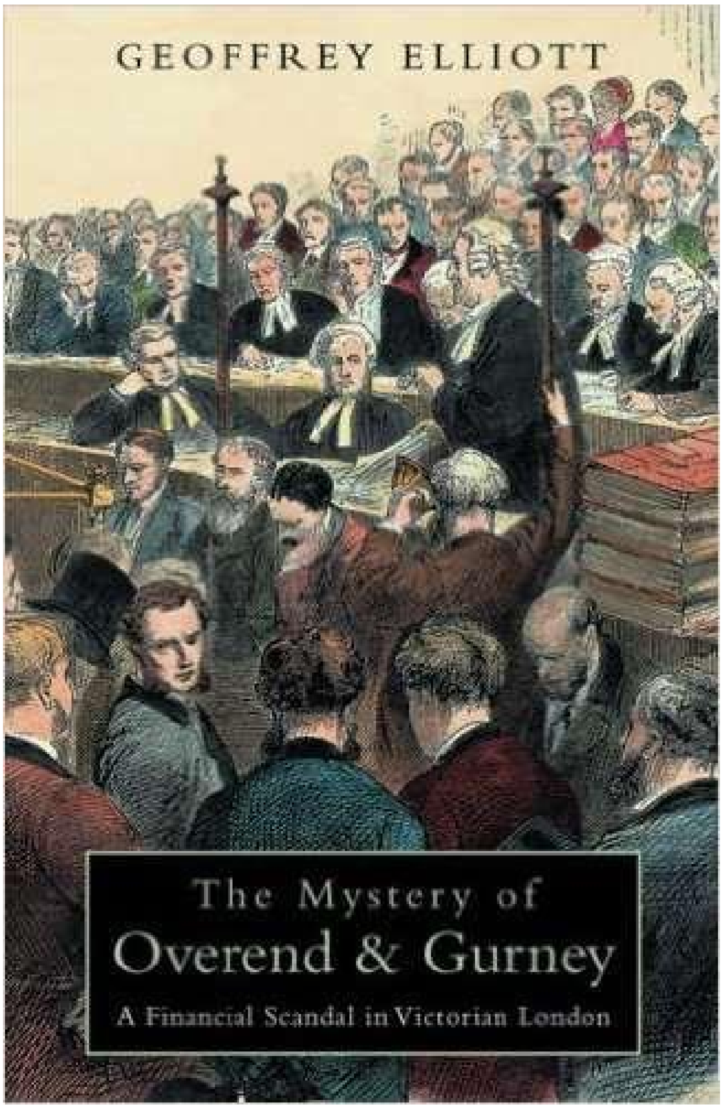
- *Architecture of the Wood-Wide Web – Kevin Beiler et al*
- *Mycorrhizal Networks. Common Goods of Plants Shared with Unequal Terms of Trade – Florian Waklder et al*
- *Inter-Plant Communication Through Mycorrhizal Networks Mediates Complex Adaptive Behaviour in Plant Communities – Monika Gorzelak et al*

Similar associations are apparent in the capital markets ecosystem, where one may expect corporate entities to perpetuate their existence through symbiotic relationships with multiple agents, internal and external. However, and as is no doubt obvious, the characteristics of phytological optimization are, as yet, beyond the evolutionary perspectives of social agents that rely on networks of trust to transfer mutual benefits, and which are far more susceptible to financial eco-system-wide disruption.

An anthology of anecdotal evidence would fill volumes with details that go far beyond the ambitions of this commentary. All the same, some abbreviated examples of the interplay of trust mechanisms, that once compromised or corrupted influence the entire capital markets network, are worth noting to underscore their significance, and persistence.

18th and 19th century merchant houses that expanded into banking are a primary illustration of trusted firms that created and managed symbiotic financial relationships through and because of established trading networks – and yet failed as a consequence of an inability to perpetuate trust.

The latest quarterly bulletin published by the Bank of England describes one such case in its article *The Demise of Overend Gurney*, which chronicles the 18th century rise of the “bankers’ banker” that within a century failed dramatically, precipitating a ‘Black Friday’ financial panic in 1866. Overend Gurney’s history uncannily parallels this century’s equivalent, Lehman Brothers. The bank’s failure was principally due to poor management and speculative investments that incurred significant loan losses, on which the influential economist Walter Bagehot commented



they [management] ruined a firm almost inconceivably good by business so inexplicably bad that it could hardly be much worse if they had tried of set purpose to make it bad.

A century later this type of failure was addressed with the application of a modern day "corporate governance complex", a subject well documented in Cambridge University's 2014 paper *The Corporate Governance Movement, Banks and the Financial Crisis* that brought up to date issues of 'managerial accountability, board structure and shareholder rights' and included a notable observation,

> *As the 20th century drew to a close senior executives were in charge of larger companies than their mid-20th century predecessors and had greater managerial latitude, meaning that there was more at stake for investors than ever before. The enhanced discretion executives had available to them could potentially be exercised in a manner prejudicial to the interests of shareholders.*

Of these executives, the CEO achieved the most prominence, a phenomenon diligently surveyed in a 2010 MIT paper aptly titled 'CEO Compensation' which described how, among many other factors, CEO compensation evolved from basic pay plus a discretionary bonus during the 1960s to basic pay plus a bonus plus certain non-discretionary incentive and options-based compensation from the 1980s onwards, succinctly noting that,

> *The purpose of option compensation is to tie remuneration directly to share prices and thus give executives an incentive to increase shareholder value.*

However, as has been well-documented since the crisis, compensation formulas at many firms contributed to the market collapse by encouraging the maximization of short-term revenues and profitability metrics, chiefly among them quarterly EPS.

That the pressure on CEOs to perform on a quarterly basis became a psychological obligation and burden is in part due to the cult of the celebrity CEO that coincided somewhat with the shift in compensation packages that by the early 1990s were already strongly rooted across corporate America, unwittingly abetted even by Warren Buffett who commented in a 1990 Forbes article,

> *You'll never pay a really top-notch executive . . . as much as they are worth. A million, $3 million, or $10 million, it's still peanuts.*

Around the same time, Graef Crystal, a renowned executive compensation consultant, commented thus on the celebrity CEO "ideology",

> *A perennial debate in history circles centers on whether great men, like Napoleon, really can change the course of history, or, alternatively, whether history unfolds in a mysterious process that is only marginally influenced by the Napoleons of this world. Ask your typical board of directors to jump into the debate among historians, and to a man... they will vote with the "great man" camp. To them, it is self evident that if you put the right person in the CEO's job and make sure he stays in the job, great results will ensue. And to make sure he stays in the job, pay him anything he requires, short of the entire sales volume of the company.*

These early indications of excess generally went un-noticed during the stock market's incessant rise throughout the decade, perhaps a reflection of blind trust in the abilities of CEOs to deliver ever more impressive results. However, the recession at the beginning of this century, that also cast a spotlight on corporate scandal and excess, marked a ground-shift in the power dynamics of publicly accountable firms, an observation that seemed to have been lost on the investment research community that in 2003 was itself held accountable through the Global Analyst Research Settlement, ushering in a period of more sober, almost "boring" investment representation to attenuate the impact of growing mistrust across the entire investment landscape, but which only deepened further subsequent to the financial crisis.

This period also coincided with (and not to overstate), a tectonic shift in the shareholder base, with institutional investors increasingly managing a greater portion of retail assets, to the extent that now around 20 managers are responsible for about 50% of all US equity securities, a fact noted in a paper published in April this year by Ohio State University. Titled *The Granular Nature of Large Institutional Investors*, the highly detailed analysis focuses on the impact of these firms' trading activity, finding in conclusion

> *evidence suggesting that the trading volume of large institutions generates a large price impact,*

and that

> *large institutional investors are more likely to destabilize financial markets than a set of small institutions that trade in a less correlated way. The effect that we find is likely to be exacerbated during times of financial crisis when large trades are executed in an illiquid market.*

Additionally, how large institutional investors are exerting influence on the investment network through increased concentration of corporate ownership raises a correlated issue of trust, a theme expanded on in a University of Amsterdam paper published in June this year, *Hidden power of the Big Three? Passive index funds, re-concentration of corporate ownership, and new financial risk*, which makes the noteworthy observation,

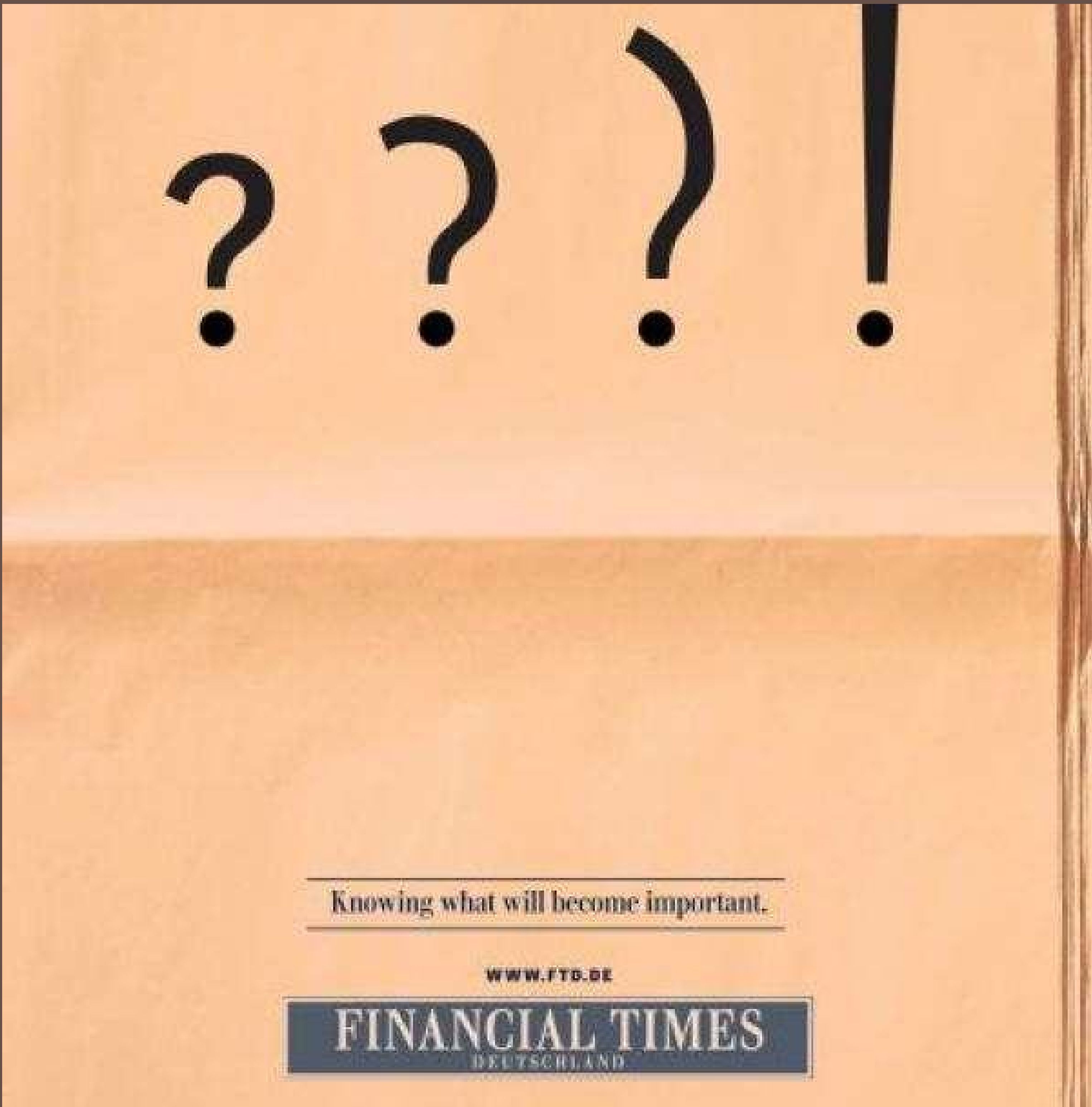
> *Rapidly growing assets invested in passive index funds may have an impact on financial stability as well as on global corporate governance and corporate control as passive investment strategies do not entail passive ownership. On the contrary, there are strong indications that the Big Three actively exert influence on the corporations in which they hold ownership stakes.*

Along with William Lazonick's compelling paper *How Stock Buybacks Make Americans Vulnerable to Globalization*, articles with headlines such as 'CEOs Meet in Secret Over the Sorry State of Public Companies' (New York Times, July 21, 2016) and a dearth of opinion from multiple sources on the entirety of underlying investment mechanisms, there is surely an incumbent obligation upon analysts, investors and all market participants to not take for granted an investment ecosystem that, much like the mycorrhizal networks and communities, requires the right kind of nourishment to sustain and perpetuate trust.

In concluding, I quote SEC commissioner Luis Aguilar's appropriate summation on the overarching issue of trust in capital markets from a speech given in 2013,

> *The responsibility of institutional investors stems, in large part, from their stewardship of assets that belong to others. The one indispensable fact to remember is that behind all institutional investors and their portfolio managers are millions of American workers, savers, policy holders, retirees, and other individual investors, who rely on those they entrust with their monies to provide for a safe and secure retirement, to help them save for a home or college education, and to participate in the American dream.*

Note: "American dream" as a relative term for standard of living opportunity associated with Middle to High Income brackets.



Advertising Your Wares

Media Coverage

Media coverage surrounding the current US presidential campaigns at times, in fact, frequently, appears to envelop reality in a fog of surreal proportions that can acutely distort perception, leaving political analysts the task of extrapolating and deciphering material of substantive value and influence for the politically investing public. Media coverage and its inherent complexity is also a consideration for investors, and where historically there have been clear and direct channels of communication to observe the investment landscape, social media now contributes a nebulous layer of additional complexity that investment analysts need to see through.

Personally, my interest in media coverage of companies (by extension their products), and its relationship to stock valuation, participation and returns is, for a variety of reasons, somewhat peripheral. However, and in principle, the inherent technological evolution and increased subjectivity embedded in two-pronged (advertising media and reporting media) short attention-span communication is necessarily part and parcel of everyday observation and analysis. Damian Tambini at the London School of Economics alludes to and reinforces the latter prong of this notion in his 2014 paper, *What Are Financial Analysts For?,* which, whilst omitting the social media phenomenon and investor rationales, reasonably critiques the ethical standards of the financial journalism profession on both sides of the Atlantic, without exaggeration succinctly noting that,

> *increasing pressures of speed, complexity and productivity add to the constant challenge for journalists: namely to ensure that they are not used in the service of someone else's interests, but report in the public interest or at least the interests of their readers.*

Papers

- Harvard – Playing Favorties: How Firms Prevent Revelation of Bad News
- Northwestern – The Effect of Financial Press Advertising on Stock Prices
- Mannheim – Advertising, Attention and Financial Markets

In parallel, a joint NBER/LSE/Harvard paper, also published in 2014 and titled *Playing Favorites: How Firms Prevent the Revelation of Bad News*, reasonably critiques the ethical practices of corporate PR, most clearly reflected in earnings conference calls, noting,

> *If firms are deliberately choosing to call on more favorable analysts, we might expect them to do so when it is especially valuable. For instance, firms that engage in more earnings management (discretionary accruals), may be especially wary of calling on analysts that will probe into these accrual behaviors. Additionally, firms that barely meet or exceed earnings expectations (meeting at 0, or beating by 1 penny), have been shown in prior literature to be far more likely to have manipulated earnings in order to do so, and so may be less likely to want to be aggressively questioned. Lastly, firms planning to do Secondary Equity Offerings (or managers planning to sell their shares or exercise their options) in the near future may be interested in keeping share price high to maximize proceeds, and so may prefer to call on friendly analysts.*

Influencing emotion and behaviour is a staple of all advertising and extending that communication discipline to investors has naturally been a topic of research and interest to publicly traded firms. One of the more seminal studies on such channelled media, published by Northwestern University in 1977 and titled, *The Effect of Financial Press Advertising on Stock Prices* sought to find a causal relationship between advertising in the financial press and stock prices based on the assumption that

> *The financial press carries to millions of investors advertising messages that are controlled by management and are presumably "biased",*

a fact borne out by a survey in which

> *discussions with corporate advertising officers and media representatives suggest that a primary objective of such advertising is to influence security prices*

and ultimately concluding that

> *financial press advertising can exert a favorable influence on common stock prices, at least during some time periods.*

The concluding words are noteworthy, as they resonate with the findings of subsequent studies, including the aforementioned 2014 NBER paper that explored

> *a subtle, but economically important way in which firms shape their information environments, namely through their specific organization and choreographing of earnings conference calls..... firms have an information advantage, and they understand this and have the ability to be strategic in its release.*

However, more recent studies founded on more data-rich content that include internet habits and social media behaviour question the relative value of established communication strategies inferred by the above. One such study, published earlier in January this year by Mannheim University in Germany and titled, *Advertising, Attention and Financial Markets* tackled Northwestern's original theory from a more subtle angle,

The detailed and well-documented findings require full reading to more fully appreciate the significance and implications for future advertising strategies, although briefly noting the paper's measured conclusion is telling in itself,

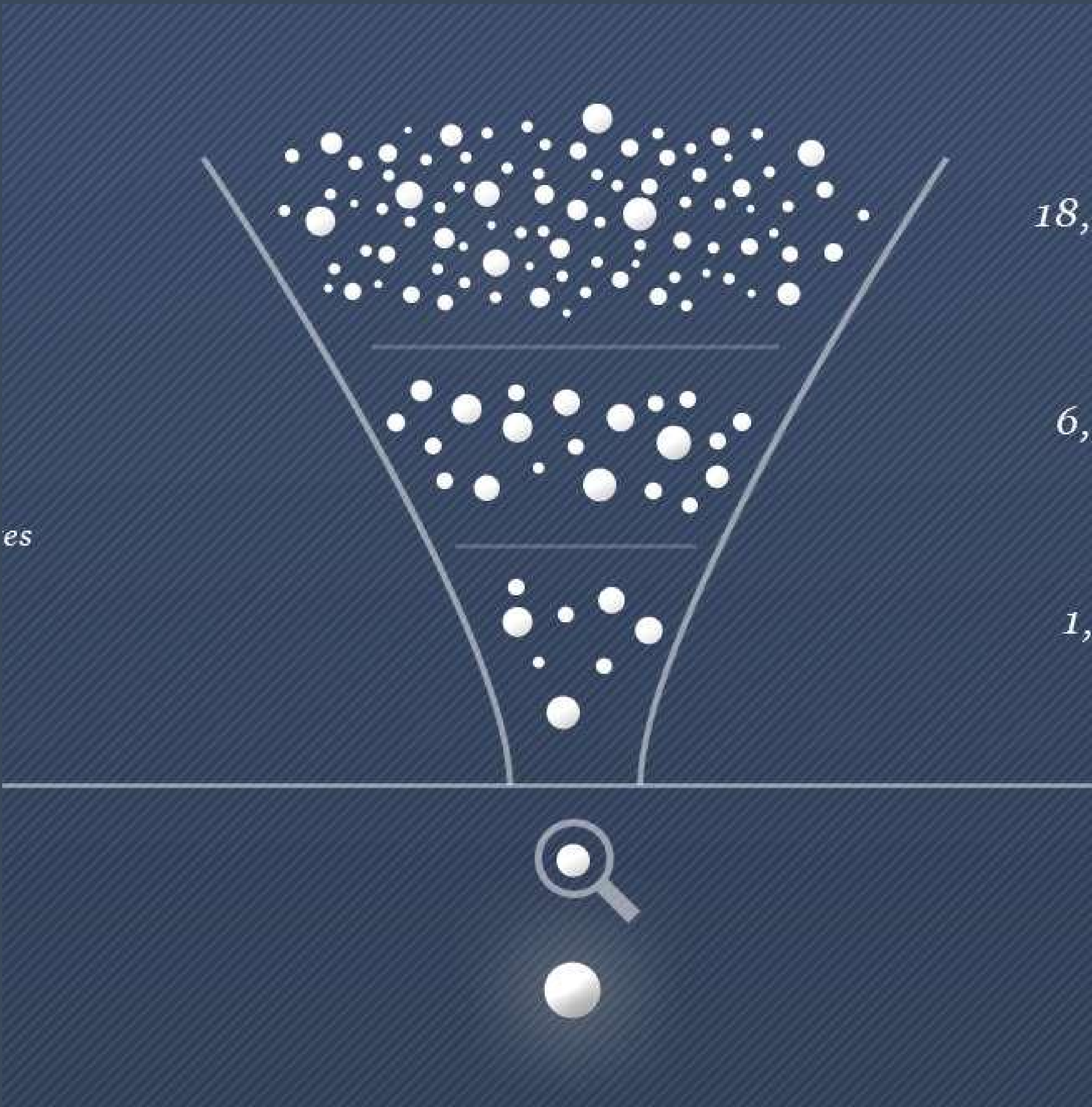
> *Using advertising to create investor attention and artificially inflate stock prices seems like a tempting opportunity for corporations and their managers. However, the findings in this paper challenge the view that stock prices can be easily manipulated by advertising. Thus, some patterns of managerial behavior like increasing advertising expenditures prior to security issuances, M&A transactions, or insider sales that are documented in the literature might have other explanations or are driven by managers wrongly believing that advertising has an impact on asset prices.*

A distinct, yet complementary paper subsequently published in March and titled, *Is Investor Attention for Sale? The Role of Advertising in Financial Markets,* draws similar conclusions, ultimately noting that advertising's

> *increased attention translates into temporary increases in trading volumes for firms with retail ownership but does not seem to have an effect on stock returns. These findings are consistent with ads reminding investors about the stocks of the firms but containing limited value-relevant information. The findings that ads do not affect firms' stock prices casts doubt on prior findings of managers' manipulative advertising behaviour.*

In concluding this condensed commentary it's interesting to note that in 1974 U.S. firms spent approximately $6.5 billion on corporate communications, $800 million of which went to media advertising. In 2012 U.S. firms spent approximately $165 billion on advertising, $34 billion of which went to print media. The entirety of spending throughout the past 40 years may well have been based on only a handful of key principles that now appear far less valid and valuable than previously believed and currently practiced, which, at least to me, poses, among a multitude of analytical scenarios, the intriguing question,

What financial and ethical cost now to advertise your wares?



Dichotomous Valuations

Fundamental Considerations

At some point during 1999, as our three-man team at Citibank Private Bank in London was rapidly approaching $100 million in mutual fund AUM, I was approached by senior management to analyse and select plain vanilla and hedge funds for a new product platform to be introduced to clients by relationship managers worldwide. The instruments of analysis, as I discovered, were distinct from the approach I was taking within our unit, which predominantly involved the reading of fund literature, analysis of fund performance and interviews with selected managers to get a real sense of their thinking and decision-making.

The new platform would select funds on a strictly quantitative basis, and so I embarked on a Micropal and TASS learning curve that kept me busy going back and forth between two analytical methodologies – relatively fundamental and purely quantitative. At the time, the multi-manager industry was in its infancy, and the ETF market was barely nascent, yet it was clear that studying alphas, sharpe ratios and a handful of other primary statistical metrics was a rational, albeit non-associative process for evaluating prospective fund performance. The same rationale, with even greater significance, applied to hedge funds.

Nevertheless, the lack of association embedded in the exercise, that is, the distance from, and non-communication with, the fund manager, diminished (at least in my mind) the credibility of the performance characteristics, even if the fund manager was recognized to be, for example, Julian Robertson. Because of the infinitesimal permutations embedded in purely statistical analysis, and despite the greater efficiency of this quantitative method, less effort was actually expended, and greater satisfaction derived, from meeting fund managers face-to-face – the fundamental determinant of decision-making. Whether this choice affected client returns remains an open question.

Opinion

Because of the infinitesimal permutations embedded in purely statistical analysis, and despite the greater efficiency of this quantitative method, less effort was actually expended, and greater satisfaction derived, from meeting fund managers face-to-face – the fundamental determinant of decision-making.

Fast forward to the present, and after over a decade of focus on the fundamental analysis of stocks, the quantitative approach to stock selection draws similar parallels, although with a greater degree of bifurcation. Whilst the choice of analysis can be rationalized from a purely statistical perspective, the evaluation process can be diametrically opposed to valuations based on observable characteristics of, for example, firm performance drivers or the nuances of visual and vocal presentations, and where, realistically speaking, no causal relationship with the many imponderables of firm activity can be quantitatively defined without expending greater resources than may actually be warranted.

Even whilst quantitative factors can represent a positive attribute for stock analysis, there remains a qualitative informational distance from firm activity that complicates reconciliation. For example, the observed cost inflation in production due to higher raw material prices can provide indications for valuation adjustments that can reasonably reflect the impact on final product sales, operating costs, debt levels and corporate earnings down the line, but may immediately affect the activity of an algorithm-driven automated trading platform that recognizes such a change as a correlative price signal, illustrated thus,.

```
def initialize(context):
    context.benchmarkSecurity = symbol('IWM')
    schedule_function(bookkeeping)
    set_slippage(slippage.FixedSlippage(spread=0.00))
    set_commission(commission.PerShare(cost=0, min_trade_cost=None))

def bookkeeping(context, data):
    short_count = 0
    long_count = 0
    for sid in context.portfolio.positions:
        if context.portfolio.positions[sid].amount > 0.0:
            long_count = long_count + 1
        if context.portfolio.positions[sid].amount < 0.0:
            short_count = short_count + 1
    record(long_count=long_count)
    record(short_count=short_count)
    # gross leverage should be 2, net leverage should be 0!
    record(leverage=context.account.leverage)

def handle_data(context, data):
# remove trailing stoploss - doesnt seem to work
#    if len(context.longs) and len(context.shorts):
#       set_stoploss(context, data)
#       execute_stop(context, data)
    pass

def before_trading_start(context):
    df = get_fundamentals(
        query(fundamentals.valuation.market_cap,
              fundamentals. valuation.shares_outstanding,
```

Multiplying this phenomenon by multiple, constantly changing factors inevitably results in price volatility and circumspect "artificial" judgement. This dichotomy in valuation applications and outcomes has been noted in a broader context by MIT professor Andrew Lo who comments thus,

> *As long/short equity managers have grown in size, technology has naturally begun to play a more important role, even among fundamental stock-pickers who find that they cannot expand their business unless they make more efficient use of their time and skills. Such managers have begun to rely on stock-screening software and portfolio-construction tools that allow them to leverage their qualitative stock-selection skills, and automated trading platforms that allow them to execute their stock picks more cost-effectively. These new tools have made quants out of many fundamental stock-pickers. Indeed, even among the long-only equity managers, 130/30 strategies are transforming the multi-trillion-dollar equity enhanced-index business into a quantitative endeavor.*

Interestingly, since his comments in 2007, equity long/short funds returns have averaged 4.7% annually over the past decade, far less than the average 15.2% during the course of the preceding decade. (Barclays Long/Short hedge fund index)

Surely then, and notwithstanding this highly abbreviated commentary, the consideration that stock selection can be just as effective without more valuation complexity than is actually necessary is not a misplaced notion, also because ultimately, a stock, as well as representing a factoraily priced proposition, is far more a value proposition that realistically hinges on the objective/subjective output of fundamental analysis – as do most business decisions and transactions that reflect and explain the real-world intricacies of publicly traded firms.

Offensive, Defensive…or Both?

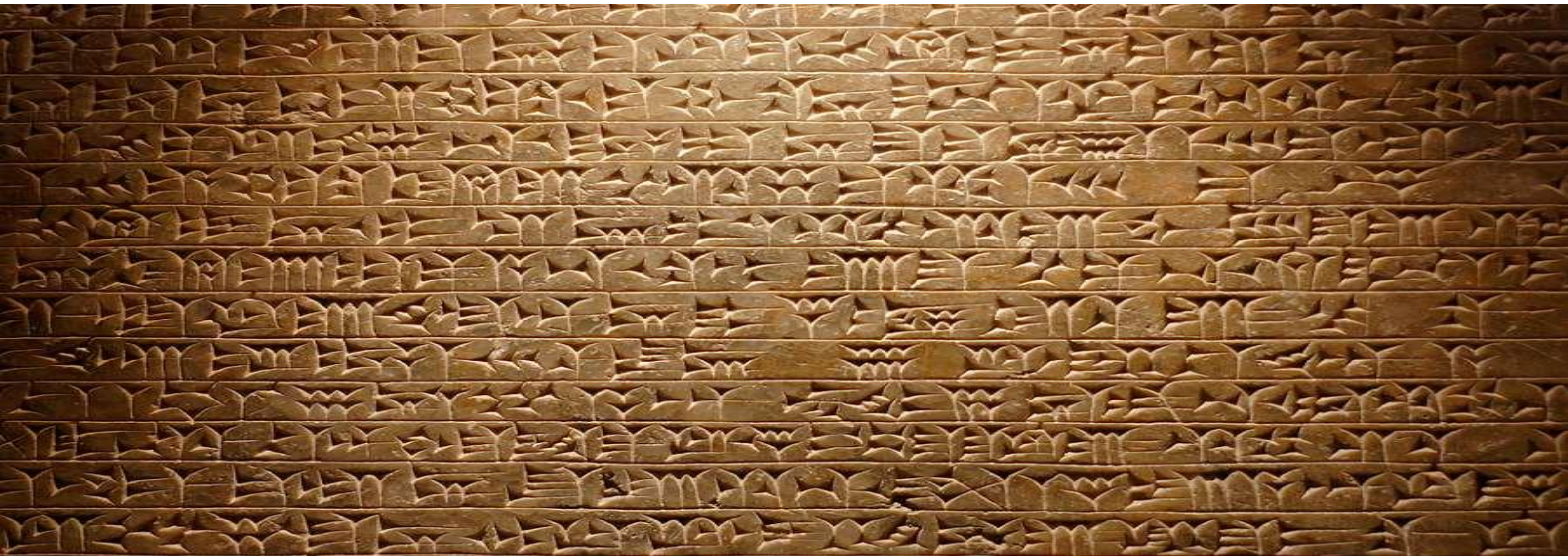
Strategy Plays

American football provides an engrossing insight into strategic gameplay that few other sports can match. Unlike, for example, rugby or soccer games, which are generally more free-flowing and spontaneous, football requires more chess-like tactics to advance the ball against the opposition. This year's Super Bowl match-up between the Carolina Panthers and Denver Broncos provides a conveniently exemplary illustration of two key contrasting strategies that can determine advancement, field domination, possible victory, and a lasting legacy; the Panthers' offensive gambit and the Broncos' defensive response. Fascinatingly, while the Broncos metamorphosed this season from an offensive powerhouse to a defensive one, the Panthers did just the opposite. Indeed, the Panthers' historically defense-minded, defense-playing coach recognized that much of the season's success came down to a creative and consistent offensive running game that matured over the past five years – in sports, a long-term play.

This combination of offensive play to win ground, and defensive play to consolidate positions can, at a reasonable stretch, reflect core strategies that have been the hallmark of successful evolutionary civilizations, nations, economies and firms – even all the way to the most basic common denominator, the individual. A recent paper, published last month, puts this broad-reaching topic into highly relevant perspective. Titled, *The Paradox of Civilization: Pre-Institutional Sources of Security and Prosperity*, the thesis begins with the following,.

> *The rise of civilizations involved the dual emergence of economies that could produce surplus ("prosperity") and states that could protect surplus ("security"). But the joint achievement of security and prosperity had to escape a paradox: prosperity attracts predation, and higher insecurity discourages the investments that create prosperity.*

The reading is compelling, with the proposed theoretical model providing a highly associative rationale for the paradox, noted thus (with paraphrasing),



This [formulaic] expression exhibits a key trade-off of the model: productive [offensive] investments i_1 raise the value of the productive asset. Thus, conditional on maintaining control of the asset, investment is a good idea for the incumbent since ρ > 1; however, the future control of the asset is not a forgone conclusion. Investment raises the incentives of the challenger to arm itself since it makes it more attractive to become the [defensive] incumbent. Therefore, while productive investments increase the value of future incumbency, they may lower the chance that the current incumbent gets to reap that value. This is the civilizational paradox: future prosperity raises insecurity, which in turn depresses incentives to invest and undermines the creation of that future prosperity.

The paper goes on to include an anthropological assessment of Egypt and Sumeria to illustrate the theory, and concludes with two highly salient observations,

1. *A more prosperous society was worthy of attack, and the resulting insecurity would weaken incentives to create prosperity in the first place. In addition, states and civilizations arose together, and therefore stateness, defined as a high degree of security, had to emerge in association with the prosperity that tended to undermine it,*

and

2. *What the basic model cannot explain however is why Sumeria, together with Egypt the other early center of civilization, could develop when it did not enjoy a high level of natural defense. An answer is offered by the extension of the model to consider endogenous defense capability. A naturally occurring high initial productivity, which exacerbated conflict in the basic model, can now enable the transition into security with prosperity and resolve the civilizational paradox. The key is that initial productivity be high in terms of its purchasing power over improvements in defense capability. The possibility of accumulating means of defense helps create the conditions where productive investments can be made without triggering predatory challenges. This result may also help rationalize historical experiences where a temporary economic boom allows the state to consolidate its power and usher in a phase of more sustained growth.*

Transposing the combined examples of football and nation-building onto the corporate landscape can generate meaningful insights into the most recent post-crisis phenomenon of stock buybacks, that more than dividends, characterizes a defensive strategic mindset of leadership, which on the weight of academic, industry and media commentary, skews towards the conviction that longer-term corporate dynamism and economic sustainability is being eschewed in favour of shorter-term gains, which at an aggregate level implies a greater level of economic insecurity, the consequences of which have and continue to be debated. That the purpose and value of stock buybacks are open to multi-dimensional interpretation are particularly reflected by three eye-opening articles; William Lazonick's *Profits Without Prosperity* appearing in a September 2014 issue of the Harvard Business Review, Wall Street Journal's *Beware the Stock-Buyout Craze* of June 2015, and a Reuters article of 16th November 2015, whose combined overall stance is that excess stock buybacks are detrimental to longer-term company security. It is interesting to note that similar anecdotal media literature has appeared in the near thirty years since the 1987 stock market crash.

Of the more illustrative papers that anatomically investigate the offensive and defensive postures and rationales of stock repurchases are Michigan University's 1987 paper *Takeover Bids, Defensive Stock Repurchases, and the Efficient Allocation of Corporate Control*, which presents both defensive and non-defensive scenarios to test the notion of "fair" competition between manager and raider for corporate control, Stanford University's 1988 paper *Share Repurchases and Acquisitions: An Analysis of Which Firms Participate*, which delved into the accounting characteristics of firms engaged in "non-dividend cash payments", Laurie Bagwell's follow-up 1991 paper *Share Repurchase and Takeover Deterrence* which somewhat ironically introduced the thesis with the observation that "there has been explosive growth in the use of share repurchase in the past few years, with much of the increase associated with contests for corporate control", thereafter citing a few examples and further noting that

> *the use of repurchase as a deterrent is not well understood.*

The poorly understood theme was tackled by Scott Weisbenner (then at the Federal Reserve Board) who in his 2000 paper *Corporate Share Repurchases in the 1990s: What Role Do Stock Options Play?* took a different tack by focusing on the implications of executive stock option programs, noting that,

> *A dividend payment will reduce the stock price and the value of outstanding op tions, whereas a repurchase of shares or greater earnings retention will not...... Th at means that any dividends paid on a stock will typically not be paid to those h olding options on that stock. Thus, firms whose executives hold more options ma y repurchase more stock and/or retain more earnings to maximize the value of t heir option holdings. The distribution decisions of the firm will not solely reflect sha reholders preferences, but will also depend on how the wealth of the person(s) making those decisions, the agent, is affected.*

Interestingly, he also notes how,

> *the popular press also cites executive compensation as contributing to the change in corporate payout policy*

- (The Economist, August 7, 1999 and April 25, 1998, and Business Week, April 21, 1997.)”

Daniel Bens’ (formerly Chicago Booth, now Insead) 2003 paper *Employee Stock Options, EPS Dilution, and Stock Repurchases* innovatively added a further interpretive branch of thought to find that

> executives are more likely to undertake repurchases when earnings fall short of the levels necessary to sustain prior growth rates in reported EPS. Thus, executives’ incentives to manage diluted EPS help explain their firms’ stock repurchase decisions,

based on the assumption that

> *a substantial body of empirical literature suggests that investors reward firms that report consistent earnings growth, consistently meet analysts' earnings forecasts, and avoid earnings disappointments.*

That corporate executives seek to strategically manage earnings results through buybacks implies market timing and signalling, a theme comprehensively analyzed in a 2012 paper out of Kentucky University which studied the stock repurchase behaviour of around 5,500 firms between 1984 and 2010 to understand whether managers successfully execute repurchase programs, that is, buying at attractive values once a determination was made that the stock was undervalued, ultimately concluding that whilst managers have great flexibility in the execution of buyback programs (for example, timing, size and aggregate amounts) they typically executed repurchases when stock prices were higher and key valuation ratios lower.

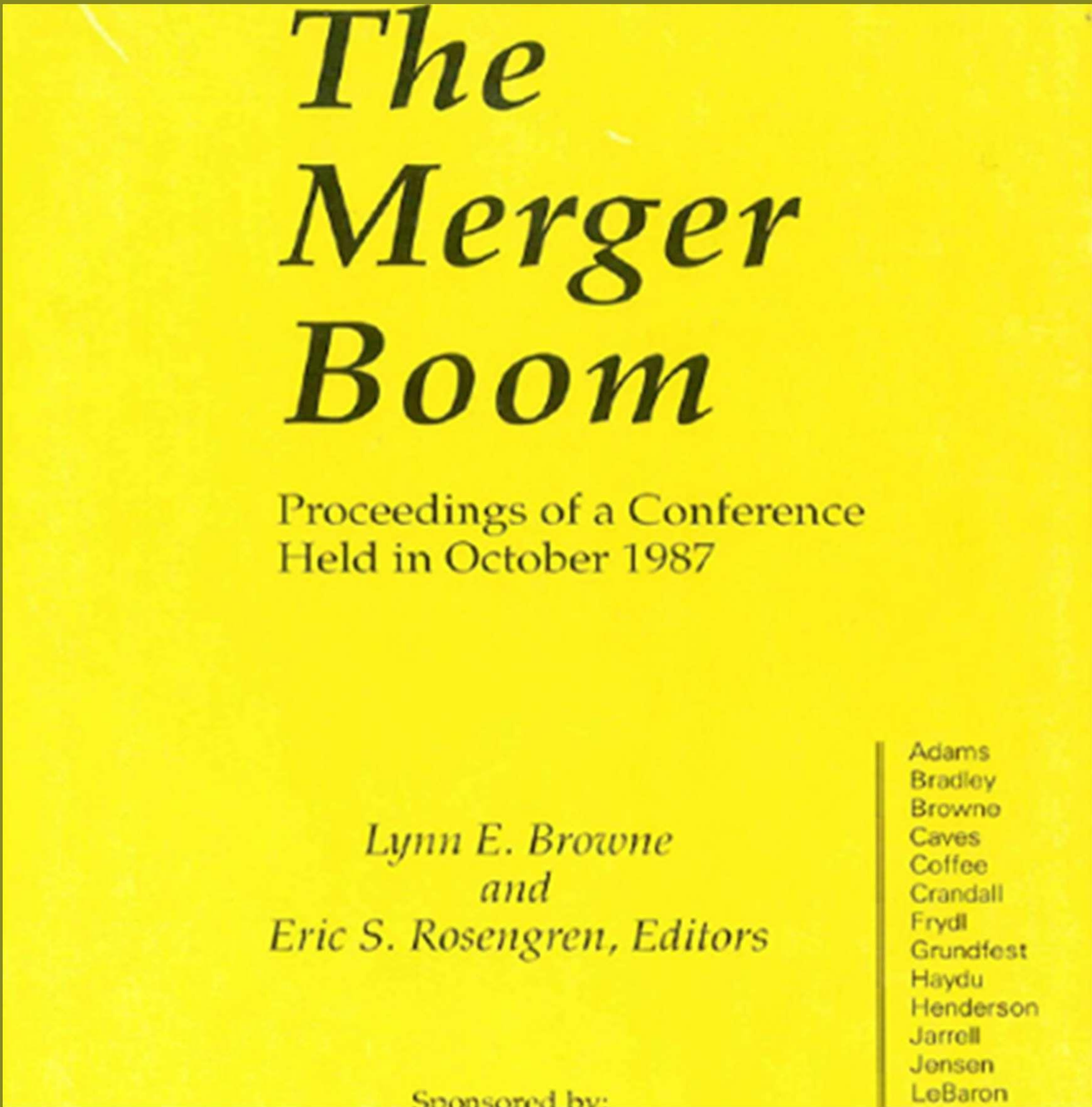
Notwithstanding all these, and other, academic insights, the voice of real-world experience generally elicits more attention. Michael Mauboussin at Credit Suisse expertly provides such a contribution in his Q&A formatted research paper of 2014 entitled *Disbursing Cash to Shareholders*, which to an extent contrasts certain aforementioned findings whilst agreeing on the puzzling strategic rationales for buybacks, observing

> *If, why, and how companies choose to distribute cash to shareholders is a crucial and timely issue in determining shareholder value. Still, poor thinking about the topic continues to pervade the minds of executives and investors alike. We can pin part of the confusion on the media, which frequently provides superficial and unsophisticated reporting. But many executives and board members also come across as rudderless even though they have a great deal to gain by getting it right. Finally, investors are all over the map. Some swear by dividends, and others want buybacks only. Few have carefully and rigorously thought through their positions. Executives are buffeted by the strong views of investors, leaving them in doubt of the best course.*

The ambiguity of three decades of theoretical research and factual experience aptly illustrates a dilemma reminiscent of the introduction's "civilizational paradox", and, however seemingly, or perhaps appropriately, abstract the premise, it is clear that there is no certain answer on how best to make use of excess cash, although, in principle, $1.9 trillion of excess capital that is **not invested** in diverse and dispersed growth opportunities to thus be injected into the broader economy perfectly illustrates, in my mind, a concept of civilizational paradox that can indeed undermine the creation of future prosperity.

In concluding this commentary, corporate gameplay that regards stock buybacks as an offensive or defensive strategy, or perhaps given the abbreviated evidence, even both, is a phenomenon best summed up by an excerpt from a 1967 Senate Report,

> *Corporate repurchases of their own securities may serve a number of legitimate purposes. For example, they may result from a desire to reduce outstanding capital stock following the cash sale of operating divisions or subsidiaries, or to have shares available for options, acquisitions, employee or stock purchase plans, and the like, without increasing the total number of shares outstanding. Repurchase programs, however, may also be utilized by management to preserve or strengthen their control by counteracting tender offers or other attempted takeovers, or may be made in order to increase the market price of the company's shares. Whatever the motive behind the repurchase program, if the repurchases are substantial they will have a significant impact on the market.*



Nuts and Bolts

Equity Geography

At a practical level, one of the more fascinating aspects of analysis outside corporate announcements, reports, commentary, conferences, analyst and investor meets is the observation, indeed study, of the entire macro- and micro-economic geography of the United States; looking at layers of activity that, once superimposed, generate an entire visual feast of concentric data concentrations that can contribute to forming perspective and insight.

One of the more interesting aspects of such an exercise is that, at some levels, it can help explain the puzzle surrounding participation rates in the stock market and the reduction in the number of publicly traded firms over the past two decades, a phenomenon that has been reported on periodically with opinions one can assume to be fairly distributed on the bell curve, but in some sense lacking comprehensive analysis and industry engagement. Given that the stock market has a 200-year old history and is intrinsic to the genesis and progression of America as an independent nation with its market-based economy (after all, the stock exchange was formed only 5 years after the creation of the constitution), the theme warrants increased attention.

Papers

- Harvard – Eclipse of the Public Corporation
- NBER – The Geography of Investment: Informed Trading and Asset Prices
- NBER – The Geography of Stock Market Participation: The Influence of Communities and Local Firms

Harvard professor Michael Jensen's ground-shifting 1989 paper entitled *Eclipse of the Public Corporation* is a good starting point. His introduction, curiously reflective of the current environment, began with,

> *The publicly held corporation, the main engine of economic progress in the United States for a century, has outlived its usefulness in many sectors of the economy and is being eclipsed. New organizations are emerging in its place—organizations that are corporate in form but have no public shareholders and are not listed or traded on organized exchanges. These organizations use public and private debt, rather than public equity, as their major source of capital. Their primary owners are not households but large institutions and entrepreneurs that designate agents to manage and monitor on their behalf and bind those agents with large equity interests and contracts governing the distribution of cash.*

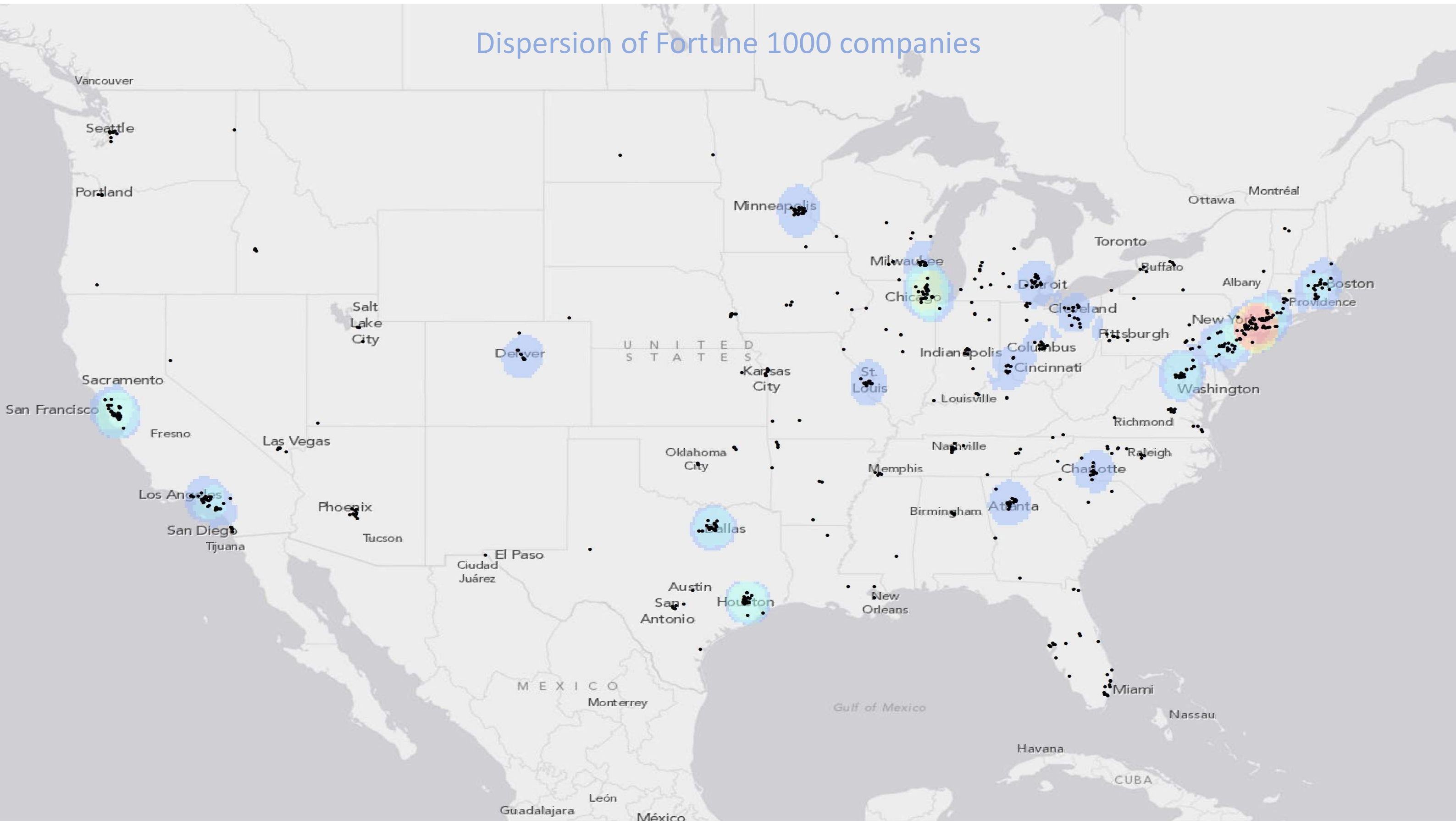
His thesis delved into the mechanics of competitive financing forces at hand with compelling explanatory constructs that nevertheless neglected the overall socio-economic landscape, as did one of the more comprehensive discussions held just a week after the October 1987 crash at the Boston Fed conference,

[The Merger Boom]

Over the following decade relatively little evidence-based studies were conducted that superimposed stock market participation rates onto the economic landscape, a curious omission given that the nineties experienced the longest running expansion in the nation's history, as measured by NBER, and comparatively detailed in the Bureau of Labor Statistics publication, *Job growth in the 1990s: a retrospect.*

Finally in 2001 a paper by Coval and Moskowitz at NBER, *The Geography of Investment: Informed Trading and Asset Prices* partially began to counteract some of Jensen's assertions, finding positive and significant relationships between investors (principally mutual funds) and publicly traded firms,

> *Moreover, funds better able to select local stocks concentrate their holdings more locally…These funds also generate the largest gains from local investment, outperforming their distant holdings by as much as 3 percent per year and outpacing local stocks not held by 4–5 percent per year, on a risk-adjusted basis. Conversely, funds that do not exhibit a local bias generate no abnormal performance in their local holdings. These results suggest an informational link between geography and investment.*



These findings may have constituted an impetus for a more elaborate analysis appearing in a 2004 paper, *The Geography of Stock Market Participation: The Influence of Communities and Local Firms* which fascinatingly described the relationship between household equity participation and geographic locality, including how, of the approximately 750,000 observations representing around 85,900 distinct taxpayers,

> *Nearly 92 percent of households [taxpayers] have at least one publicly-traded firm headquartered within 50 miles. However, the share of total U.S. firm market value residing (i.e., headquartered) in that 50-mile radius differs substantially across households. To place this in context, over the period from 1987 to 1996, 0.7 percent of U.S. firm market value was located within 50 miles of Kansas City, MO on average (this is approximately the median of the share of firm market value within 50 miles of a household), 5.6 percent was located within 50 miles of Dallas, TX, 8.3 percent was located within 50 miles of Chicago, and 25.8 percent was located within 50 miles of New York City.*

Tellingly, the study found that

1) an individual's decision whether to invest in the stock market is influenced by the participation decision of others in the household's community, and

2) that equity market participation is influenced by the presence of local firms.

Whilst these dual findings may be interpreted in any number of ways, they do at least identify positive benefits of the democratized nature of stock market participation with its geographic dispersion. Even Jensen acknowledged that the public corporation "remains a viable option in some areas of the economy, particularly for growth companies", a fact borne out to an extent by the growth in listed firms throughout the 90s that reached a peak in 1997 with over 8,000 listed firms, but which has since declined progressively to less than 3,800 for reasons variously attributed to, for example, the increased participation of Private Equity (as Jensen intoned), the absolute decline of IPOs, increased share buybacks and inevitably, the impact of changing regulations and legal environments, the latter interestingly remarked upon in a 2003 NBER paper, *Firms' Decisions Where to Incorporate* which from a study of over 6,800 publicly traded firms noted how

> *The evidence indicates that a significant home-state advantage is at work in the market for corporate law. In contrast to the conventional picture of state competition, a firm's incorporation choices are not solely based on comparing states' corporate law systems but are significantly influenced by the firm's location. States are substantially more successful in "selling" their corporate laws to firms located in them than to firms headquartered elsewhere. This home-state advantage is especially strong with respect to smaller and older firms, a pattern consistent with several explanations for the presence of such advantage.*

However, over the past decade again little was seemingly done to reinforce or promote these combined findings, with the exception of a few studies, including a paper published in a 2007 edition of the Journal of Behavioral Finance entitled *The Geography of S&P 500 Stock Returns* which although limited to those index constituents nevertheless investigated the intricacies of firm geography by questioning the dynamics of investor behaviour,

> *But how would bias in favor of local firms affect the correlation of stock returns? If investors prefer familiar local companies, then firms that are close to each other are likely to have more investors in common than distant firms. Local economic and other considerations may disproportionately affect investors who live close to the same S&P 500 firms. These items may be local tax issues, news about the health of the local economy, or even weather, and they might produce local informational advantages, changes in local sentiment, or liquidity needs. If these factors cause local investors to trade together and if this common trading activity is large enough to affect prices, then stock returns of geographically close companies are likely to be correlated.*

The entire paper actually succeeded in plotting correlations between firm geography and investor participation, even extending out to performance attributes, but only recently have bodies of research began to unfurl a collective tapestry that emphasizes the role, validity and opportunity of geographic dispersal and localization for corporations and investors. Some of the more relevant papers that provide perspective and insight into this arguably critical topic are, for backdrop, NBER's March 2015 paper, *Where has all the skewness gone? The decline in high-growth (young) firms in the U.S.*, Ohio University's May 2015 paper *The U.S. Listing Gap*, and for evidence-based debate, two papers led by Gennaro Bernile, the first in September 2013 entitled *Home Away From Home: Geography of Location and Local Investors*, which focused on the conjecture that

> *the geographical variation in firms' local economic activities generates location-based information asymmetries among investors, which in turn influence the portfolio decisions and performance of those investors.*

tested through the application of a variable-rich model to determine whether a local informational advantage induces an investor to overweight local stocks, indeed finding that

> *the direct relation between portfolio LIC (Local Information Content) and performance is stronger when an investor allocates greater weight to her local investments.*

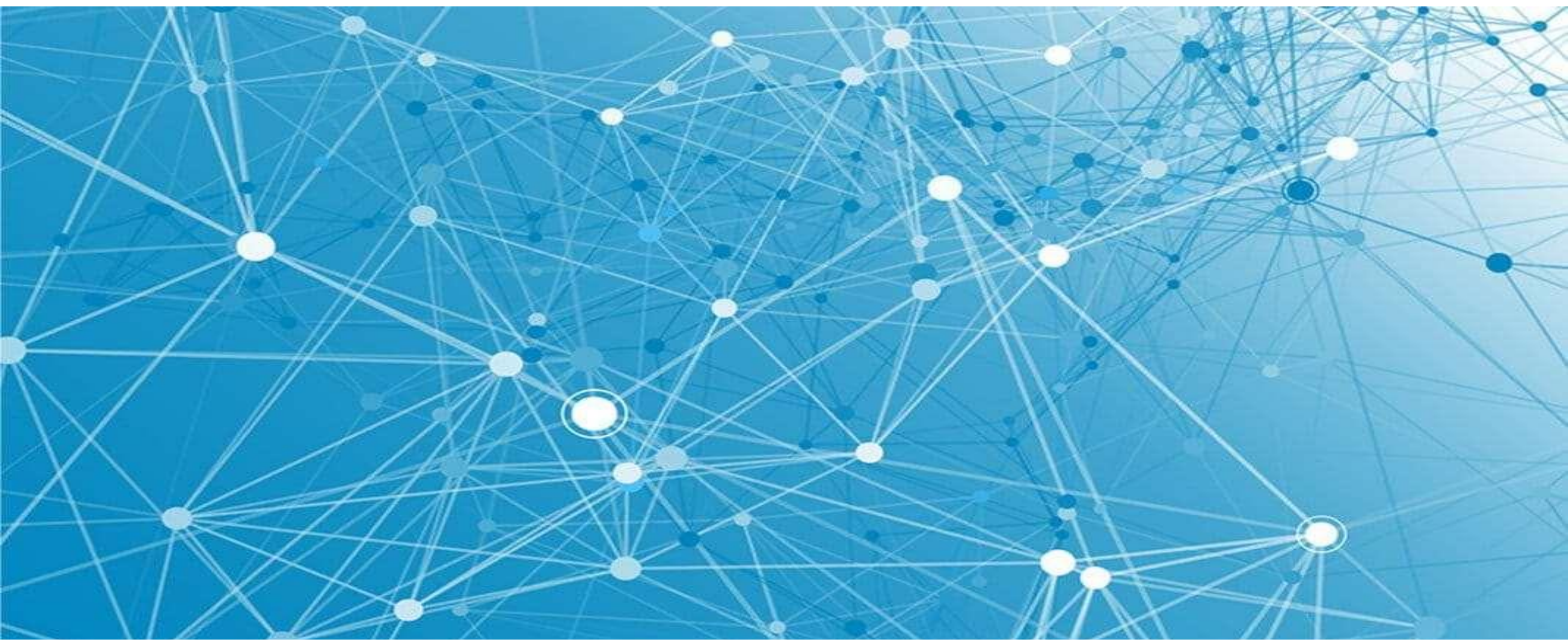
These findings were further emphasized in the following February 2015 paper, *Information Environment and the Geography of Firms and Investors* wherein,

> *The empirical evidence shows that the quality and quantity of publicly available information are strongly related to investors' propensity to hold and trade stocks; however, the direction of these relations depends crucially on the investors' geographic proximity to the firm.*

Most recently, this month's Miami University paper *Slow Diffusion of State-Level Information and Return Predicatibility*, highlights the multi-faceted importance of geographic dispersion for corporate activity and investor participation, ironically (at least to me) introducing the theme with

> *We use a new disclosure-based approach to show that value-relevant information about publicly-traded firms is geographically distributed within the United States and the market is slow in aggregating this information. Firm fundamentals such as earnings and cash flows can be predicted using the fundamentals of other firms in economically relevant U.S. states, but sell-side equity analysts and institutional investors do not fully incorporate this information in their earnings forecasts and trades, respectively.*

In concluding I note that this somewhat lengthy commentary is merely context for far more deterministic debates and exercises that require the entire spectrum of socio-economic-political interaction (such as the March 2015 conference of the Center for American Progress that included Hillary Clinton and Glenn Hutchins of Silver Lake Partners), not only to connect the dots for more meaningfully dispersed pockets of firm and investor participation, but more intrinsically, to examine, polish and place the nuts and bolts of local economies that connect and support the dispersed cogs of a mighty engine of growth that must perform.



Fair and Reasonable Exchanges

Koinonia

A quatrain from Goethe's West-Osterlich Diwan reads

> *Let him who fails to learn and mark three thousand years still stay,*
>
> *Void of experience, in the dark, and live from day to day.*

The entire literary work was inspired by the poetry of a 14th century Persian, Hafez, and was intended to stimulate exchange between western (Christian) and eastern (Muslim) cultures. This was by no means a first attempt at stimulating dialogue between two apparently very different mindsets. Already in the 12th century the Persian philosopher Averroes was championing the works of Aristotle to the Muslim world with interpretations of rhetoric that had been neglected in the works of Al-Farabi, who in the 10th century founded his own school of philosophy after absorbing Greek philosophy (especially that of Aristotle and Plato) and initiated scholarly translations of the original Greek writings into Arabic, which two centuries later provided Ibn Rushd (Averroes) with his literary material.

Interestingly, the Arab bibliographer al-Nadim entered the following comments in his index on the subject of rhetoric by Aristotle

> *And it means "oratory". It is found in an old translation. It was said that Ishaq (ibn Hunayn) translated it into Arabic and that Ibrahim ibn Abd Allah also did a translation [of the treatise]. Abu Nasr al-Farabi wrote a commentary on it.*

Al-Farabi did indeed write his commentaries on Aristotle, more scholarly characterizing rhetoric thus,

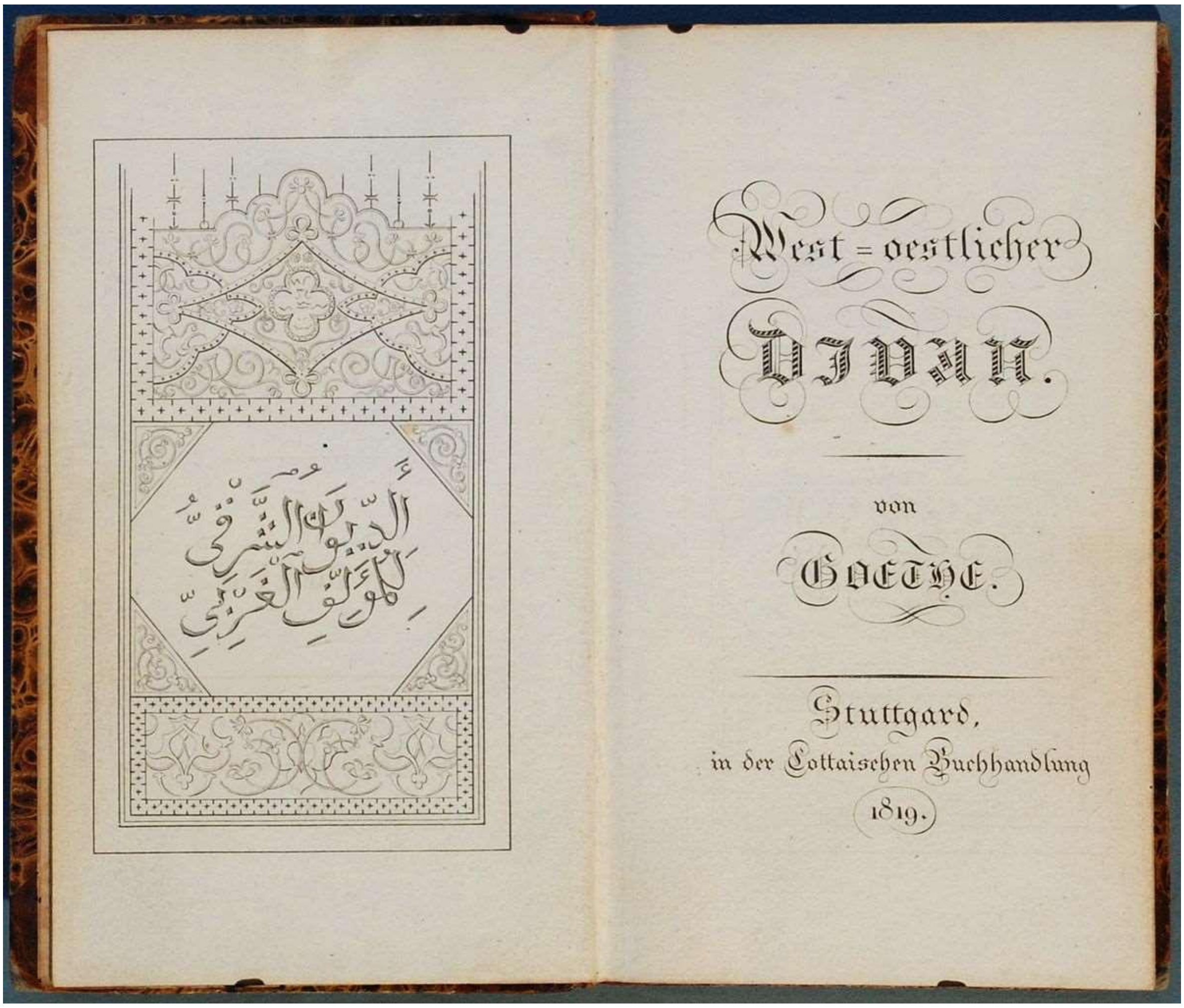
> *Rhetoric is a syllogistic art, the purpose of which is persuasion in all ten genera…..What happens in the mind of the bearer as a result of persuasion is the ultimate goal of the acts of rhetoric.*

In a subsequent entry that curiously apportions monetary value to these works, al-Nadim writes

> *Abu Zakariyya said he had asked ibn Abd Allah to give him, for fifty dinars, a copy of the 'Sophistics', a copy of the 'Rhetoric', and a copy of the 'Poetics', which were translated by Ishaq, but he would not sell them.*

In terms of literary categorization, this was phenomenally important, a link not lost in Uwe Vagelphol's scholarly work, Aristotle's Rhetoric in the East: The Syriac and Arabic Translation and Commentary Tradition, within which is described

> *a wider process of cultural exchange that led to the adaptation and transformation of large parts of Greek learning to fit the unique religious, intellectual, political and social circumstances of Islamic culture.*



For historical circumstances too lengthy to mention, these Arabic renderings of Greek philosophy made their passage through the Mulsim world to then journey back to western Europe where they were translated into Latin through the course of the 12th century onwards, in the 13th century attaining revelationary prominence through Albertus Magnus and especially his disciple Thomas Aquinas, who elevated Aristotle's rhetoric to another interpretive level, representative of the times he lived in, and reflective of Goethe's thinking six centuries later – into whose mind we have some certain insight - principally due to the observations of Falk von Muller, captured in his book, *Characteristics of Goethe*, from which we read

> *From his elevated point of view, history appeared to him nothing more than a record of an eternally repeated, nay, necessary conflict between the follies and passions of men and the nobler interests of civilization; he knew too well the dangers, or, at least, the very problematical results, of uncalled-for interference…This was the persuasion which dictated all his endeavors to influence the minds of others by conversation or by writing – to suggest, to instruct, to encourage, to restrain; to represent the false, the distorted, the vulgar in all their nothingness; to ally himself entirely with noble spirits, and steadfastly to maintain that higher freedom of thought and of will, guided by reason, which raises men to the true dignity of human nature.*

The enduring thread (or as computer scientists may prefer, string) that binds these cultural exchanges, fairly distributed in their multivariate forms, is naturally the rhetoric of Aristotle, whose treatises on moral philosophy influenced entire civilizations' deliberations and determinations on what was, among other considerations, just and unjust, fair and unfair, reasonable and unreasonable. His barely elucidated theory on justice in exchange relations inspired debate on what was lawful and unlawful in an even then evolving world of commerce and finance, a subject matter fascinatingly expounded on in Louis Baeck's 1998 paper *The Mediterranean Trajectory of Aristotle's Economic Canon*, which further delved into the multicultural interpretations of the Nicomachean theme of proportional reciprocity, a term that laid intellectual foundations for the advent of formalized monetary exchanges that, in principle, accorded intrinsic value to the various forms of goods, stocks, commodities, services - practically anything of exchange value - driven by circumstances of trade, neatly summed up thus by Baeck,

> *In the evolving commercialization and monetarization of the economy, money emerges as the conventional standard measure of all things. In the next step, Aristotle opens a new perspective on the nature and function of money; in due time it becomes the "representative" of "chreia". Money serves as an acceptable surrogate for the intrinsic or basic value measure: "huppalagma tès chreias". In his view, money is not only a medium but, in due time, also becomes a value measure in exchange relations. Moreover, money serves as a stock of purchasing power for future transactions. Finally, since money is only a conventional instrument based on common agreement, its value is liable to fluctuations.*

The theme of intrinsic value gradually became a standard for exchange relations that evolved over the course of centuries (and still appear to be evolving in the present day). Some historical perspectives on the topic are covered in Michael Kemp's engaging book, *Uncommon Sense: Investment Wisdom Since the Stock Market's Dawn*, which brings to the fore the concept of what constitutes fair and reasonable exchanges for, in this instance, stocks, with a certain emphasis on the manipulation of their exchange values. Of particular relevance is the author's reference to a book written at the time of the South Sea Bubble by Daniel Defoe, entitled *The Anatomy of Exchange-Alley: or, A System of Stock-Jobbing*, and the following chosen passage that evokes tactics employed by present-day high frequency traders…

> *That six or eight men shall combine together, and by pretending buying or selling among themselves, raise or sink the stock of the E. India Company, to what extravagant pitch of price they will; so to wheedle others sometimes to buy, sometimes to sell, as their occasion require; and with so little regard to intrinsick value, or the circumstances of the company…*

This state of affairs, where trading advantages are skewed towards unfair practices, further compounded by the activities of exchanges that bear little relation to their intrinsic purpose and sense of proportional reciprocity, has presented a real dilemma for policymakers and market regulators who, despite their accumulated wisdom, appear to find themselves lost, divided or befuddled by their own rhetoric, thus layering further complexity that can be reasonably considered incommensurate with the requirements and expectations of the majority of the investing classes, which now brings me to conclude this necessarily rambling commentary.

This combined dilemma has been confronted by IEX Group, which has pooled the collective wisdom, and capital, of those who arguably better understand and appreciate the basic, fundamental existence of relations necessary to uphold and advocate historically and universally acknowledged tenets of fair and reasonable exchanges that additionally avoid (in principle) the hyperventilating consequences of excess.

Katsuyama et al. lead by example. Their rhetoric, along with their application for exchange status, merit and deserve approval from the SEC.

Cautionary Tales, Sober Reflection

Quicksilver Markets

It is interesting to observe how, regardless of actual knowledge, a person will experience more cognition when hearing the name Seneca than when hearing the name Theophrastus. Apart from being easier to remember, Seneca historically gained prominence as a Stoic, became associated with Nero, hence drama, and thus (somewhat paradoxically) emotion, a habitually stronger point of reference for human memory. Incidentally, a light and entertaining account of Seneca's life worth reading appears in February's edition of The New Yorker.

Theophrastus, although arguably less prominent, succeeded Aristotle as the head of the Peripatetic school, enhancing in his time both philosophical and scientific exploration and discovery through principally factual analysis, memorably represented in his ground-breaking *Historia Plantarum*. Curiously, Quintilian, a writer and teacher of Rhetoric, and ardent admirer of Cicero the Orator, says of Seneca, of whom he was more critical

> *Cuius et multae alioqui et magnae virtutes fuerunt, ingenium facile et copiosum, plurimum studii, multa rerum cognitio, in qua tamen aliquando ab iis, quibus inquirenda quaedam mandabat, deceptus est.*

generally translated as

> *Seneca had many excellent qualities, a quick and fertile intelligence with great industry and wide knowledge, though as regards the last quality he was often led into error by those whom he had entrusted with the task of investigating certain subjects on his behalf.*

These days, distinguishing prominent individuals is a more complex and arguably more subjectve task. The population is far greater, as are the variables. One notable exception is Warren Buffet, who has distinguished himself above the many, and whose pronouncements are rigorously monitored because they still have global resonance. One of his more recent pronouncements, earlier this month, was that he had been wrong on interest rates, which however had been preceded by his opinion that

> *If we get back to normal interest rates, stocks at these prices will look high.*

Papers

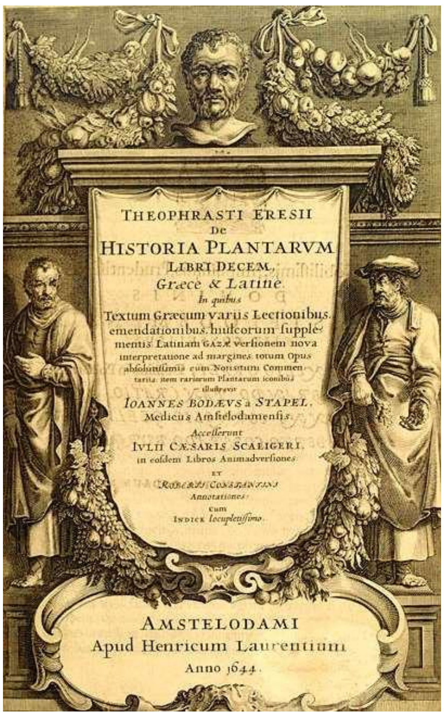
- FRB – Stock Market Flucuations and the Term Structure
- MIT – What Stock Market Returns to Expect for the Future
- FRB San Francisco – Asset Price Bubbles
- IMF – Lessons for Monetary Policy from Asset Price Fluctuations

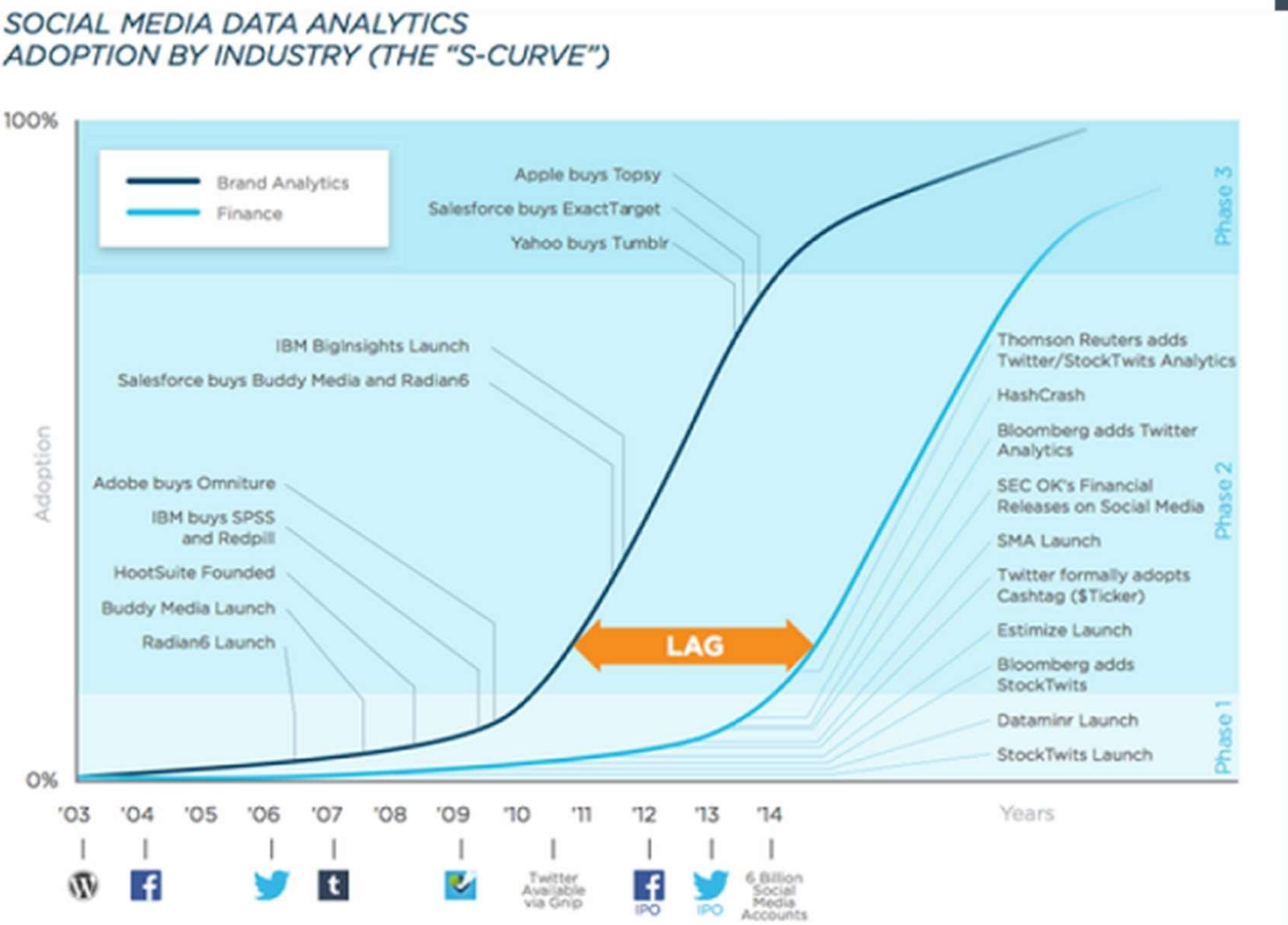
The relationship between interest rates and asset prices (stock prices in particular) is a prominent theme, historically and continuously investigated, discussed and promoted, often and not necessarily coincidentally in periods closely preceding a significant structural market correction.

Notable and well-defined papers on the subject that serve as cautionary tales include the Federal Reserve Boards's 1996 publication *Stock Market Fluctuations and the Term Structure*, the March 1999 Economic Letter by FRB San Francisco, a 2000 paper by Peter Diamond at MIT entitled *What Stock Market Returns to Expect for the Future*, a further FRBSF letter published in October 2007 entitled '*Asset Price Bubbles*', a 2009 IMF paper *Lessons for Monetary Policy from Asset Price Fluctuations*, Mark Zandi's testimony before the Joint Economic Committee in March 2014, and, most recently last month, another letter from FRBSF tellingly titled *Optimal Policy and Market-Based Expectations* which concluded with the following,

> *Financial market prices can be a valuable source of information for policymakers, including central bankers. However, it is important to recognize the limitations of market-based expectations. Market prices may vary for a number of reasons that are unrelated to the fundamental factors of interest to policymakers. Therefore, it appears that policy cannot be formulated exclusively using information in market-based expectations.*

I conclude with reference to an excellent piece published in March by Ted Berg at the Office of Financial Research. *Quicksilver Markets* encapsulates a variety of observations, theories and beliefs expounded on by prominent individuals associated with capital markets and monetary policy. The narrative, salient and informative, is timely, and on the back of precedent, reasonably encourages sober reflection.





Opinion, Opinion, Opinion

Sentiment Analysis

When, as a fresh-faced, fresh-out-of-college youth I took my first steps into the professional world as a negotiator for Savills, one of the more prestigious real estate and land agents in England (and now the world), the prevailing market mantra was “Location, Location, Location”. At the time I was too green to understand the layered interpretive permutations in those words, reputedly coined by Lord Harold Samuel, founder of Land Securities, who preceded the ubiquitous appendage with “There are three things that matter in property…” Over the years (and after a change in professional direction) I grew to more fully appreciate the phrase, which has become part of established lore. Today its relevance is indisputable, principally because the underlying value of location can be empirically proven with a high confidence rate, thus increasing the likelihood of universal acknowledgement.

For financial markets the three Ls have no real equivalent basis (it would be somewhat facile to attribute their use to the major financial centers). Notwithstanding, because of the historically documentable and universally acknowledgeable importance of ‘noise’ throughout the financial markets spectrum, one close and relevant alternative mantra that could be lightly applied would be “Opinion, Opinion, Opinion”, a term derivable from growing trends in the study of opinion mining, or sentiment analysis, or crowd psychology, which whilst interesting as fields of study, remain and will likely remain far too limited, principally due to the inherent weakness of parametric assertions and the complexity of iterative subjectivity which require more statistically advanced definition and proof to have decisive real-world practicality, notwithstanding the current and anticipated increase in levels and layers and dissection of big data, and developments in neuroscience. Naturally, I only speak for myself - it’s just my opinion, hence the light application.

Papers

- Edward Miller – Risk, Uncertainty, and Divergence of Opinion
- Hendrik Bessembiner – Information, Differences of Opinion, and Trading Activity
- Nerissa Brown – Analyst Recommendations, Mutual Fund Herding, and Overreaction in Stock Prices

Still, the three Os form a reasonably all-inclusive proxy to represent verbal and non-verbal expressions (along with their own derivative representations) prevalent in academic, regulatory, investor and social media environments that, to lesser and greater degrees, help to substantiate the impact of opinion on equity markets.

Among the multifarious literature that can add substance to the three Os theme are the following papers which, as I randomly found from reading sequentially, form a coincidentally useful cumulative stratified body of knowledge, each building on the preceding paper's logic and empirical analysis.

Starting with Edward Miller's 1977 paper on *Risk, Uncertainty, and Divergence of Opinion* which introduced a fundamental premise; "In practice, the very concept of uncertainty implies that reasonable men may differ in their forecasts", illustrated by an example whose principle finds relevance to this day,

> *Consider a stock held by 1% of investors. A particular article is likely to cause 10% of the readers to lower their opinion of the stock sufficiently to cause them to sell one share of the stock if they held any, and to cause 1% of readers to purchase a single share. Although such an article would probably lower the average assessment of the market, the net effect is induced purchases 10 times as large as the induced sales.*

In 1994, a research paper led by Hendrik Bessembinder, entitled *Information, Differences of Opinion, and Trading Activity* added further layers of knowledge through the modeling of opinion that used as its empirical base open interest to find that,

> *One key determinant of variation for demand for financial assets is cross-sectional differences in the information possessed by traders… Open interest reflects the cross-sectional variation in agents' [traders'] net demand for positions in the equity basket, including that variation attributable to differences of opinion.*

More recently in 2009 a paper exploring the herding phenomenon, *Analyst Recommendations, Mutual Fund Herding, and Overreaction in Stock Prices* found strong correlations between fund managers' investment behaviour and analyst opinions. Using a substantial 11-year dataset (1995-2006) the authors tested various hypotheses to explain herding behaviour, in one instance noting,

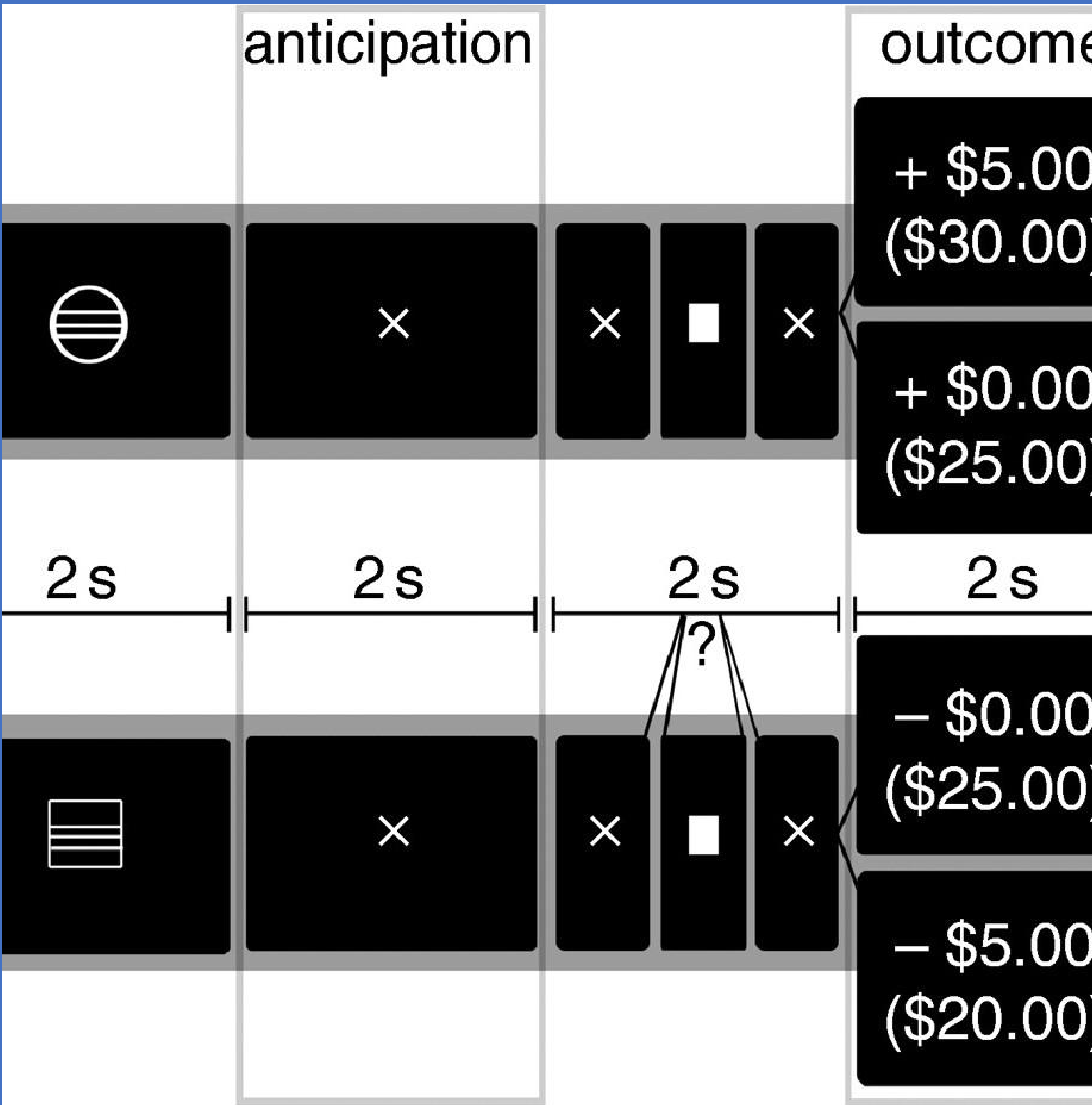
> *In addition, we show that fund managers exhibit a stronger reaction to analyst opinions that are more unanimous (i.e., analyst "herding" that is either due to correlated information or to analyst career concerns). These findings suggest that mutual funds respond directly to the information content of analyst revisions, controlling for their response to other signals.*

Most recently, a 2014 paper from the University of Innsbruck serves as an anthology for research on investor sentiment, linking John Maynard Keynes' observation that the "market is subject to waves of optimistic and pessimistic sentiment, which are unreasoning and yet in a sense legitimate where no solid basis exists for a sound calculation" with a variety of academic findings to support his time-tested and proven notion, concluding with useful comments on the direction of future research on the topic,

> *There is nothing wrong with asking investors about their beliefs or explaining certain puzzles with proxies related to sentiment, but it might also be of interest to analyse factors influencing investors' individual evaluation of asset characteristics. This is an important issue, since investors constantly have to process and interpret information which provides the basis for their actions […and I would add, opinions].*

Thus, in its myriad forms, the catalyst, creation and diffusion of opinion is proven to be fundamental to participation in, and performance of, equity markets. However, with the exponential growth in media characterization of opinion that tends to distort perception and interpretation, perhaps the priority should not be on subjectively qualifying the value of opinion through statistical quantification, but rather on objectively optimizing its value through more effective calibration.

There are three things that matter in equity markets…Opinion, Opinion, Opinion.



Realms of Probabilities

Uncertainty Valuation

Probability is a dilemma. Socrates and Antiphon respectively attested to the philosophical and legal implications of "*eikota*" that were generally defined by divine (thus irrational) laws until the 17th century advent of mathematical probability through the most banal of pastimes, gambling, which quite appropriately went hand in hand with then legal interpretations. This nascent science is compellingly and comprehensively detailed in Lorraine Daston's book *Classical probability in the Enlightenment*, which traces the essential characteristics of probability that persist today and, in all probability, will persist in perpetuity.

Reading through a variety of literature these past two months abstractly brought this thread of conviction into relief. One example is a fresh-off-the-press paper entitled *Money Doctors* appearing in The Journal of Finance and written by former asset managers that, in brief, model the probabilistic tendency of investors to hire active managers who in all likelihood will under-perform passive funds. The authors reasonably contend that this phenomenon is akin to a patient-doctor relationship where,

> *many investors have very little idea of how to invest, just as patients have a very limited idea of how to be treated.*

Interestingly, they use the concept of trust to replace the associative agency conflicts that typically arise between investors and managers, a theme thoroughly expounded on in a paper published twenty years ago by NBER, which primarily examined the relationship between fund performance and subsequent investment flows

> *in order to determine whether the relationship generates incentives [eikota] for fund management to alter the riskiness of their portfolios,*

a premise that subsequently finds statistical (hence probabilistic) validity in a 2011 paper by Kuhnen and Knutson that indicates a deterministic relationship between a positive emotional state and propensity to take risk, that is,

> *a positive emotional state induces people to take risk and to be confident to evaluate investment options, whereas negative emotions, like anxiety, reduce propensity to take risk", which by itself is a statement on the probability distribution of human behaviour.*

Highlight

"many investors have very little idea of how to invest, just as patients have a very limited idea of how to be treated."

- Money Doctors

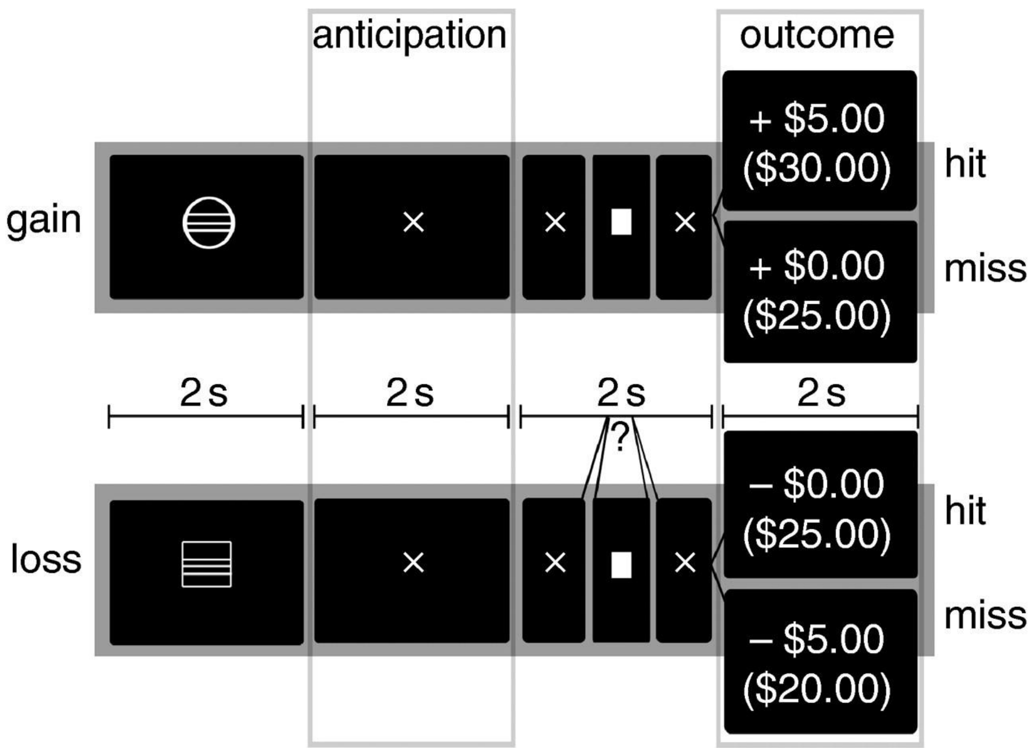
Human behaviour, is then, the crux of the dilemma that confronts the ever-dynamic actualities of probabilities, which takes us back over 2,000 years to *The Rhetoric of Aristotle*, in which he syllogistically proposed that

> *a probability is a generally approved proposition: what men know to happen or not to happen, to be or not to be, for the most part thus and thus…*

and went on to say that any probability argument is one in which the major premise is almost but not quite universal, and so the conclusion only probable. His very thoughts have been echoed countless times over the ages, notably in recent history by Lars Hansen, the less noted recipient of the trio of Nobel laureates that include Eugene Fama and Robert Shiller. Hansen's specific interests lie in statistical methods to understand how financial markets are linked to the macroeconomy, recognizing how, a priori, models are all about approximations. He elaborates on this notion through a number of theories, notably detailed in his 2014 paper *Stochastic Compounding and Uncertainty Valuation*.

In concluding, and to put the probability dilemma into the context of human behaviour, I quote from Condorcet's work on jury theorem in the late 18th century, which both Socrates and Antiphon would have, in all probability, sophistically approved of.

> *Reason and Calculus tell us that probability increases with the number of constant observations which is the basis of our belief; but does not the force of the natural tendency which makes us believe depend at least as much on the force of the impression that these objects make on us? Thus, if reason does not come to our aid, our opinions will actually be the work of our sensibility and our passions.*



Sense and Credibility

Facts and Analysis

Here are two interesting excerpts from a recently released transcript of an interview with Robert Rubin, recorded in 2005 and relating to his term as Secretary of the Treasury during the Clinton administration:-

…**on economic policy management**,

Beckenstein: Isn't that partly because the economic foundation of the President's approach wasn't ideological? It was more a problem-solving mode and very open to all suggestions, as compared to Reagan, with supply-siders versus monetarists and all that. That legacy must have played a role.

Rubin: It was a very big deal. Let me distinguish for you two things—I was thinking of this the other day. I was with President Clinton earlier this week when he gave a remarkable speech at the Concord Coalition. I was thinking about something he said as he was saying it. I think that's exactly right; he was not ideological. That doesn't mean he didn't have some strongly held views. He did have strongly held views, but because everything ultimately became a question of facts and analysis, as you said, if he had a strongly held view about something, whatever it might be, you could go to him and say, "Mr. President, it's your view and you have all kinds of reasons, but here are a whole bunch of facts that are different. Here's our analysis." If you're an ideologue, you don't care about that. If you have deeply held views but ultimately everything is a matter of facts and analysis, then you listen and you weigh and you balance. That's what he did. It does surely work. That certainly was an important part of why it worked.

> Interview highlight
>
> *Clinton always struck me, and still does, with how much he knew about this stuff and how thoughtful he was about it. You had a President who really understood this stuff. He could sit there and understand exactly what you just said.*
>
> \- Robert Rubin

…**on the debt ceiling issue of 1995**,

Rubin: They tried to force him to sign a budget he didn't like by saying if you don't sign it, we'll raise the debt ceiling and you'll go into default. Newt Gingrich went on, I believe, Meet the Press and said,

> *If we have to have a brief default to get a budget that we think is good for the country, we're willing to accept default.*

I said default's unthinkable and it was heading toward a collision. Then we found a way to get around it by borrowing from the trust funds and we did that for many months. They were furious because they felt we were doing something nobody had ever done before.

— • —

Two decades later what may be perceived to be ideological persuasions effectively created an identical scenario. In both circumstances, what sensible purposes did opposition actions and rhetoric serve? To read the dearth of commentary and analysis available would most likely lead one to reasonably conclude that no sensible alternative outcomes would have been achieved. Kara Brandeisky eruditely made comparisons of both debt ceiling crises in a 2011 article appearing in the New Republic. A read of reports on economic performance for the periods 1995-2000 and 2008-2013 indicates that policies enacted were beneficial, both structurally and monetarily.

Robert Gordon at Northwestern University provides solid perspectives in papers that cover both periods, neither necessarily skewed, one way or another, and with concluding cautionary remarks that speak to the potential socio-economic impacts of inequality, an issue that this year has received increasing attention from, understandably, the public sector, notably through an extremely detailed discussion by Janet Yellen in October at a Conference on Economic Opportunity and Inequality, and the private sector, thoroughly examined in a September paper by Ellen Zentner and Paula Campbell at Morgan Stanley. Defining data on the inequality debate can be extracted from the Federal Reserve's publications on Family Finances for periods 2007 to 2010 and 2010 to 2013.

For those with an appreciation of "old world" literature, along with an apolitical, yet roundabout playful dig at John Boehner, here's a concluding excerpt that elementally encapsulates this month's theme of sense and credibility…

> *Marianne's abilities were, in many respects, quite equal to Elinor's. She was sensible and clever; but eager in everything: her sorrows, her joys, could have no moderation. She was generous, amiable, interesting: she was everything but prudent.*

Richard W. Fisher

Economic Service

During the course of the past year my commentaries have included ample reference to the Dallas Fed chairman, Richard Fisher - seemingly unconciously for good reason. Earlier this month he became a recipient of the Woodrow Wilson Award for Public Service, having embodied the former president's belief that

> *there is no higher religion than human service. To work for the common good is the greatest creed.*

Therefore, I once again defer to Fisher's words, which, on reflection, speak volumes about the multitude of opportunities and qualities that emanate from generational freedoms, a universal topic of discussion that the Obama administration is vigorously giving voice to, to exhort a wave of generational transformation in places where similar freedoms do not and cannot yet exist. Herewith, a substantial excerpt from Richard Fisher's acceptance speech given September 19th.

Highlight

By now, everyone knows that the son who was "manufactured in China" is me. In one generation, a great shift occurred: from homeless to Harvard; from a brutal reformatory in Queensland to the great banking house of Brown Brothers Harriman in New York.

- Richard W. Fisher

Last November, I was in Queensland, Australia, and stood in the very court where, 104 years ago, just two months past his 5th birthday, he [Les Fisher, my father] was sentenced to seven years in Westbrook Reformatory for begging for food. Here is what the court minutes say:

> *Lengthy evidence was taken from which it appears that the child's mother had deserted [him] … The [child] has been in the care of the father for several weeks; and at 4 a.m. on the 18th, the father and child were found sleeping together under a sort of grated bridge or platform.*

The arresting officer testified,

> *I have never known [the father] to do any work. … I could see he was begging. … For the past two months he has almost constantly had the little boy with him day and night. I have heard complaints about the way the boy was treated. … The child was hungry.*

Westbrook Reformatory was considered the most sadistic reformatory in Australia; many of the boys sentenced to Westbrook were either beaten to death or committed suicide or, if they survived, became hardened criminals. But my dad was spared.

Two weeks after he arrived, the warden received a letter from the Home Secretary's Office remitting the unexpired portion of the sentence of a seven-year detention.

He was released to an orphanage, then doled out to a series of foster homes, one so cruel as to tie him by his ankle at night to an outdoor post, waking him in the predawn hours to deliver milk by horse-drawn carriage. He became an "apprentice"—a euphemism for something akin to indenture—in a tool shop, working lathes during the day and sleeping on the shop floor at night.

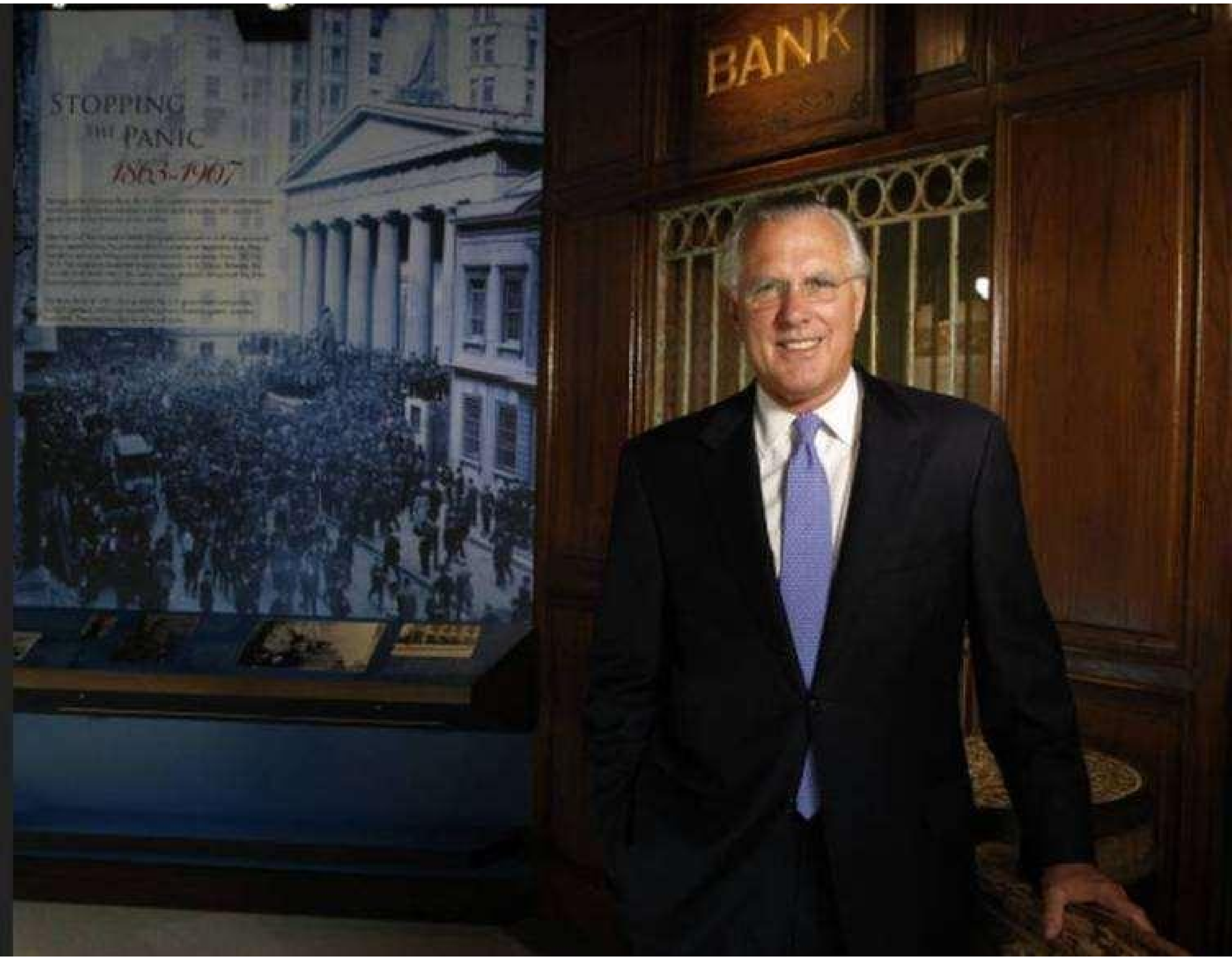
At the age of 14, his teeth are so rotten they are replaced by false ones. Eventually, at the age of 17, he is released to the care of a family who takes him by ship to South Africa, where he becomes a bus driver, sells Hupmobile cars and, for the first time, makes money. He falls in love with the daughter of a widowed Norwegian woman who cooks for a boarding house. They set sail for the Promised Land, America, only to discover that his record and lack of documentation make him inadmissible as a permanent resident. He retreats to Tijuana, Mexico, where he outsmarts the bookies at the horse track and crisscrosses the border to sell cars for eight years before he is admitted for U.S. citizenship in 1947.

He then hires out to collect a payment in Shanghai for a chemical company. In Shanghai, his wife becomes pregnant with their third child; they leave Shanghai on the second-to-last ship to sail from China before Mao's forces close the port. They dock in Los Angeles and he sets about working countless jobs in countless places: He sells tools and silver in Mexico, airplanes in Indonesia, used cars in Florida, men's suits in New York and women's undergarments in the Caribbean. He smokes 72 cigarettes a day until his mid-50s and enjoys liberal portions of Scotch whiskey, but he lives to the ripe old age of 90 years before dying in Austin, Texas.

By now, everyone knows that the son who was "manufactured in China" is me, your honoree. In one generation, a great shift occurred: from homeless to Harvard; from a brutal reformatory in Queensland to the great banking house of Brown Brothers Harriman in New York; from being tied by the ankle at night in the yard behind a foster home to living in the tony neighborhood of Highland Park, Texas; from working lathes during the day and sleeping on the shop floor at night to becoming president and CEO of a $180 billion Federal Reserve Bank and a member of the Federal Open Market Committee—a group of 19 that decides monetary policy for the world's most powerful economy. From abuse and derision and scorn to being praised in that beautiful video by Henry Kissinger, Janet Yellen, Admiral (Bobby R.) Inman, Ray Hunt, Herb Kelleher and Randall Stephenson and my fellow honoree and the chairman of the Dallas Fed Board, Mike Ullman, one of the nicest men God ever put on this good earth.

From sleeping under a bridge and begging for food to being here tonight at this sumptuous dinner to receive the Woodrow Wilson Award for Public Service.

What an honor! For me. For my father (and my mother). For my family. Only in America could this be possible!

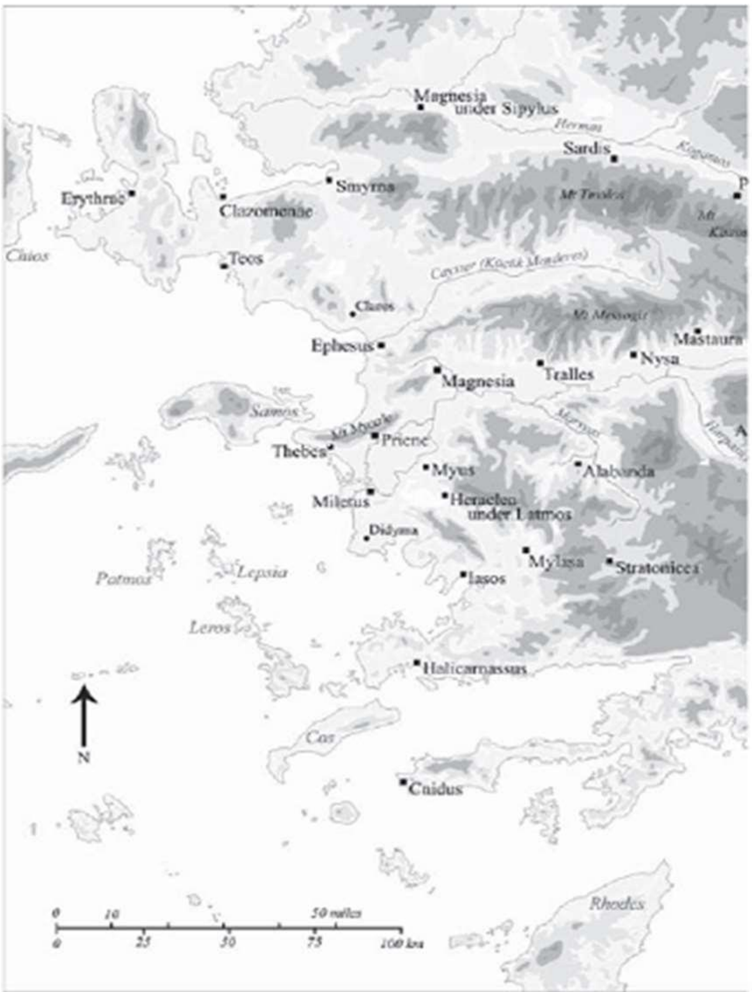


Congruence, Confidence, Confluence and Coincidence

Human Behaviour

Water is interesting. In fact, it's fascinating. Throughout history water has reminded Man of the extraordinary reach and inventiveness of his abilities, as well as the frustrating truth of his limitations. Water's direct association with all aspects of life surely makes it the most fundamentally important of all the elements. To Thales of Miletus, considered by Aristotle to be the first philosopher and mathematician, water is the primary principle of nature, of life. His namesake city Miletus ascended in material wealth, social confidence and cultural importance by virtue of mercantile trade that depended on water transit, and eventually decayed through lack of it. Peter Thonemann, author of *The Maeander Valley*, and winner of the Runciman Prize, writes a mesmerizing account of the region's historical links to water, noting how

> *Under imposed and inherited circumstances, men and women make their own history; human events within any given environment are not merely surface agitation, froth raised up by deep and determinate natural currents. Just as the behaviour of human communities itself has been constantly shaped and limited by environment, so the environment itself has been constantly and repeatedly reshaped by human behaviour, most visibly in the case of the malleable and unstable wetlands of the Maeander valley delta zone.*



Map 1. The Maeander valley

Similar anecdotal evidence of water's relationship to human development abounds throughout the ancient to modern world. A striking example that resonates and finds certain congruence with modern times is the so-called "hydraulic civilization" that symbolized the nascent empire of Ch'in in the 2nd century BC, and today's monumental South-North Water Transfer Project, intended to divert waters from southern China to the North in order to sustain economic growth and social development. Norman Gall expands on this topic in a Braudel Papers publication, noting how in only the past four decades water has reached crisis levels of epic proportions. Banks that are assuming the financing of the project, sustaining the project's financial liquidity and relying on its eventual cash flows, confront an equally epic default risk, and may need to brace for large-scale fallout of a political organism that is dominated by engineers whose ambitions, in the words of analyst Peter Martin

> *reflect a Maoist impulse to subjugate nature in the pursuit of economic development*.

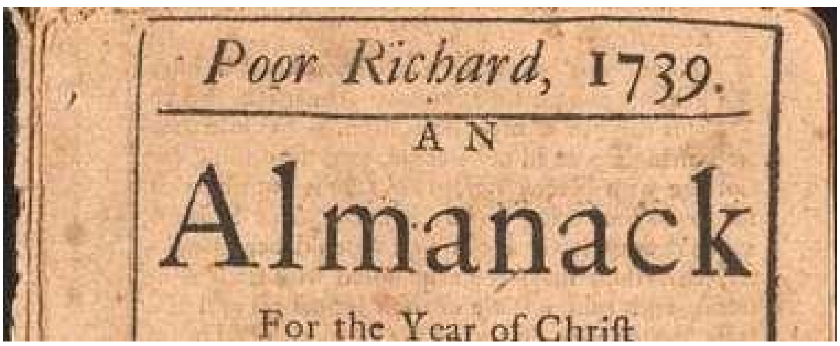
Science, art, philosophy, religion and all manner of human disciplines find confluence in principles represented by water. It is therefore quite natural, and in fact no coincidence, that the financial world liberally includes terms associated with water. A recent Morgan Stanley presentation, accompanied by pictures of yachting, reads

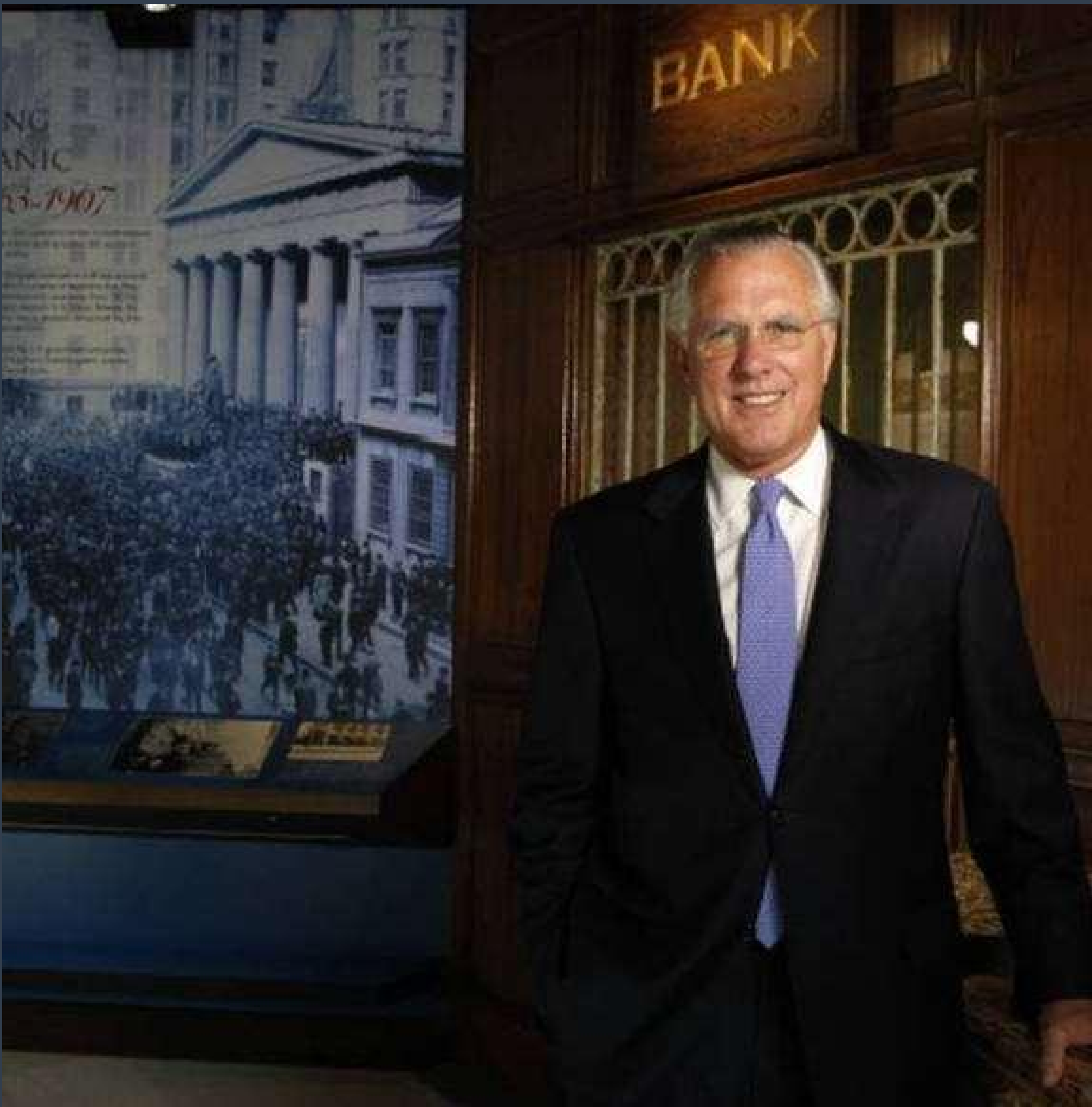
> *In uncertain times, access to liquidity and financial flexibility are even more critical to protect your net worth and allow for quick decision-making. Managing your balance sheet and the timing of your cash flows effectively can help unlock liquidity*.

The recent debacle surrounding dark pools and their relevance to the overall financial markets' liquidity is further demonstration that the principles of water inherently permeate all aspects of financial existence, and should thus be always present when faced with choices.

As Poor Richard succinctly noted in his Almanack,

> *When the well's dry, they know the worth of water*.





“Never let your brains go to your head”

Possum Explicarle

Given that we can we learn much from the experiences of others, this month I defer to a recent graduation commencement speech by the Dallas Fed president Richard Fisher, who ably crafts words to deliver sound and salient principles that are hallmarks of a successful America. Following are excerpts of his 17th May speech at Bryant University.

Blessed to Be Americans

Mike Fisher [brother] and I grew up in what can most charitably be described as "unusual circumstances." Our father started out his life in conditions right out of Charles Dickens: At the age of 5 years and 2 months, he was arrested for begging for food and sentenced to seven years in Australia's harshest prison, a God-awful place called Westbrook Reformatory. He was spared the destiny of most inmates there—he was released quickly and lived to see better days—but to say he grew up rough is an understatement. Our mother, born in a small South African outpost where Norwegians, Swedes and Danes carved a life out of the "bush," lost her father at the age of 4 and was raised by a single mom who cooked for a boarding house. Neither of our parents had a formal education. But both were smart and ambitious for a better life. What did they do? They came to America. It was here that their family flourished.

> Highlight
>
> *He or she is competent in making discerning judgments with tools derived from science, engineering, social science, the arts and humanities...and who will learn what it takes to negotiate different world views emanating from different cultural traditions, a tolerant yet rigorous thinker whose moral compass is guided by ethical reasoning.*
>
> - Diana Sorensen

The Sages of the Ages

To find something profound that I might pinch for your amusement today, I pored over the sayings of the great minds through time: Plato, Socrates, Mencius, Muhammad, St. Paul and St. Augustine, Voltaire, Martin Luther, Mother Teresa … Miley Cyrus, Justin Bieber. The maxims put forward by the sages of the ages are inspiring, but you already know them, or you would not be where you are today:

Be disciplined; be prepared; be loyal and thrifty and brave; always question conventional wisdom; take risks; push the envelope; be true to yourself; never promise more than you can deliver; never compromise your integrity; don't waste your talents; never forget that you have been given those talents in order to do good; never, ever, ever, ever give up the pursuit of excellence.

Diana Sorensens' Dictum

One of the most intriguing living thinkers, Diana Sorensen, the dean of arts and humanities at Harvard University, defines a knowledgeable graduate taking wing as follows:

> *He or she is competent in making discerning judgments with tools derived from science, engineering, social science, the arts and humanities. He or she should be a persuasive speaker who can articulate the reasons for his positions; who can write with clarity, elegance and conceptual power; an innovator who will take risks but first makes sure the limb they go out on is a sturdy one; a creative individual who has faced challenges posed by artistic production and experimentation; a global citizen who can speak, read, write in at least a second language; and who will learn what it takes to negotiate different world views emanating from different cultural traditions, a tolerant yet rigorous thinker whose moral compass is guided by ethical reasoning.*

Babe Fisher and John Paul Jones

Babe Fisher [mother] never enjoyed the benefit of the type of education you have received. Yet she was a wise woman. She was a kind of female Nordic Yogi Berra who dispensed exquisite pearls of wisdom to her boys. One is especially germane for this ceremony. Our mother would say: "Never let your brains go to your head." The pun is horrific but the message is profound: To achieve success, you will need to keep your superb education and your considerable talent in perspective. Brains and the gift of talent are necessary, but they are insufficient for success in life.

Time and again, in business and universities and government we see instances in which women and men of towering intellect get far at first but ultimately snatch defeat from the jaws of victory. They do so because they have forgotten to develop their emotional quotient with the same devotion they applied to developing their intelligence quotient. My heartfelt advice to you is to work as hard on expanding your EQ as you have on harnessing your IQ.

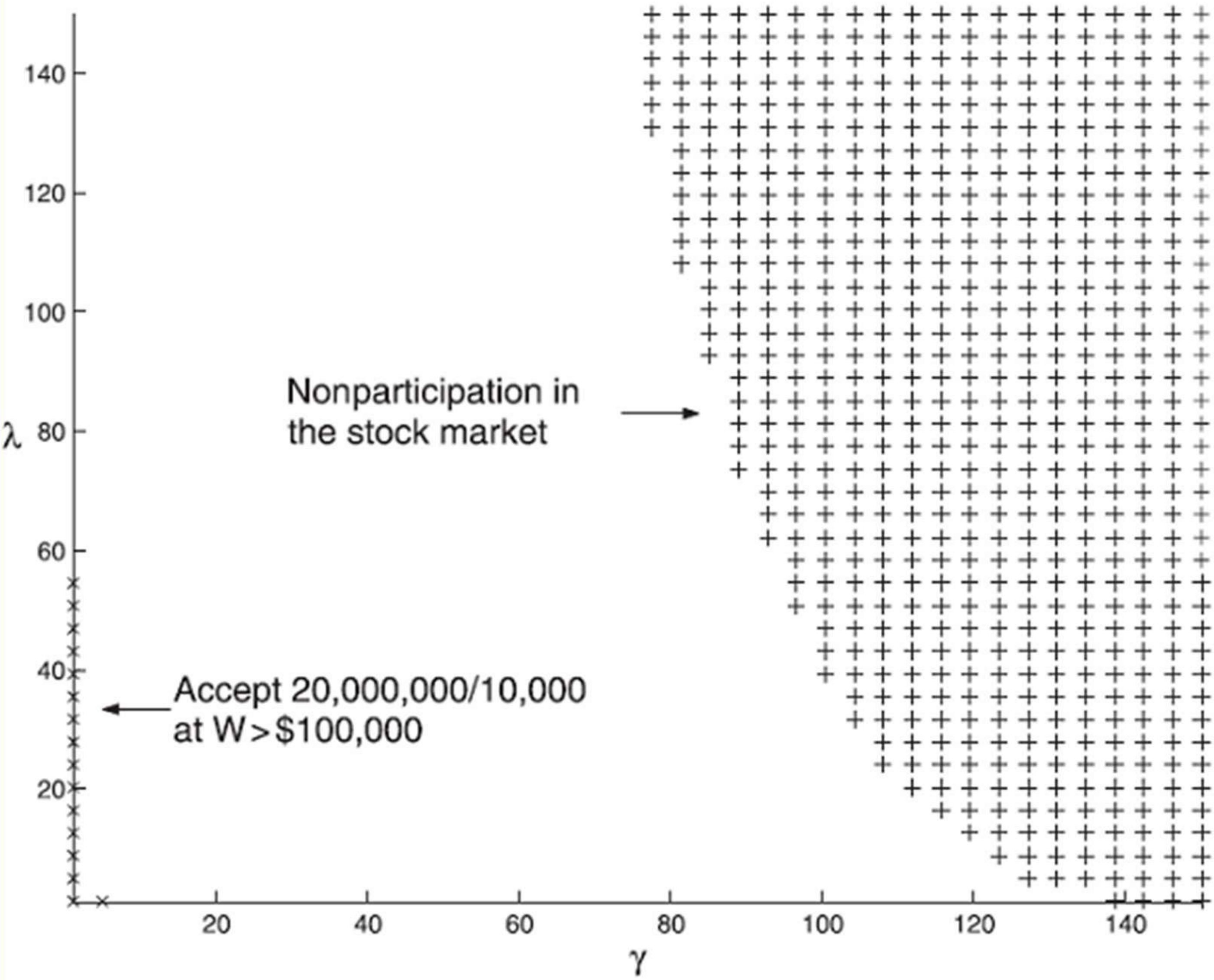
A Smattering of Latin

Commencement speakers at great schools seem to delight in showing off their command of an ancient tongue. Many a commencement speaker might have concluded this afternoon's remarks with *labor omnia vincit*—a stern reminder that labor conquers all things. It is true, indeed, that you can't rest on your laurels or your good family name or a Bryant education or just plain good luck. You have to work hard and sweat to succeed. And in doing so, you have to remember *mens sana in corpore sano* — a sound mind resides best in a sound body. But that is way too ponderous. This is, after all, a festive day! So I will conclude with this:

> *Bubbus, sed possum explicarle, non sed possum comprehendere*.

For those of you unschooled in the language of the ancient Romans, that is Texas-ized, distorted Latin for,

> *Bubba, I can explain it to you, but I can't understand it for you*.



Balancing the Scales of Logic, Reasonably

Behavioural Bias

A typical mutual fund prospectus includes a brief explanation of the investment strategy employed. Take, at random, JP Morgan's Undiscovered Managers Behavioral Value Fund, managed by sub-advisor Fuller & Thaler, part of which reads

> *In selecting stocks for the Fund, Fuller & Thaler applies principles based on behavioral finance. Fuller & Thaler believes that behavioral biases on the part of investors may cause the market to overreact to old, negative information and underreact to new, positive information concerning a company. In an effort to take advantage of such behavioral biases, Fuller & Thaler generally utilizes a three-pronged approach that includes (i) positive signals such as significant share purchases by company, insiders or stock repurchase activity by the company (ii) evidence of overreaction due to behavioral factors that have resulted in an absolute or relative decline in valuation and (iii) analysis of the company fundamentals with regard to business model, valuation and credit risk.*

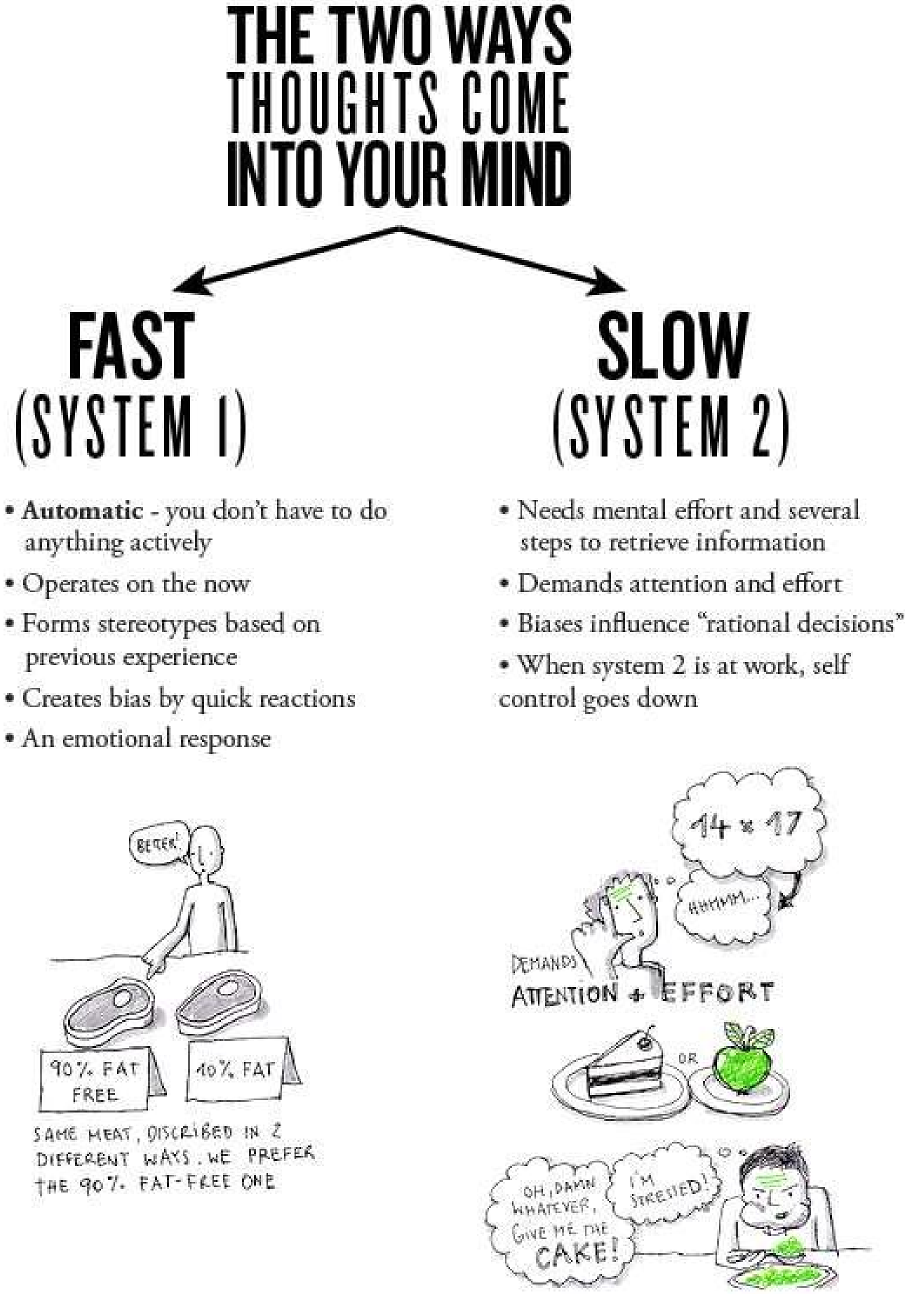
Highlight

the illusion of skill is not only an individual aberration; it is deeply ingrained in the culture of the industry.

- Daniel Kahneman

The premise is impressive. How many investment funds talk of "behavioral bias" as a strategy, and how many managers can qualify that statement? The answer to both is "not many", especially when considering that the fund manager is Richard Thaler, one of the foremost thinkers on behavioral economics. However, notwithstanding these credentials, even an experienced potential investor may, at first sight, baulk at the idea of investing money in something which cannot be immediately or tangibly understood, particularly given the fund's name. This possible reaction speaks to, seemingly paradoxically, the work of a friend and admirer of Thaler, Daniel Kahneman, another noted psychologist and winner of a Nobel prize in Economics, who could describe the potential investor's initial reaction as a System 1 event, expertly detailed in his book *Thinking, Fast and Slow*, which expounds on, among other correlated topics, the Two Systems method of cognitive psychology. The paradox may be said to exist because, despite his admiration for Thaler, Kahneman has no particular admiration for mutual funds, evidenced in Part III of his book which ponders the phenomenon of Overconfidence. In a chapter headed *The Illusion of Stock-Picking Skill* (which also includes an anecdote about both visiting a Wall Street firm in 1984), Kahneman states a somewhat contrary finding

Mutual funds are run by highly experienced and hardworking professionals who buy and sell stocks to achieve the best possible results for their clients. Nevertheless, the evidence from more than fifty years of research is conclusive: for a large majority of fund managers, the selection of stocks is more like rolling dice than like playing poker. Typically at least two out of every three mutual funds underperform the overall market in any given year.



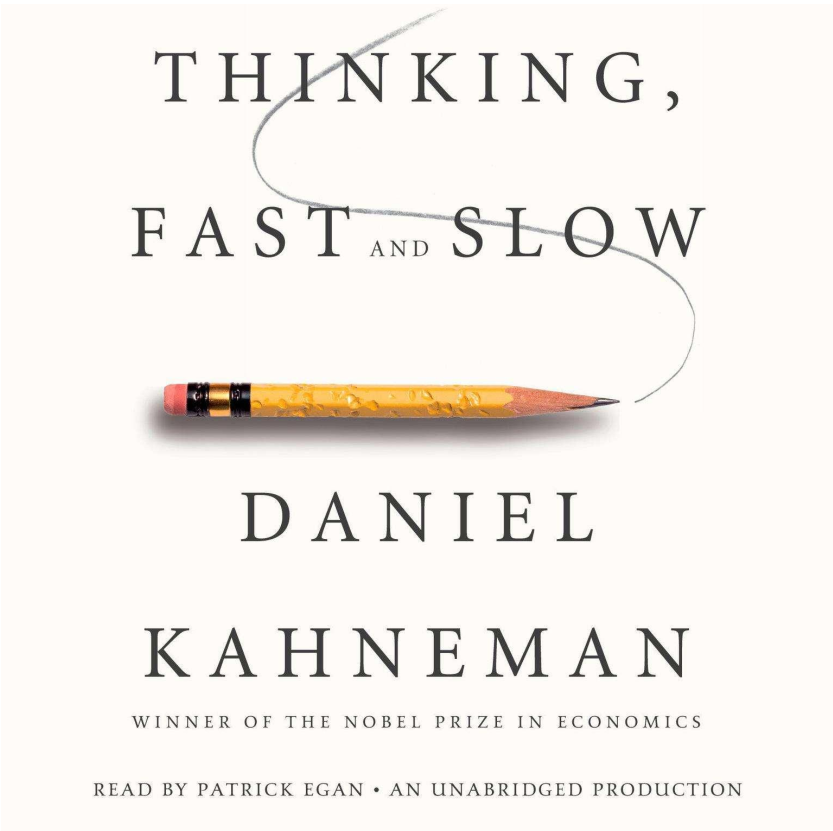
He concludes the chapter by noting that

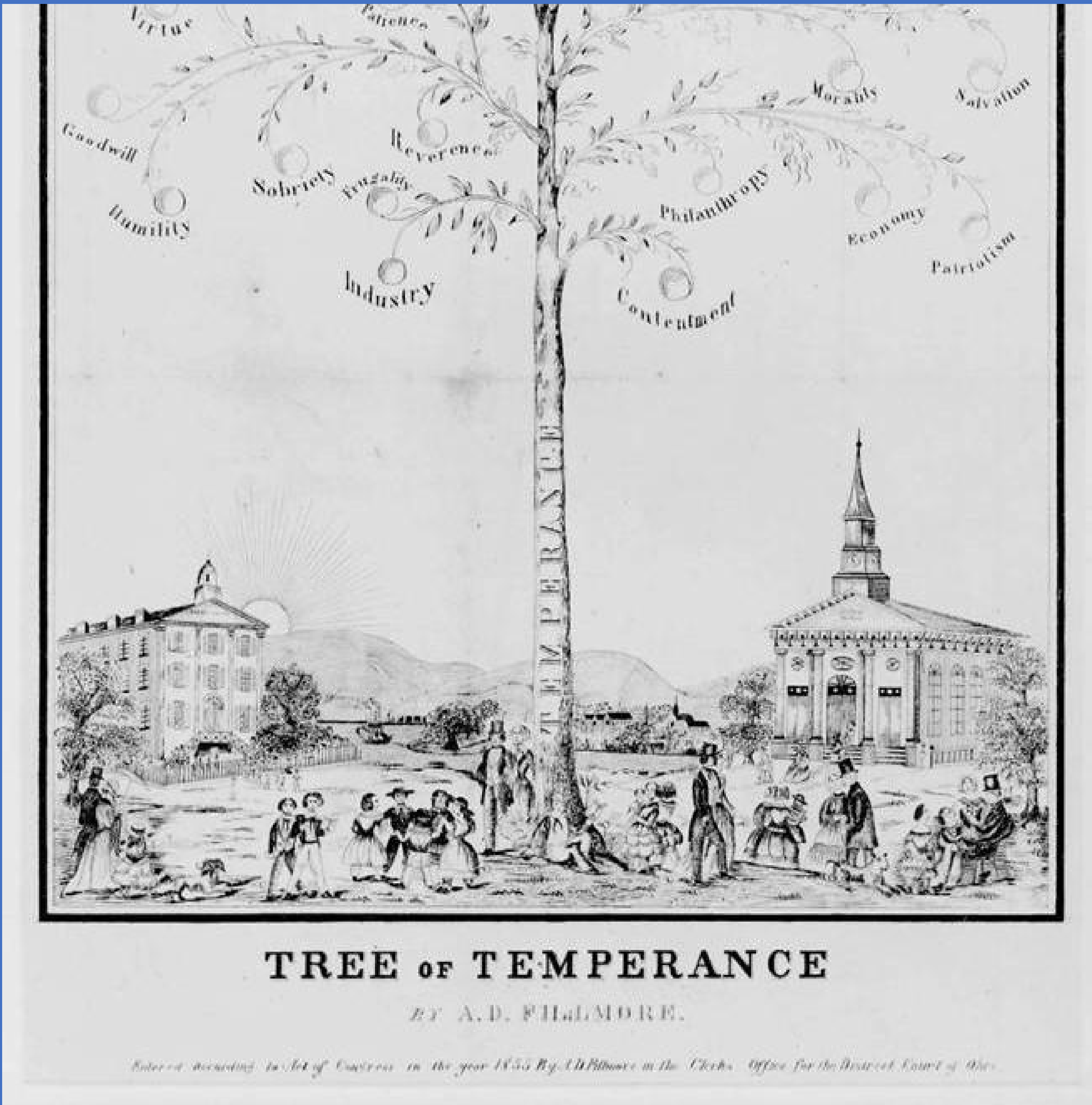
the illusion of skill is not only an individual aberration; it is deeply ingrained in the culture of the industry.

Given that both Thaler and Kahneman are experts in their respective fields, one may argue that there is both a theoretical and real-world imbalance in their respective choices of applied logic. Is this psychological seesaw a negative or a positive? Keith Chen at Yale provides a helpful indication to this cognitive dilemma in his paper *How basic are Behavioral Biases? Evidence from Capuchin Monkey Trading Behavior*, which focuses on finding how widespread behavioral biases may actually be. Similarly, in an article appearing in the September 2009 issue of American Psychologist, *Conditions for Intuitive Expertise: A Failure to Disagree* Kahneman and a psychologist from an opposing school of thought, Gary Klein, happily spar over contrasting perspectives on behavioral biases yet share common ground on the issue of judgement.

Returning to the fund, further exploration (a System 2 event) actually reveals that the investment strategy is not as opaque, and therefore, not as unreasonable, as the name infers. With 90% of investments in recognizable equity securities, Thaler is quite possibly intuitively exercising a balance between the gamble of behavioral biases, and the fundamentals of company performance - framed by divergent yet interdependent rules of reasonable logic.

Note: The choice of fund is for the purposes of commentary and should not be construed as an endorsement.





Temperance

Aristotle

Temperance, an antiquated word, one that possibly brings to many minds the image of a vicar preaching from his pulpit, sprung into my mind whilst watching Leonardo di Caprio's latest cinematic incarnation as a Wall Street rogue, and represents an appropriate theme for the beginning of another investment year that might show signs of skewing towards excess, given the rising chorus of optimism that can sometimes transform into over-extending zeal, which can lead to contrary consequences.

As around this time last year I quoted text from the writings of the philosopher Francis Bacon, I'll start this year with some of the same…

> *Seek not proud riches,*
>
> *but such as thou mavest get justly,*
>
> *use soberly,*
>
> *distribute cheerfully,*
>
> *and leave contentedly.*

Financial Times, January 1, 2014

Letting the odd philosopher into a business is not an indulgence. It would help management think more deeply about what a business should properly be trying to do with the customer's life in order to improve it.

- Alain de Botton

Perhaps the greatest advocate of temperance was Aristotle, who expounded on the word's significance in writings dedicated to his son and so named *Nichomachean Ethics*. In one noteworthy passage he concluded that temperance and courage

> *are destroyed by excess and defect, and preserved by the mean.*

Measuring the mean depended to a great extent on the use of "practical wisdom", a quality eschewed by the likes of Jordan Belfort, who presumably embodies

> *the man who falls into intemperance.*

Conversely,

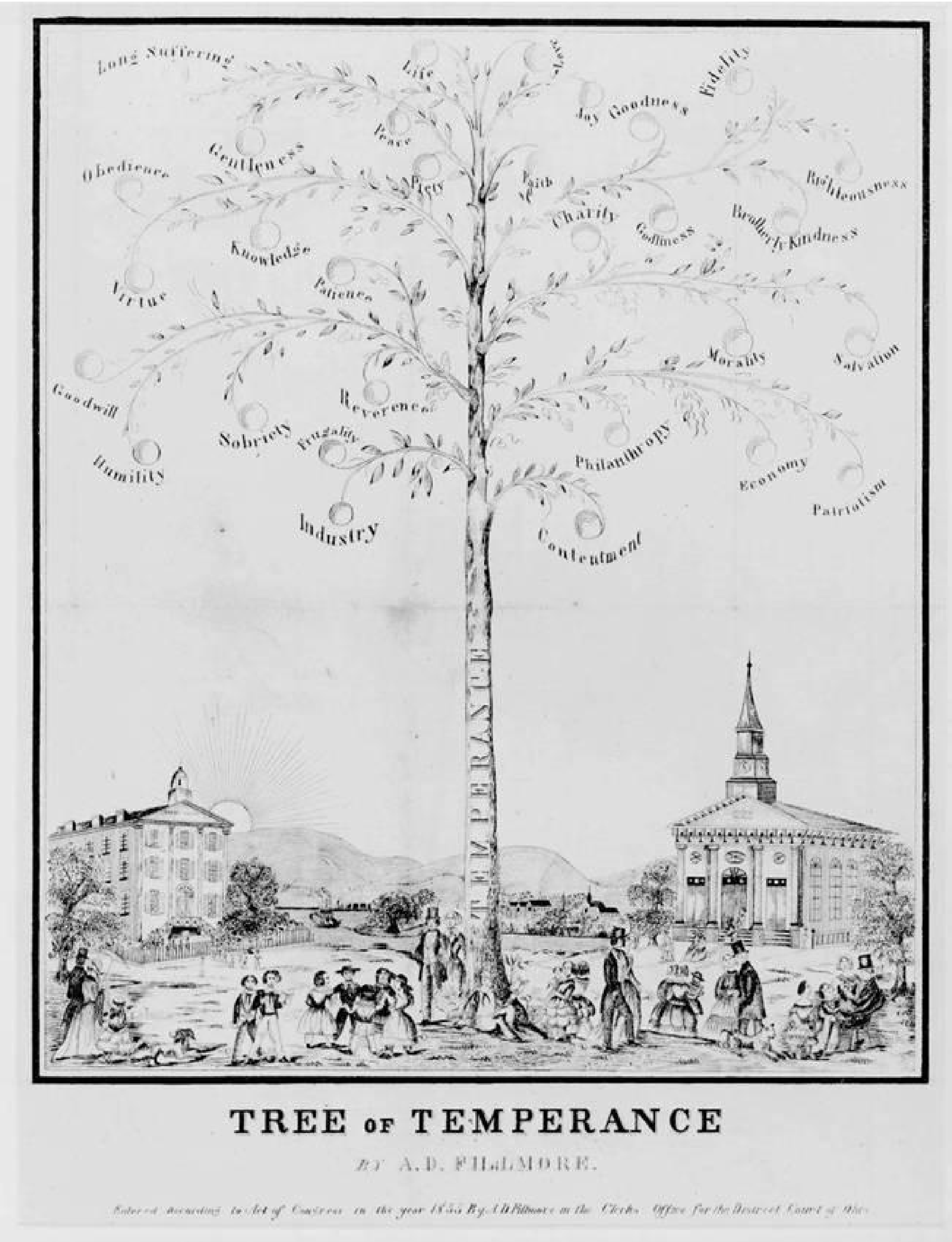
> *the temperate man desires the right thing in the right way at the right time.*

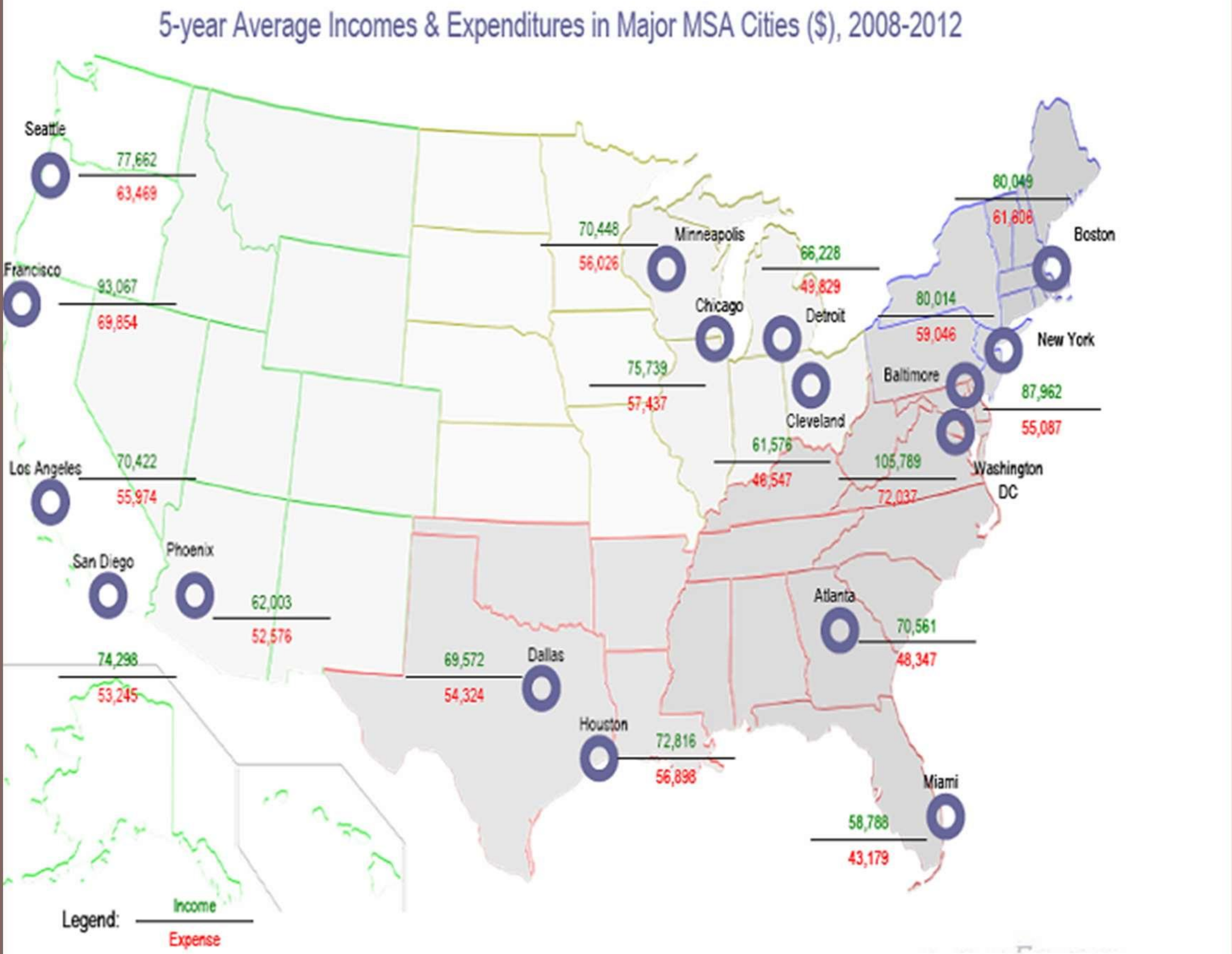
Given the experience of the most recent depression, perhaps a practical choice for investors would be to practice temperance by taking satisfactory gains rather than chasing the potentially elusive return in excess of a happy mean.

Alain de Botton alluded to this principle in a Financial Times article published January 1st, intimating that philosophy has relevance for wealth management by

> *asking how money can properly contribute to clients' happiness.*

For the more empirically minded, Luc Arrondel of the Paris School of Economics produced an interesting paper on the relationship between household income and stock market participation. Entitled *Temperance in Stock Market Participation: Evidence from France*, his findings may serve as a useful proxy for investment choices and decisions that lie ahead.





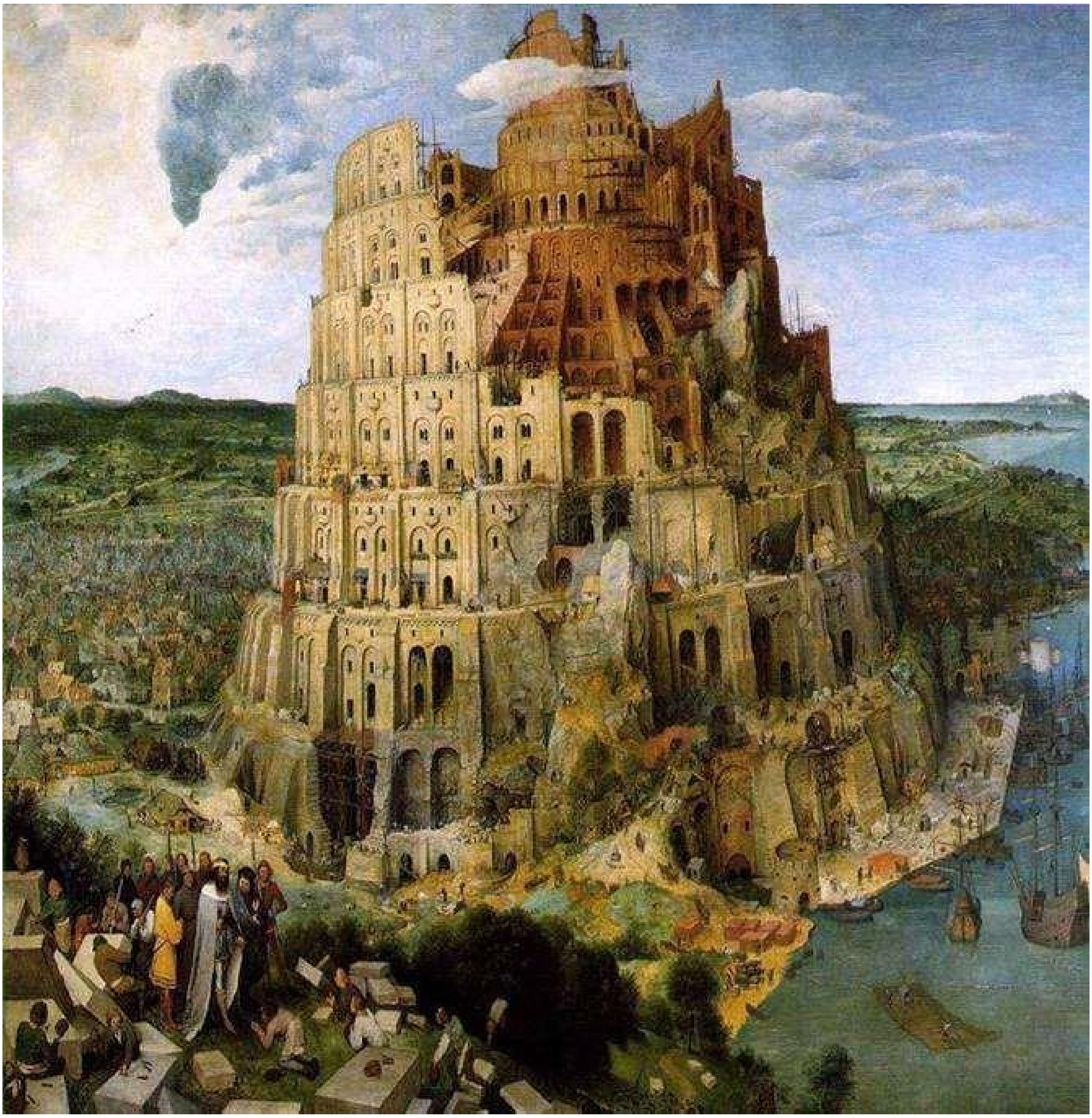
Lay of the Land

Equity Topography

Viewed as a landscape painting, the collective US equity markets may be considered a masterpiece. Viewed as a topographic map, US equity markets offer as diverse a perspective as the nation itself, richly heterogeneous, and if such a term can be acceptably applied, beautiful in depth and breadth as a representation of the US economy, in the same way that Pieter Bruegel's *Tower of Babel* can be a seductive and beguiling depiction of human endeavour, with its inherent triumph and failure.

Book

Fernand Braudel – Civilization and Capitalism



In fact, Bruegel's illustrations of everyday life during the Flemish Renaissance are somewhat analogous to the humdrum activity of today, characterized by the "average" man of the age going about his day, contributing in some way to the creation of wealth through, as Fernand Braudel termed in his volume *Civilization & Capitalism*, 'exchange value', possibly from a desire to maintain a particular level of consumption or perhaps to become a more advanced or sophisticated consumer through the expansion of choice, a phenomenon these days most viscerally apparent in China.

Interestingly, Braudel shares much with Bruegel, in that they both drew inspiration for their works by observing the more "humble" strata of society that make up the majority of population in advanced civilizations. This majority accounts for a considerable level of consumption, which today in the US represents approximately 70% of GDP, naturally, unevenly spread among wealth brackets and population concentrations that provide colour to the economic landscape.

Of particular observational interest are the idiosyncrasies of habitual consumers that ultimately determine the performance of the nation's economy, represented to an important degree by a homogeneously defined stock market.

Given the inexhaustible supply of commentary on markets, for this month I have chosen to illustrate some details of economic data collated during this month and October intended to stimulate thoughts on what constitute basic economic dogma, intrinsic to a nation's wealth, and certain enduring parameters of Man's existence, axiomatically portrayed in the *Tower of Babel*.

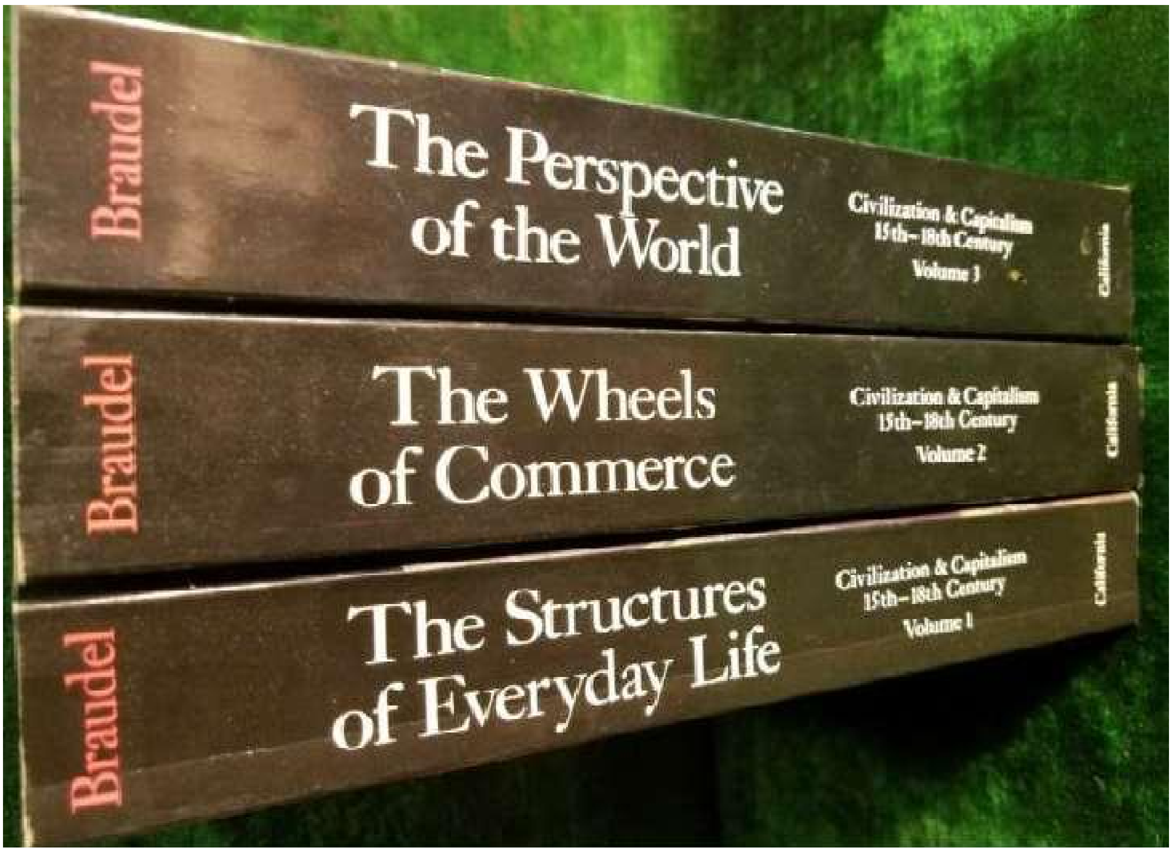
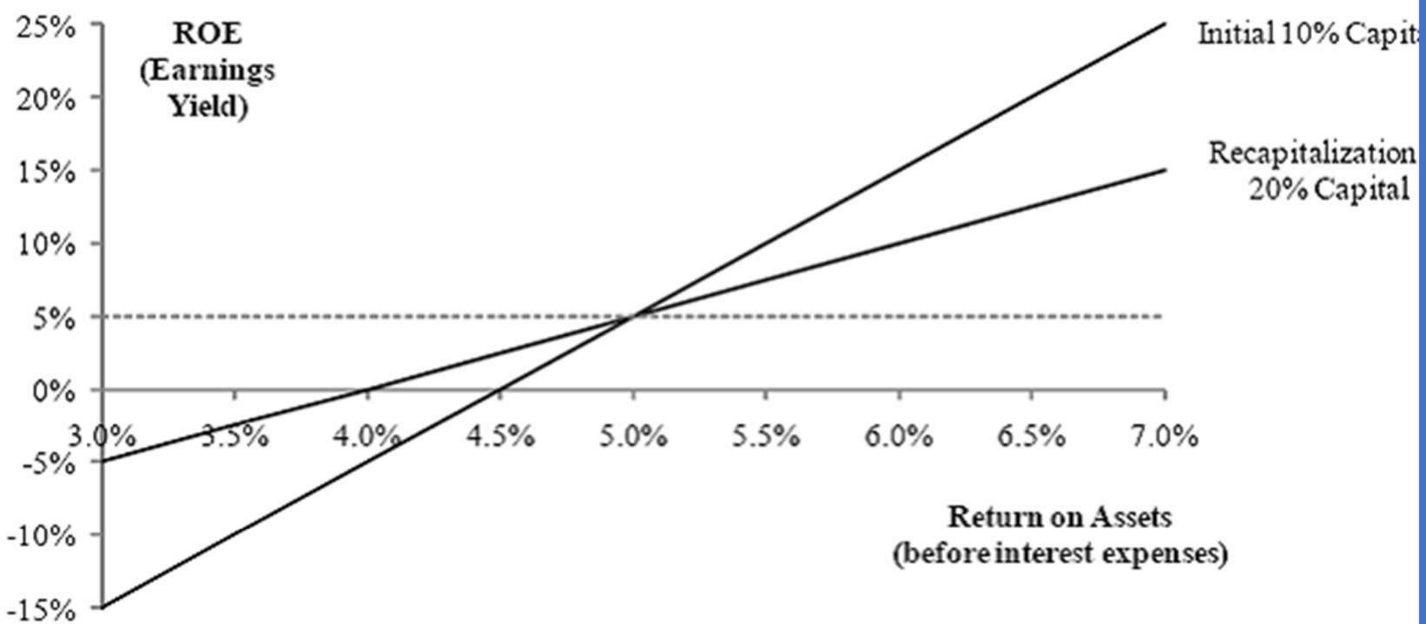


Figure 2: The Effect of Increased Equity on ROE



Raising the Bar, and Financial Perspective

Behavioural Conflicts

‘Bull’ is the title of Chapter 35 in *The House of Morgan*, a biography written in 1990 by Ron Chernow – an author of repute. The chapter is notable for describing the financial parallels of the 1920s and 1980s, and two emerging trends of the latter period, leveraged finance and black-box trading, which twenty years later contributed to the almighty economic crash that followed a similar blueprint to 1929 and 1987. One passage in particular, on Black Monday (19th October 1987), resonates with the most recent crisis,

> *The Federal Reserve moved with a dispatch that left no doubt as to its resolve. On October 20, Alan Greenspan issued a tersely effective statement affirming the Fed’s “readiness to serve as a source of liquidity to support the economic and financial system.” The Fed bought dollars and engineered a sharp drop in interest rates.*

Financial crises are synonymous with systemic risk, a term first coined by William Cline in the wake of the Latin American debt crisis of the early 1980s, and now widely used by academics, financial industry regulators and policy makers. The main issue with systemic risk is, unsurprisingly, the lack of bank capital to counteract adverse interest payment obligations arising from excessively leveraged investments

Excessive leverage has been a predominant theme in post-crisis regulatory discussions, with both sides of the Atlantic expressing intent to increase resiliency in the banking system to address this phenomenon, partially through increased bank balance sheet and shadow banking transparency, and critically through capital requirements that in theory can avoid or mitigate future financial shocks. Mark Carney, former governor of the Bank of Canada, and current governor of the Bank of England as well as chairman of the Financial Stability Board, succinctly summed up these efforts in a September 9th Financial Times article, in itself an extension of a more thorough dissertation communicated to the UK Parliament’s Treasury Committee earlier in February this year.

Highlight

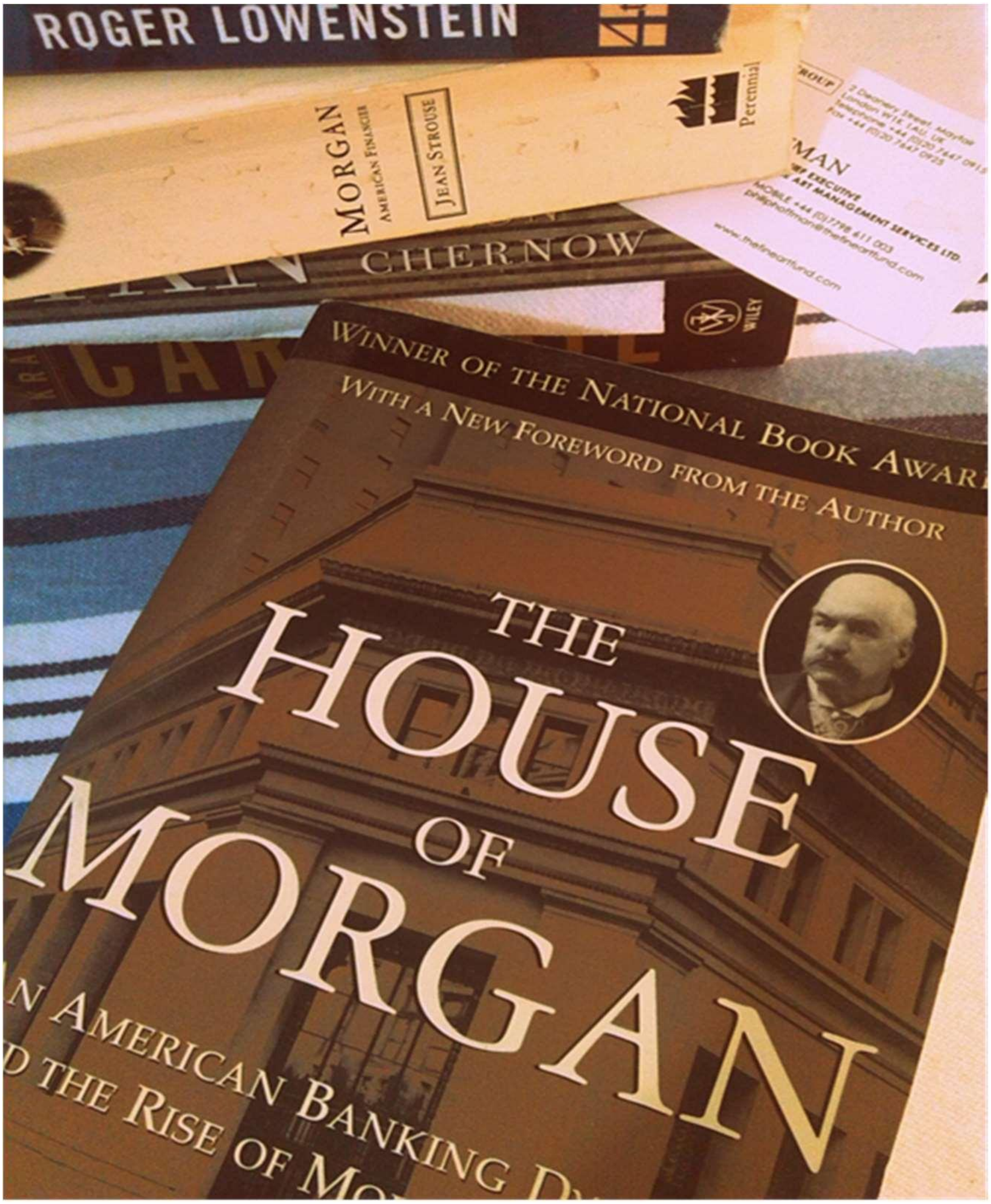
Our business is full of conflicts. In an industry as integrated as ours, I don’t see how they can be avoided.

- Dick Fisher, Morgan Stanley

Similar expressions of intent and regulatory proposals were witnessed in the U.S., where independent panel discussions and Federal Reserve Bank testimonies contributed to published guidelines for capital planning at the largest bank holding institutions.

Last month the Board of Governors of the Federal Reserve System published *Capital Planning at Large Bank Holding Companies: Supervisory Expectations and Range of Current Practice*, wherein the introduction commenced with

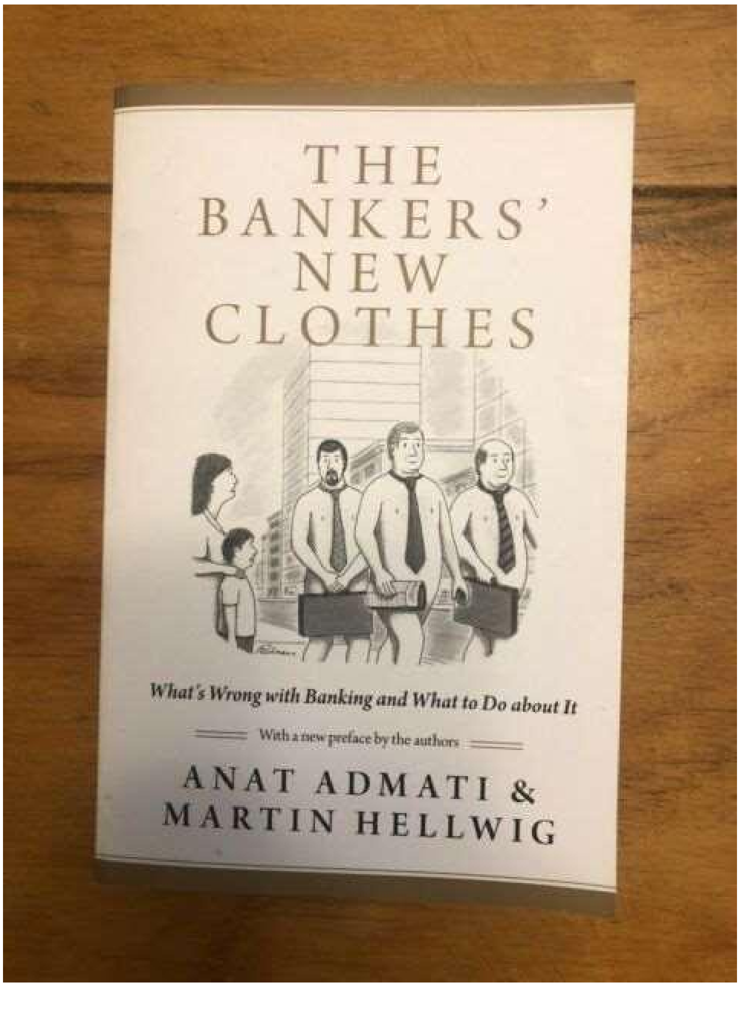
> *The Federal Reserve has previously noted the importance of capital planning at large, complex bank holding companies (BHCs). Capital is central to a BHC's ability to absorb unexpected losses and continue to lend to creditworthy businesses and consumers. It serves as the first line of defense against losses, protecting the deposit insurance fund and taxpayers. As such, a large BHC's processes for managing and allocating its capital resources are critical not only to its individual health and performance, but also to the stability and effective functioning of the U.S. financial system.*



How adequate capital planning is achieved remains a topic of contention, with most disagreement revolving around which models are most appropriate to generate and maintain resiliency. Of the abundant literature available on the topic, several papers stand out that provide worthwhile, differentiated perspectives. Anat Admati, a finance professor at Stanford, and author of *The Bankers' New Clothes: What's Wrong with Banking and What to Do about It*, advocates an equity-based solution. An alternative solution using retained earnings forms the basis for a 2011 paper by Acharya, Mehran and Thakor. The Dallas Fed's Economic Letter of April 2013 provides an engaging read on capital ratio and its relevance to transparency and accountability, and interestingly, this year's annual report by the Bank for International Settlements (BIS 83rd Annual Report, Chapter V) provides comparative progress commentary and metrics.

My personal view is that, in the abstract, a marginal basis points decline in profitability from foregone earnings capture potential is healthier in the long run, averts moral hazard, and in fact encourages a form of Aristotelian "moral virtue". However, deducing an optimal solution is difficult. Chernow's chapter "Bull" aptly includes a paragraph on a still prevailing banking dilemma, which notwithstanding the abbreviated context, speaks volumes and concludes this month's commentary.

> *"Our business is full of conflicts", said Dick Fisher [of Morgan Stanley]. "In an industry as integrated as ours, I don't see how they can be avoided."*



Resilience

Asset Bubbles

Resilience, and its derivative terms, has uncannily appeared frequently in my reading material during the past two months, and evolved as such into a theme that now seems appropriate entering into the second half of a so far robust investment year.

The term first caught my attention whilst reading through the UK Parliamentary Commissions' June report on banking standards, *Changing Banking for Good* in which Lord Turner argued that long periods between banking crises tended to breed complacency in regulators, commenting

> *The classic problem for human institutions and for the design of our regulatory structures and our policy is how do we design against it in 25 years' time, when the generation of those who were there in October 2008 are in retirement and we have another: "This time it's different. This time we're cleverer than the previous generation." That is the institutional challenge, and we have got to try and embed the intellectual challenge, the counter point of view—but also try and embed through what we do on structure things which are resilient to changes in intellectual fashion.*

Financial crises are synonymous with systemic risk, a term first coined by William Cline in the wake of the Latin American debt crisis of the early 1980s, and now widely used by academics, financial industry regulators and policy makers. The main issue with systemic risk is, unsurprisingly, the lack of bank capital to counteract adverse interest payment obligations arising from excessively leveraged investments

Reference to regulatory structures and institutional challenges were a feature of Bernanke's speech at a conference held on July 10th, 'The First 100 Years of the Federal Reserve: The Policy Record, Lessons Learned, and Prospects for the Future', in which he emphasized the importance of fostering "a financial system that is sufficiently resilient to withstand large financial shocks." By large financial shocks Bernanke was possibly alluding to the consequences of asset bubbles, a theme amply elucidated on by Sarah Raskin at an Exchequer Club event held in Washington D.C. on July 17th entitled *Beyond Capital: A Case for a Harmonized Response to Asset Bubbles.*

Highlight

Bubbles are characterized by increasing leverage among the various types of lending institutions and by increasing maturity transformation on and off-balance sheets of various lenders.

- Sarah Raskin

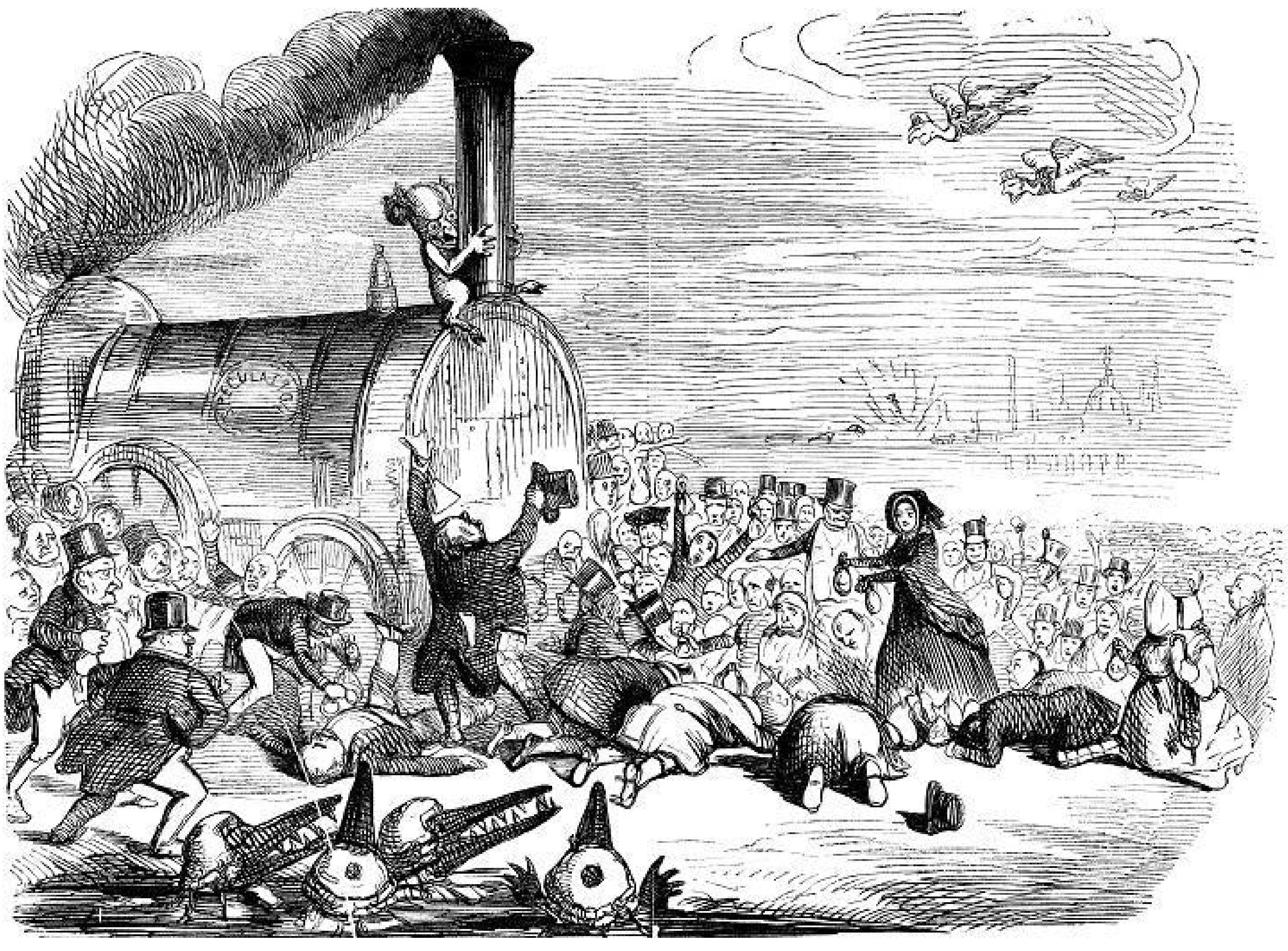
Raskin's discourse, in similar vein to thoughts expressed by Turner and Bernanke, highlighted the role of regulatory policy necessary to build resilience in the financial system to counteract the consequences of asset bubbles - banking crises in the language of Turner, financial shocks in the language of Bernanke – that

> *we understand them to be a product of particular actions and choices by financial institutions and their regulators.*

Raskin's choice of explanatory agent was the credit crisis that ensued from the most recent real estate boom and bust, and in particular, the triggers common to asset bubbles.

> *Bubbles are characterized by increasing leverage among the various types of lending institutions and by increasing maturity transformation on and off-balance sheets of various lenders.*

Her conclusive introductory view was that asset bubbles are a repetitive feature of the financial landscape, interestingly a view shared by a panel of speakers at a June CFA roundtable dedicated to a review of financial market history.



To address asset bubbles, Raskin described a series of available regulatory tools – capital regulation, liquidity regulation, regulation of margins and haircuts, and restrictions on credit underwriting – intended in each case to “build resilience” or “increase resilience”, arguing that such tools or policies enhanced the financial system’s ability to

> *absorb and shrug off unexpected losses from any source, including sharp asset price declines,*

a hallmark of asset bubbles

Quite by coincidence, on the same day of Raskin’s speech, a brief article appeared in the Harvard Business Review by author Rosabeth Moss Kanter, whose book, entitled *Confidence*, develops extensively on the theme of resilience. As she noted in her preface,

> *Volatile times bring disruptions, interruptions, and setbacks, even for the most successful among us,*

but that

> *resilience is the ability to recover from fumbles or outright mistakes and bounce back.*

Her concluding remarks are replicated below as they aptly conclude my own for the purposes of this month’s commentary.

> *Resilience draws from strength of character, from a core set of values that motivate efforts to overcome setback and resume walking the path to success. It involves self-control and willingness to acknowledge one’s own role in defeat. Resilience also thrives on a sense of community – the desire to pick oneself up because of an obligation to others and because of support from others who want the same thing. Resilience is manifested in actions – a new contribution, a small win, a goal that takes attention off of the past and creates excitement about the future.*

The Going is Good, so Why the Angst?

Surfing Economy

A few decades earlier Punch magazine may have published an illustration of a caricatured US economy nose riding a set of variously named waves on a longboard, with a caption optimistically reading “What a swell time to ride the Stimulus”. On reading the issue a cynical reader may have remarked that a shark was missing from the picture, asserting that the shark represented interest rates, and the higher out of the water the shark’s head, the greater the threat to the surfing economy..

Negative market reactions to the Fed’s recent FOMC statement and Fed chairman Bernanke’s announcement on tapering quantitative easing (QE3) frustratingly highlights a stubborn adherence to conventional wisdom in unconventional times.

John Canally, investment strategist at LPL Financial, correctly noted that the Fed tightening measures were good for stocks because

> *You have to remember why they’re doing this, because they think the economy is in a self- sustaining phase, which ultimately is good for profits, which is good for stocks.*

This is in effect what the Fed was saying when Bernanke noted

> *If the incoming data are broadly consistent with this forecast, the Committee currently anticipates that it would be appropriate to moderate the monthly pace of purchase later this year; and if subsequent data remain broadly aligned with our current expectations for the economy, we would continue to reduce the pace of purchases in measured steps through the first half of next year, ending purchase around midyear. In this scenario, when asset purchases ultimately come to an end, the unemployment rate would likely be in the vicinity of 7%, with solid economic growth supporting further job gains – a substantial improvement from the 8.1% unemployment rate that prevailed when the Committee announced this program.*

Bernanke made it clear that the Fed did not intend to raise the federal funds rate from its current 0-0.25% range. So why the angst? One reason why cynics may justify their pessimism is based on the premise that investors have over-relied on cheap money to boost performance, hence the guess is that many would find themselves out on a limb in a lackluster economic environment and therefore “forced” to cut back on risk-perceived investments.

Highlight

You have to remember why they’re doing this, because they think the economy is in a self-sustaining phase, which ultimately is good for profits, which is good for stocks.

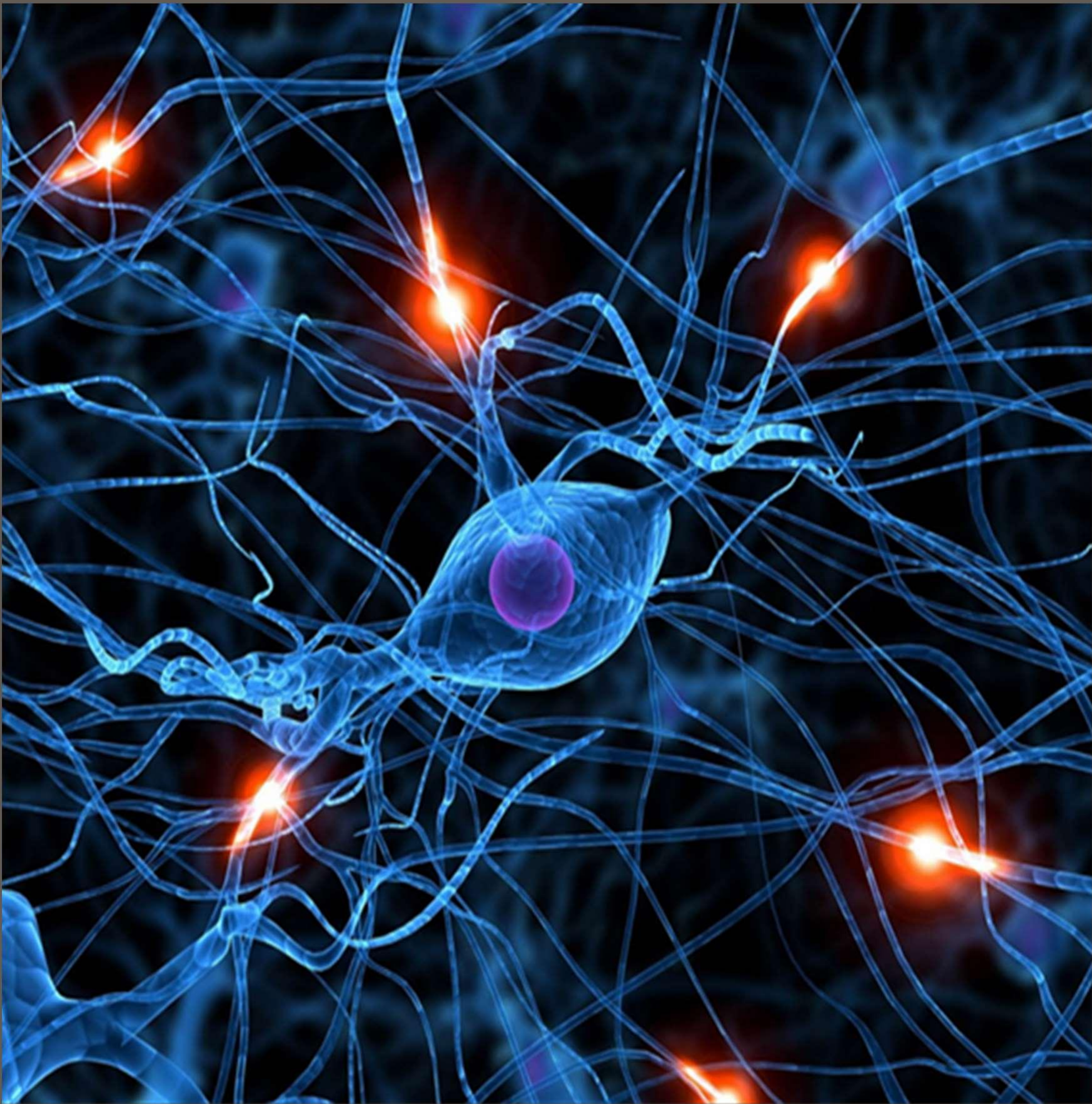
- John Canally, LPL Financial

However, real world facts do not, in fact, back this conjecture. Rafts of economic data are emerging that are buoyed by consistently positive trends. Noteworthy, for example, the June Z1 Q1 report showing that household disposable incomes have increased by almost $1 trillion since 2008, with a healthy swing into corporate equities investments of almost $250 billion. Corporate profits have booked consistently at approximately $1.2 trillion every quarter since the beginning of 2012, strengthening balance sheets. A dearth of other statistical data actually demonstrates that the going is good, and genuinely so.

When Richard Fisher, president of the Dallas Fed, commented on the “feral hogs” in financial markets being responsible for the negative market reaction to the FOMC meeting, noting that

> *they are testing us. That’s the way markets work,*

he was possibly voicing an oblique critique of an investment environment that is prey to skilled arbitrageurs that play on time-tested fears of herds. Maybe, given the circumstances, the lead shepherd in this scenario could be more forthcoming in allaying herd anxieties.



Patterns, and Preferences…and Almonds

Investor Behaviour

Since a 2002 article written by Jason Zweig at CNN entitled *Is your brain wired for wealth?* surprisingly few studies on explanatory constructs of investor behaviour have emerged that have been provided by the field of neuroscience. Understandably so given the still evolving state of a highly complex scientific discipline that nevertheless merits significant financial resources for the advancement of understanding and more accurate interpretation of human activity that, directly and indirectly, impact the financial health and social wealth of a nation.

One of the cited individuals in the article is Andrew Lo, a finance professor at the MIT Sloan School of Management who, along with Camelia Kuhnen at Kellogg Northwestern, can be considered a pioneer in the field of cognitive neuroscience as related to investor behaviour and whose work aligns with and in fact predates the more often cited Reinhart and Rogoff treatise on fear and greed.

Highlight

The human brain is a superb machine – "a Maserati" – when it comes to solving ancient problems like recognizing short-term trends or generating emotional responses with lightning speed.

- Read Montague

Notational academic disparities aside, Andrew Lo has pragmatically noted a universally acknowledgeable dilemma:

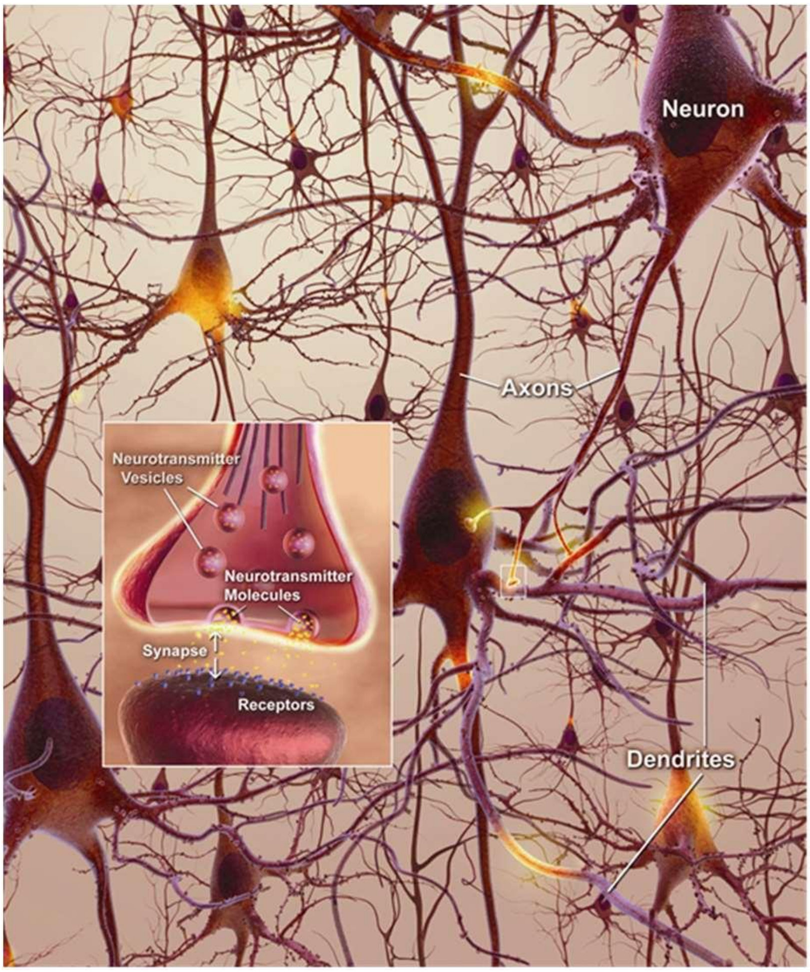
> *If fear and greed are the key drivers of all financial crises, then a better understanding of how the brain produces these behaviors may eventually allow us to formulate more effective policies to manage their consequences.*

He could have added how policies could potentially prevent financial crises in the first place, yet the salient point was made and his 2011 paper is one of the more fascinating and entertaining, taking the reader on a journey of seemingly abstract anecdotes and observations to arrive at a series of compelling conclusions that prominently include,

> *One of the most significant consequences of the Financial Crisis of 2007-2009 is the realization that the intellectual framework of economics and finance is incomplete…*

The correct assumption that the intellectual framework is incomplete finds resonance (albeit within a limited environment) in scientifically tested, proven and illustrative patterns of investor preferences that emanate to an extent from genetic predispositions, as Lo contextualized, and as Kuhnen has sought to quantify and qualify in her 2012 paper *Asymmetric Learning from Financial Information* which deals with responsiveness to gain and loss scenarios, subject to observable yet still largely indefinable emotional states. One of her more meaningful conjectures is that

> *Importantly, financial knowledge and the COMT genotype (linked to memory function and emotional control) of participants drive these individuals' subjective beliefs as well as their propensity to select the optimal asset given the available information…*



Whilst her findings cannot be considered definitive, given the aptly titled state of asymmetric learning and limited testing parameters, her contribution to the understanding of underlying precursors of investor behaviour is significant. As Kuhnen helpfully notes

> *These findings provide novel insights for understanding patterns in asset markets and for future theoretical work on price formation,and suggest that financial education may help individuals overcome innate disadvantages.*

Returning to the article, Zweig included a comment by neuroscientist Read Montague that is as relevant today as a decade ago,

> *The human brain is a superb machine – "a Maserati" – when it comes to solving ancient problems like recognizing short-term trends or generating emotional responses with lightning speed. But it's not good at discerning long-term patterns or focusing on many factors at once – challenges that our early ancestors rarely faced but that we investors confront every day.*

This particular dilemma has also found scientific groundwork through Valery Polkovnichenko at the Capital Markets department of the Federal Reserve Board, whose 2012 paper on investor preferences highlights the role of sentiment in determining outcomes of passively versus actively managed funds. His study, although unrelated to a neuroscientific approach, nevertheless provides an instance of connective data to support evolving neuroscientific research into investor behaviour.

The role of neuroscience in significantly enhancing understanding of investment patterns and preferences, among many other dynamics that concern the human condition, cannot be underestimated, hence the recent launch of the US government's Brain Initiative provides a welcome exploratory prospect for the longer term, one which I will look forward to following, as may be the dictate of my amygdalae.

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Asymmetric Learning from Financial Information

CAMELIA M. KUHNEN*

ABSTRACT

This study asks whether investors learn differently from gains versus losses. I find experimental evidence that indicates that being in the negative domain leads individuals to form overly pessimistic beliefs about available investment options. This pessimism bias is driven by people reacting more to low outcomes in the negative domain relative to the positive domain. Such asymmetric learning may help explain documented empirical patterns regarding the differential role of poor versus good economic conditions on investment behavior and household economic choices.

Confounding the Senses

Shaping Cognition

Jan Comenius, a 17th century contemporary of Francis Bacon, would surely have thoroughly approved of, and found validation in, a recent innovative experiment at Stanford University that combined science and art to explain, infer and indicate how, in the words of lead researcher Natalie Phillips,

> *cognition is shaped not just by what we read, but how we read it*.

The experiment involved MRI scans of PhD candidates as they read a copy of Jane Austen's 'Mansfield Park'.

> Highlight
>
> *It is important to gain knowledge. Grasp of the intelligible determines the fate of the rational.*
>
> *- Avicenna [Ibn Sinna]*

What brought Comenius to mind was how the cited findings of the experiment resonated soundly with the preface to his encyclopedia for children, 'Orbis Pictus', which reads

> *'Nihil est in intellectu quod prius fuerit in sensu' – Nothing is in the understanding that was not first in the senses.*

Comenius contended that all knowledge starts with sense information, but that the senses are often confounded and therefore reason is required to correct the defects of the sense and its errors. His empirical approach to knowledge and understanding parallels the beliefs and applications of an even earlier thinker, Ibn Sina, otherwise known as Avicenna, who in the 11th century taught how knowledge consisted of the mind grasping the intelligible through reason and logic,

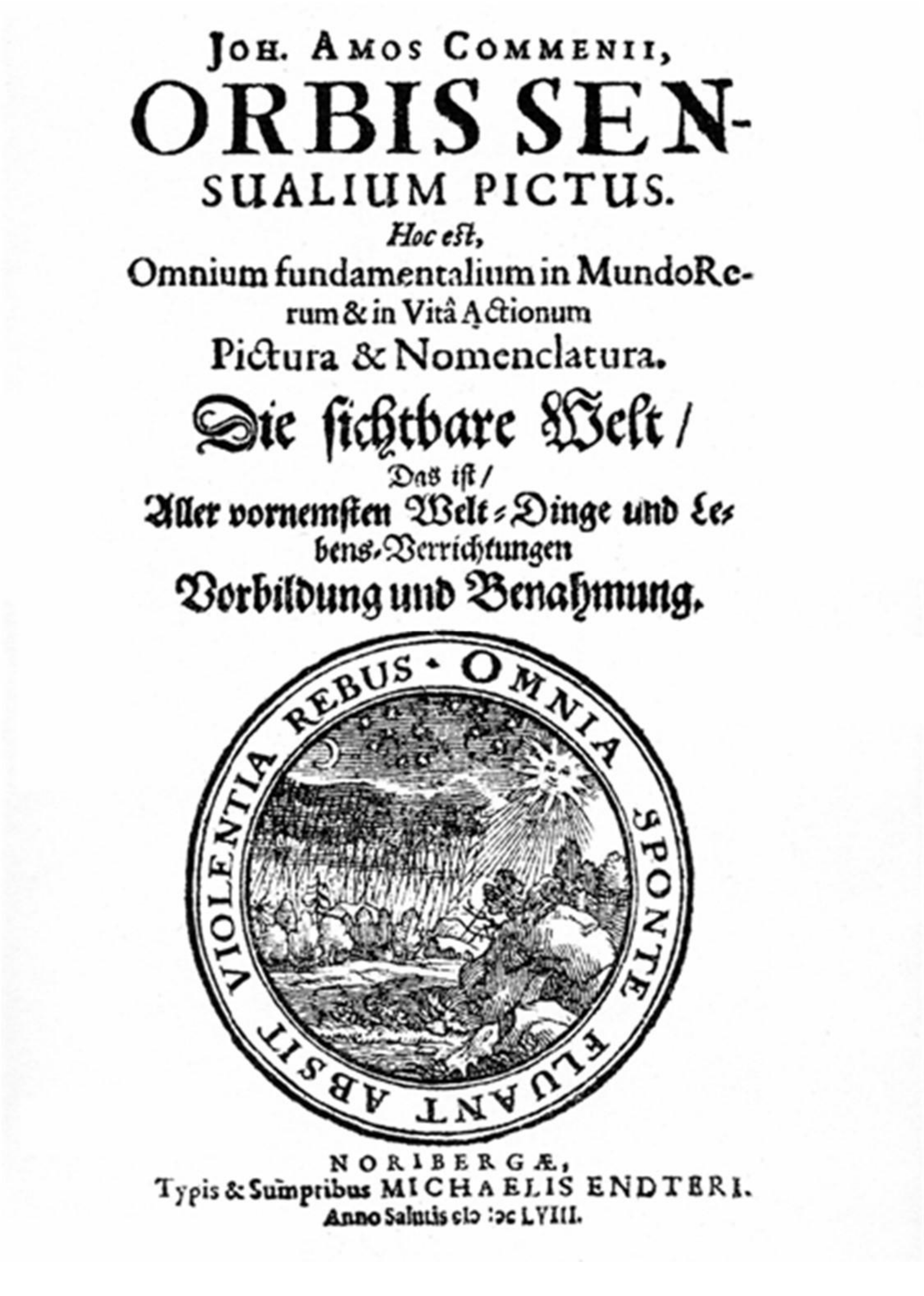
> *…it is important to gain knowledge. Grasp of the intelligible determines the fate of the rational.*

The peculiarity of Comenius' innovative theory during the 17th century stands the test of time. The early 21st century can present itself as a Hieronymous Bosch-like triptych of chaotic information, disseminated in myriad forms and through multiple channels, often writhing for prominence and at times screaming for attention, thus constituting an assault on the senses whereby intelligible analysis and meaningful interpretation can be difficult to formulate or may be easily lost in a blurry distance.

A credible witness to this phenomenon is Mike Moritz, chairman of Sequoia Capital, who in a recent Financial Times article commented on the disconnect between Apple Inc's performance and investor reaction, succinctly observing that, *Lost amid the mewling and mindless pandemonium was any sense of perspective.*

Disparate opinions and, as he termed "television sound-biters", appeared to have confounded the senses of those who, influenced by a barrage of media, now no longer perceived Apple to be a precocious child of commerce and capitalism.

As neuroscience increases understanding of stimuli that contribute to the formation of sensory perceptions that coalesce into recognizably distinct patterns of cognitive processes, the investment industry may still learn to more effectively communicate knowledge through reason, thereby strengthening its collective professional voice "amid the clamour" (as Moritz headlined) to concisely deliver salient guidance on how to appropriately read, visualize and understand the vicissitudes of equity markets.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Die sichtbare Welt/
Das ist/
Aller vornemsten Welt-Dinge und Le-
bens-Verrichtungen
Vorbildung und Benahmung.

NORIBERGÆ,
Typis & Sumptibus MICHAELIS ENDTERI.
Anno Salutis cIↄ Iↄc LVIII.

Where the Reasonable Man

Individual Judgement

Fundamental differences of opinion are an everyday fact of life, so I was randomly interested to draw substance from this truism by comparing last week's comments by Warren Buffett, doing media rounds for a new book, with October's SEC roundtable on high-frequency trading, the in-vogue 'pox' affecting equity markets.

What's reassuring about Warren Buffett is that he, and the type of investor he represents, provides a reinforcing justification for investment in equities. What's disconcerting about Warren Buffett is that his investment style is no way close to accounting for 50% of trading activity. Also, just mentioning his name can come across as subjectively fuddy-duddy, so for the purposes of this article I will make him synonymous with SFT, slow frequency trading.

This year Scott Patterson provided further evidence of stark contrasts between SFT and HFT, summarizing that

> *the average holding period of stocks was about 8 months in 2000. In 2008, the holding period was 2 months. This number decreased to 22 seconds in 2011.*

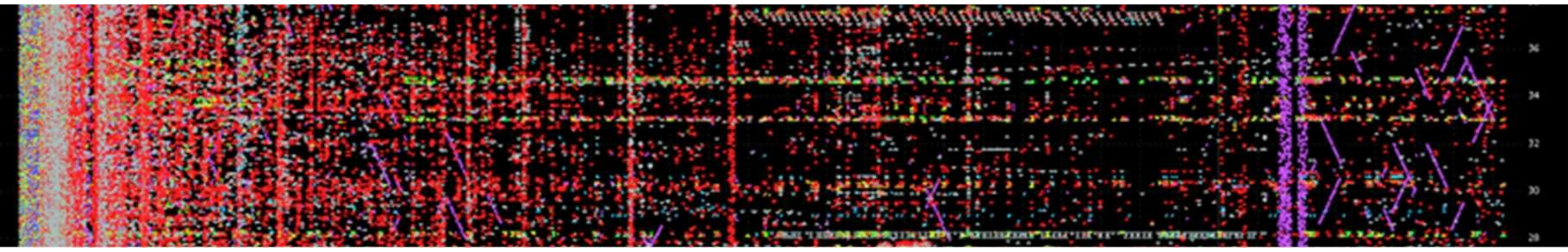
That 22 brings to mind that great novel by Joseph Heller highlights a dilemma resonating with Paul Krugman's observation that,

> *It's hard to imagine a better illustration (of social uselessness) than high-frequency trading. The stock market is supposed to allocate capital to its most productive uses, for example by helping companies with good ideas raise money. But it's hard to see how traders who place their orders one-thirtieth of a second faster than anyone else do anything to improve that social function.*

His comments in a New York Times article of 2009 were followed by a plethora of market commentary and flurry of academic studies that have become prejudicial references for HFT. Prominent among papers published are Biais, Brogaard, Penalva, Hirschey, Kirilenko, Menkveld, Boehmer, Zhang, Fabozzi - all worthwhile reads, that possibly induced investment firms such as Merrill Lynch and JP Morgan to clarify their positions earlier this year with published research commentary, and government agencies such as UK's BIS and US's CFTC and Chicago Federal Reserve Bank to qualify their opinions and force a rethink of policy and regulation.

Buffett maxims

- *It's only when the tide goes out that you learn who's been swimming naked.*
- *Buy into a company because you want to own it, not because you want the stock to go up.*
- *In the stock market you do not base your decisions on what the market is doing, but on what you think is rational-*



After absorbing my selected pile of reading material on the multifarious aspects of HFT, my personal interpretation of the matter led me to contemplate the early 19th century work of Adolphe Quetelet, arguably a highly lucid man who, paradoxically, statistically invented the concept of “a reasonable man” that first became enshrined in law in the following cases that finalize my brief encapsulation of the prevailing HFT phenomenon.

Vaughan v. Menlove (1837)

In Menlove, the defendant had stacked hay on his rental property in a manner prone to spontaneous ignition. After he had been repeatedly warned over the course of five weeks, the hay ignited and burned the defendant's barns and stable, and then spread to the landlord's two cottages on the adjacent property.

Menlove's attorney admitted his client’s

> *misfortune of not possessing the highest order of intelligence,*

arguing that negligence should only be found if the jury decided Menlove had not acted with

> *bona fide [and] to the best of his [own] judgment.*