

Random Governance

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Introduction

Two distinctly different factors comprise market randomness: “risk” and “uncertainty.” Legacy governance practices which fail to distinguish between the two factors tend to create results that have proven contrary to their intended results. Unintended consequences of such legacy practices include increasing rather than decreasing the volatility attendant to market randomness. I argue that best-practice financial market regulation requires separate regulatory regimes that recognize and differentiate determinate from indeterminate economic environments.

The dictionary defines “risk” as the chance of loss. Risk is determinate and thus presents foreseeable consequences, whereas “uncertainty” is indeterminate and characterized by unforeseeable consequences. The distinction has been well understood for almost 100 years, Frank H. Knight’s *Risk, Uncertainty and Profit* written in 1921 remains the classic treatment. Knight posited that “risk” referred to those events where decision-makers can assign mathematical probabilities to the randomness encountered. In contrast, “uncertainty” referred to events when randomness could not be expressed in terms of mathematical probabilities.

Knight’s work was instrumental in reshaping financial industry’s risk management and product design practices. His work, however, was largely overlooked by the industry’s regulators. Their slowness in adopting industry best practices exacerbated market perturbations during the past 20 years and helped suppress economic development and productivity.

To illustrate, risk-based pricing is a methodology adopted by many lenders in the mortgage and financial services industries. The interest rate on a loan is determined not only by the time value of money, but also by the lender’s estimate of the probability that the borrower will default on the loan. This means borrowers with different probabilities of default will pay different rates. Conversely, catastrophic events caused by forces of nature, which could not have been avoided by foresight or prudence are uncertain and require model pricing for the performance of a contractual duty.

Recent financial market turmoil has led to widespread cries to “reign-in risk” for effective governance. I contend that what placed our capital market system in jeopardy was not so much “risk” but the other component of randomness—“uncertainty.” Innovative solutions for global markets increased complexity. Complexity begot uncertainty as complex structured financial products evolved from earlier, simpler versions. The new products require innovative and adaptive changes to address uncertain and unforeseeable circumstances. Over time, the relative percentage per transaction and absolute amount of uncertainty in the capital market triggered a tipping point leading to chaotic market conditions. Just as hammers cannot drive screws, indeterminate financial instruments cannot be governed with one-size-fits-all deterministic metrics. Subprime credit default swaps that tried to insure negative cash flow uncertainty¹ proved to be financial *non sequiturs*. If two different elements are conflated and treated as the same, difficulties are likely to follow.

¹ The bright line between risk and uncertainty is defined by positive and negative cash flow.

Governing randomness

Context is reality. Calls for improved compliance must have historical reference to connect the dots of the governance network. Fundamental to the issue of re-regulation through more disclosure and better transparency is to know whether economic actors are operating in an environment of either risk or uncertainty.

Compliance-wise, regulation is primarily a function of pricing and practices where the complainant alleges being overcharged and/or being misled. From a valuation perspective, complex structured financial products that have positive cash flow are marked-to-market, whereas those with negative cash flow tend to be marked-to-model. The current market turmoil witnessing vicious cycles of imploding mark downs illustrates analyst angst in trying to force a false construct to reach probabilistic mark-to-market values with uncertain mark-to-model cash flows. Governance of sales practices is enforced mainly through the anti-fraud statute of the securities laws. The foundation of this provision is the concept of “*Scienter*,” a legal term that refers to intent or knowledge of wrongdoing. This means that an offending party has knowledge of the “wrongness” of an act or event prior to committing it.² But, what is the standard for “*Scienter*” in an indeterminate economic environment? How do you know when things are inherently unknowable? If mark-to-market pricing rules are being adjusted for indeterminate values, why would similar practice rules not be formulated for a separate regulatory regime that deals with indeterminate investments?

Frank Knight’s seminal work provided four ways to decrease uncertainty that included: combining uncertainties through larger scale; increasing control of the situation; slowing throughput; and, increasing knowledge.³ What the recent financial crisis illustrates is, although established capital market governance is almost exclusively deterministic; Treasury Secretary Paulson’s remedy relies heavily on Frank Knight’s uncertainty metrics by:

1. Using greater scale to propose a \$700 billion RTC-type pool for troubled assets,
2. Banning short selling for more than 800 financial institutions from September 19, 2008 until October 9, 2008 to exercise greater control over bear raids, and
3. Considering slowing throughput by re-instating the Up-tick Rule.

Surprising by its absence is the call for increased knowledge. Much has been made about the lack of regulatory red flags as complex structured financial products were made available to green mortgagors. Policy makers believed “Main Street” self-interest would keep pace with “Wall Street” financial innovations. For this to become reality a Sixth “C” – capability, as in informed consumer – now needs to be added to the “Five Cs of Credit Analysis⁴” to qualify mortgagors. Otherwise, the goal of protecting unsophisticated prospective home owners imposes commercial censorship on the next generation’s mortgagors.

Innovation and adaptability are the hallmark of our capital market system. Without a commensurate increase in financial knowledge, however, regulation merely “dumbs-down” the consumer base at the expense of market efficiency. This creates a derivative moral hazard where “noise traders”⁵ receive a regulatory subsidy to expand the scale, scope, and span of their investment activity. Much as driver education students reduce their cost of auto insurance,

² <http://en.wikipedia.org/wiki/Scienter>

³ The Unanticipated Consequences of Technology, Tim Healy,

⁴ The five Cs of credit analysis are the key elements a borrower should have to meet to obtain credit. They are character (integrity), capacity (sufficient cash flow to service the obligation), capital (net worth), collateral (assets to secure the debt), and conditions (of the borrower and the overall economy).

⁵ The term used to describe an investor who makes decisions regarding buy and sell trades without the use of fundamental data. These investors generally have poor timing, follow trends, and over-react to good and bad news.

investors who become financially sophisticated reduce their cost of capital and make the market more efficient by substituting intellectual capital for financial capital.⁶

US capital market regulatory structure is a hierarchical command and control process similar to [Gosplan](#) of the Former Soviet Union. Gosplan lacked the information system to restructure and therefore was unable to address effectively the hierarchical complexity. In the early years of the Soviet Union, the total number of goods controlled by Gosplan's centralized planning was approximately 500,000 to 750,000 items. By 1972, the total number of goods produced in the economy was 12 million and a decade later the number had doubled to 24 million. This meant that planning only used a 2-to-3 percent sample size of total products to forecast aggregate demand. It was simply impossible to calculate real demand for all items in the economy. This flaw became exponential as the economy became more dynamic.⁷

Regulators find themselves in a similar position to the Former Soviet Union given greater demand for resources required by global mass markets and greater complexity required by innovative enterprises. The [SEC](#) can no longer effectively govern with a deterministic, one-size-fits-all regulatory regime that conflates risk with uncertainty. Efficient utilization of regulatory resources suggests a modification of the Commission's centralized command and control organizational structure and legacy practices tied to neo-classical economics, and deterministic legal and accounting frameworks. Robust markets create an exponential demand for products in comparison to the Securities Exchange Commission's ("SEC") linear ability to supply regulatory resources. This creates a Hobson's choice for the SEC either to constrain market dynamics (errors of omission) or fall behind the compliance curve (errors of commission).

Conclusion

Conflating risk with uncertainty produces the unintended consequences of contingent and unforeseeable liabilities for market practitioners. This jeopardizes market effectiveness. Holding market participants who deal in uncertain investments to the condition of predictability conveys regulatory responsibilities without attendant regulatory disclosures and transparencies as to whether economic actors are operating in a determinate or indeterminate economic environment. If the SEC seeks guidance relative to complex structured financial transactions⁸, then the SEC is acknowledging the existence of uncertainty. This raises the question as to whether indeterminate activities can be governed by deterministic metrics and buttresses Paulson's strategies for using Knight's indeterminate best-practices to remedy the financial crisis rather than a deterministic [Sarbanes-Oxley](#) type regulation?⁹

Imposing commands to attain predictive capability on capital markets characterized by uncertainty undermines market resiliency and increases the probability of systemic failure. Regulating a market characterized by "uncertainty" as though it were deterministic imposes sanctions on unforeseeable events that stifle free market innovation and adaptability. Government sponsored regulatory opacity, in turn, creates a moral hazard that places

⁶ The Information Age challenge for policymakers is to change their governance emphasis from "no" to "know". The know governance regime shifts the regulatory emphasis from investor financial capacity to investor financial capability.

⁷ Ellman, M. and Kontorovich, V. 1998. [The Destruction of the Soviet Economic System: An Insiders' History](#). New York, NY: M.E. Sharpe, p109.

⁸ Comments on Release No. 34-49695, File No. S7-22-04 (June 9, 2004)
http://www.federalreserve.gov/SECRS/2004/June/20040610/OP-1189/OP-1189_1_1.pdf

⁹ It is interesting to note that the Government Sponsored Enterprises (GSEs), Fannie Mae and Freddie Mac, were exempt from the provisions of Sarbanes-Oxley.

practitioners in jeopardy of being held to a higher deterministic standard than an uncertain economic environment allows.

Congress is now calling for a systemic change of our capital markets. While using the current one-size-fits-all deterministic regime with *martingale*¹⁰ stop-gap measures may bring temporary governance effectiveness, it will likely be something less than efficient. Capital market reform should begin with the recognition and attendant disclosure of the economic environment as either:

1. Predictable – US Treasuries,
2. Probabilistic – positive cash flow, large-cap issuers, and
3. Indeterminate – negative cash flow instruments.

Thereafter, best practices should be codified into a separate regulatory regime for each economic environment.



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¹⁰ Martingale referred to a class of betting strategies popular in 18th-century France. The simplest of these strategies was designed for a game in which the gambler wins his stake if a coin comes up heads and loses it if the coin comes up tails. The strategy had the gambler double his bet after every loss, so that the first win would recover all previous losses plus win a profit equal to the original stake.