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KEYNOTE ADDRESS: THE SEC, DODD-FRANK, AND  
MODERN CAPITAL MARKETS

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I'd like to thank Chancellor Allen and Ms. Chapman and all of her colleagues at the *NYU Journal of Law and Business* for asking me to participate in this symposium and give the keynote address.

In previous writings I have suggested that two visions have animated the debate over the regulation of derivatives and financial innovation since the explosive growth of the derivatives market that began in the early 1980s. I now suggest that these two visions animate as well the most important, most sweeping financial legislation since the emergence of the modern welfare state in the 1930s. The 2010 Dodd-Frank Act, at its core, finally brought the OTC derivatives market into the regulatory fold.

The first vision is that of science run amok, of a financial Jurassic Park. In the face of relentless competition and capital market disintermediation, big financial institutions hired expert staff to develop complex new products. Operating in an international wholesale market open only to major corporate and sovereign entities – a loosely regulated paradise hidden

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\* Copyright © 2011 by Henry T. C. Hu. All rights reserved. Portions of the January 21, 2011 address draw on prior talks and articles, and are subject to the copyright and other rights I have in such works. Allan Shivers Chair in the Law of Banking and Finance, University of Texas Law School. In September 2009, Securities and Exchange Commission Chairman Mary Schapiro appointed Professor Hu the inaugural Director of the Division of Risk, Strategy, and Financial Innovation. He returned to academia on January 19, 2011.

from public view – these financial engineers (sometimes called “quants,” “rocket scientists,” and “light bulb heads”) push the frontier, relying on powerful computers and an array of esoteric models laden with incomprehensible Greek letters.

But danger lurks. As the financial creatures are invented and introduced, they begin to evolve and mutate, causing exotic risk and uncertainties. In its most fevered imagining, not only do the trillions of creatures destroy their creators in this wholesale capital market, but they escape and cause havoc in the retail capital market and in real economies worldwide.

So this vision, that of Jurassic Park, focuses on the chaos that can result from financial science and the lack of transparency in this unregulated paradise. This first vision rests on the potential for systemic risk.

The second vision is effectively the converse of the first vision. The focus is on the order – the sanctuary from an otherwise chaotic universe – made possible by financial science. The notion is this: corporations are subject to volatile financial and commodities markets. Derivatives, especially over-the-counter derivatives, by offering hedges against almost any conceivable kind of risk, allow corporations to operate in a more controlled and ordered world.

Corporations can enter this alternate universe, a “derivative reality.” And as the innovation process continues, the experience becomes ever richer and more sustained.

So if the first vision is that of a financial Jurassic Park gone awry, the second vision is of the soothing, perfect hedges found in formal Japanese or English gardens. The second vision, in other words, rests on the potential for risk management.

At its derivatives core, the Dodd-Frank Act crystallizes the 20-plus years of public debate and offers a Congressional response to the two visions. Throughout its 2,000-plus pages, Dodd-Frank tries to address the concerns embodied in the first vision while recognizing the promise embodied in the second.

In this address, I do not want to talk about the *substantive* provisions of this particular response to financial innovation. Instead, I will briefly discuss the regulatory production process associated with this particular response, as well as the resource demands modern capital markets in general place on regulators.

To be more specific, I'll deal with three issues: *first*, the speed at which Dodd-Frank mandates that the new regulatory regime be built; *second*, the complexity of trying to follow the Dodd-Frank Act's blueprint and goals; and *third*, the resource implications for regulators flowing not just from Dodd-Frank, but from characteristics of modern capital markets.

I start with the speed issue. This dates me, but I'm a fan of the 1950s television show, "I Love Lucy." Perhaps you may remember the episode in which Lucy and Ethel are working at a chocolate factory and their job is to wrap up the chocolate bon-bons coming down the conveyor belt. The problem is that the conveyor belt keeps on speeding up. The situation gets frantic. By the end they're putting bon-bons into their mouths, into their puffy hats, and down the fronts of their shirts. And of course, the topper comes when they somehow successfully hide from their supervisor the fact that they haven't been able to keep up. The supervisor is impressed and says, "Speed it up!"

Why am I talking about this "I Love Lucy" episode? Well, after Dodd-Frank passed, at least a few of us at the Securities and Exchange Commission felt like Lucy and Ethel. Dodd-Frank includes over 100 rule-making provisions applicable to the SEC, many of which require action within one year. Moreover, the Act mandates that the SEC do more than 20 studies and create five new offices. Every week, seemingly, the SEC has to wrap up some Dodd-Frank bon-bons coming down the conveyor belt. And as soon as those bon-bons are wrapped up, others come racing down.

This is no ordinary speed-up in operations. There is almost an order of magnitude difference between the speed mandated by Dodd-Frank and the historical pace at which SEC rule-making has occurred.

Let's now turn to the second issue: the complexities associated with implementing the Dodd-Frank Act. In one sense, Lucy and Ethel had a very easy task. They only had to follow the same three steps as each one of those bon-bons came down the belt. With the Dodd-Frank conveyor belt, it's different. Many of the individual bon-bons require serious thought in terms of how they should be wrapped up. Dodd-Frank often does not provide clear instructions.

Moreover, an entirely new regulatory regime is being created for the derivatives markets: individual components need to be designed with other components in mind, so that the regime as a whole would work efficiently. Difficult intellectual challenges are posed. And, given resource constraints and the statutory timing mandates relating to different components, there may not be the luxury of consistently designing integrally-related components simultaneously.

Accommodating the two animating visions for derivatives regulation is itself complex. On the one hand, the Dodd-Frank Act is replete with provisions focusing on systemic risk. The Act tries to reduce systemic risk by, for instance, subjecting “security-based swap dealers” and “major security-based swap participants” to capital and margin requirements, forcing many OTC derivatives to be cleared through a clearinghouse, and increasing transparency of transaction and pricing data as to both cleared and non-cleared security-based swaps.

Beyond trying to reduce systemic risk, the Act contemplates a more comprehensive federal role in the monitoring and analysis of systemic risk. The creation of the “Financial Stability Oversight Council” and the “Office of Financial Research” are emblematic.

On the other hand, Dodd-Frank recognizes the risk management possibilities that derivatives offer. For instance, the clearing requirement will not apply if, among other things, one of the parties is using swaps to hedge or mitigate commercial risk (and is not a financial entity). The Act seeks to reduce systemic risk and other private and social costs relating to derivatives without impinging unduly on such end-user risk management activities.

The complexity of developing rules that properly balance systemic risk concerns while accommodating worthwhile derivatives transactions can be seen through the lens of a single task that Dodd-Frank assigns to the SEC: developing capital adequacy standards for security-based swap dealers that are not banks. Decades-long efforts at developing capital adequacy and related standards for commercial banks suggest the magnitude of the challenge. It is now more than 20 years after the initial 1988 Basel Accord, and 4 years since a composite version of Basel II was issued by the Basel Committee on Banking Supervision. Despite monumental empirical, theoretical, and

policy work associated with Basel I and II on the part of regulators, bankers, and academics worldwide, these frameworks not only failed to achieve their goals but may have contributed to the global financial crisis that began in 2007.

Most fundamentally, the frameworks' laser-like focus on capital adequacy, to the relative neglect of liquidity matters, was a mistake. As has come to be emphasized in the wake of the financial crisis, to a financial institution, capital is like food but liquidity is like air. The regulatory response to such failures is still unfolding: last month, the Basel Committee set out the final text of the core elements of a new "Basel III" framework. But work on certain other aspects of Basel III continues.

Setting capital and related standards for entities undertaking a narrow range of activities, like security-based swap dealers, would in theory be easier than setting such standards for banks. However, because such dealers are entities that have not existed before, and are only coming into existence by reason of the Dodd-Frank Act and the implementing rules, these dealer capital rules must be developed without the benefit of a real-world foundation.

Even first-order, regulatorily-pertinent questions such as likely number of dealers are not easily answered. This should not be surprising: whether a financial market participant elects to become such a dealer will depend in part on the capital and other rules applicable to such dealers that the SEC has yet to propose. In developing such rules, the SEC presumably will consider, among other things, questions as to dealer and product market structures that best accommodate the Act's diverse goals. In terms of dealers, a small dealer, or potential new entrant, may be more affected by certain capital rules than a large dealer. In terms of products, capital rules as well as such factors as mandatory clearing requirements can influence not only activities relating to existing products, but also the financial innovation process.

In short, issues associated with such new financial products, and the underlying innovation process, can be complex. Responding to modern financial innovation can be especially daunting to those who are unfamiliar with the characteristics of such products, much less the theoretical constructs and real-world practices and institutions that animate the underlying process.

This is by way of segue to the third issue: the special resource demands imposed on regulators by the nature of modern capital markets. I'm going to talk about it from the perspective of just one regulator, the SEC, because that is the regulator I know best.

The SEC had, for nearly four decades, operated in large part through four "Divisions": Corporation Finance - underwritings and the like, Investment Management - mutual funds and closed-end investment trusts, Trading and Markets - stock exchanges and broker-dealers and, of course, Enforcement - Enforcement staff members are the ones who were college football stars and who now tackle fraudsters and their ilk.

The vast bulk of professional staff at these Divisions, as at the SEC as a whole, are traditional lawyers. In the modern era, the first professional economists arrived at the SEC in the mid-1970s. As of August 2009, substantially all of the SEC's economists were in organizational units called the "Office of Economic Analysis" (OEA) and the "Office of Risk Assessment" (ORA).

How does this relate to the resource demands issue? Broadly speaking, capital markets were relatively simple at the time of the creation of the SEC. Easy-to-understand products dominated: stocks and bonds. And the essential regulatory goal was simple: to prevent fraud. Moreover, the regulatory tools were fairly obvious: requiring high-quality corporate information and sanctioning material omissions and misrepresentations. With simple products, a common sense regulatory goal, and obvious regulatory tools, traditional lawyers were in comfortable territory.

In modern capital markets, complex new products such as OTC derivatives and asset-backed securities have become important, the regulatory goals have become more diverse, and the appropriate regulatory tools have become less obvious.

In terms of products, OTC derivatives essentially emerged around 1980. The disclosure in 1981 of some of the particulars of a currency swap involving the World Bank helped legitimate the market, and spurred growth. So around 1980, the OTC derivatives market had barely started. But by mid-year 2010, the market had reached \$583 trillion in notional amount terms. The OTC derivatives market is no longer a sideshow.

More important than individual types of OTC derivatives or asset-backed securities, a new process of financial innovation emerged. The underlying process of financial innovation - the way in which products were invented, introduced to the marketplace, and diffused - changed. Rooted in part in a revolution in how we think about risk, the process has come to have characteristics normally associated with science-based industries like biotechnology: specialized expertise, formal models, reliance on computers, and the like.

How simple, classic financial products like stocks are traded has also gone high tech. For instance, many ordinary investors first came to hear of "high frequency trading" in connection with reports about the May 6, 2010 "flash crash." Yet this previously-obscure trading strategy might now account for the majority of daily trading volume on U.S. stock exchanges. And, because of associated "co-location" issues, even the laws of physics - i.e., the speed of light - have become relevant to financial regulators.

The essential regulatory goals now extend well beyond addressing fraud. For instance, I've discussed the two animating visions for derivatives regulation, one rooted in systemic risk and the other rooted in corporate-level risk management. Neither theme has historically been important at the SEC. Moreover, traditional lawyers, including those at the SEC, have not had formal exposure to sophisticated analyses of systemic risk or the pluses - and *minuses* - of corporate-level risk management.

Trends in corporate governance also complicate the matter of regulatory goals. For instance, the new derivatives-driven phenomena of "empty voting," "empty crediting," and "hidden (morphable) ownership" pose challenges to the foundational mechanisms of corporate and debt governance.

The instruments of regulatory intervention are also more complicated now. Addressing such systemic risk, risk management, and decoupling issues requires a sophisticated, interdisciplinary understanding, informed not just by the pertinent economic or financial theories but by actual real-world practices and products. For instance, merely understanding the incentive structure, cognitive bias, and financial "science" factors that contribute to a financial institution's decisionmaking er-

rors is no easy task, much less crafting the appropriate regulatory responses.

In September 2009, the SEC created the Division of Risk, Strategy, and Financial Innovation, the first new "Division" since 1972 - the first since before the emergence of the modern derivative. Chairman Schapiro asked me to be Risk Fin's inaugural Director. Since Risk Fin was co-equal with the four longstanding Divisions, existing and potential SEC staff who were not traditional lawyers were offered a real and highly visible seat at the table.

Concurrent with its creation, OEA and ORA became components of Risk Fin and so all staff at these two units immediately became staff of Risk Fin. With Risk Fin's subsequent adoption of an organizational structure consistent with its broad mandate, the OEA and ORA units disappeared, having been fully merged into the Division. Shortly afterward, Risk Fin welcomed all of the financial data processing and analysis experts at the SEC's "Office of Interactive Disclosure."

Risk Fin's core purpose is to provide sophisticated, interdisciplinary analysis across the entire spectrum of SEC activities, including policymaking, rulemaking, enforcement, and examinations. As the SEC's "think tank," Risk Fin relies on a variety of academic disciplines, quantitative and non-quantitative approaches, and knowledge of market institutions and practices to help the agency approach complex matters in a fresh light. Risk Fin also helps identify, analyze, and respond to risks and trends, including those associated with new financial products and strategies. Through the range and nature of its activities, Risk Fin serves the critical function of promoting collaborative efforts throughout the SEC and breaking through silos that might otherwise limit the impact of the SEC's institutional expertise.

The SEC has long had excellent economists. But in view of this broad, ambitious mandate, Risk Fin needed to add to existing skill sets and deepen the bench.

I hired individuals who had corporate governance, financial, quantitative, risk management, scholarly research, and transactional expertise developed at major hedge funds, investment banks, law firms, and universities. Moreover, I hired individuals with advanced academic training in highly quantitative disciplines, such as mathematics. Some Risk Fin staff had



both a Ph.D. and deep “local knowledge” of real-world products, practices, and institutions.

Outside observers appear to have noticed such changes. *The Economist*, for example, proclaimed that this new Division is “packed with heavyweight thinkers.”<sup>1</sup>

Risk Fin has been involved in a wide variety of matters relating to financial innovation and systemic risk. Most notably perhaps, Risk Fin was actively involved in connection with the landmark Congressional efforts that culminated in Dodd-Frank,<sup>2</sup> and has been working closely with others at the SEC in trying to implement the legislative mandates.

Risk Fin has also participated extensively in financial innovation and systemic risk matters outside of this derivatives legislation context. These include efforts relating to asset-backed securities, hedge funds, and money market funds that help make up the “shadow banking system” at the root of many current systemic risk concerns. Risk Fin has also been involved in other matters that some believe implicate systemic risk issues. These include pension funding, disclosure, and other issues relating to the state of municipal securities markets<sup>3</sup> and the high frequency trading, flash crash, and other matters relating to market structure.<sup>4</sup>

Modern capital markets also raise many important issues in contexts largely unrelated to systemic risk. In the corporate governance context, Risk Fin contributed to the SEC’s most comprehensive review of the shareholder voting infrastructure in 30 years, especially with respect to the review’s “empty vot-

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1. *Fingers in the Dike – What Regulators Should Do Now*, ECONOMIST (U.S. ED.), Feb. 13, 2010, at 14, 16 (Special Report on Financial Risk); cf., e.g., Floyd Norris, *A Window Opens on Pay for Bosses*, N.Y. TIMES, Jan. 15, 2010, at B1; Kara Scannell, *At SEC, Scholar Who Saw It Coming*, WALL ST. J., Jan. 25, 2010, at C1.

2. See, e.g., Testimony Concerning the Over-the-Counter Derivatives Market Act of 2009 Before the H. Comm. on Fin. Services, 111th Cong. (2009) (statement of Henry T. C. Hu).

3. See, e.g., Securities and Exchange Commission Field Hearing on The State of the Municipal Securities Market (San Francisco, Sept. 21, 2010) (transcript available at <http://www.sec.gov/spotlight/municipalsecurities/092110transcript.txt>).

4. See, e.g., Concept Release on Equity Market Structure, SEC Release 34-61358, 2010 SEC LEXIS 118 (Jan. 14, 2010).

ing”-related aspects.<sup>5</sup> In the enforcement context, it has worked on such matters as credit derivatives-related insider trading litigation. In the examinations context, Risk Fin staff includes experts on data analytics who are helping exam teams allocate resources across and within investment advisers.<sup>6</sup> The SEC doesn’t have the resources to examine all investment advisers every year, so how do we use technology to better identify potential problems?

Chairman Schapiro recently stated that, prior to the creation of Risk Fin, interdisciplinary analysis at the SEC was a “novelty”; the SEC has been set on a “new path.”<sup>7</sup> In the past, the SEC has sometimes been perceived by outside observers as having a lawyer-dominated culture; Risk Fin is an agent for change.<sup>8</sup> Risk Fin is, and hopefully always will be, a work in progress, one that is as dynamic as today’s capital markets.

Let me conclude. Responding to modern capital markets, especially the financial innovation at their core, is difficult. The regulatory production process imposes incredible demands, on members of Congress as well as on regulators. Beyond the Lucy and Ethel issues associated with Dodd-Frank and broader notions of how to respond to modern capital markets, it’s critical to adopt a sophisticated, interdisciplinary approach informed both by ivory tower theories and by knowledge about the real world.

Effective regulation of modern capital markets depends on having a portfolio of those from traditional backgrounds and those with expertise in this particular type of interdisciplinary analysis. Adequate funding to recruit new staff and support existing staff is essential. Especially with the “continuing resolution” that government agencies are currently operating

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5. See, e.g., Concept Release on the U.S. Proxy System, SEC Release No. 34-62495, 2010 SEC LEXIS 2407 (July 22, 2010); Kara Scannell, *SEC Delves into ‘Proxy Plumbing’: Biggest Review in 30 Years Puts Empty Voting, Adviser Conflicts, Other Issues Under the Microscope*, WALL ST. J., July 15, 2010, at C3.

6. Alexander Campbell, *Profile: The Fin Man*, RISK, Jan. 2011, at 132.

7. Henry T. C. Hu, *Inaugural Director of Division of Risk, Strategy, and Financial Innovation to Return to University of Texas*, SEC Press Release No. 2010-226 (Nov. 18, 2010), available at <http://www.sec.gov/news/press/2010/2010-226.htm>.

8. JIM MCTAGUE, CRAPSHOOT INVESTING – HOW TECH-SAVVY TRADERS AND CLUELESS REGULATORS TURNED THE STOCK MARKET INTO A CASINO 97-98 (2011); cf., e.g., Gillian Tett, *Schapiro Gets Troops Ready for Regulatory Turf War*, FIN. TIMES (Asia Ed.), June 26, 2009, at 22.

under, the SEC has nowhere near the funding it needs. It is simply not rational for an SEC staff member to be unable to take a train from Washington to New York for want of resources.

But I want to end on a happier note. Movie aficionados know that scene in “I Love Lucy” is itself a derivative. It comes from Charlie Chaplin’s movie, “Modern Times,” released in 1936, a few years after the previous global financial crisis.

In the last scene, Chaplin’s girlfriend, poverty-stricken and homeless, says to him, “It’s hopeless. Why go on?” Chaplin replies, “Buck up. We’ll get by.” And they stride, arm in arm, up the road into the sunrise.

Now, that’s Hollywood. And Congress and the SEC are in Washington. And that movie didn’t have anything about continuing resolutions.

I continue to believe, however, with important gatherings like this, regulators and capital market participants can walk together into the sunrise.

Thank you very much.

[Applause]

