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The Golden Revolution, Revisited: Chapter 9

This Insight continues the serial publication of the new, Revisited edition of my book, The Golden Revolution (John Wiley and Sons, 2012). (The first instalment can be found here.) The book is being published by Goldmoney and will also appear as a special series of Goldmoney Insights over the coming months. This instalment comprises the fourth chapter of Section II.

Why Financial Genius Fails, or, a Forensic Study of the 2008-09 Global Financial Crisis

"The US economy is in danger of a recession that will prove unusually severe and long… The great question is what will happen to the variety of financial asset bubbles in the United States when the housing bubble bursts and the economy slumps."

KURT RICHEBAECHER, FORMER CHIEF ECONOMIST OF DRESDNER BANK, 2006

Much excellent analysis has already been written regarding the origins and key events of the 2008–2009 global financial crisis. In this chapter, I am not going to flog a dead horse. I am, however, going to explore some of the subtler ways in which the moral hazard created by US economic policy in the period 1987–2006 contributed to the near-collapse of the financial system in late 2008.

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The key lesson is that the US regulatory regime does not promote financial stability but, in fact, undermines it. As such, the US financial system is inherently unstable and fundamentally at odds with the current fiat dollar reserve currency standard, on which I will elaborate on later.

A BRIEF HISTORY OF FAILED FINANCIAL GENIUS

The dustbin of financial history is littered with examples of failed genius, in which extraordinarily bright, determined, hugely successful financiers or traders encounter a set of circumstances that take even them by surprise, and, lo and behold, they go suddenly, sometimes spectacularly, bankrupt. Long-Term Capital Management (LTCM), a large hedge fund that employed several Nobel Prize winners yet failed in 1998, threatening the entire US financial system, is a high-profile example, but there are many more. No doubt there were also clever folks involved in running the Knickerbocker Trust (failed 1907), Austrian Kreditanstalt (1931), Continental Illinois National Bank (1984), more than 1,000 US savings and loans (1986–1991), Barings UK (1995), and, of course, Bear Stearns, Lehman Brothers, Merrill Lynch, Washington Mutual, and Wachovia (2008).

No doubt equally clever people were running the myriad hedge funds and funds of funds that have been forced, for one reason or another, to close their doors. As we know, in recent years, huge numbers of math, science, and engineering graduates and PhDs from the world's best universities entered the financial industry and went to work building subprime collateralized debt obligations (CDOs), among other toxic securities, that have lost most or, in some cases, all of their value. There was certainly plenty of genius to go around—too much, perhaps.

Perhaps hiring geniuses doesn't guarantee that your firm won't go bankrupt or that it won't threaten the broader financial system. But what if it made it even more likely? What if some of the very geniuses who have been involved with financial failures in the past and are now the authorities on what exactly went wrong and what needs to be done, or avoided, to prevent future crises are, in fact, drawing wrong, potentially dangerous conclusions?

Let's focus this discussion on the observations of a gentleman getting much press of late, Jim Rickards, author of the recently published book Currency Wars and former general counsel to LTCM. In a 2009 interview, he explained what he believes are perhaps the key reasons why the financial industry so badly miscalculated the risks it was taking going into the recent crisis:

> As general counsel of LTCM, I negotiated the bailout, which averted an even greater disaster at that point. What strikes me now, looking back, is how nothing was changed; no lessons were applied. Even though the lessons were obvious, in 1998. LTCM used fatally flawed VAR risk models. LTCM used too much leverage.[1]

These value at risk (VAR) risk models to which Rickards refers are models that assume that financial asset price movements are normally distributed; that is, they follow a bell-shaped curve under which one standard deviation from the mean encompasses roughly two-thirds of all potential outcomes, and by the time you have moved three standard deviations away, you capture some 99 percent of all outcomes. That leaves the 1 percent, which is known in the industry as a once-in-a-century event—so unlikely that, for practical business purposes, there is little if any reason to worry about it.

The critical importance of the assumption that financial variables are normally distributed should not be underestimated. It is central to essentially all aspects of modern finance, ranging from how assets are to be valued, to how much capital traders, funds, or banks should hold against leveraged positions. As a prominent example, the original Black-Scholes option pricing model, developed in the 1970s and for which the Nobel Prize in Economics was awarded in 1997, assumes a normal distribution. Although subsequently modified in various ways, option pricing models in use today still explicitly assume the normality—bell-curve distribution—of returns.

> Rickards is quite right that VAR is a fatally flawed concept. There is overwhelming evidence that financial price returns are not normally distributed but rather follow what is known in physics as a power curve distribution. Rickards describes this as:
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> . . . a different kind of degree distribution. Any degree distribution is simply a plotting of the frequency of an event relative to the severity of the event. . . . A power curve, one of the most common degree distributions in nature, which accurately describes many phenomena, has fewer low impact events than the bell curve but has far more high impact events. . . .
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> A power curve says that events of any size can happen and that extreme events happen more frequently than the bell curve suggests. This corresponds to the market behavior we have seen in such extreme events as the crash of 1987, LTCM's collapse, the dot.com bubble's bursting in 2000, the housing collapse in 2007—you get the idea. Statistically, these events should happen once every 1,000 years or so in a bell curve distribution—but are expected much more frequently in

1 This quote, and all subsequent quotes from Rickards in this chapter, are taken from a fascinating interview by Kathryn Welling in Welling@Weeden 12, no. 4 (2010). We take this opportunity to thank Welling@Weeden for permission to use these quotes.

> a power curve distribution. In short, a power curve describes market reality, while a bell curve does not. . . .
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> Bell curve distributions in this context describe continuous phenomena and power laws describe discontinuous but regular phenomena.

Now we notice here two things. First, Rickards is a seriously intelligent fellow with significant direct market experience and superior statistical knowledge. Second, and far subtler but hugely important, we see that the financial industry as a whole has chosen to embrace VAR models, notwithstanding overwhelming historical evidence that they dramatically underestimate risk. If the financial world is populated by geniuses, what possible explanation could there be for that? Well, he has an explanation:

> [T]he history of science is filled with false paradigms that gained followers to the detriment of better science. People really did believe the sun revolved around the earth for 2,000 years and mathematicians had the equations to prove it. . . . In effect, once an intellectual concept attracts a critical mass of supporters, it becomes entrenched. . . .
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> I don't know whether it was denial or inertia or because people got so wedded to the elegance of the mathematics they'd done that they hated to leave all that work behind. . . . In other words, Wall Street decided that the wrong map is better than no map at all—as long as the maths are elegant. And that led to calling extreme events a sort of special case, a "fat tail," which just meant they were happening more frequently than a bell curve would indicate.

Perhaps that's it. But no, that's not all. Rickards goes one step further, which, given the huge rise in proprietary trading activities in recent decades, rings true:

> [A]nother reason the Street was loath to throw out the whole notion of normally distributed risk, and tried to salvage it instead by putting a fat tail on it, is that the alternative, a power curve, just didn't look that palatable to most practitioners and so comparatively little work has been done in applying power curves to financial markets. . . .
>
> The thing is, power curves don't have a lot of predictive value. Since most financial researchers approach the field precisely to gain a trading edge, once they discover power curves aren't much use there, they move on. . . .

Good insight. Probably spot on. The consequences, as we know, have been devastating. Rickards uses the severity yet unpredictability of earthquakes as an excellent analogy for financial crises and for what he believes should be done to avoid them in future:

> We know that 8.0 earthquakes are possible and we build cities accordingly, even if we cannot know when the big one will strike. Likewise, we can use power curve analysis to make our financial system more robust even if we cannot predict financial earthquakes. And one of its lessons is that as you increase the scale of the system, the risk of a mega-earthquake goes up exponentially. . . .

Unfortunately, this is not something that Wall Street or its various regulators currently comprehend. After all, the institutions that were too big to fail back in 2008 are even larger now, posing a greater systemic threat.

But I'm not so easily convinced of Wall Street's ignorance in this matter. I will explain why in a moment. First, allow Rickards to continue with his explanation:

> I've always thought the problem was that, although Wall Street was very active in hiring a lot of PhDs—astrophysicists, applied mathematicians and others with very good quantitative theoretical skills, it didn't let them use their heads. What happened was that their Wall Street managers said, "Look, here's how the financial world works and we want you to model it and code it and develop it and write these equations and programs." And so they did. . . . [I]nstead of telling them what to do, they should have listened.

Now, why is that, do you think? As mentioned earlier, I have an idea. Those Wall Street managers telling their quants what techniques to use were clever enough to understand that, were they to employ models based on power curve distributions, it would not make proprietary trading any more profitable, as such models lack predictive power. But it would dramatically increase their cost of capital, as their capital bases would need to be large enough to ensure against power-curve-implied earthquakes. Capital would need to increase, and balance sheet leverage decrease exponentially, alongside any growth in proprietary trading operations. How convenient and coincidental that Wall Street executives collectively created a VAR-based risk management culture at every single major trading firm, without exception, notwithstanding the overwhelming historical evidence that VAR is fatally flawed!

Perhaps Rickards is just being polite. I have no such compunctions when it comes to entertaining ideas of possible conflicts of interest between Wall Street executives and

their firms' shareholders. The evidence may be circumstantial, but it is clear. It was never in Wall Street's interest to seriously consider replacing VAR-based with power-curve-based risk management because it would have raised the cost of capital, thereby curtailing profits, salaries, and bonuses.

But wait a minute. Am I implying that Wall Street executives were willing to risk the bankruptcy of their own firms and even the collapse of the entire financial system by deliberately employing far too much leverage? Yes, I am. As a managing director at multiple major global financial institutions in the period 2000–2008, I had ample opportunity to observe the prevailing attitudes toward risk at the highest levels, and how key decisions were made. There was a consistent, clear bias in favor of risk taking, with risk management playing only a supporting, enabling role. Those taking the greatest risks generally received the greatest rewards, including, importantly, rapid promotion. The executive committees of the major firms were thus comprised overwhelmingly of those most successful at pushing risk taking to its practical limit, which included placating (or, in some instances, bullying) those in risk management.

Remember, these Wall Street executives are smart guys. Perhaps as smart as Newton. Perhaps as smart as Rickards. Perhaps smarter still. So smart that they took a good look back at post–World War II financial market history and saw that in every single instance in which the threat of systemic failure arose, policymakers intervened with progressively greater assistance. And in every instance, the policy reaction has proven, in hindsight, to be disproportionate to the crisis, and the moral hazard implicit in the system has grown. Indeed, it could be argued that the regulators have made the financial world safe for fundamentally flawed, VAR-based risk models. If the power curve distribution does indeed obtain, and the 2008–2009 crisis provides crystal clear evidence that it does, then given that the too-big-to-fail firms are now even larger than they were prior to the Lehman Brothers bailout, an even larger financial crisis, with an even larger bailout price tag, lurks in the not-so-distant future. (At the time of this writing, a crisis an order of magnitude greater than that sparked by the Lehman Brothers failure appears to be brewing in the euro-area banking system, which has a huge net exposure to the heavily overindebted nations of Greece, Ireland, Portugal, Spain, and even Italy, which has the third-largest government debt in the entire world. The ECB has responded by purchasing incremental portions of these countries' debts and by providing unprecedented three-year financing to euro-area banks. While such actions do buy time, they don't in any way address the underlying causes of the crisis, that is, the excessive debt and leverage in the system.)

A REGULATORY SILVER BULLET?

Regardless of whether Rickards believes that Wall Street executives deliberately chose to ignore the implications of the power curve distribution or were simply blissfully unaware, he has specific recommendations for how to avoid another major financial crisis:

> [O]nce we understand the structure and vulnerability of the financial system in this way, some solutions and policy recommendations become obvious. . . .
>
> They fall into three categories: limiting scale, controlling cascades and securing informational advantage. . . .
>
> I certainly would favor the Volcker Rule and I would favor bringing back something like Glass-Steagall. And I'd favor imposing stricter capital ratios on banks and brokers.

What these recommendations collectively would do is give substantially greater power to regulators to determine how Wall Street is run. But stop right there. Is this realistic? Who, exactly, is going to determine how to limit scale? How can we have any confidence that such decisions will not be highly politicized? By controlling cascades, are regulators not providing an implicit subsidy for excessive risk taking? Rickards might counter that his proposed stricter capital ratios would limit such risk taking, but once again, can we be at all confident that such capital ratios will be set in a sensible, objective, nonpoliticized way, given the history of chronic failures on the part of regulators to effectively carry out their mandates? (The most recent such example of regulatory failure appears to be the MF Global bankruptcy, where client funds, thought to be segregated, were in fact used as collateral for proprietary positions. If true, this demonstrates at a minimum persistent regulatory incompetence or, alternatively, regulatory complicity in fraudulent practices at the highest levels of the US financial system.)

My concerns with a purely regulatory-based solution to serial financial crises come down to the following: Is Rickards really prepared to place his faith in the regulators who enabled the S&Ls to embark on their fateful 1980s lending binge, who failed to see the dot-com bubble but then wasted no time slashing rates when the market crashed, who denied that there was a housing bubble even as they were claiming that the nascent subprime crisis was contained, who were supposedly overseeing Fannie and Freddie in the years prior to bailing them out completely, who repeatedly missed (or chose not to hear) the warnings about Bernie Madoff, who glossed over Lehman's

category-105 repo transactions, and who bailed out AIG Credit Default Swaps CDS at par even though such contracts were trading at a huge discount in the market?

To be fair, Rickards is in good company. There are numerous policy makers and financial commentators who appear not to have learned the lesson that the US financial regulatory regime not only repeatedly fails but also fails so completely, consistently, and predictably that Wall Street has made a highly profitable business out of being bailed out. As Sir Isaac Newton might ask, have these folks fumbling about for a regulatory-based solution to Wall Street excess thought to apply the scientific method properly, isolating key assumptions and controlling for all factors? If they did, they might see the disturbingly consistent pattern right before their eyes and draw the obvious conclusion.

I agree wholeheartedly with Rickards that VAR is a flawed concept and that a power curve approach to risk management would be a welcome step in the right direction. But with all due respect, I am horrified at the prospect that the dysfunctional US financial regulatory system would be tasked with such an important initiative.

If more such misregulation is not the answer, then what is? My proposed solution is as simple as it gets: throw Wall Street and the City of London to the wolves. The US Congress and UK Parliament should pass laws making it illegal for their respective governments or any agencies thereof, including their central banks, to provide any form of direct financial assistance whatsoever, under any circumstances, to the nondepositor (e.g., wholesale, interbank) sources of funding for the financial system.

How would financial markets respond? Presumably, absent any explicit or implied guarantees, the share prices of weak financial firms would decline, perhaps to levels implying a high risk of insolvency. The weakest institutions would probably also find that their bonds were trading at a large discount and would find it difficult, if not impossible, to refinance at attractive rates. They would be forced to shrink their balance sheets—if not immediately, then gradually over time. Larger (uninsured) depositors would begin to withdraw funds from those institutions deemed at growing risk of failure and place them in stronger institutions. They would also most probably spread deposits around, seeking greater diversification of risk. In general, capital would flow from weak to strong financial institutions, exactly what is needed to avoid a repeat of 2008.[2]

Shareholders, now aware that assistance would not be forthcoming in a crisis, would demand that financial executives not only increase their respective firms' capital

cushions but also devote more resources to and provide greater transparency of risk management. For institutions taking material proprietary risk in trading or investment banking, a general move back to a partnership model, in which executive wealth is tied to the stability and longer-term survival of the firm and in which conflicts of interest with shareholders and bond holders are minimized, would probably take place. Specifically, shareholders would probably demand that risk management replace flawed VAR-based methodologies with those based on a power-curve distribution. What Rickards thinks should be done by chronically incompetent regulators would almost certainly be done in short order by increasingly competent, if imperfect, financial executives, in response to shareholder pressure.

Mistakes would still be made. Geniuses aren't perfect. But absent a homogeneous VAR-based risk-management culture, the risk of systemic failure would be all but eliminated. If any firm grew to the point of posing a systemic risk, the cost of capital for the entire system would rise accordingly, constraining growth and reallocating resources to less risky nonfinancial business sectors.

I believe I know why financial genius fails. The answer is surprisingly simple, really: because failure pays so much better than success. Only when action is taken to ensure that success pays better than failure will financial crises threatening the health of the entire economy become a thing of the past.

2008 CRISIS POST-MORTEM: GLOBAL MONETARY DISORDER

Much has been written on the topic of what caused the 2008–2009 global credit crisis. In some cases the argument is put forth that it was pure accident. I strongly disagree. Yet regardless of whether Wall Street firms or other banks in the US and other countries were aware of the risks they were running, or whether policy makers realized that, through the decades, the degree of moral hazard had grown to system-destabilizing proportions is ultimately moot. However, as a result of the Federal Reserve and certain other central banks resorting to a historically unprecedented general global monetary inflation to try and keep the increasingly fragile system afloat, the global monetary order has entered a state of unstable equilibrium, which makes the situation in 1971—the year President Nixon suspended gold convertibility—look rather tame by comparison. Therefore, we now turn to a discussion of equilibrium dynamics.