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A year ago, financial markets were in freefall. After years of weak real estate markets, years of accommodative monetary policy, and months of bailouts, Lehman Brothers was allowed to fail. The financial chaos contributed to the United States worst post World War II recession.

In the ensuing year, people have developed many explanations for what happened and for the causes. Many of those explanations are simplistic. Some are flat out wrong. This is not unusual. People often developed myths about events, and often those myths are incorrect. It's important, though, that we try to correct those myths. If we make policy decisions based on incorrect myths, we may exacerbate future problems. Certainly, any policy changes based on those myths won't be correcting the real problems.

A myth that has built up around last year's collapse is that financial markets were something like the Wild, Wild West. The story goes like this: Market participants (financial agents, bankers, other lenders, brokers, borrowers, and rating agencies) were undisciplined, incompetent, greedy, probably dishonest, and possibly criminal. Markets, driven by greedy participants and unconstrained by regulation or supervision, were frenzied bacchanalian celebrations of mankind's worst characteristics.

That is simply not true.

In fact, the United States financial markets and banking industry are among our most regulated industries and markets. Most of the market participants are not particularly greedy, incompetent, or criminal. Market participants are, however, humans. As such they react to incentives, and those reactions are predictable.

What we saw last September was the result of years of market participants reacting to inappropriate incentives. As a result of inappropriate incentives, a house of cards was built, and that house was destined to collapse. The precipitating cause of the collapse was an understandable error in pricing mortgage-backed securities.

The United States has a decades-long history of considering some firms too big to fail. The idea is that the failure of a particularly large firm would so affect other firms and markets as to have catastrophic economic outcomes. Consequently, when too-big-to-fail firms found themselves in trouble, the government has felt compelled to bail them out.

There is a problem with this. The problem is that a firm that knows it's too big to fail has an incentive to take excessive risks. We don't need to go into the details here, but it is well understood that conferring too-big-to-fail status on the firm, is essentially issuing the firm's stockholders an option. It is also well understood that option prices increase with volatility, risk. Therefore, the management of too-big-to-fail firms can increase the value of their company by increasing the value of the too-big-to-fail option. This is done by taking otherwise unacceptable risks. We have a simple case of management doing its job, maximizing stockholder wealth, by following the incentives placed in front of it. There is no evil here. There is no criminal intent.

Other market participants and firms not too-big-to-fail also learned, following incentives, to take excessive risks. From the time that Alan Greenspan became chairman of the Federal Reserve System (Fed), the Fed has systematically trained market participants to take excessive risks. Soon after being appointed head of the Fed, Greenspan responded to the October 1987 financial collapse by reassuring markets and dumping massive amounts of liquidity into the markets. This defined the Fed's response to every financial crisis during Greenspan's tenure. Time and again markets would run into problems, and time and again the Fed would intervene by providing massive amounts of liquidity. The result of these repeated interventions was that market participants were trained to take excessive risk confident that they would be protected by a benevolent Fed. They were protected from facing the consequences of their actions. Market participants had been trained, as surely as Pavlov's dogs were trained, to take excessive risks. There is no evil here. There is no criminal intent.

As firms and market participants were responding to incentives and assuming excessive risks, financial regulators appeared to bless their actions. The regulators did not sanction financial institutions. They did not tell the public that there were problems. There was no hint from the regulators that anything was in any way unsatisfactory. By their silence, the regulators condoned the activities of firms and market participants.

In some cases the regulators exacerbated the weaknesses of this house of cards that was being built. It became national policy to increase homeownership rates. To encourage increased homeownership rates Fannie Mae, Freddie Mac, created new lending opportunities. Financial institutions, particularly banks, were encouraged and incentivized to participate in increasing homeownership.

The program to increase homeownership was successful. The United States homeownership rate rose from approximately 64 percent in 1995 to about 69 percent in 2005.

I need to take a slight detour here and discuss homeownership rates. There are many well-known advantages to homeownership. I don't need to outline here. However, homeownership imposes obligations and costs. These include making payments to a mortgage holder and taxes. To preserve property values, often-costly maintenance cannot be deferred. The unfortunate fact is that not everybody has the wherewithal to meet those costs and obligations, or they may not have the stability to meet those obligations over an extended time.

While it is easy to see that not everybody should own the home they live in, it is not clear what the correct homeownership rate should be. Indeed, the correct homeownership rate can change from economy to economy. For example, California's homeownership rate tends to be about ten percentage points below that of the United States. For the United States, it appears around 64 percent is a sustainable homeownership rate. When we climb significantly above the sustainable homeownership rate we are building a problem. Eventually, we confront the problems we see today. The adjustment to a sustainable home ownership rate is difficult, costly, and often heartbreaking.

Here again, market participants responding to incentives, built another wing of America's house of cards. Lenders, responding to incentives, loaned money to people that should not have been buying homes. Renters, responding to incentives, purchased homes they couldn't afford to keep. The demand, boosted by an accommodative monetary policy, drove home prices up. There is no evil here. There is no criminal intent.

So far I've told a story of incentives and of market participants responding to those incentives. Early in this essay I mentioned that the collapse was precipitated by an understandable mistake in pricing mortgage-backed securities. This is necessarily a technical topic, and I ask the readers patience as I explain.

Mortgage-backed securities are tradable market instruments that represent a claim on some portion of the cash flow resulting from a portfolio of mortgage loans. They can be sliced and diced a million ways, and they have been. How they are sliced and diced is not important here. What is important is that the securities are based on large numbers of home loans. The idea was that by combining several risky assets into one portfolio and then slicing up the portfolio, risk could be reduced. The amount of risk reduction is dependent on, to simplify, the joint probability of default. That is, what does one loan default tell us about the probability that another loan will default?

If the default of one loan tells us nothing about the probability another loan will default, correlation is said to be zero. If the default of one loan guarantees another loan will also

default, the correlation is said to be one. So the range of correlation takes a value between zero and one. A low value means that there is very little information in the default of one loan. Larger numbers, closer to one, mean that the default of one loan increases our assessment of the probability a second loan will default.

When these packages of mortgage cash flows were put together, they were priced as if the correlation between defaults on the various underlying loans was very small. That is close to zero. It was understandable in a way. Over the previous several years it did appear as if there was relatively low correlation between these defaults. However, it has since become clear that in time of serious economic distress the correlation increases. It approaches one.

Consequently, the securities were not well understood, and they were underpriced. That realization, combined with the fall in real estate prices is what precipitated the financial crisis. When Lehman Brothers failed, market participants realized that they were at risk. The house of cards collapsed.