

## **Incentives and Systemic Risk: Not Just for Company Executives**

by Max J. Rudolph, FSA CERA MAAA

Enterprise risk management continues to evolve. Practice ranges vary widely. Models are becoming more sophisticated yet less transparent. Customers are becoming more sophisticated yet still depend on black box cookie cutter solutions. Incentive compensation, which everyone agrees is a key component of best practice ERM, lags behind. Given that people will do what you pay them to do, this behavior is not surprising.

There is no question that incentives are important. Most discussions of this topic deal with senior managers at businesses, but incentive led behavior is not purely monetary when considering systemic risk. The collapse of an entire financial system due to contagion from one company, industry or other entity is a big deal. One can, and should, argue that this would be an unintended consequence. Better information about prior decisions and their results can reduce systemic risk.

Regulators today view systemic risk, through the SIFI (Systemically Important Financial Institution) mechanism, as being driven by a single company. This is wrong. It is the practices those companies implement that create risk. The most famous individual company SIFI was AIG. It was actions at their Financial Products Division, holding unbalanced risk in a leveraged market, that threatened to bring down some of the biggest banks in the world. AIG was able to enter into these derivative contracts due to their AAA rating. Other financial institutions could have been doing the same thing. Other parts of the AIG holding company structure were not even aware of these actions, yet they were lumped together as if everyone was guilty of the same malfeasance. Banks, mortgage originators and other brokers had ethically questionable practices. Should only large companies be penalized while small firms go unchecked? It's the actions that create the risk, and a broad swathe should be cut through any industry with practices likely to interact with other parts of the financial system in a disastrous way.

Within the insurance industry, for example, there are risks that can be managed using the law of large numbers and risks where outlier events can dominate and threaten solvency. Reinsurers hold quite a bit of the known known risks with historical data, but also hold most of the unknown unknown risks. Reinsurers are also highly intertwined from an ownership and risk sharing perspective. If one of them became financially insolvent, it is unclear what the impact would be on other reinsurers. It is the industry practice that is at fault, not single company implications.

These systemic risks do not belong entirely to the banking and insurance sectors. Groups that could impact the global financial system include governments, from both established and emerging countries, rogue states and terrorist groups, non-governmental organizations (NGO), academic institutions, scientific researchers, financial institutions, and even manufacturing and service companies can all have unintended negative consequences on the world's financial order.

## INCENTIVE COMPENSATION: THE CRITICAL BLIND SPOT IN ERM TODAY

Systemic risk goes beyond pure financial risks, including higher costs due to trade conflicts and war. The financial system is at risk due to pollution, resource depletion, and forced changes to a way of life. They were initially free but true costs are yet to be determined.

### **Established governments**

Stable governments provide checks and balances, but even a multiparty system overextends and mean reverts with respect to policy and regulations. Prior to 2008 a generation of regulations had moved the United States toward a laissez faire economy where the “invisible hand” would manage the economy. The government had become a prisoner of the bureaucracy, which itself suffered (and continues to suffer) from regulatory capture. This is when special interest groups, such as investment bankers, effectively take over a regulatory agency through a combination of lobbying, infiltration and bureaucratic job security. Incentives at governmental agencies need to protect the public.

Examples: Both Robert Rubin and Henry Paulson served as US Treasury Secretary after leading investment bank Goldman Sachs. Gerrymandering, the process of manipulating voting districts to keep one party in the majority, has led to a divided political environment where moderates are not welcome. If you don't need to work with others to get elected why are we surprised that this trait has been lost in Washington?

### **Governments in emerging countries**

Third world countries tend toward concentrated decision making power in leaders who often have their own agendas. The incentive is to stay in power since change in control often leaves the exiting leader dead. Getting these countries to open up their economies to trade, with restrictions so foreigners can't overly impact their markets through quick entry/exit would align incentives with citizens.

Example: Venezuela, under Hugo Chavez, has nationalized firms and used oil money to provide benefits to the voters of his country. South America has contagion risk when this unsustainable situation breaks down.

### **Rogue states**

A country intent on joining the powerful elite can slow economic growth through protectionism and by diverting resources to military budgets. Incentives of food and other services are offered in an attempt to manage expectations.

Example: The world is more stressful as North Korea pursues nuclear weapons and long range ballistic missiles. Incentives have had limited success to date as power is the motivation.

### **Terrorist groups**

Those who are intent on terrorism want to incite change. It can be difficult to incent this group as they feel life will improve for the masses despite popular opinion. Systemic risk increases as these groups will target disruption techniques like cyber-terrorism designed to create chaos in the financial markets.

Example: al-Qaeda grew in strength over many years before the 9/11/2001 World Trade Center attack and continues to pursue adoption of an extreme form of sharia law for all.

### **Non-governmental organizations**

Non-governmental organizations operating without proper oversight can create systemic risk through actions or set the stage for future disruption.

Examples: United Nations troops in 2010 serving after the Haiti earthquake brought cholera to the local drinking water. The Gates Foundation has reduced the number of deaths in many remote parts of the world, but these areas have historically been subjected to food shortages and war. Incentives should be developed, with oversight, to balance good intentions against delayed suffering.

### **Academic institutions**

Academic research has its own bureaucracy that makes it hard to change established practice. When Copernicus described a solar system that was not earth-centric, the existing intelligentsia challenged him. The incentives are to reward to existing bureaucracy and not make waves. The Nobel Prize in Economics has not helped, as its recent winners have focused on model driven mathematical models that serve as great proxies for markets but less well as predictors for future results.

Example: Warren Buffett has commented that he should endow professorships to teach the efficient market theory, as that will lead to another generation ignoring intrinsic value. EMH, CAPM and Black-Scholes tend to confuse the signal and noise, focusing on market values as always being correct.

### **Scientific researchers**

When a researcher wants to publish results they can't find a place to do so unless they have statistically significant positive results. This is poor incentive as it leads negative results to be ignored. This results in redundant studies and impure data. Even Mendel fudged his data when studying peas to better prove his hypothesis.

Example: Peer reviewed science journal retractions have increased greatly over the past generation. Whether it is a vaccine's impact on autism or stem cell research, there is great pressure on researchers to "earn" their grant money and move up the food chain.

### **Financial institutions**

Much of the recent financial crisis was laid at the feet of bankers and their incentives. This is appropriate, but there is plenty of blame to go around to others too. Mortgage originators are paid for top line growth, and the risk is passed on to others who naively rely on others to manage the risk. Incentives are not aligned. When flood insurance is subsidized by the government it is not surprising that private insurance dries up.

Example: sovereign debt required no capital to be held by banks or insurance companies, so investors in these institutions sought out riskier debts that provided a larger spread. This also occurred with liquidity risk. No capital is required to be held, so institutions loaded up as it seemed like free money.

## **Manufacturing and service companies**

Within companies incentives get a lot of discussion as they apply to managers, and that is important. In addition, some government policies are designed with good intentions that lead to unintended consequences.

Example: Social Security contributions are capped for both individual and company contributions. Oftentimes this money is used to provide an additional retirement plan for the highly compensated, leading to higher pay with no alignment of performance incentives.

## **Conclusion**

Proper incentives drive systemic risk, but it is not always obvious what the proper incentive is. A long time horizon helps think through unintended consequences and risk interactions. Providing proper oversight so one person never has absolute control, and a variety of perspectives is encouraged, will improve both incentives and results.