

# Revisiting Systemic Risk In The Modern Global Economy

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## Abstract

The economic dislocations that have brought havoc to the nexus of global economic relationships since mid 2007 have awakened our collective conscience to the need for conceptualizing and understanding business risk transferred from the firm level to the industry, and its eventual diffusion to national and global dimensions. This process of diffusion has created a new hybrid risk that is a synthesis of microeconomic and systemic risk. This “micro-systemic risk” where one institutional failure can cause cascading failures across the entire economic system is the subject of this paper. This paper proposes two different ways to restabilize the world economy. The first is building internalization structures within companies where contracts are paid in stock or bonds in the company purchasing items. This new company will exhibit preferencing of items in the newly partnered company. Growth will be gradual but sure. These mega companies will be regulated by international governments with the knowledge that these companies are too big to fail and regulations shall be drafted to stop highly speculative measures.

The second is a less intrusive measure involving an automatic takeover of a bankrupt business and either restructuring or gradual winding down of the business with the main goal being continuation of the business rather than paying off creditors.

## I. Introduction And Perspectives

The economic dislocations that have brought havoc to the nexus of global economic relationships since mid 2007 have awakened our collective conscience to the need for conceptualizing and understanding business risk<sup>1</sup> transferred from the firm level to the industry, and its eventual diffusion to national and global dimensions.

As expected, the gut-level reaction of the economics profession was to seek guidance from similar events in the first half of the 20<sup>th</sup> Century. Thus we were reminded of the panic of 1907 and the great depression of the early 1930's in painful (almost excruciating) detail. Also as expected, our first policy lifelines were tossed in the direction of privately owned institutions that were “too large to fail”. Needless to say, these micro based lifelines did not succeed in arresting the free fall from a major recession to a near catastrophic global depression.

The truth be told, there were valid reasons for focusing on the microeconomic level. To wit:

1. We have been conditioned historically to the idea, that the laissez-faire economies are inherently stable, hence a bit of policy nudging would restore them to equilibrium.
2. We have learned since the 1940's that our institutional arrangements, (i.e., the Fed and the US Treasury at the national level, as well as the IMF and the World Bank at the global level) can provide the necessary resources and policy prescriptions for economic recovery<sup>2</sup>.
3. We have also learned, since the 1898 passage of the first Bankruptcy Act and its subsequent revisions that the Bankruptcy code can provide a meaningful set of policy tools in salvaging firms that are pivotal to the economy.

Nevertheless, we discovered in due time that the nexus of contracts, which guides modern markets, had mutated into a process of self reinforcing diffusion, that called for new thinking and policy tools for bringing economic recovery and eventual growth.

In light of the above we propose to revisit systemic risk (which affects industries, sectors, and economic regions) and search for methods that can restabilize the global economy.

Our paper follows a simple outline: in Section II, we review some of the micro-macro events that were manifested forcing the recent economic crisis. In Section III, we focus on methods to handle systemic risk, both tactically and strategically. In Section IV, we conclude, and venture some suggestions for further research.

## II. Landmark Bankruptcies in The U.s.a., 1970- Present

The cacophonous reaction to the Lehman Brothers bankruptcy notwithstanding, our economy had witnessed some rather large defaults, ranging from Penn Central (June 21, 1970), to Long Term Capital Management (LTCM) (December 1979). From the cases below it is evident that the concept of “too big to fail” is not new. What is new from the Great Recession of 2007 - 2009 is evidence of what happens when the government does not step in early, or steps in only sporadically.

In this section we describe briefly some of the major microeconomic (firm based) cases since the mid 1970's.

### II. A. Bankruptcies of Non-financial Institutions

1. Penn Central, which was the nation's largest railroad became the country's largest bankruptcy in 1970. It had borrowed heavily from most major banks (including Chase Manhattan, Morgan Guaranty, Manufacturers Hanover, First National City, Chemical Bank, and Continental Illinois). Officers of these banks served on Penn Central's board of directors. These banks also held large blocks of Penn Central stock in their trust departments. The poor corporate governance in Penn Central led to a disastrous cash crisis that resulted in the dissolution of the firm and its separation into two units. AMTRAK, which assumed the passenger services of Penn Central was created in 1971 and continues its money losing operations. It is still sustained by government subsidies to the present time. CONRAIL which assumed the freight operations of Penn Central was created in 1973 as a private corporation. CONRAIL has

returned to profitability since 1987, when the government sold its 85% holdings in a public offering.

2. The Lockheed Corporation which was the country's largest defense contractor, also neared bankruptcy in 1970. The government guaranteed a loan of \$250 million which was eventually repaid in 1977 through large defense contracts awarded to it by the military-industrial complex.
3. New York City teetered on the brink of bankruptcy in 1975. Despite government direct loans to the city of \$2.3 billion, New York City continues to chug along still in deep debt.
4. Chrysler Corporation was on the verge of bankruptcy by 1978. It was saved by \$1.5 billion in loans guaranteed by the U.S. Treasury. In addition, the lending private banks agreed to write down \$600 million of old loans and to exchange an additional \$700 million in loans for preferred stock in Chrysler, which was saved in the nick of time, and lived to repay its government loans.

## II B Bankruptcies of Financial Institutions

1. Unity Bank and Trust Company in the Roxbury Section of Boston, Mass., was saved by the FDIC, which made an Essentiality Ruling on July 22, 1971. The bank continued in its haphazard operations until June 30, 1982, when the Massachusetts Banking Commissioner finally revoked Unity Bank's charter at a final cost to the FDIC of about \$4.5 million.
2. Commonwealth bank of Detroit was bailed out in 1972 by the FDIC. Commonwealth had shown a phenomenal growth through interbank loans (from Chase Manhattan Bank in New York), securities speculation, and managerial self dealing of shameful dimensions. Nevertheless, the FDIC bailed out Commonwealth on January 17, 1972 with a loan of \$60 million and several federal guarantees. In effect the FDIC engineered the sale of Commonwealth Bank to the First Arabian Corporation, a Luxemburg entity founded by Saudi Nobility. As the bank continued to flounder it was resold to the former Detroit Bank and Trust Company, known today as Comerica.
3. The First Pennsylvania Bank of Philadelphia was the nation's oldest bank, dating back to the Bank of North America, that was created by the Continental Congress in 1781. Nevertheless, by 1980, its go-go policies of increasing profit ratios by reducing safety margins, taking risky loans, and speculating in the bond market, had brought it to the brink of bankruptcy. Because of the large size of the bank (assets in excess of \$9 billion) and its historical significance the Federal Reserve pressured the FDIC to engineer a bail out. It involved a \$32.5 million loan by the FDIC (interest-free the first year and at a standard rate thereafter). Although the bank's operations have remained on shaky ground, the bank repaid its FDIC loan fully at the end of five years.
4. Continental Illinois of Chicago was the country's seventh largest bank with assets of \$41 billion. Continental had a banking presence globally with a loan portfolio that showed spectacular growth. Unfortunately, part of the loan portfolio growth was undermined by the purchase of oil and gas loans from the notorious Penn Square Bank in Oklahoma in the amount of \$1 billion. By 1982 the energy market had collapsed with the Mexican and Argentinean debt crises coming to a head. The news generated severe withdrawals of deposits followed by an electronic bank run of billions of dollars from Asia and the rest of the world. Indeed, within seven days the outflow swelled to over \$6 billion. The final bailout package went as follows: The FDIC took over \$4.5 billion in bad loans and paid Continental \$3.5 billion for the portfolio. The difference was made up by the infusion of \$1 billion in fresh capital in the form of stock purchase. In effect, the federal government controlled 80% of Continental's shares.

## II C More Recent Financial Crises

The Great Recession of 2007- 2009 involved a series of failures of financial institutions beginning with the Chapter 11 of Ownit Mortgage Solutions in December of 2006 and climaxing with the bankruptcy of Lehman Brothers and the nationalization of AIG in September of 2009 (See Appendix A for a complete timeline). This period was marked by a series of institutional failures, sometimes rescue by the government, and sometimes bankruptcy which resulted in cascading failures of other financial institutions soon thereafter. It should be noted that while the past failures of large institutions were marked in every case with government aid, none of them cascaded into a great recession. In both cases, it was the American public that paid the ultimate price, whether in the form of government debt or economic recession.

## III Organization and Governance of A Global Corporation That can Weather Idiosyncratic and Systemic Risks.

From Section II we have noticed that "too big to fail" is more than just a catch phrase. It is a fact of modern life. A company failure does not concern just the creditors or equity holders, it concerns all stakeholders in the company, including labor, parts suppliers, creditors and equity holders. Our current bankruptcy system effectively ignores all stakeholders except the creditors. The alternative is government intervention that taxes (literally) every person in the United States, regardless of the stake they have in the company.

This section presents two possible alternatives to this quandary. The first involves a structural change to the corporation itself to turn company specific risk into risk more like industry wide risk. Should a business fail despite this change, the second is designed to fix both the responsibility and cost of a corporate rescue on the stakeholders of the corporation.

### III A Corporate restructuring

When a global corporation such as General Motors, USA, wants some work done on a new car, say interior design by Fiat, rather than subcontract the work it can make the would be subcontractor a stakeholder by issuing Treasury stock or bonds to Fiat. This *internalization* motivates Fiat designers to do an outstanding job on the new GM product. Similarly, if GM, USA, wishes Fiat to market the new product in Europe or internationally through its own market network it can become a stakeholder in Fiat by buying stock and/or bonds.

This type of *internalization* (stake holding) (A similar concept under the heading of "Internal Corporate Governance" has been proposed by V. Acarya, S. C. Meyers and R.G. Rajan. This paper received the III Jaimie Fernandez deAraoz corporate finance award in 2010) can be undertaken by any stakeholders (e.g. managers, parts suppliers, dealer networks, and/or labor unions). For example, labor unions can invest their ESOP funds in Fiat stake holdings and conversely. Eventually, this procedure is followed with other would be subcontractors, like Mercedes-

Benz, BMW, Toyota, etc. Overall, this internalization will generate *preferencing* for the products that each new stakeholder produced and greater motivation for quality of effort in design, production, and marketing.

In effect we view each global corporation as an agglomeration of stakeholder groups, including

1. Capital suppliers (Stockholders, banks and bondholders)
2. Parts suppliers (Inventory and semi finished goods suppliers)
3. Labor suppliers (Unions, etc.)
4. Market skills suppliers (Wholesale dealers, leasing agents and retail dealers)
5. Managerial skills suppliers (Administrators, operating managers, etc.)
6. Government fund suppliers (Federal, state, local and agencies)

Thus we now have something like a “nested games” methodology Tsebelis, 1990, Clark and Philippatos, 2003, 2007).

Naturally, there will be “Agency conflicts” and costs which will be resolved by negotiations, much as is done in the political arena.

The origins of company distress and/or bankruptcy can be deciphered as follows:

- a. If the global company’s products are snubbed by the market, company distress transmutes into industry distress regionally or worldwide.
  - a. In this case it behooves all the stakeholders to come up with the knowhow and the resources that will restore and reorganize the global corporations. Additionally, national governments may also participate in the salvage operation).
- b. The global company’s products or services may suffer from severe reduction in effective demand by a global recession.

In this case it behooves national governments, international alliances and international institutions (IMF, IBRD, and WTO) to address the dislocation by any means necessary.

### III B. Stakeholder takeover

From the above it would appear that the concept of “too big to fail” applies mainly to financial institutions and industries upon which many other businesses rely. The prospect of a “cascading failure” affecting large portions of the economy is at least enough to stimulate a rescue from insolvency for a period of time. This is analogous to a hostage situation with the hostage taker (the insolvent institution) holding a knife to a hostage’s throat and demanding money. The hostage is the primary stakeholder in the situation but they usually do not pay. Rather those around will pay the ransom.

In the case of large institutions, the government is usually the payer of last resort. The result is that payment is halting and many times insufficient. A better way to address this risk is to involve the primary stakeholders at the time of insolvency. This could be done by formation of a “shadow” board of directors consisting of stakeholders in the institution that would have voting power in proportion to their stake in the business, be it in the form of loans, present value of future cash flows from the business, wages and salaries, etc. For this power they could be assessed a *pro rata* amount of whatever it would take to keep the company solvent in the event of insolvency. They would also be able to elect the new board of directors of the company. Formation of this “shadow board” will not involve capital transfers before the financial distress, but only afterwards. It would, however, involve pre-designation of the board members for a speedy takeover.

## IV Concluding Remarks and Other Recommendations.

### IV.A Summary

In this paper we have discussed the organization and governance of a futuristic global corporation that can weather idiosyncratic as well as systemic risks of default by relying on the restructuring efforts of groups of stakeholders that contribute financial, material, and human resources which will ensure its tactical and strategic survival.

Since the nature, scope and operations of the corporations are global, the all-important issue of market structure is treated also from a global perspective. In a market, whose domain is worldwide, the questions of market share and antitrust considerations may be relegated to the negotiating skills or various groups of stakeholders and global market regulators. Such negotiations can be handled through the methodology of nested games, which has been successfully applied to both economic and political dimensions. Market structure regulations may be passed and enforced globally by the World Trade Organization (WTO) or regionally by the EEC, NAFTA, APEC and/or other regional economic blocs. There may be 25-50 such global corporations operating in an oligopolistic regulated market structure as is the case with the banking industry in say the U.S.A., or the auto manufacturers in the U.S.A., Japan, and/or Europe. Since the proposed global corporation will be a portfolio of stakeholder groups, we would also expect the formation of consumer cooperatives that will join as stakeholder groups in extant of newly formed global corporations.

Of course, the proposed global corporations will be rife with agency conflicts, which will be handled with negotiations as time goes by, and the participants refine their priorities.

### IV. B Some Afterthoughts

The core of the proposed global corporation is simple:

1. Rather than outsourcing the design, production and distribution of its products and services the global corporation offers stakeholder status (stock, bonds and profit sharing) to the potential subcontractors.
2. The global corporation can also become a stakeholder in the potential subcontractors by offering its marketing and other skills to these smaller groups.

3. The inter-company cross-holding of equity, debt, and profit sharing need not be administered necessarily by corporate headquarters. Instead, the various shareholder groups will negotiate toward the achievement of common goals, much as is being done in the methodology of goal programming.
4. Finally, the question of default risk must be addressed here. Again, it should be clear by now that idiosyncratic or firm based risk is not clearly defined for the global corporation which will operate more or less as an industry grouping. Hence, in the event of default for such global corporations, there will be a reliance on the concerted efforts of all stakeholders including the governments of the countries where the corporations operate (*in rem*). In the event of a significant reduction on effective demand (say, a global recession) there will be a reliance on the coordinated efforts of all the groups above, plus the IMF, The IBRD and the WTO.

#### **Appendix A. A timeline of the Recession of 2007- 2009**

December 2006: Ownit Mortgage Solutions Inc. files for Chapter 11 bankruptcy. It was the 16<sup>th</sup> largest sub prime lender in the US.

February 5, 2007. Mortgage Lenders Network USA Inc. files for Chapter 11 bankruptcy. It was the 15<sup>th</sup> largest sub prime lender in the US. It made over \$31 billion in loans the third quarter of 2006.

April 2, 2007 New Century Financial files for bankruptcy. It had made \$51.6 billion in loans in 2006.

June- August, 2007 Bear-Sterns halts redemptions in three of its hedge funds.

June 20, 2007 Merrill seizes \$800 million in Bear Stearns assets for unpaid redemptions.

#### **Northern Rock: July 2007- February 18, 2008**

July 25, 2007 Northern Rock issues an optimistic report on its trading in residential mortgages, revealing that it is the leading bank in the UK in selling mortgage policies, at £ 10.7 billion for the first half of the year. Its total assets are £ 113 billion.

August and September, 2007 European banks begin cutting exposure to the increasingly troubled US sub prime market, igniting a credit squeeze. The Libor rises to 6.7975%.

September 17, 2007 The UK government guarantees the deposits of Northern Rock depositors to quell a growing bank run.

February 18, 2008 After several months of attempting to negotiate a private takeover, trading of shares in Northern Rock is suspended and the government effectively nationalizes the bank.

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August 6, 2007 American Home Mortgage Investment Corporation files for Chapter 11. It was the 10<sup>th</sup> largest retail mortgage lender in the US, structured as a REIT.

August, 2007 Because of a complete lack of liquidity worldwide, banks write down billions in loans and the European Central Bank injects • 95 billion in the economy. The Federal Reserve, Bank of Canada and Bank of Japan join in.

August 14, 2007 Sentinel Management Group, Inc. Freezes payments on its cash management group. Three days later they file for Chapter 11.

September 1, 2007 Ameriquest, the largest provider of subprime mortgages, closes and sells assets valued at \$45 billion to Citigroup

October 25, 2007 Merrill Lynch announces an \$8.4 Billion loss during the year

Jan 11, 2008 Bank of America acquires Countrywide financial for 4.1 billion.

March 17, 2008 Bear Stearns acquired by JP Morgan after infusion of money from the government.

June 19, 2008 Bear Stearns agents arrested for mail fraud and conspiracy

July 11, 2008 IndyMac shut down, the 4<sup>th</sup> largest bank failure in history

July 17, 2008 Bloomberg reports that bank losses total \$435 Billion for the year

September 7, 2008 Fannie Mae and Freddy Mac nationalized by US Government. They guarantee approximately \$6 trillion in loans

September 14, 2008 Bank of America buys Merrill Lynch for \$50 billion

September 15, 2008 Lehman Brothers files for chapter 11

September 17, 2008 AIG is effectively nationalized by US loan of \$85 billion

September 25, 2008 Washington Mutual seized by the FDIC and assets sold to JP Morgan Chase

Nov 24, 2008 US Government bails out Citigroup by infusing \$20 billion. The total infused is \$45 billion.

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### Endnotes

<sup>1</sup>The first English bankruptcy statute was passed in 1570. It was a coarse statute employed exclusively for the benefit of creditors. It allowed creditors to seize and sell the debtor's assets. In case of a shortfall after the liquidation, the debtor was ordered to “Debtor's Prison” until all remaining debts were finally repaid.

<sup>2</sup>After several false starts, the U.S. Congress finally passed a Bankruptcy Act in 1898. It is considered the grandfather of our present bankruptcy laws. Under this act debtors would declare their own bankruptcy. The court would liquidate the assets and distribute the proceeds to the creditors in legal priority. At any rate, the debtors were allowed to keep a specific “homestead exemption” of personal property that would help them start over again. In the 1930's the U.S. Bankruptcy laws were modified to allow partial payment of debt. Under the new Chapter 13 of the Bankruptcy Code debtors and creditors would work out a plan under court supervision. The courts would approve the plan if the creditors would receive at least as much as they would have received in a Chapter 7 full liquidation.