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## SYSTEMIC RISK AND THE U.S. FINANCIAL SYSTEM

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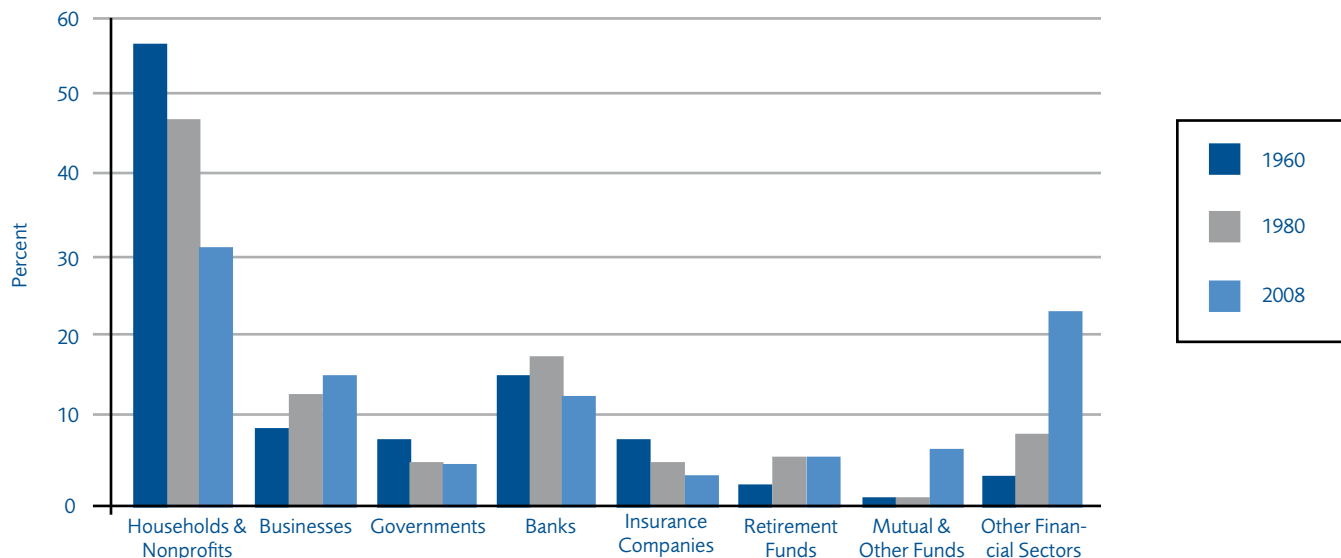
**E**CONOMIC GROWTH DEPENDS upon a strong financial system that reduces the costs of economic exchange, allocates credit and financial returns, and facilitates capital investment. Economies and financial systems are inextricably linked: Every economy needs a financial system that safely and efficiently transforms many different types of assets into flows of funds that meet changing economic needs. Because financial and economic activities are so closely linked, disruptions in a financial system can have significant effects on real economic activity, as we are seeing in the present crisis.

Disturbances within a financial system can result in a cascade of other disturbances. The risk that disturbances in one component of a system will spread to others is called “systemic risk.” To address systemic risk, some policymakers would prefer a more centralized regulatory authority. However, a closer look at how the financial system works suggests that this is misguided. The U.S. financial system is polycentric, closely tied to local economic activity, and ever-evolving. In today’s world, systemic risk cannot be effectively regulated by a centralized regulatory authority.

### HOW DOES THE U.S. FINANCIAL SYSTEM WORK? HOW HAS IT CHANGED OVER TIME?

LIKE THE \$14 trillion economy it supports, the U.S. financial system is large, complex, polycentric, and dynamic. Rather than hoarding financial assets under their mattresses, U.S. asset holders put their money to work in savings and investment vehicles including bank deposits, stocks, bonds, annuities, mutual funds, money-market funds, pension funds, venture funds, real-estate investment trusts, and so on.

FIGURE 1 AND TABLE 1: FINANCIAL ASSETS BY SECTOR FOR 1960, 1980, AND 2008



U.S. FINANCIAL ASSETS Holder Sector	1960		1980		2008	
	Amount (\$billions)	%	Amount (\$billions)	%	Amount (\$billions)	%
Households & Nonprofits	1,349	57	6,556	47	40,814	31
Businesses	215	9	1,612	12	17,908	14
Governments	136	6	735	5	6,087	5
Banks	347	15	2,342	17	15,756	12
Insurance Companies	142	6	646	5	5,699	4
Retirement Funds	75	3	786	6	8,127	6
Mutual & Other Funds	23	1	146	1	8,514	6
Other Financial Sectors	87	4	1,064	8	28,931	22
<b>Total</b>	<b>2,375</b>	<b>100</b>	<b>13,887</b>	<b>100</b>	<b>131,836</b>	<b>100</b>

Source: Author's compilation based on the Flow of Funds Accounts of the United States.

One way to understand this complexity is to analyze who is holding the assets in the system and how this is changing over time. The U.S. financial system has over thirty different types of asset holders, which we can group into eight categories. If we look at data on asset holding from 1960–2008, we see that the financial system has significantly changed. (See figure 1 and table 1.) In 1960, non-financial entities (households, non-profits, businesses, and governments) held 62 percent of all assets. At the end of 2008, this share had fallen to 50 percent while financial entities picked up the difference, increasing their share of assets from 38 percent to 50 percent, rivaling non-financial entities as the primary risk managers in the financial system.

Over this period, we also observe some other trends:

- There is a clear trend toward disintermediation. Increasingly, asset holders are making transactions directly in capital markets rather than using an intermediary such as a bank or insurance company.

- There has been a great deal of innovation in financial products and services and a proliferation of new types of asset holders in the financial system.
- Governments (local, state, and federal) are backstopping the potential losses of household, business, and financial sector asset holders through a wide range of credit and insurance programs, such as mortgage and trade finance guarantees; deposit insurance; flood, crop, and other types of disaster-insurance programs; unemployment insurance; retirement programs; and so on.
- As the financial system has evolved and the number and types of asset holders has diversified, systemic risk has become more difficult to monitor and regulate on a centralized basis.

The last of these trends presents a particularly complex challenge, which requires a deep understanding of the changing nature of risk in the financial system before it can be effectively addressed.

## THE NATURE OF SYSTEMIC RISK IN THE U.S. FINANCIAL SYSTEM

SYSTEMIC RISK EMERGES when asset holders cannot meet significant increases in the demand for liquidity. Changes in demand for liquidity can occur because an asset holder is insolvent, as the result of “contagion” where the problems of a weak asset holder spread to healthy asset holders through counter-party claims, or in response to disruptive events such as natural disasters.

Systemic risk is fundamentally a contracting problem that arises when a large number of parties cannot honor their commitments. The extent of systemic risk is determined by estimating counter-party risk under a variety of plausible scenarios. Because economic and financial activities are co-determined, there is a high level of interdependency among different types of asset holders.

The U.S. financial system handles vast numbers of transactions involving millions of asset holders with many different claims. Nearly half of this activity occurs in very flexible but largely opaque private capital markets that are lightly regulated in the United States and abroad (see figure 2). About 24 percent of financial activity occurs in public capital markets through exchanges, which have strong self-governing traditions and a relatively high degree of transparency and operate in the shadow of the regulatory authority vested in the Securities and Exchange Commission and the Commodities Futures Trading Commission. Another 16 percent of financial activity

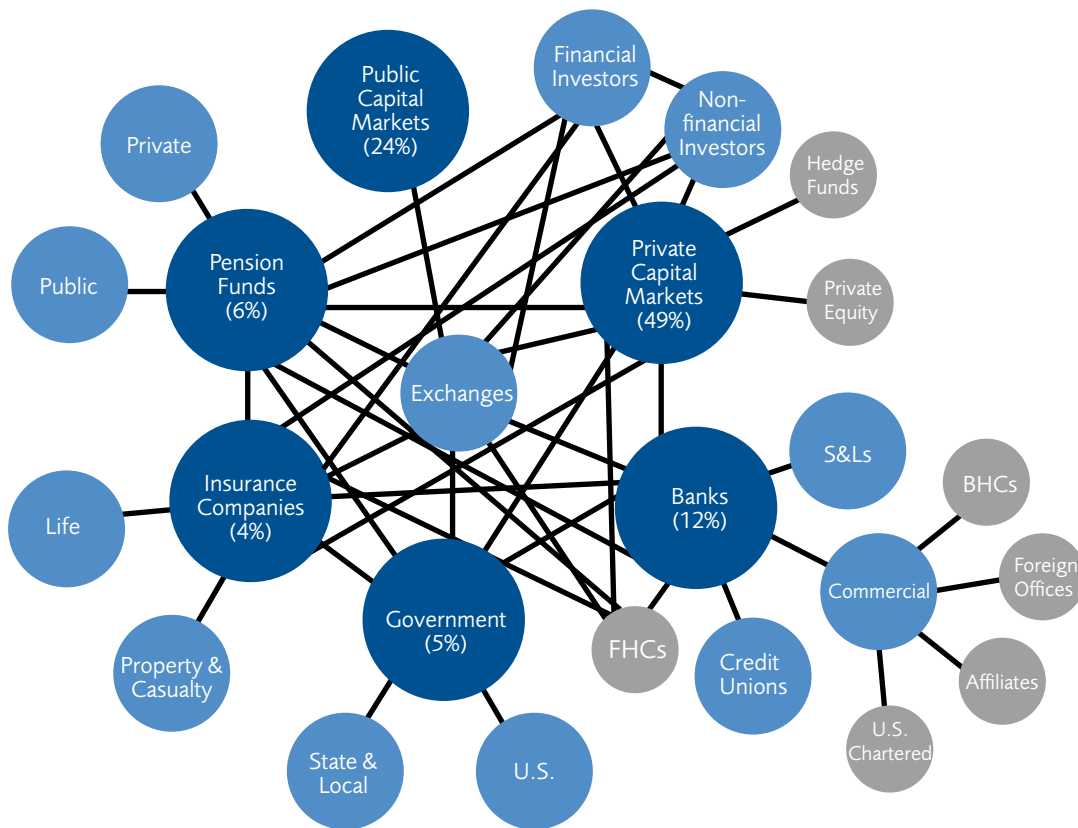
can be attributed to banking and insurance activities, which since the repeal of Glass-Steagall prohibitions, are increasingly interconnected through Financial Holding Companies (FHCs). The Federal Reserve regulates FHCs. The Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and the Federal Reserve regulate commercial banks, and state insurance commissions oversee insurance companies.

While it is difficult to coherently map the full extent of the interdependencies in the U.S. financial system, this diversity and complexity is not itself either irrational or a threat to safety and soundness; polycentric systems are potentially more innovative and resilient than centralized systems and can be a source of enormous strength and competitive advantage providing that they are effectively governed.

### IS A “SYSTEMIC-RISK REGULATOR” A GOOD IDEA?

When feeling threatened, we have a tendency to “rationalize” complexity by centralizing authorities and responsibilities into single hierarchically structured organizations—the political equivalent of “circling the wagons” when under attack. However well-intentioned, centralized authorities inevitably fail to mitigate risk in polycentric systems because information about the nature of risk is too idiosyncratic and widely disbursed to be monitored, evaluated, or addressed by a single, centralized entity.

FIGURE 2: THE U.S. FINANCIAL SYSTEM



It would be a mistake to attempt to delegate responsibility to a single “systemic-risk regulator.” The primary asset holders in the system are the entities that are best equipped to evaluate and strengthen risk-management processes. However, the effectiveness of their efforts depends upon strong regulators with the expertise and tools to monitor fast-moving transaction flows and maintain a level and prudential playing field by enforcing sound risk-management practices in capital markets and asset-management businesses.

A financial system is not a tangible entity but an abstraction: It is a way of describing the contracting activities associated with investing the liquid economic surpluses generated by many different economic activities into other types of less-liquid investments in economic activities that will (hopefully) produce surpluses in the future. This “inter-temporal asset transformation” process is inherently risky for the simple reason that no one can predict the future with certainty. However, these risks can be reduced if those who hold and manage assets have specialized investment expertise and local knowledge of the factors that can affect risk levels.

Because contracting is the chief source of risk in a financial system, market safety and soundness depend upon how prudently contracting parties assess and manage their various risks and responsibilities. At present, there is no level of modeling sophistication that can replace due diligence and common sense at the contract (deal) level. By definition, systemic risk only exists when a large number of contracting parties either behave imprudently or events disrupt their abilities to meet their obligations, at which time systemic risk can no longer be prevented, only stemmed. Hence, one cannot per se “regulate” systemic risk, and it is hard to imagine how a single entity could be sufficiently omniscient to monitor, evaluate, and regulate all contracting activity in a system as large and diversified as the U.S. financial system.

## CONCLUSION

THE U.S. FINANCIAL system is a polycentric contracting system that employs a wide array of instruments to finance over \$14 trillion of annual economic activity on a global scale. This system, which supports better than 25 percent of world GDP, emerges from private self-governed contracting activities, contracting through public exchanges, and regulated contracting through licensed financial intermediaries. A one-size-fits-all “systemic regulator” cannot effectively govern such a diverse set of activities. While prudential regulation is needed, effective regulation in a polycentric system requires many different centers of specialized regulatory activity that can identify and adapt to change in local contracting environments and facilitate coordination based on common interest and general principles rather than common function and specific rules.

## ENDNOTES

1. The financial flows in the U.S. economy are reported quarterly and summarized annually by the Board of Governors of the Federal Reserve System in the Flow of Funds Accounts of the United States. The categories of asset holders listed in the March 12, 2009 release of the Flow of Funds Accounts include households, farms, non-farm non-corporate businesses, corporate (non-financial) businesses, state and local governments, U.S. government, monetary authorities, four categories of commercial banks, savings banks, credit unions, property casualty insurance companies, life insurance companies, private pension funds, state and local government employee retirement funds, federal government employee retirement funds, money-market mutual funds, mutual funds, closed-end funds, exchange-traded funds, government-sponsored enterprises (GSE), agency and GSE-backed mortgage pools, asset-backed issuers, finance companies, real-estate investment trusts, security brokers and dealers, funding corporations, and the “rest of world.”
2. For a more detailed analysis of these trends, see Margaret M. Polski, *The Invisible Hands of U.S. Commercial Banking Reform* (The Netherlands: Kluwer Academic Publishers, 2003).
3. The Gramm-Leach-Bliley Act of 1999 repealed provisions of the Glass-Steagall Act that prohibited affiliations between banks, securities firms, and insurance companies. The act authorized bank holding companies (BHCs) and foreign banks that meet certain eligibility criteria to become financial holding companies (FHCs). FHCs may engage in a broad array of financially related activities.
4. For an overview of regulatory issues in the banking system, see Rose Marie Kushmeider, “The U.S. Federal Financial Regulatory System: Restructuring Federal Bank Regulation,” *FDIC Banking Review* 17, no. 4 (2005).
5. For a more detailed explanation of the inter-temporal transformation process, see Margaret M. Polski, “Bank Risk Management,” *Mercatus on Policy* 43, (Arlington, VA: Mercatus Center at George Mason University, April 2009), <http://mercatus.org/PublicationDetails.aspx?id=26866>.
6. For an overview of risk management at the enterprise level, see *ibid.*

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The Mercatus Center at George Mason University is a research, education, and outreach organization that works with scholars, policy experts, and government officials to connect academic learning and real-world practice.

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