Each year, mortgage lenders originate more than $1 trillion in loans. In late 2017, nearly $12 trillion in residential mortgage debt was outstanding, according to the Federal Reserve Board of Governors. What's more, the trading of residential mortgage-backed securities constitutes the second largest bond market in the world, behind only that for U.S. Treasury securities.

Before the Great Recession, housing finance traditionally didn't excite research economists despite the enormous resources involved. The consensus view was that mortgage finance was unlikely to substantially affect the macroeconomy, short of a catastrophic housing market crash—an at-farfetched notion. After all, before 2008 the United States had not experienced a nationwide downturn in housing prices since the 1930s.

Frame takes on a then-unglamorous specialty
Atlanta Fed financial economist and senior adviser Scott Frame took a different view. Housing finance is where he decided to carve out his professional niche in the 1990s. Frame worked at the U.S. Treasury Department early in his career, from 1996 to 2000. There he became immersed in the workings of the government-sponsored enterprises (GSEs) and identified an understudied area. Not only was the mortgage finance market large, but also the GSEs that buy most mortgage loans to bundle into securities—Fannie Mae and Freddie Mac—were growing.

They were also amassing enormous political influence. "Before the crash, the political clout of Freddie Mac and Fannie Mae was legendary," Harvard University economics professor Edward Glaeser once wrote in the New York Times.

Frame dug into the workings of the GSEs anyway. In the years preceding the housing-led financial crisis, he, along with frequent collaborator and Atlanta Fed research economist Larry Wall, made a mark with pioneering research on the vulnerabilities of Fannie Mae and Freddie Mac. Their research came years before the GSEs became insolvent and placed in government conservatorship at a cost to taxpayers of $187.5 billion.

Frame continued researching the mortgage giants after he joined the Atlanta Fed in 2001.

"To be a researcher in that environment and to question the GSEs was courageous," said Kris Gerardi, a financial economist at the Atlanta Fed who has collaborated with Frame.

Frame became a man in demand
Years later, in 2007, a calamitous housing downturn dragged the country into its darkest economic spell since the 1930s. Suddenly, everyone cared intensely about housing finance. Frame's knowledge proved invaluable when Fannie and Freddie unraveled and the federal government took them into conservatorship in September 2008. (Frame discussed the
In announcing that move, then–Secretary of the Treasury Henry Paulson attributed Fannie and Freddie's downfall “primarily to the inherent conflict and flawed business model embedded in the GSE structure, and to the ongoing housing correction.”

That's exactly what Frame had been writing about in his research through the early 2000s. Frame illuminated incentives out of alignment with the public interest and sound risk management. For example, Fannie Mae and Freddie Mac operated with an implied guarantee that the federal government would always backstop their debts. Consequently, normal market discipline that compels financial firms to manage risks responsibly in many ways did not apply. And the GSEs kept acquiring more and more mortgages and mortgage-backed securities, layering on more and more risk. Moreover, the GSEs' profits went to private-market shareholders, despite the implicit public backstop.

"I did a lot of articles laying this stuff out for people. It got more attention with time, and then it just blew up," Frame said. "I don't claim to have had a crystal ball."

**Diverse expertise a hallmark of Atlanta Fed research**

Frame's body of work reflects a pillar of the Atlanta Fed's research strategy. The Bank employs some two dozen research economists with deep expertise in a range of topics, most of which don't present acute economic concerns at a given time. But even the best minds don't know where the next crisis will originate.

"We have a set of people with diverse interests and expertise because you never know when these things may become important, or even urgent," Frame said.

The turmoil in home finance and attendant insolvency of the GSEs created a critical demand for Frame's expertise. Amid the financial crisis, the Treasury Department asked Frame to help craft its strategy to take over and shore up Fannie Mae and Freddie Mac. During the next three years, he took on other emergency assignments at the Fed's Board of Governors related to steadying financial markets and sharpening bank regulatory strategy. He was even asked to bring his housing finance expertise to the President's Council of Economic Advisers and served a stint there in 2010.

Frame's once unglamorous research has also been heavily cited in papers by other economists, Gerardi said. "He's built this extraordinary stock of knowledge about the institutional details of housing finance markets that not many people in our profession have. That takes the quality of the research to a much higher level."

**Squeeze the balloon here, where will it inflate?**

Major policy work was not always Frame's aspiration. For a time, he thought he might end up in management consulting. Then a stint as a research analyst at the Atlanta Fed crystallized his thinking.

"I couldn't figure out where this economic training was taking me," said Frame, an Illinois native who studied at Arizona State University and the University of Georgia. "When I came to the Fed, the light bulb went on. I was around these people who were very accomplished, and they were doing research. But a lot of them were interested in practical things, whether related to the business world or public policy."

Since the crisis, Frame has continued to research housing finance as well as evolving regulatory policy. A recent paper, for example, focused on "cross-border regulatory arbitrage." Frame and coauthors found that U.S. financial firms operating overseas tend to locate operations in countries where regulation is less stringent, which can have consequences for risk in the financial system.

Another recent paper explored whether the conflicts inherent in the securitization of mortgages were a key contributor to the financial crisis. The short answer: not entirely. Problems came from the origination, packaging, and distribution of particularly risky loans that performed even worse then expected, Frame found.

Also, the normal incentive structure that kept securitization working fell apart once financial market problems intensified. When the players were scrambling for sheer financial survival, the cooperative, legal, and economic constructs that typically restrained bad behavior collapsed.

This work continues Frame's mission to inform economic and regulatory policymakers. What they ultimately do with his findings is, of course, out of his hands.

The good news is that, in general, policymakers have grasped the fundamental lessons about the dangers of perverse incentives that led to the crisis at Fannie, Freddie, and the larger financial system, Frame noted. Still, policymaking is often a battleground of competing political interests. Frame seeks to produce sound research to inform those making the ultimate decisions on matters such as reforming mortgage markets.

"Through my papers, my job mostly is to provide technical assistance," he said. "I try to show that if you squeeze the balloon here, then it's going to inflate there."

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*Charles Davidson*

**Staff writer for Economy Matters**