

“Procyclicality, Resiliency and Systemic Risk: Why Some Housing Finance Systems Failed and Others Did Not”

Testimony prepared for

**“COMPARISON OF INTERNATIONAL
HOUSING FINANCE SYSTEMS”**

ON

SEPTEMBER 29TH, 2010

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS

U.S. SENATE

WRITTEN TESTIMONY

SUSAN M. WACHTER

The Richard B. Worley Professor of Financial Management

Professor of Real Estate and Finance

The Wharton School

University of Pennsylvania

3733 Spruce Street
430 Vance Hall

Chairman Bayh, Ranking Member Corker, and other distinguished members of the Committee:

Thank you for the invitation to testify at today's hearing on the "Comparison of International Housing Finance Systems." It is my honor to be here today to discuss the strengths and weaknesses of various models, how they differ from the United States system and any lessons or themes that may be learned from their experiences prior to, and during the global economic crisis.

The United States belongs to a group of countries that suffered particularly severe recessions driven by sharp housing price crashes. Other countries in this category include the United Kingdom, Spain, and Ireland. On the other end of the spectrum are countries where home prices merely leveled from 2007 to the present, resulting in no or mild recessions. This category encompasses Canada, Australia, and Germany. (Denmark lies somewhere in the middle, with a late bubble and current downturn.) By comparing these two groups, we can investigate what causes and what prevents housing bubbles and financial crises. In a forthcoming paper with colleagues, we conduct just such an investigation and find that two institutional differences separate these groups: the role of mortgage insurance (MI) and the strictness of regulations countering the market's tendency toward procyclical behavior.

No country better exemplifies this pro-cyclicality in housing and mortgage markets than the U.S. With economic growth and low interest rates coming out of the recession of 2000-2001, mortgage lenders and securitizers increased lending and competed for market share among borrowers. When the available market was satiated, they expanded the market by lowering their standards to include less creditworthy borrowers. An expanding economy thus drove lax lending standards, the increase in nonstandard mortgages, and the proliferation of private-label securitization (PLS). It also encouraged regulators and bankers to increase leverage (i.e. lower capital requirements) to maximize profits. Eventually, borrowers found themselves with too much debt to repay, and the downward spiral of foreclosures, defaults, home price declines, and decreased aggregate demand ensued. Unfortunately, banks had too little capital—especially in liquid form—to cushion the blow, forcing them to curtail lending and even file for bankruptcy. The free market naturally motivates firms to lower lending standards and capital buffers in good times, thus adding momentum to the upswing, and to increase lending standards and capital buffers in bad times, thus reducing economic activity when the system needs it the most.

While lending standards deteriorated, the extent to which this was occurring was unknown due to information opacity, the underlying mortgages were complex and difficult to track, the extent of fake equity, in which the rise in house prices was due to unsustainable product growth was unknown.

In the U.S., mortgage insurance and regulation declined as the housing bubble grew, thus magnifying this pro-cyclical behavior. Regulators who brought attention to declining lending standards, an increase in aggressive and predatory lending, and a rise in loan-to-value (LTV) ratios were ignored or overruled. Mortgage insurers could have served as a "third party control," as they must pay the remaining value of the mortgage if the homeowner defaults, but originators came to rely less and less on MI because they could pass on the default risk to investors via securitization. To deal with low downpayments that would have triggered the need for mortgage insurance, piggy

back loans were originated and these too were securitized. When Fannie Mae and Freddie Mac securitized mortgages, they bore the default risk, making them the “third party control.” However, when Wall Street securitized mortgages, the default risk transferred to the buyers of the mortgage-backed securities (MBS). Because the mortgages and the MBS were becoming more complex and heterogeneous, investors could not assess the default risk, as evidenced by the fact that they were accepting lower interest rates (even in comparison to Treasuries) for riskier products.

Contrast this experience to that of Canada, where regulators mandate that all high-LTV mortgages must be covered by MI. This practice has not inhibited Canada from achieving levels of homeownership on par with those of the U.S. in 2004, at their peak. Canada and Australia in this time period as well relied on mortgage insurers as a “third party regulator” with the result that mortgage lending standards did not deteriorate and housing prices did not collapse. Mortgages in Australia and Canada were and are typically short term variable rate, or in the case of Canada, rollover, and were originated and to a large extent held in portfolio by banks. Both countries avoided recessions, homeownership has been maintained at high levels, and their banking systems have been able to continue lending as the crisis has caused financial systems in other countries to stop functioning. Australia has a significant ARM share, but regulators prohibited lenders from issuing ARMs to borrowers who did not qualify for the highest projected rate over the life of the loan. Thus, Australia was spared the fate of the U.K., Denmark, and Spain.

A system reliant on MI can only work, however, if the insurers maintain enough capital to cover defaults during economic downturns. The U.S. is an example of what can happen when this principle is ignored. Credit default swaps (CDS) acted like insurance on MBS, but CDS issuers like AIG did not have enough capital to cover the defaults and were not required to reserve for the risk they were holding. Thus, MI is only one half of the equation, with strict *countercyclical* capital regulation being the other half. Canada is an excellent example of maintaining both ends of the equation. Their adjustable rates were regulated to prevent predatory behavior; for example, originators were not allowed to use low “teaser” rates.

The structure of the dominant mortgage product is also critical to preventing pro-cyclicality. Most countries rely on adjustable-rate mortgages (ARMs). The U.S., Denmark, and Germany are the three notable exceptions, favoring fixed-rate mortgages (FRMs). ARMs place the interest rate risk on the borrower, who is not as well-suited to bear it as lenders and investors. When interest rates rise, borrowers may have difficulty making payments and may be forced to default. ARMs also subject the borrower to greater market risk because their interest rates may rise when defaults increase elsewhere in the economy. ARMs are less conducive to systemic stability, as exhibited during the recent economic crisis. During the housing bubble, securitizers’ appetite for market share drove them to demand riskier mortgages from less creditworthy borrowers. Originators responded by favoring ARMs over FRMs, and it was these nonstandard mortgages that eventually exploded. The U.K. and Spain also relied on ARMs with similar consequences. All countries with ARMs saw their lending dry up during the credit crunch with borrowers unable to refinance at the high new rates. With ARMs that need to be repaid or refinanced the illiquidity of the system may be transformed as in these countries into a solvency or foreclosure crisis.

Building a system around the FRM requires a secondary market. Banks do not want to bear the interest rate risk of “borrowing short” from depositors and “lending long” to homeowners. When interest rates rise, they will have to pay more to depositors but will be receiving the same low payments from homeowners that were established when the contract was signed. This mismatch was directly responsible for the U.S. savings and loan crisis two decades ago and similar crises elsewhere. While in practice they can hedge this risk with derivatives, in practice no country has a banking system reliant on FRMs without secondary market institutions that bear some of that risk and/or increase their profitability. In the U.S., Fannie Mae and Freddie Mac serve that role by purchasing FRMs and securitizing them. Unlike PLS of ARMs, this securitization yields a product that would not otherwise exist. In Germany, banks issue “covered bonds” (instead of MBS) that are secured by *standardized* mortgage loans through Pfandbrief institutions. While the investor who purchases a covered bond receives the cash flows from the homeowner, the issuer who sold the covered bond retains the default risk. If the homeowner defaults, the issuer owes the remaining balance to the investor. Unfortunately, the stringent loan to value requirements of the system in Germany has resulted in one of the lowest homeownership rates in the industrialized world, relying on renting for over half its population.

But without the proper regulations, even covered bonds can get a country into trouble. German regulators ensure that investors get periodic updates on the state of the collateral securing their covered bond, and they do not allow covered bonds to be secured by loans with an LTV ratio above 60%. Unlike in the U.S., these regulations were not eroded during the housing bubble. Denmark also relies on covered bonds and had similarly stringent regulations until recently. When Danish legislation moved the system toward interest-only mortgages, the market joined the housing mania and developed a late bubble that subsequently deflated. Similarly, Spain used covered bonds extensively, yet they slid toward ARMs in recent years. The Spanish banks, *cajas*, securitized ARMs through *cedulas* in an effort to generate fees and gain market share, generating a bubble and crisis that is severe, with Spain suffering 20% unemployment. In the face of rising prices, it is very tempting to lower lending standards, contributing to procyclicality.

All industrialized nations have significant government involvement. When the housing market is in crisis, it endangers the entire system. The British rescue of Northern Rock preceded the American bailouts and the Spanish government has intervened to protect the *cajas* and their covered bonds. To prevent a foreclosure crisis from driving an economy into a severe recession or depression, governments will intervene; thus it is necessary to regulate the housing finance market *before* it reaches the crisis stage. The taxpayer owns the tail risk. Rather than raise lending standards after the fact, we can *prevent* the problems of moral hazard, shrinking equity, and bailouts by maintaining standards and transparency.

The clearest difference between the U.S., the U.K., and Spain, on one side, and Australia, Canada, and Germany on the other, is the stability of regulation. The first group allowed lending standards and capital requirements to decline, stoking the pro-cyclical behavior that created a housing bubble and economic crisis, while the latter group maintained rules in the face of market pressure.

Bibliography

“Housing Finance In Developed Countries - In a Time of Turmoil,” co-authored by Richard Green, Adam Levitan, Susan Wachter, working paper, 2010.

“The American Mortgage in Historical and International Context,” co-author Richard K. Green, *Journal of Economic Perspectives*, Vol. 19, No. 4, Fall 2005, 93-114.

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=908976

“The Housing Finance Revolution,” co-author Richard K. Green, *Housing, Housing Finance, and Monetary Policy: Symposium Proceedings*, Federal Reserve Bank of Kansas City, January 2008. Reprinted in *The Blackwell Companion to the Economics of Housing: The Housing Wealth of Nations*, eds. Susan Smith and Beverley Searle, London: John Wiley & Sons, forthcoming 2010.

http://www.kansascityfed.org/Publicat/Sympos/2007/PDF/Green_Wachter_0415.pdf