

“Incentives and the Current Crisis”

Testimony prepared for

HEARING TITLED

**“EXECUTIVE COMPENSATION II: CEO PAY AND THE
MORTGAGE CRISIS”**

ON

MARCH 7, 2008,

BEFORE

**THE COMMITTEE ON OVERSIGHT AND GOVERNMENT
REFORM,**

U.S. HOUSE OF REPRESENTATIVES

DRAFT

WRITTEN TESTIMONY OF DR. SUSAN M. WACHTER

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I: Introduction

Chairman Waxman and distinguished members of the Committee:

Thank you for the invitation to testify at today’s hearing on “Executive compensation, CEO Pay and the mortgage crisis” and to provide my perspective on the ongoing mortgage debacle and the resulting credit crunch. I am Susan M. Wachter, the Richard B. Worley Professor of Financial Management and Professor of Real Estate and Finance at The Wharton School of the University of Pennsylvania. Formerly, I served as Assistant Secretary of Policy Development and Research at the U.S. Department of Housing and Urban Development. My testimony is based on studies that I and others have authored on the causes and consequences of the subprime crisis.

Incentives are an important element of the current debacle in subprime mortgage markets. The focus of subprime market participants on short term compensation through fees rather than long term loan performance is central to the outcome we see today of unprecedented foreclosure rates in an economy that is currently not in recession. The current crisis is a textbook demonstration of how misaligned incentives cause financial markets to fail. In my testimony I will draw on and briefly describe research that my colleagues and I have done that shows why and how misaligned incentives generate financial crises and why these often lead to housing market crises. I will then discuss the specific role of compensation driven misaligned incentives in the current crisis. Finally, I will briefly describe the origins of the current crisis and end by summarizing implications for short term and long term policy responses.

II: Why Incentives Matter

Financial crises and collapsing housing markets often occur together. The combined mortgage credit crisis and housing market recession that we are currently in is not a first. The two phenomena are correlated in a remarkable number of instances, such

as the Great Depression, the Asian Financial Crisis, and the US Savings and Loan collapse. Our current crisis in the subprime mortgage market is another example.

Such combined crises often result from the misalignment of incentives in the financial markets that fund housing debt. This misalignment of incentives can be seen in the current debacle. Dysfunctional compensation schemes operate at every stage of the subprime mortgage securitization process. Short run volume drives compensation and therefore incentives to produce throughout the subprime mortgage supply chain. Long term loan performance or the likelihood that loans would fail did not slow down the production process until the failures actually did occur. Quite the contrary as the drive to expand markets and garner additional volume driven fees, loans were underwritten at more risky terms and with less controls and less information on the borrower's ability to repay. Information that pointed to greater risk was ignored, and these loans were originated, underwritten and securitized, generating unprecedented growth in fee.

In research done with my colleague, Andrey Pavlov, (Pavlov and Wachter, 2006) we show why and how compensation structures that are driven by short term volume production lead to financial crises. We show the conditions under which such crises are actually inevitable, the most important of which is the absence of market or other institutions that force consideration of long-term performance and profitability.

Misaligned incentives in compensation systems are at the core of the current financial market and housing market linked crises. The incentive to generate increased loan volume erodes lending standards, leading to loans that are designed to fail.

In the short run, weakened lending standards expand the market, fueling demand which drives up housing prices to unsustainable levels. The result is higher housing prices in the short run which temporarily supports the market but which cause far higher than anticipated foreclosures when it becomes apparent that the price rises were artificial and prices fall. Loans made at high previous housing prices often with high loan to value ratios are now "under water," with loan amounts near to or exceeding mortgage balances. This is where we are today in much of the 2006 book of business of subprime adjustable rate mortgages.

This too has happened before. In our work referenced above, we show direct evidence that erosion of lending standards initially impacts underlying housing markets through higher prices. As financial institutions erode lending standards in an attempt to increase origination volume, housing markets incorporate this mistake into asset prices. This generates housing price inflation beyond what can be justified by the fundamental economic conditions. Sooner or later this mechanism runs its course and home prices stagnate. When these poorly underwritten loans began to fail, price declines are inevitable and these price declines drive a spiral of increasing foreclosures. As this begins, lenders are no longer able to further relax their lending standards, and, in fact, withdraw the supply of funds to the housing market for fear of default losses. It is this erosion and later tightening of lending standards that cause the real estate market to crash.

Nonetheless, the credit induced price bubble temporarily increases the perceived value of loans collateralized by real estate which provides ammunition to falsely support claims that risks have not increased. Thus the compensation driven production of loans, with lower loan quality, goes on. This, in turn, leads to further increases in the price of real estate, with the requisite fall to fundamental price level steeper as a result, and the consequence increased foreclosures. Eventually, the process becomes unsustainable as lending standards cannot be further eased, price increases halt, and the poorly underwritten loans cannot be rescued by ever increasing prices. This leads to a system breakdown.

In the presence of defaults, the mechanism of eroding and later tightening of lending standards is even more pronounced. First, the mere reduction of supply of funds for real estate limits the choices homeowners in financial difficulty have and forces them into default. Second, defaults generate a negative pressure on all surrounding properties, further magnifying the real estate cycle, which, in turn, further reduces the availability of credit.

Using both international and domestic real estate and financial availability data in research with colleagues we empirically demonstrate that the erosion of lending standards is linked with excessive home price increases, followed by credit tightening and deeper price declines than could be explained by changes in the underlying economic fundamentals.

In our current crisis, actors lacked incentives to underwrite loans carefully so that they would be sustainable; rather the incentive was to produce loans whatever their ultimate performance, with the consequence of loans that were designed to fail, failing in unprecedented numbers.

This lending crisis has been centered in the securitized subprime mortgages. In a well functioning securities market, as loans became riskier, the price of the securities, composed of pools of these mortgages should drop, reflecting their poorer quality and heightened risk. In efficient markets, this would have caused demand for and production of such lending to decline and market self-correction, before a crisis production level of these loans occurred.

We must ask why, despite the increased production of poorly underwritten loans and the deterioration of overall credit standards, this market correcting decline in prices of the securities backing the subprime credit did not happen. Markets failed to signal the heightened riskiness of securities backed by subprime loans until the loans actually began to go into default, rather than when the riskier loans were being produced. If the latter had occurred this would have allowed self-correcting feedback. This is another component of misaligned incentives which I will address below.

III: Mechanisms

I would now like to focus on the mechanisms that caused a short term focus on volume and fee driven compensation. As noted above, the incentive to generate short term fees without properly pricing or underwriting for long term performance operated throughout the subprime mortgage production supply chain. At origination, mortgage brokers were incentivized to produce as many mortgages as possible. Mortgage brokers were paid for loan closings, not for detecting and rejecting a poorly underwritten loan that was likely to fail. In the case of subprime, mortgage brokers were paid exclusively with fees issued at closing. This payment structure meant that the broker had no incentive to restrict issuance of mortgages to those of high quality. The losses from bad mortgages would fall only on the lender or the investor. Yield spread premiums also widened the incentive gap between brokers and lenders. Lenders would pay these premiums to brokers for loans that included excessive prepayment penalties and interest rates in excess of what the borrowers' credit scores dictated.

These incentives lead to subprime brokers taking extreme measures to close a loan. In many cases these measures included inflating the borrower's income or assets either with or without the borrower's involvement. Brokers would also use inflated appraisal values or commit borrowers to overpriced mortgages. Some of these borrowers had credit scores that qualified them for prime loans with much lower rates. Furthermore, if a borrower was put into a loan that they could not afford, the broker could always help refinance the loan, which lead to even more broker fees. In these ways, brokers had an incentive to heighten the risk of subprime loans and pass that risk on to borrowers, lenders and investors. Lenders had no incentive to stop the brokers from these dubious practices. Through securitization, they planned on passing these risks on to the investors and therefore lowered their underwriting standards on loans to increase the volume of mortgages being produced.

Mortgage brokers held no risk by collecting fees up front and passing faulty loans off to lenders or investors. Lenders knew that they could also pass on the risk of these loans onto the investor and be paid upfront for their services. Investment banks and rating agencies were indifferent to the risk of these loans as well because they knew their revenue would be generated by the securitization process. Investors did not scrutinize the ratings of loan pools in their rush for high returns. Their increasing demand for these high-yield securities ultimately lead to an increasing flow of borrowers into subprime loans.

Why were the investors, the ultimate holders of the risk, along with borrowers, in this process? Surely they were incentivized to seriously evaluate the risk/return trade-off of the securities they were purchasing and holding? While this would seem self-evident, the markets that could have encouraged and enabled identification of risk through incorporation of all information were not operating. Rather investors were purchasing mortgage backed securities (MBS) and Collateralized Debt Obligations (CDOs), interests in MBS which were highly heterogeneous with risk specific to the mortgages in the pool. Without standardization, there was little liquidity and these securities did not trade. They

were not marked to market; rather they were marked to model. The models were approved by rating agencies that had few incentives to evaluate their flaws. There was limited incentive for traders to consider the negative outlook for these securities, since they did not trade. For many investors who were looking for yield yet needed to be in investor grade triple “A” securities, these MBS and CDOs were too good to turn down, as long as they were rated triple A. The fact that the rating rather than their underlying risk was what made them investment grade securities may or may not have been known. But for some investors the short term excess return while invested in seemingly secure instruments was good enough and no further investigation of risk was necessary. For investors who would have wished to profit from the mispricing of this risk, for the “A” and the riskier “B” and well named, toxic waste, pieces of these securities, there was no option to do so since the securities did not trade.

IV: The Current Crisis: Origins and Outcomes

In our current situation, it was ultimately the increase in the supply of credit that enabled the production of what we have elsewhere called aggressive lending instruments. Industry sources suggest that aggressive lending instruments, such as interest only loans, negative amortization loan, low or zero-equity loans, and teaser-rate adjustable rate mortgages (ARMs), accounted for nearly two-thirds of all U.S. loan originations since 2003. Furthermore, in 2004, there was a huge growth in the number of mortgages extended to people with non-prime credit. There was a particular ramp up in the number of negative amortizing loans and teaser rate ARM mortgages offered in the subprime market. This weakening of lending standards coupled with increased production resulted in mortgages which were structured to fail, even in the absence of intent or fraud, although fraudulent lending also did increase.

The result, as we have seen, has been the massive failure of these loans. For example, recent data that was released by the Mortgage Bankers Association reveals that in the 3rd quarter of 2007, 43% of the adjustable rate mortgages extended to subprime borrowers started the foreclosure process. In early February, Fitch Ratings predicted that fully 48% of subprime loans securitized by major financial institutions in 2006 will go into default. As described by Pat McCoy, in her testimony entered into the record for today’s hearing, 2006 was nevertheless an extremely profitable year for financial institutions; Goldman Sachs, Morgan Stanley, Merrill Lynch, Lehman Brothers and Bear Stearns posted record net earnings.

Further evidence of aggressive lending practices is that in 2006, in some offering documents for securitized subprime bond offerings failed to state that exceptions to underwriting standards, or loans that actually flunked the underwriters’ standards far outweighed the number of loans which met underwriting standards. Ratings agencies now assert that investment banks withheld from them due diligence reports which quantified the extent of these underwriting exceptions. On the other hand, rating agencies were also motivated by the same misaligned incentives; the major ratings agencies also had financial incentives to understate the risks embedded in subprime mortgage-backed

securities and collateralized debt obligations. Basically, the investment banks underwriting securitizations hired rating agencies to evaluate their loan pools, but the more good, investment grade ratings the agencies issued, the more deals that were sold by the banks and hence, greater profit was shared by both the investment banks and the rating agencies which they hired.

How did we get here? While securitization has and continues to serve an important role in the mortgage system, the securitization process that has enabled the production of subprime loans with ever increasing levels of risk is a departure from traditional securitization processes. In a joint paper with Richard Green, written for the 2007 Jackson Hole Conference, we describe how securitization transformed mortgage markets for the good, allowing recovery from the Savings and Loan crisis without undue negative consequences for the overall economy, and a period of stability from the 1980s until the early 2000s. Such securitization has enabled the funding of long term fixed rate mortgages, a key pin of our historically stable and affordable mortgage system, without putting banks, with short term deposit based liabilities at risk. The MBS that backed these long-term mortgages were standardized and traded in liquid markets, with little disruption even in periods of financial turmoil.

The new form of securitization, beginning in the mid-1990s that enabled the growth of the private label secondary market which funded the new subprime mortgage debt, was different in one critical respect: The lack of standardization which would have allowed trading and the use of available information to self-adjust from excesses. The subprime mortgages were priced not through standard lending criteria but rather at least ostensibly on borrower risk; nonetheless since MBS would vary greatly based on risk characteristics of the specific pooled loans, there was no standardization and therefore limited trading of whole pools.

The market for subprime MBS failed to incorporate information that pointed to the likelihood that low defaults through the end of 2006 were not sustainable, given erosion of lending standards and layering on of additional risks through high loan to value ratios, low-doc and no-doc loans, and teaser rates. Under appropriate market conditions, such MBS would be marked to market, and there would be incentives to use all available information to price the risk embedded in these mortgages, as opposed to ignoring such risks in order to book short term gains.

There are always optimistic investors who are willing to provide funding for financial instruments; financial markets when they work well also provide incentives for those who understand the risks to impact pricing and to counter overly optimistic or uninformed investment pricing. These incentives to value the MBS for the long run were absent. The results that we see today are a direct consequence of the absence of incentives to identify and price these risks. The lack of standardization is thus a key to the inability to trade and contrary to the purpose of securitization as it was introduced and continued in the US up until the beginning of the recent crisis.

In the long run solution, if we are to maintain a private label market, this will have to be addressed. Even in the short run, a solution to the problem will also have to rest on how these pools are dealt with. As of now, there is little and slow modification of nonperforming loans that would be in the interest of maximizing the value of the pool as well as assisting borrowers about to lose their homes. Such resolution in the interests of the pool as a whole as well as borrowers and the overall economy has been limited and occurring only very slowly. In part, this is because the MBS and related securities have been sliced and diced and resold so that securities are not actually composed of liquid assets of similar risk. Rather tranches based on different risk classes have created investor classes with different risk exposure and different incentives to resolve the nonperformance of these assets. This places servicers of the trusts responsible for resolving borrower default, in a difficult position to operate in the interest of the whole pool, despite the favorable consequences for investors as a group, and borrowers, of doing so. A policy response to this issue is necessary both to resolve the problem of limited liquidity for refinancing subprime mortgages and to stop the process of borrowers' falling further behind in their loan payments. Otherwise, with less and less opportunity to become current, more and more foreclosed properties will come onto the market, further pushing down prices, and increasing the likelihood of additional foreclosures, with no end in sight. If we are to avoid this we will have to address the issue of the role of securitization and incentive for efficient loan performance and resolution of nonperforming assets both in the short run and the long run. Nonetheless such an approach, while necessary, will be insufficient to avoid replication of the current crisis.

The ultimate question before us is do we want a system that produces risks such as those that we have seen in the current market. It is clear that Wall Street will underwrite any risk. Risk taking with the home, through instruments, such as, negatively amortizing and teaser rate loans, expose borrowers and investors in these instruments to risk but they also expose all homeowners and the overall economy to increased house price volatility and risk. Such lending, financed through MBS even with diversified loan portfolios is nonetheless completely exposed to the risk of the business cycle; in financial terms, the beta of such securities is high. Negatively amortizing and teaser rate mortgages that ultimately require refinancing for sustainability have similar systemic risk to the kind of mortgages which prevailed during the Great Depression (bullet loans) which also needed to be refinanced, whether the markets were friendly and allowed the refinancing, or not; in which case, foreclosure was the only recourse. We as a society will have to decide whether we wish to encourage such financially vulnerable funding as backing to the asset which we also call home.

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