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THE TRUTH ABOUT THE U.S. HOUSING CRISIS
– The Trojan Horse of U.S.-Style "Securitization" –

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THE TRUTH ABOUT THE US HOUSING CRISIS

– The Trojan Horse of US-Style "Securitization" –

By: Christopher R.E. Joye
June 2009

***Preface*:** by H. "Woody" Brock

THE PRINCESS AND THE PEA: Recall from childhood lore that, no matter how many mattresses the princess piled on top of each other, the pea underlying the bottom mattress continued to cause her pain. By analogy, if today's critical economic and financial slump is society's pain then the underlying cause lay in the dynamics of the US housing industry since 2002. What actually went wrong, and why has the housing crisis in the US been so much worse than anyone expected, or than elsewhere? This is what is clarified in the essay below by Christopher Joye. Joye explains the US housing crisis in a manner far more compelling than anything else I have read. First, some background is in order.

THE SEVEN-STEP CAUSAL CHAIN UNDERLYING TODAY'S GLOBAL CRISIS: Here is a synopsis of what has happened to date.

- First, the US housing bubble burst in 2007. [Note that this was a bubble not only in the *price* of housing, but also in the *quantity* of new houses produced between 2002 and 2007. A double bubble in this sense.]
- Second, the drop in house prices along with an ensuing recession triggered well-grounded fears of accelerating future mortgage default rates — first in subprime mortgages, and subsequently in mortgages of all kinds.
- Third, these default rate fears (and subsequent realities) in turn wreaked havoc with the values of mortgage-backed securities and hence in the balance sheets of a wide cross-section of financial institutions, money center banks in particular. In particular, the toxic combination of sky rocketing default rates *and* of extremely high balance sheet leverage *and* of "downward price overshoot" of complex securities due to Pricing Model Uncertainty blew a $5 trillion dollar hole in the balance sheets of financial institutions both within the US and overseas — a development we had to some extent expected and predicted due to our research in the new topic of "endogenous risk."

- Fourth, the non-linearities associated with this last set of developments generated what we called a "Hindenburg Effect" whereby the *speed* with which major financial institutions cratered was completely unprecedented.
- Fifth, this speed transformed the "game" of inter-bank lending into a Prisoner's Dilemma game for the first time in centuries: For the first time, it became irrational for major money center banks to lend to one another in the very short run.
- Sixth, this newly rational and unprecedented cessation of interbank lending triggered what we have called the first-known case of "global emphysema" whereby banks of all sizes all over the world ceased making loans to a wide variety of customers, regardless of whether the underlying local economies were good or bad. As oxygen is to the lungs of mankind, so is credit availability to the lungs of Main Streets everywhere. In particular, the financing of international trade dried up at a rate and to an extent that was virtually unbelievable.
- Seventh and finally, economies everywhere from Iceland to Auckland plunged into recession. Note that the proximate cause was not housing, but credit market emphysema. The severity of what happened can best be appreciated by noting that planet earth GDP growth plunged from 5% to -1.5% in 10 months.

Nothing like this has ever been witnessed before. And as the foregoing synopsis makes clear, the underlying "pea" was the US housing crisis. This being the case, it is surprising that so little that is compelling has been written about what really went wrong with US housing. That standard story is that a bubble was fueled by low cost money and by excess optimism about future house price appreciation, and that this bubble had to and finally did burst. It was also widely held that most all Anglo-Saxon countries were paying a price for their widespread cultural bias towards the societal goal of broad-based home ownership. "An Englishman's home is his castle" after all.

THE TRUTH – AS IDENTIFIED IN NEW RESEARCH BY CHRIS JOYE: In past essays, we have focused on the last six of the seven links in the causal chain underlying today's global distress, and reviewed above. But we have never written in depth about the housing crisis itself, i.e., the pea in this saga. This was largely because the author did not have a deep understanding of the US housing market, and thus contented himself with the standard story of what went wrong. Nonetheless, my doubts grew as I noticed that other Anglo-Saxon countries were not experiencing housing market problems as grave as those here in the US.

Then in late March 2009, I met Christopher Joye on a visit to Australia. Joye is the founder and Managing Director of Rismark International, a research firm about which I had heard good things. At that time, Joye had just finished making a presentation to the Obama administration on what really had gone wrong in the US housing market. He had been invited to do so by both the Rockefeller and the MacArthur Foundations, and what he told me was highly original and brilliant. I thus asked him, and he agreed, to write a special essay pulling together his analysis of the true problems in the US housing market, of how the US market is altogether different from other Anglo-Saxon markets, and of what the US needs to do to solve its problems. Additionally, his analysis reveals a host of hitherto unidentified problems with “securitization” of housing mortgages in the US — problems that have *not* wreaked havoc in other housing markets that have also (if to a lesser extent) securitized mortgages. As a result of Joye’s work, it now becomes clear that too much securitization (just like too many unregulated derivatives) is the root problem. Not securitization (derivatives) per se.

CONCLUSION: I hope SED readers will read this essay with care. The subject of the housing market is complex and requires a level of industry understanding that neither I nor any other American economist I know of has evidenced. In short, I trust that the proprietary essay below will change and improve your understanding of the principal original source of today’s global economic distress. The pea. Joye’s contribution attests to the fact that it sometimes takes someone from another part of the world to look inside our own country to understand what is really going on. Someone who is literally as well as figuratively “outside the box.”

– H. “Woody” Brock

(Please turn to the following page for Christopher Joye’s essay)

THE TRUTH ABOUT THE US HOUSING CRISIS

– The Trojan Horse of US-Style "Securitization" –

By: Christopher R.E. Joye[1]
June 2009

1. AN OUTSIDER'S PERSPECTIVE

I recently had the honor of being parachuted into the crucible of the US policymaking debate when I was invited by the Rockefeller and MacArthur Foundations to present alongside Robert Shiller of Yale at the private *Transforming America's Housing Policy* summit[2] for Obama administration officials in New York.

While in New York I was overcome by an unearthly feeling that the world I perceived was conspicuously different to that which my US colleagues could see. In trying to work out why, for instance, the financial systems of Canada, New Zealand and Australia (which is where I come from) have been in such radically better shape than their US cousin, I began to realize that there is a fundamental frailty that rests at the heart of the US financial architecture, which sets it apart from most other developed countries, and which has been largely responsible for both precipitating the current crisis and subsequently propagating it around the rest of our increasingly interconnected world.

In spite of all the (usually conservative) rhetoric about the problems with the Government Sponsored Enterprises (GSEs) Fannie Mae and Freddie Mac, I have heard no discussion of this much more far-reaching flaw embedded within the foundations of the US credit creation system.

The problem is an ostensibly simple one: the vast bulk of all home loans in the US (around 70 per cent) are funded not using the balance-sheets of large transnational banks, and in turn the regionally diversified retail deposits of their customers, but via the far more complex, unstable and, in its US incarnation, inherently conflicted process of "securitization."

In contrast to the rest of the world—where securitization, if it exists at all, has been a small yet important part of the housing finance mix (cf. Australia and Canada)—this process completely dominates home loan funding in the US. The concern is not with government support for homeownership, which one can find in justifiable forms in most countries, but the deleterious consequences of a financing system that initially evolved from the parochial designs of

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[1] Many thanks to Woody Brock (SED), David A. Singer (MIT), Saul Eslake (ANZ Bank), and Robert Shiller (Yale) for comments on different versions of this article. The usual caveat applies. Please send any feedback to christopher.joye@rismark.com.au.

[2] See http://www.transformingamericashousingpolicy.org for video coverage of the presentations.

competing States within the highly fragmented US federation, and which was distorted further by the Federal Government's policy responses to the spate of banking failures during the Great Depression. Of course, such failures were themselves an artifact of the vulnerabilities borne from the incredibly decentralized financing system that was the product of the desire of individual states to regulate and control the banks (and, incidentally, any insurance companies) operating within their domains.

(Older heads will recall that the deeply ingrained cultural opposition in the US to nationally operated and regulated banks can be traced all the way back to the Founding Fathers and the battle waged between George Washington's Treasury Secretary, Alexander Hamilton, and Thomas Jefferson and his Virginians over the creation of the First Bank of the United States.)

The outcome of these State and Federal Government decisions, and the continued missteps of US policymakers ever since (including the "partial" privatization of Fannie Mae—in the sense that it retained "public" privileges—by LBJ in 1968 to remove its debts from the government's balance-sheet, and the misplaced creation of the second major GSE, Freddie Mac, in 1970 purely to compete with Fannie), has been the effective disintermediation of deposit-taking organizations as a permanent source of housing finance in the US in favor of the nebulous mission of the GSEs and, crucially, the process of securitization that they uniquely pioneered.

It is my belief that the two GSEs became a synthetic surrogate for the nationally-integrated banking systems that serve as the foundation for housing finance in most other countries (like Australia, Canada, and New Zealand) that have avoided virtually all of the extreme dysfunctions that emerged in the US (but, of course, were nevertheless casualties of the ensuing crisis). In doing so, the dominance of the artificial GSE-based financing infrastructure also attenuated pressure on State and Federal Governments to pro-actively facilitate the wholesale consolidation of the geographically fractured and prone-to-fail US banking system that should have organically occurred over the 20th century.

The ineluctable result of this taxpayer subsidized "fire-and-forget" funding foundation was the destructive crisis that first emerged in the summer of 2007, and which has been quickly transmitted around the world by closely integrated wholesale capital markets. Notwithstanding the relative integrity and health of many international debt securities, the liquidity of credit markets in countries that are far removed from the US, and which share none of its problems, has been eviscerated with savage real economy consequences.

2. ON BALANCE-SHEET VS. OFF BALANCE-SHEET FUNDING

When a mortgage is securitized, the lender that originates the loan does not keep it on their balance-sheet and hold it to maturity—the whole point of this exercise is to take assets "off balance-sheet" and sell them to third-party investors, thus enabling the lender to recycle the original capital and embark on a new round of financing. Over the years many economists have noted that this process makes considerable sense if it is managed with the right controls.

Indeed, most regulators around the world have commented approvingly that securitization allows lenders to alleviate balance-sheet stresses and share some of their risks with third-parties, such as pension funds, who in turn get exposure to typically low volatility "mortgage-backed securities" that yield higher returns than conventional cash instruments. The very low risk and robust long-term performance of securitized home loans in countries like Australia and Canada prior to and, significantly, throughout the current credit crisis has been testament to the merits of this diversification medium for consumers, lenders, and investors.

In fact, the Canadian Government's wholly-owned (i.e., not privatized) CMHC, which guarantees mortgage-backed securities in return for a commercial risk premium and, critically, imposes the condition that mortgage originators have to contribute a 2 per cent "first-loss" equity piece to their securitized portfolios to create a strong alignment of interests between the distributor of the loans and the investors in the pools (since the former bear considerable risk), has been able to support continued securitization of large volumes of Canadian home loans throughout the crisis.

In contrast to the US, Australia's and Canada's housing finance markets have been dominated by five highly successful national banks whose balance-sheets are the principal providers of mortgage credit to households (securitization plays a useful yet subordinated role to the bank-based credit creation system).[3] In fact, Australia now lays claim to four of only 11 AA-rated banks in the world (three of Canada's five major banks have AA-ratings) while Canada was judged by the 2008 World Economic Forum report as having the world's soundest banking system.

Since mortgage default rates in both countries remain extremely low (less than 15 per cent of US levels), and there has been no credit rationing, bank failures, or nationalizations, Australia's and Canada's housing markets have also avoided any material price falls. Indeed, Australian house prices actually rose during the first two months of 2009.

Trouble arises when you create artificially strong incentives and subsidies, as US governments repeatedly did, to predicate your *entire* housing finance edifice on securitized forms of funding to the detriment of the traditional deposit-taking market. Over and above stunting the growth of a nationally-integrated banking sector, synthetic incentives that instill securitization as the preferred source of funding expose the overall financial system to a number of potentially destabilizing conflicts. The most obvious of these is that the organizations that source new home loans and which are responsible for assessing their credit risk are removed from the institutions that ultimately own the assets and hence bear that risk. We have, therefore, a classic principal-agent problem.

[3] The 90 day default rate on Canadian and Australian home loans is reported by the Reserve Bank of Australia to be less than 0.5%, which is a fraction of US (circa 4%) levels.

As I noted above, securitization has and should continue to play a valuable part in the overall financing system. There is no evidence, however, that in the absence of government subsidies such as those that were introduced in the US that securitization should dominate deposits and balance-sheet funding as the prime source of housing finance within a mature and nationally-integrated banking system.

This is certainly the case when one looks around the rest of the world. In countries like Australia and Canada securitization offered lenders valuable portfolio diversification benefits but nevertheless only ever accounted for around 20 per cent of all mortgage funding.[4] One of the chief problems with securitization is illiquidity: in comparison to sticky deposits that banks can aggregate from many millions of individual customers, securitization is a fundamentally unstable source of finance given that it is supplied by a relatively small number of large and sometimes fickle institutional investors that can withdraw their liquidity at a whim.

Because the quasi-private GSEs had an artificial capital-raising advantage wherein investors imputed to them the US government's AAA-rated credit rating (on the assumption they were backed by the state), they could source funds to underwrite home loans, and insure mortgage-backed securities, much more cheaply than their competitors (i.e., the non-AAA rated deposit-taking banks). The GSEs also had other crucial advantages such as tax exemptions and, most importantly, substantially lower capital requirements that allowed them to assume spectacularly higher levels of leverage than any normal bank. In fact, Fannie and Freddie developed investment banking-like leverage ratios of 20:1 and 70:1, respectively (these ratios rose radically if you included all the off balance-sheet mortgage-backed securities they guaranteed).

Prior to the credit crisis materializing, the two GSEs alone funded or guaranteed around half of all US housing finance, with total on- and off balance-sheet liabilities of circa \$5 trillion, which is terrifying when compared with the \$9.5 trillion of US government debt at the time of their "conservatorship" (weasel words for nationalization).

In the early 2000s, an additional wrinkle emerged when the GSEs were asked by, ironically, the Bush administration to increase financing for low- to moderate-income regions with high minority populations which, in concert with shareholder calls to improve their returns, resulted in them using their AAA-ratings to invest for the first time in, or guarantee, higher risk "alt-A" loans. These loans had little borrower documentation, lower credit scores and/or higher loan-to-value ratios.

By 2008, the two GSEs held on balance-sheet or guaranteed around \$1.6 trillion of these "non-prime" mortgages (or a remarkable 34 per cent of their total exposures), which unsurprisingly accounted for 90 per cent of their losses. Once again, the GSEs were effectively crowding-out non-AAA rated private lenders from their traditional alt-A domain and shunting them further down the credit curve. The not unpredictable consequence was a concurrent increase in even riskier (sub-prime) lending, which doubled from 10 to 20 per cent of all new US home loan origination between 2001 and 2005.

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[4] See www.rba.gov.au and http://www40.statcan.gc.ca/l01/cst01/fin21-eng.htm

A very good recent IMF study[5] on the drivers of the global financial crisis has argued that these effects were exacerbated by at least two other related factors:

1. The Basel II accord on international bank regulation that encouraged banks to accelerate their off balance-sheet mortgage securitization activity; and

2. Changes in SEC regulations that allowed investment banks to increase their debt to net equity ratios from 15:1 to up to 40:1.

In the IMF's opinion, the net result was that banks started creating their own "Fannie and Freddie look-alikes," namely the "structured investment vehicles" (SIVs) and CDOs.

Yet in almost all other countries, such as Australia, Canada, and New Zealand where these quasi-government entities do not dominate housing finance, traditional banks ordinarily account for up to 80-90 per cent of all mortgage credit with the vast majority of these assets retained on the lenders' balance-sheets. Importantly, when lenders in these nations do securitize, they usually apply the same credit-assessment standards to the loans that are securitized as those that they use with the assets that are retained on their balance-sheets. In the case of Canada, the wholly government-owned entity that does offer commercially-priced mortgage-backed securities guarantees, the CMHC, requires that securitisers contribute a 2 per cent first-loss equity piece to the mortgage pools such that they bear all the risk if their credit assessment standards fail. The CMHC's activities have in no way served to disintermediate the traditional deposit-taking market, with Canada's five main banks accounting for the vast bulk of all new housing finance.

Accordingly, in most Western economies, banks control the credit assessment process, they service the assets, and they bear the risk if borrowers default on their loans (and when they do securitize, they continue to service).

In the US, all three critical functions—origination, servicing, and funding—are often separated due to the artificial incentives introduced by governments, which in the absence of mitigating regulation leads to inevitable conflicts of interest.[6] This is almost certainly one of the reasons why, for instance, Australian and Canadian mortgage default rates are a fraction of US levels.

While the UK might appear to be an exception to this thesis, its experiences can also be traced back to the vulnerabilities that materialize when a fire-and-forget securitization model starts to displace the traditional "hold-to-maturity" banking sector apropos the funding of credit.

The UK bank Northern Rock, which had a 10 per cent share of the overall UK housing finance market, sourced three quarters of all its funding from off balance-sheet sources. The sudden explosion in global risk aversion in mid 2007 as a consequence of the US sub-prime calamity propagated an indiscriminate rise in illiquidity for all debt securities (and especially anything

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[5] See www.oecd.org/dataoecd/47/26/41942872.pdf

[6] One obvious remedy is the Canadian solution to require securitizing lenders to contribute a "first loss" piece to the mortgage portfolio, such that *they* bear the risks of default.

remotely resembling a mortgage). As a result, private mortgage securitization markets collapsed around the world in the latter half of 2007 with extremely adverse ramifications for any system that relied upon them.

The emergence in the UK of a bank that had unusually predicated almost all of its funding on external or "wholesale" sources of finance (as opposed to deposits) ingrained within the wider banking system a powerful endogenous transmission mechanism for any external shocks. This, of course, came home to roost in 2007 as the US credit market virus precipitated the first run on a UK bank in more than a century, and forced the government to nationalize Northern Rock in February 2008.

3. A FRANKENSTEINIAN SYSTEM OF HOUSING FINANCE

So how has the world's largest and purportedly most advanced economy ended up with its unusual credit creation system? It is disturbing to see that few US policymakers are seeking to address this essential question. I believe that the explanation lies in two intertwined factors:

- Firstly, the historically dispersed US banking industry (there are currently over 8,400 banks and savings institutions, around half of which have less than $100 million in assets), which is disposed to frequent failure and even today has amazingly produced just one truly national coast-to-coast bank (i.e., Bank of America); and

- Secondly, the US government's panoply of interventions in response to the underlying problem of persistent bank failures (which can itself be attributed to the localization or geographic diffusion of the deposit-taking institutions) and the collapse of its financing system during the Great Depression (it is no surprise to see history now repeat itself).

The extraordinary degree of direct government involvement in the US housing and financing systems is hard for an outsider to fathom. In addition to the GSEs, the US Government created the largest public mortgage insurer in the world in 1934, known as the FHA, which specializes in insuring the losses of private lenders that source higher risk, non-prime home loans with deposits of less than 20 per cent and/or poor credit scores. Today, the FHA's market share of new mortgages has risen from just 4 per cent in 2006 to nearly 20 per cent in 2008, with analysts predicting that it will hit 30 per cent in 2009.

Don't misunderstand the subtext here: I have repeatedly argued in the past that governments have a vital role to play in intervening when critical economic markets fail, as they have done through the current crisis (most strikingly via their central banks), to supply the "public goods" of a minimum level of liquidity and price discovery. But these government actions should not be allowed to morph into institutions that permanently oppress private market activity, as was the case with the US's deposit-taking system following the last depression.

When I described the Australian housing market's characteristics to the 200-300 policymakers at the *Transforming America's Housing Policy* summit for Obama administration officials you could see their jaws metaphorically hit the floor. Without any government interventions of the kind seen in the US, Australia has generated a higher 70 per cent rate of home ownership, no sub-prime or alt-A market to speak of, no bank failures, no nationalizations, no mortgage credit rationing, and current and long-term mortgage default rates that are less than 15 per cent of US levels.

The audience was even more amazed to learn that over 80 per cent of all Australian borrowers are on "adjustable rate" home loans, which are viewed as devil's breath in the US (and those on fixed-rate loans only fix for one to five years). Significantly, these variable home loans' interest rates are set based on the Australian central bank's "target cash rate." In the US, however, the government's post-depression actions set up a system where around three quarters of all borrowers have 30-year fixed-rate mortgages, which do not price off the central bank's target rate but rather long-term Treasuries, over which the central bank has limited to no control.

While a 30-year fixed rate mortgage sounds wonderful from an affordability perspective—as it did to policymakers during the Great Depression—it has severely undermined the ability of the Federal Reserve to manage economic activity and the housing market in particular.

Between August 2007 and December 2008, the Fed slashed its target policy rate by 500 basis points. Yet the average interest rate on outstanding US home loans fell by only 15 basis points. It has been no surprise, therefore, to see US default rates continue to rise in spite of the Fed's efforts. In comparison, Australia's central bank has been able to seamlessly deliver a 40 per cent drop in the cost of the variable rate home loans paid by most borrowers with 375 of its 400 basis points worth of rate cuts passed on by lenders to these households.

The clear point of difference between Australia and the US is government policy. While both nations are federations, the US was arguably disadvantaged by virtue of its far greater decentralization across 50 states. All US banks were initially chartered and regulated by their individual states, which often had conflicting approaches. This made it near impossible for banks to pool risks and transfer liquidity from one state to another during times of crisis. The result was a high propensity for bank failures during the 19th and 20th centuries.

The US is also distinguished by a cultural antipathy towards nationally consolidated and regulated banks. This was highlighted during the days of the Founding Fathers with the dispute between Alexander Hamilton and Thomas Jefferson over the establishment of the First Bank of the United States. President Andrew Jackson's battle against the Second Bank of the United States has been described as the *"dominant issue of his second term (1833-37) and further cemented the opposition towards nationally operating banks."*[7] Thomas Jefferson's militant views on the role of banks in society vividly captured this animus:

[7] Saul Eslake, Chief Economist, ANZ Bank.

"I believe that banking institutions are more dangerous to our liberties than standing armies. If the American people ever allow private banks to control the issue of their currency, first by inflation, then by deflation, the banks and corporations that will grow up around [the banks] will deprive the people of all property until their children wake-up homeless on the continent their fathers conquered."

Following a bout of bank failures in 1907, Congress established the Federal Reserve in 1913 with a principal objective of facilitating liquidity between banks to prevent these crises from occurring. Yet up until the mid 1980s and early 1990s, laws remained in the US prohibiting banks from setting up branches in outside states and from merging with one another. Columbia University economist Charles Calomiris has observed, *"economic logic often took a back seat to special interest politics and, occasionally, to populist passions."*

The central bank's presence also proved incapable of stopping a continued proliferation of bank failures due to heavy localization and a smorgasbord of inadequate and sometimes conflicting regulators. By way of contrast, in countries like Australia there is just one banking, securities, and insurance regulator. MIT academic David A. Singer has described the bizarre patchwork of US regulations as follows:

"The US has one of the most institutionally fragmented financial regulatory environments of any industrialized country. Banks face an alphabet soup of regulators, including the Fed, the OCC, OTS, FDIC, the National Credit Union Administration, and separate state regulators, while the SEC, the Commodity Futures Trading Commission and other regulators monitor the capital markets. Most surprisingly, the US does not have a federal insurance regulator; instead, 50 separate state regulators govern insurance firms within their jurisdictions."

According to the FDIC, a remarkable 2,698 US banks and savings institutions failed between 1984 and 2003. And it was only in 1994 that Congress finally agreed to repeal most of the prohibitions on interstate banking—yet by that time the damage had already been done. Notwithstanding some recent consolidation in the deposit-taking sector, the exceedingly fractured US savings system—subordinated as it was in the provision of housing finance to the unnaturally competitive GSEs—has been set in stone. Unfortunately, recent actions by the Bush and Obama administrations in response to the crisis have only reinforced these underlying problems.

4. CAUSES OF THE US AND GLOBAL FINANCIAL CRISES

The first-order cause of the global financial crisis was not the advent of sub-prime lending, the Basel II Accord, changes to SEC regulations, greedy investment banks, non-recourse lending, community reinvestment acts, or the GSEs per se (although a case can be made that all of these factors contributed as catalysts). The underlying driver was more than a century of flawed political decision-making that created a deeply dysfunctional and structurally fragile system of housing finance under which bank balance-sheets, and a nationally-integrated deposit-taking infrastructure had been impeded and displaced.

Since the 1930s, the deposit-taking industry has been supplanted from the provision of traditional mortgage credit by the AAA-rated GSEs, which entrenched the complex, unstable and sometimes conflicted process of securitization as the dominant source of finance, in contrast to almost all other countries where balance-sheet funding proliferates.

The destruction of the alignment of interests found when the originator and funder of home loans are one and the same, combined with the absence of regulation to ameliorate these intrinsic risks (e.g., requiring securitizers to post a first-loss equity margin as is the case with the CMHC in Canada), led to an inexorable deterioration in credit standards and the development of unusually risky (i.e., sub-prime) products. These higher-yielding instruments, which were increasingly originated by third-parties to households with a low probability of being able to service them, came to account for an unprecedented share of all new mortgage flows.

The government-created, yet ostensibly private GSE duopoly, which acted as a surrogate for a national deposit-taking system, stunted the need for the geographically dispersed and intrinsically fragile US banking industry to naturally consolidate and insulate itself from failure over the course of the 20th century. These structural flaws in the US credit creation system were exacerbated in the early 2000s, when the highly-leveraged GSEs, on the conflicted imprimatur of both government and shareholders, entered the much riskier nonprime segments of the US mortgage market, which ended up causing over 90 per cent of their losses. Once again, the traditional private lending sector was pushed further down the credit curve with a consequent explosion in sub-prime loans. The introduction of the Basel II Accord that encouraged off balance-sheet securitization activity only lent additional momentum to these dynamics.

As default rates inevitably rose and the system of securitization instantaneously transmitted these risks to investors around the world, the dark side of capital market integration and globalization emerged: liquidity in credit markets for completely unrelated assets collapsed as information asymmetries propagated an extreme rise in global risk aversion. Defective mark-to-market accounting standards, premised as they were on the belief that "efficient markets" always priced assets accurately (but rarely during times of crisis), entrenched a vicious negative feedback loop as artificial declines in collateral values forced banks and investors all around the world to pull back on lending, triggering further reductions in asset values, and yet another contraction in lending, and so on.

One overlooked point here is that many of the so-called "toxic" assets that commentators wax lyrical about were not toxic at all: the market failures triggered by the implosion in the US housing finance system precipitated illiquidity for all forms of credit internationally, which only then endogenously embedded the deleveraging death-spiral that decimated asset values, parts of the international banking system, and more recently real economic growth.[8]

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[8] This process is sometimes referred to as "endogenous" (i.e., internally generated) risk. Theories of endogenous risk provide entirely rational—as opposed to irrational—explanations for under- and over-shooting in asset prices. According to Stanford economists Mordecai Kurz and Woody Brock, when one has excess leverage combined with "Asset Pricing Model Uncertainty" (i.e., difficulty knowing how markets will price assets) and compensation systems based on "relative performance," complex securities (such as CDOs with sub-prime mortgages) can display extremely chaotic price paths that involve quite rational overshooting (i.e., booms) and undershooting (i.e., busts).

Today, the private lending market in the US has all but disappeared with the GSEs and the FHA accounting for an astonishing 95 per cent of housing finance. Indeed, the remnants of private banking that do remain are being stealthily nationalized via a questionable process of private risk socialization, with the US government now the largest individual shareholder in Citigroup and Bank of America.

5. FIXING THE US FINANCIAL SYSTEM

Having identified the profound dysfunctions that lie at the heart of the US financial system I am amazed to see that policymakers continue to apply prescriptions that do absolutely nothing to address them. Indeed, stakeholders from Paul Krugman to Timothy Geithner appear to be in a state of complete denial—in Krugman's case, having the temerity to lay blame for the crisis at the feet of Asia and its "excess savings," while Geithner and the Obama administration appear hell-bent on bailing out bankers without any real reforms to the financing system at all. As taxpayers are forced to continuously internalize private risks and the role of the GSEs is repeatedly reaffirmed, the perverse moral hazard incentives and call option-like payoff functions (i.e., we will take the upside of billions of dollars worth of bonuses but only bear limited downside when we're caught short) are just being re-infused into the institutional DNA. The administration even recently had the audacity to ask the rest of the world, through forums like the G20, to embrace collective fiscal stimulus in an effort to wrench it out of a crisis that was entirely of its own making (and which has been transmitted to many superficially removed countries with severe real economy consequences).

If the US is to have any hope of cauterizing these problems and preventing similar cataclysms from reemerging in the future, the administration and key thought-leaders have to start by acknowledging the structural system flaws that brought about these issues in the first place. Applying myopic bandages in a desperate bid to avoid a cathartic recession without concomitant reforms is emphatically not the long-term answer. In fact, the administration's policies are just going to increase the likelihood of the same issues inevitably occurring again (although no doubt on another President's watch).

In short, the US's entire credit creation system must be transformed back to a hold-to-maturity, balance-sheet based focus. At some point, the GSEs should be fully nationalized and, alongside other public housing finance agencies, phased out of the day-to-day housing finance infrastructure. Governments have a role to play supplying the public goods of liquidity and price discovery when markets fail—but only when markets fail.

In the medium to long term, the administration needs to create something that has been beyond previous governments since the days of the Founding Father: a robust and nationally-integrated private banking infrastructure, which is underwritten principally through retail deposits, in order to firmly reposition balance-sheets as the main repository of credit in the US. To achieve this, the administration must establish singular banking and insurance regulators rather than the kaleidoscope of agencies they currently have, and remove all of the legal and regulatory obstacles to enable the private banking system to expand to eventually supplant the GSEs and the many unnatural activities they spawned**.**

While there are undeniable diversification benefits to be garnered from securitization, as can be seen in countries like Australia and Canada, there is no evidence that the off balance-sheet capital available through this medium would ordinarily disintermediate the deposit-taking system.

6. DELEVERAGING HOUSEHOLD BALANCE-SHEETS

Policymakers need to capitalize on the current chaos to innovate at both the institutional and individual instrument level. In the preceding chapters I have discussed the need for institutional reform. I now want to turn my mind to resolving another critical dysfunction, which is equally culpable for contributing to today's problems: the structure of household balance-sheets.

One of the most important lessons from the global financial crisis has been that many households have far too much leverage—particularly in the US where the average borrower's mortgage is now worth an astonishing 95 per cent of the value of their home (i.e., as many as 30 per cent may be "underwater").[9] And the only genuine policy solution to the consequent desire to deleverage is the development of external markets in housing equity—or "shared equity"—which borrowers could use synergistically in combination with traditional debt finance.

With this in mind, President Obama's recently announced $75 billion housing plan is a long-term policy disaster insofar as it merely treats the manifestations of this crisis in an extremely costly manner via crude short-term interest rate relief—read good taxpayers bailing out bad—and remarkably does nothing at all to prevent the next generation of US borrowers experiencing exactly the same problems in the future. In fact, it can be argued that it only creates a higher tax burden for tomorrow's taxpayers.

Disturbingly, the administration's response also exacerbates the underlying problems that are the root cause of the US's housing market woes by, for example, offering defaulting borrowers scope to wriggle out of their home loan contracts through the judicial system (or, in the words of the administration, *"allow judicial modifications of home mortgages during bankruptcy for borrowers who have run out of options"*).

This will only undermine the enforceability of US mortgages and embed a new risk premium that will inevitably lead to higher future interest rates and likely funding uncertainty—why finance US mortgages when they can be overturned by the courts?

[9] See http://www.aei.org/scholars/scholarID.9,filter.all/scholar.asp

The administration's asinine approach to dealing with the greatest economic challenge since the depression has, to be frank, left me despondent and thinking that the more gloomy prognoses—including those predicting a Japanese-style "lost decade"—could well come to pass.

There remains, however, "hope" that the more thoughtful decision-makers in the administration, such as Housing Secretary Shaun Donovan, will search out the superior long-term reforms that they so desperately need. In this context, I was fortunate enough to be able to present just such a solution to the aforementioned *Transforming America's Housing Policy* summit.

The summit's preamble was entitled, *"A crisis would be a terrible thing to waste,"* which could not have better captured the awkward crossroads at which US policymakers find themselves. The difference between the US experiencing an interminable decline and recovering in the medium term to reclaim its place as one of the global economy's drivers of entrepreneurship and innovation, will arguably hinge on it response to this catastrophe.

The good news is that I believe there is a way forward, albeit one that will require courage, foresight and conviction on the part of the administration's decision-makers. Given the life-defining stakes, it is never too late to recalibrate one's trajectory.

The plan I outline below directly cauterizes the US's underlying housing market dysfunctions, delivers far greater and more permanent interest rate relief for distressed borrowers, allows banks to immediately recapitalise their balance-sheets with a $77 billion cash injection, and will ultimately cost taxpayers much less than the initiative the administration has announced.

On all objective counts I find it hard to see how it does not unambiguously dominate the administration's alternative. Based on consultations with US experts, I believe that it would be easier to implement since borrowers, lenders, investors, and taxpayers would all be clearly better off than they are under the administration's scheme.

Let me demonstrate how the application of a government-managed "debt for equity swap" program would allow distressed US borrowers to radically deleverage their balance-sheets and permanently reduce their mortgage repayments by 35 per cent or more in exchange for sharing some of the economic benefits of home ownership with taxpayers:

- Assume that the average "distressed" borrower's loan-to-value (LTV) ratio (i.e., their mortgage as a percentage of their home's value) is, say, 115 per cent (this is likely to be a fair approximation given that the average LTV across the whole market is 95 per cent). Under this debt-for-equity swap proposal, the traditional lender would only write off 15 per cent of the value of their loan to bring the borrower's LTV back to 100 per cent of the property's value (as opposed to the lender writing off most of the loan's value, as would ordinarily be the case with a borrower in extreme default). A similar write-down is anticipated in the administration's scheme.

- Yet instead of taxpayers making a cash gift to lenders to temporarily cut borrowers' repayments, the government would effectively "buy-out" or refinance 25 per cent of the reset traditional loan by swapping that portion of the debt with a taxpayer-funded "shared equity" loan (this could be achieved by simply having the borrower pay down 25 per cent of the reset traditional loan with the funds they receive from the government).

- Importantly, the shared equity loan carries no monthly repayments whatsoever during its maximum 30 year life. In exchange for the shared equity finance, taxpayers would receive half of the property's future capital growth in lieu of interest when the home owner elects to repay the loan either on refinancing or sale of the property (this contrasts starkly with the administration's program where taxpayers currently get nothing in return for their $75 billion bailout). However, the shared equity lender (viz, taxpayers) formally own no legal interest in the home since the instrument is structured using a traditional mortgage contract; the owner therefore retains control over what they do with the property in the future as they would under any other loan.

- The traditional lender is now left with a dramatically lower (and hence less risky) 75 per cent LTV. They are also directly paid 25 per cent of the face value of their reset loan by the government and hence get the benefit of a significant cash injection—which, as I show below, is worth about $77 billion—onto their balance-sheets (this constitutes a much needed recapitalisation for the banks).

- The borrower is now only paying a full rate of interest on a home loan that is just 65 per cent of its original value. Thus they benefit from a permanent 35 per cent reduction in their interest and principal repayments over the 30 year life of the loan package. In contrast, the reduction in repayments realised by borrowers under the administration's current proposal only lasts five years—after which rates are ratcheted back up, thereby once again raising the risk of "redefault."

- Assuming that overall house prices increase at a rate no greater than nominal GDP during the next 30 years, which given the recent 25 per cent correction seems like a defendable expectation, taxpayers could expect to earn a 5-10 per cent annualised, ungeared rate of return on their equity investments, which is dramatically superior to the 100 per cent losses that they will realise on their $75 billion "gift" to distressed borrowers under the administration's current plan.

- How much would this cost? According to the Mortgage Bankers' Association, 6.6 per cent of the circa $11 trillion of US home loans are currently estimated to be in 60 days or more arrears. Assume that half of these borrowers will go into foreclosure and need to access this new debt for equity swap program. That gives $363 billion worth of loans in extreme distress. If the average LTV is 115 per cent and the lender bears a 15 per cent write-down then the total value of the reset debt would be about $309 billion.

- A 25 per cent debt for equity swap program would therefore cost taxpayers roughly $77 billion, which, coincidentally, is almost exactly the same amount of money that the President has set aside for his housing package.

- The unique benefits of the plan include the fact that once the properties are sold and the shared equity loans repaid, the government can recycle the capital to assist new households in distress.

- That is, the $77 billion housing equity fund could be used by the government on a recycled basis to reduce the risk of families facing foreclosure in perpetuity (as opposed to the current once-off "cash splash"). Since traditional lenders would be avoiding foreclosure and the associated losses, there is an argument for them to contribute to the plan in the longer-term.

- The performance of this first generation equity portfolio would help build the foundations for the development of a wider market in private equity finance that could reduce the risk of excessive household leverage in the future. In particular, the returns realised on these loans and the timing of the cash-flows would resolve many questions that have prevented these markets from emerging previously. A definitive resolution of the tax and legal treatment of these instruments as part of the plan would remove one of their key impediments in the US.

Private and publicly-funded markets in housing equity now exist in Australia, NZ, and the UK. Indeed, Australian research and practical experience have been explicitly used as a guide for several billion dollars worth of government investment in public-sector shared equity initiatives in the UK and NZ, which are helping thousands of families deleverage.

Combined with the fact that leading US academics, including Ian Ayers and Barry Nalebuff at Yale, Luigi Zingales at the University of Chicago, and Edward Glaeser at Harvard have all recently made similar calls for the US government to help borrowers swap a portion of their housing debt for equity, it is hard not to acknowledge that there is immense merit to this plan.

Nobody has a monopoly on good ideas. And nobody would begrudge the administration for seeking to refine their solutions to this calamity. I just hope Larry Summers, Shaun Donovan, Timothy Geithner, and Austan Goolsbee have the humility and foresight to listen. Because guys, what you are currently proposing to implement will almost certainly set the US economy on a long-term course towards permanent irrelevance.

Truth be told, I feel helpless because I doubt very much whether they will listen. I have been told by influential US stakeholders that it is all too late. And it distresses me deeply to see the much-vaunted Obama administration make precisely the same ill-conceived and vested missteps as its predecessors.

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About the Author

Christopher Joye is the founder and Managing Director of the award-winning research and investment group, Rismark International. In February 2009, Christopher was invited by the Rockefeller and MacArthur Foundations to present innovative policy solutions to America's housing market woes based on Rismark's experience at the private *Transforming America's Housing Policy* summit for Obama administration officials in New York. In 2007 Christopher was selected by The Bulletin magazine as one of Australia's "10 Smartest CEOs" and by BRW Magazine as one of "Australia's Top 10 Innovators." He previously worked with Goldman Sachs' Investment Banking Division in Europe and Australasia. Christopher was formerly a member of the Special Projects team within the Reserve Bank of Australia's Domestic Markets Division. In 2008, the Australian Government embraced a radical policy proposal developed by Christopher and Professor Joshua Gans of Melbourne University to provide liquidity to the Australian mortgage-backed securitisation market to mitigate the adverse effects of the 2007-2008 credit crisis. Christopher served as a Director of The Menzies Research Centre, which is a leading Australian think-tank, from 2003 to 2007. He has published widely on policy matters relating to housing and financial economics. Christopher received Joint 1st Class Honours (Economics & Finance) and the University Medal in Economics & Finance from the University of Sydney, where he was a Credit Suisse First Boston Scholar and University Honours Scholar. He studied for a PhD at Cambridge University in 2002 and 2003, where he was a Commonwealth Trust Scholar.

