

Learning *the old lessons*

The market has been swamped with analysis of what the mortgage crisis means for borrowers and bondholders. But what do shareholders make of the turmoil? *American Securitization* asked Ronald Temple, co-director of research at Lazard Asset Management, for his take on the crisis, and how it could change how equity investors allocate capital to the financial sector.

The current credit crisis is an almost textbook example of the unintended consequences of well-intentioned actions. What started in 2001 as a means to keep the U.S. economy out of a severe recession morphed into a situation where the capital markets were effectively financing the purchase of call options on property by subprime borrowers.

Avoiding getting caught in the ensuing pain was not a matter of predicting the scale of the turmoil we have all witnessed in recent months. Rather, it was a matter of recognizing the untenable dynamics driving the boom, the underlying dependencies of the businesses themselves and the opaque accounting that created incentives for managers to move further and further out the risk curve. Before moving on to my views of the road ahead for the industry, I will first outline my take on how we got to the point of being faced with a nationwide mortgage underwriting disaster.

Constructing a house of cards

I put it down to a convergence in the interests of lenders and fixed-income investors, and excessive dependence on assumptions with little or no basis. The aftermath that we are living through now includes some lessons markets teach in every cycle, such as that models are only as good as the underlying assumptions.

But the whole process needed a helping hand, and that came in the form of the policy responses to the last economic downturn at the start of the decade: the Fed slashed interest rates from 6.5% to 1.0% between January 2001 to June 2003. The 10-year Treasury yield more than halved from almost 6.80% in 2000 to a low of just under 3.10% in 2003.

Combined, these lower rates gave rise to an explosion in mortgage refinancing. In 2003, according to *Inside Mortgage Finance*, \$2.8 trillion of mortgage debt was refinanced. This amount equated to almost a third of all mortgage loans outstanding, and a full 70% of total mortgage originations that year.

The knock-on effect of the refinancing boom was that prepayment rates on mortgage-backed securities rocketed. The constant prepayment rate on Fannie Mae mortgage-backed securities (MBS) peaked at an annualized rate of over 70% in

July 2003 as the 10-year yield bottomed, according to Lehman Brothers. At such an elevated level, the average security was prepaying so fast that its expected life was merely one-and-a-half years compared with the more normal assumption of up to seven years.

Fixed-income managers including banks, asset managers and the mortgage agencies, already suffering from earlier shockwaves related to commercial credit and corporate fallen angels, were faced with reinvesting cash flow from securities prepayments at lower and lower interest rates. At the same time, mortgage servicers purchased large amounts of securities to try to offset the hit from writing off mortgage servicing rights (MSR). This buying only drove rates down further.

Lower rates were good news for borrowers, but not for investors. As their portfolios of prime mortgages were prepaid, they were left with the choice of either buying new bonds with coupons as much as 200 basis points lower or, worse, earning 1% on cash. Many chose the lower-yielding new bonds. Others, though, chose a different path — non-traditional mortgages.

Just as investor demand for subprime and alt-A mortgages was expanding, refinancing volumes began to decline as most of the borrowers who had an incentive to refinance had done so. Mortgage originators, which typically recognized income in a gain-on-sale model, thus needed a new source of loan volume to replace the earnings they had come to expect during the refinancing bubble.

In other words, the needs of investors and originators converged: the former sought yield and duration, the latter volume and higher gain-on-sale margins. Non-traditional mortgages fit the bill. As most subprime mortgages could be refinanced every two years, it looked like both machines could be fed with product — and the Wall Street CDO machine made financing even easier. Everyone was happy. The industry had seemingly found a way to take more risk, disaggregate it, disseminate it and make more money than ever before, as long as the models were correct. Here again, investors seem to need to learn the same lesson repeatedly. After all, Long Term Capital Management could be attributed to blind faith in models, too.

This is where assumptions went awry. As the boom continued, common wisdom held that mortgages were even safer

than had been assumed in the past. The safer mortgages were seen to be, the more capital flowed into the sector, increasingly into what were termed affordability products that made home ownership possible for the marginal, previously uncreditworthy buyer. With the incremental homebuyers came even higher home prices, sustaining the virtuous cycle of low losses and easier terms on credit.

Crucially, the same assumed drivers of default in the prime market were transferred, largely without question, to non-traditional product. Chief among these were that the mortgage would be the last bill a borrower would fail to pay, and that unemployment was the ultimate driver of borrower default. This was believable to some degree for prime borrowers, but extrapolating to subprime seemed rather presumptuous.

Rather than just accept the assertion, I collaborated with Emma Rasiel, PhD, Director of Undergraduate Economics at Duke University, to investigate the actual drivers of subprime mortgage foreclosures. The paucity of underlying data, in and of itself, proved shocking. Having gotten beyond the data constraints, the outcome of our research was even more surprising. In California, Maryland, Massachusetts and New York we found that from the mid-1990s, when unemployment rose, foreclosures actually went down. How could this happen?

What was happening in our view was clear: any person who ran into problems merely sold his house, as the prices had increased significantly since the mid-1990s in all of these states. In Texas and North Carolina, higher unemployment led to higher foreclosures, implying that the lower home price appreciation observed in these states was insufficient to bail out the borrowers.

And let's not forget another common assumption: that the U.S. economy is so diverse that the housing market in each region is unique. The combination of high prepayments and refinancing, falling interest rates and yields, gain-on-sale accounting, home price appreciation and loan and bonds structures had undermined that assumption. Between 2000 and 2005, home prices across the country reached levels that were more correlated than at any time in decades.

While home price appreciation accelerated and became more correlated, lax underwriting reached new levels. Research from Bear Stearns shows that in 2000 only 5% of subprime borrowers had no equity in their homes. By 2006, as many as 70% of them, in a much bigger market, had loan-to-values of at least 100%. Compounding the risk, 60% of subprime borrowers had reduced documentation of key underwriting factors.

Avoiding getting caught in the rubble

Given that an equity represents nothing more than the future

cash flows of a company net of payments to debt holders, a solid investment process should be built on ensuring one has the best possible basis for predicting the range of future cash flows that might occur. At Lazard, we dig deep to understand the ultimate drivers of profitability for each company. Our fundamental research process includes a number of components:

Return analysis: this investigation covers industry trends, competitive dynamics and the underlying levers each company has at its disposal to prepare for or respond to changes in the operating environment.

Our goal is to have an independent basis on which to judge if returns are going up, down or sideways. Part and parcel of this analysis is understanding the capital required to sustain returns as well as the risk of left-tail scenarios on the ability of a company to fund its operations.

Understanding franchise value: while we felt we had developed a solid understanding of the mechanics and profitability of the industry, we were careful not to be too presumptuous. After all, we focus on equities. One simple question we asked management at mortgage finance

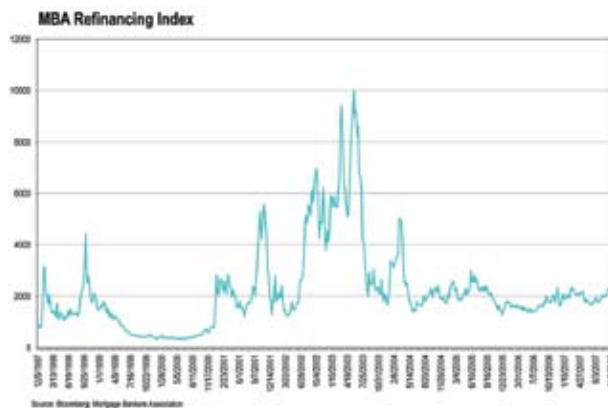
companies was: "What is the most valuable aspect of your franchise?"

Our goal was to ensure that we identified any differentiating features that might make a business model valuable to someone else even in an extreme scenario. The worst answer we got was: "Our conduit." The company said this because it had no servicing platform, no direct origination and little by way of historical experience through cycles in an unproven mortgage class. As it turned out, even firms that had a compelling offering typically did not have the funding base required to sustain a negative scenario.

Accounting validation: reported results are not always as reliable as they appear. We try to understand how the statement of cash flows relates to the income statement and the balance sheet. Put simply, reported net income in most cases for gain-on-sale mortgage originators was merely an estimation of expected future cash flow. There are good reasons to expect some of these projections of future cash flow to be correct, but the problem was that firms that were completely dependent on market funding did not live to see the cash flows realized.

Valuation: the culmination of our work is to put together our most probable scenarios and understand what each would mean for the company's valuation. Based on GAAP earnings and book value, almost all of the mortgage franchises appeared undervalued for the last two or more years.

That said, the underlying quality of book value and annual earnings was always questionable given the divergence of GAAP measures from cash flow. Ultimately, even the firms with the most desirable servicing portfolios did not have much



equity beyond that in the MSR, while those without servicing platforms had little to offer by way of differentiation to ensure access to capital. Even the firms with strong servicing credibility could not ensure that they could fund themselves to see the cash flows realized.

What can we expect?

Over the near-to-intermediate term, without question the industry will look different. Below are some key points regarding the shape of the industry and policy proposals related to the crisis.

Cash is king: what has become clear in the last year or two is the importance of being able to sustain operations through a left-tail scenario. In the credit crisis of 2002 and 2003, companies that were reliant on unsecured commercial paper realized this.

One common lesson of each crisis is that callable funding of any variety is not dependable funding. We expect the major commercial banks and diversified financial services companies to benefit the most from the likely demise of competitors that depend on market funding to operate. Deposit-funded institutions can thrive in an originate-to-distribute model as well as a portfolio origination model in the mortgage arena. A clear corollary of this factor is that the REIT model for mortgage originators is dead — at least for now — as the structure merely ensured that funding would not be sustainable through a cycle. While broker-dealers might not have the same deposit funding as commercial banks, they are far better positioned to sustain operations than a monoline.

Underwriting involves more than making up assumptions. Some have blamed securitization as a process that leads to poor quality underwriting as the incentives for originators appear to be solely focused on producing more volume.

While that is going too far, the current reps and warranties need to be more stringent to align originators' interests with those of investors. Innovation has a place in financing, but it must be in the context of assumptions that can be validated. The cumulative loss assumptions that were core to the subprime securitization process and ABS CDOs were dubious on a good day. After all, how could one model cumulative losses with confidence while simultaneously noting that home prices have not declined on a national basis since the Great Depression?

As noted above, assumptions ranging from the drivers of default to home price correlation appear to have had little basis beyond extrapolation. We should return to a financing model based on the ability, willingness and, yes, expectation that the borrower will repay the loan, not a model based on assumed collateral appreciation.

Next, hands off contract law. From a policy perspective, beware of unintended consequences. In the current environment the sanctity of contract law seems to be in question. The current crisis might seem to justify extreme measures.

Make no mistake: extreme measures can have extreme consequences. The sanctity of contract law has been a key competitive advantage for the U.S. in attracting capital flows for many years. Any proposal that even questions the inviolable aspect of contracts must be avoided, lest we find reduced access to capital flows to be the next unintended consequence of well-intended actions.

Accounting and reality need to become reacquainted. While this topic is not high on the agenda right now, it should be. Current rules require companies to estimate the inestimable. The disconnect between reported financials and actual cash flows leads debt and equity investors to rush for the exits when times are tough, as the effort required to truly understand the profitability of the companies is enormous.

While this difficulty might create opportunities for investors who do the work, markets have become so short-term that even the best asset managers might not be willing to endure the volatility to own a company with opaque accounting. It is worth rethinking the rules and allowing common sense to prevail in terms of recognizing income.

This view should apply to the ABX as a valuation tool as well. While it is good to have a traded basis for marking to market, the ABX seems ill-suited to its current role in the process for owners of subprime exposure. The index lacks the true two-way flow required of an instrument that will dictate the value of hundreds of billions of dollars of exposures. While the cumulative losses implied by the index now may well come to pass, they also might not. Marking to any model is complicated and fraught with potential for error, but marking to an index largely driven by speculative transactions begs for an alternative.

Overall, the current crisis presents a range of complicated issues. Simple solutions sound nice but rarely work as intended. As we learn the lessons of this crisis, the most valuable may well be that we can count on learning them again in the years ahead. Fortunately, investors and originators with longevity of experience and a firm grounding in common sense should be able to balance all of our inputs sensibly to perform on behalf of our clients, whether they be committing capital to equities or borrowing for a home.▼

The views expressed are those of the author and do not necessarily reflect the views of Lazard Asset Management LLC.

Ronald Temple is co-director of research for Lazard Asset Management in New York. He is also the lead analyst for the firm's coverage of U.S. financial institutions.

