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THE SECURITIES-BACKED REFINANCE

HOW BANKS AND WEALTH MANAGERS CAN HELP UNDERWATER HOMEOWNERS

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Over 7 MM American homeowners have existing mortgages with current loan-to-value (CLTV) in excess of 125%. Over 2 MM of these homeowners are currently ineligible for HARP assistance and hence likely unable to refinance into a less expensive mortgage. A large number of these homeowners have liquid assets (cash and investments) that they can borrow against. We propose that banks and wealth managers offer such homeowners a "Securities-backed Refinance" mortgage. We define this as a product which splits the existing mortgage into two parts – one that is secured by financial assets (a securities-backed loan) and one that is secured by the home. This can enable such homeowners to refinance into an 80% CLTV mortgage at a much lower rate. This is a true win-win situation – we estimate that an "average" homeowner can save $22,000 per year over the remaining life of the mortgage, and financial institutions can benefit from new and/or deeper relationships. We estimate that the Securities-backed Refinance represents a $1+ BN revenue opportunity, and is a great product for financial institutions looking to build deeper relationships with their existing customer base. Banks and wealth managers should quickly mobilize to design this new offering, create a targeted outreach program based on internal and external data, and leverage their distribution channels to solicit prospects. The early bird will likely get most of the worms.

THE PROBLEM – MILLIONS OF HOMEOWNERS STUCK WITH EXPENSIVE MORTGAGES

13.8 MM American homeowners (27.5% of homeowners with a mortgage) are underwater on their mortgage, i.e. they owe more to their lender than their home is worth. Over 7 MM of these homeowners are "deeply underwater" – the outstanding principal on their mortgage is greater than 125% of the value of their home. While home prices have begun to rise, it will still take years for these homeowners to build any equity in their homes.

The immediate pain for several of these homeowners is their inability to refinance into a mortgage at a lower rate. This is especially true for those who reside in areas that had high home prices pre-crisis (e.g. California). Government mortgage assistance programs, such as HARP, only cover mortgages guaranteed or owned by the GSEs. Given low down-payment trends and the absence of a "High-Cost" conforming loan limit for expensive regions pre-2008, more than 2 MM deeply underwater homeowners who could benefit from such assistance are unable to take advantage of these programs[1].

Consider a homeowner residing in California, who bought a single-family home for $625,000 in January, 2006. Assume that the homeowner made a 5% down-payment and took on a 95% LTV mortgage to buy the home. Given the decline in home prices in California – on average 36% lower at the end of 2012 than at the start of 2006 – the home is now worth only $400,000. Assuming no prepayments and an amortization schedule corresponding to a 30-year fixed rate mortgage, the unpaid principal balance is $537,000 today. This homeowner is deeply underwater, owing the bank 134% of the value of her home.

To make matters worse, the homeowner in our example is paying interest on her mortgage at almost twice the rate she could get in today's market. The average interest rate in January

1. **Sources:** CoreLogic and Oliver Wyman analysis

2006 for a 30-year fixed rate jumbo mortgage was 7% for a consumer with excellent credit. If she were able to refinance at current rates (say 3.5% for a 30-year conventional conforming fixed rate mortgage), she could reduce her monthly payments by roughly 30%, or $1,200 per month. Unfortunately, few banks are willing to offer refinance mortgages to severely underwater homeowners who do not qualify for HARP assistance.

THE SOLUTION – A SECURITIES-BACKED REFINANCE

We believe that banks and wealth managers can help a certain segment of homeowners who are severely underwater but also have significant liquid assets (cash and investments). These institutions should offer a new product that we call a "Securities-backed Refinance". Simply put, this product helps split the existing mortgage into two loans:

- A new mortgage which meets their or the GSEs' underwriting criteria (this will mainly imply a lower CLTV, e.g. 80%, assuming the individual is creditworthy)
- A securities-backed loan backed by the homeowner's liquid assets, which is used to pay down the existing mortgage to realize a CLTV of 80% before refinancing

A securities-backed loan is a product offered by broker-dealers for purposes other than purchasing securities (i.e. it is not a margin loan). It is typically available as a line of credit, though securities-backed term loans are also offered with durations as long as 7 years. The maximum loan amount is based on the value and type of securities held in the brokerage account; haircuts range from 5% (US Treasuries) to 50% (equities). These loans can be offered with fixed or variable rates. Rates for these loans vary from 1.5% to 5%, depending on the loan amount.

Going back to our example, say the homeowner has $500,000 in liquid assets spread across her banking and brokerage accounts (exclusive of retirement accounts, which cannot be borrowed against in this way, and rainy day savings, which she is unlikely to want to pledge as collateral). Assuming that her portfolio consists of 80% equities and 20% US Treasuries, she would be able to borrow up to $295,000. If she were to borrow $217,000 and use it to pay down her existing mortgage, she would bring down the unpaid principal balance to $320,000, which is 80% of the value of her home. Her bank would now be able and willing to refinance her mortgage into a conventional conforming loan.

We estimate that the Securities-backed Refinance would save the homeowner $22,000 per year in interest costs. Over a 7-year period (the potential term of the securities-backed loan), that translates into $151,000 in savings. This is truly remarkable – she has saved an amount more than 37% of the current value of her home! See sidebar for a detailed comparison of this and other potential options, e.g. sell securities and refinance.

Since the securities-backed loan is a shorter-duration loan than the mortgage, it carries higher monthly payments. In our example, repaying principal and interest each month on both loans, the homeowner's monthly payments would rise from $3,950 to $4,250 (a 7.6% increase). If the homeowner does not have the cash flow to support these higher payments, she can take advantage of an interest-only securities-backed loan, allowing her to pay as little as $450 per month on it, bringing her total monthly payments, including the new mortgage, down to just $1,900. With an interest-only loan, she can make lump-sum principal payments at different points in time, at her convenience. However, if she were not to repay any principal until the end of the 7-year period, she would end up paying $18,200 more in interest over the life of the loan.

The obvious risk in taking on a securities-backed loan is that of reduced liquidity – the homeowner cannot use the pledged assets for any other purpose for the duration of the loan, though she can still trade using these assets. Additionally, if the value of her portfolio were to decline, she may face the risk of a margin call. In order to avoid a margin call, she would have to reduce the effective LTV of the securities-backed loan by either pledging more assets as collateral or paying down a portion of the outstanding balance, either with cash on hand or cash proceeds from the sale of securities. The latter option implies selling at the bottom of the market, and may have tax implications as well. However, a margin call is triggered only by a large decline in the value of the portfolio, typically 30% or more. For homeowners who borrow below their initial securities-backed loan LTV limit, such as the homeowner in our example, a margin call is a low likelihood scenario. Additionally, as the homeowner continues to pay down her loan, the odds of a margin call recede (since a greater decline in portfolio value is required to trigger one). However, this is a new type of risk that a homeowner has to bear with this product, which is absent in a mortgage.

All things considered, we believe that the liquidity risk introduced by taking on a securities-backed loan is outweighed by the benefit of saving hundreds of thousands of dollars in mortgage interest while preserving the expected return on a homeowner's securities portfolio. The only scenario in which this is not an attractive option is if a recession set in immediately after the homeowner completed a Securities-backed Refinance – where equity markets decline by 30+% in a year and the homeowner faces a margin call.

COMPARISON WITH OTHER AVAILABLE OPTIONS

For homeowners in similar circumstances to the homeowner in our example, a Securities-backed Refinance is a far more attractive option than any available alternative: either doing nothing or liquidating a portion of their securities portfolio in order to pay down the existing mortgage with cash and subsequently refinance.

Changes in home prices do not impact the relative attractiveness of options presented in this analysis, as they do not affect the cost of borrowing. Under any scenario the borrower is better off in the lower-rate mortgage. It is worth noting that even if the return on the homeowner's securities portfolio over a 7-year period was as low as 1.5% per annum, a Securities-backed Refinance would still remain the most attractive of the three options, with the realized return on securities not liquidated outweighing the interest expense of the securities-backed loan (we ignore the impact of taxes in all our analysis).

The only event that could make the Securities-backed Refinance less attractive than the liquidate option would be a sudden, severe and unexpected decline in the value of the homeowner's portfolio, triggering a margin call on the securities-backed loan. If a homeowner took out this loan in October 2007 and watched the markets decline by more than 50% over the next 18 months before recovering, the liquidate option would have been better, since the margin call forces her to liquidate at the worst possible time (and liquidation of securities at the peak of the market is simply brilliant timing). While this is an unrealistic scenario for many reasons, a better way to mitigate the risk of a margin call is to borrow less than the maximum allowable amount, thereby allowing for a larger decline in the value of the portfolio before the margin call gets triggered.

Source: Oliver Wyman analysis

EXHIBIT 1: BALANCE SHEET AND FINANCIAL IMPACT ANALYSIS OF AVAILABLE OPTIONS

	1. DO NOTHING	2. SELL SECURITIES, REFINANCE	3. SECURITIES-BACKED REFINANCE
Assets on day 1 ($)			
Home value	400,600	400,600	400,600
Market value of equities	400,000	183,300	400,000
Market value of Treasuries	100,000	100,000	100,000
Expected rate of return on equities	6.0%	6.0%	6.0%
Yield on Treasuries[2]	1.2%	1.2%	1.2%
Total assets	**900,600**	**683,900**	**900,600**
Liabilities on day 1 ($)			
Mortgage UPB	537,150	320,500	320,500
Mortgage CLTV	134%	80%	80%
Mortgage rate	7.0%	3.5%	3.5%
Securities-backed loan balance	n/a	n/a	216,700
Securities-backed loan rate	n/a	n/a	2.5%
Total liabilities	**537,150**	**320,500**	**537,200**
Net worth on day 1 ($)	**363,450**	**363,400**	**363,400**

The homeowner's net worth on day 1 remains more or less constant across options, though she may be required to pay capital gains tax on securities liquidated in option (2)

	1. DO NOTHING	2. SELL SECURITIES, REFINANCE	3. SECURITIES-BACKED REFINANCE	*SECURITIES-BACKED REFINANCE WITH INTEREST-ONLY PAYMENTS*
Absolute outcomes over 7-year period ($)				
Avgerage monthly interest expense	2,900	850	1,100	1,300
Avgerage monthly cash outlay	3,950	1,450	4,250	1,900
Total interest expense	244,150	72,950	92,700	110,900
Total expected return on equities	201,450	92,350	201,450	201,450
Total yield on Treasuries	8,350	8,350	8,350	8,350
Total absolute impact to net worth	**(34,350)**	**27,700**	**117,100**	**98,900**
Outcomes relative to baseline of doing nothing ($)				
Avgerage monthly interest savings	n/a	2,050 (71%)	1,800 (62%)	1,600 (55%)
Avgerage monthly reduction in cash outlay	n/a	2,500 (63%)	-300 (-8%)	2,050 (52%)
Total interest savings	n/a	171,200 (70%)	151,450 (62%)	133,250 (55%)
Total difference in expected return on equities	n/a	-109,100 (-54%)	-	-
Total difference in yield on Treasuries	n/a	-	-	-
Total relative impact to net worth	**n/a**	**62,050**	**151,450**	**133,250**

Option (2) provides the greatest lifetime interest savings, but foregone expected return on equities makes it far less attractive than option (3)

Option (3) allows for the preservation of the full expected return on equities in exchange for interest payments on the securities-backed loan, resulting in the most positive total impact to net worth over the 7-year period under consideration

Source: Oliver Wyman analysis
2. Nominal yield on 7-year US Treasuries as of 4/25/2013

WHAT BANKS AND WEALTH MANAGERS MUST DO

The Securities-backed Refinance represents a substantial opportunity for banks and wealth managers, with the potential to generate up to $80 BN in mortgage refinancing volume that would otherwise have remained locked up and as much as $45 BN in additional securities-backed loan volume. Up to $90 BN of investable assets that are required to secure these loans (assuming 100% equities portfolios) could be in play, with assets moving from financial institutions that do not offer this product to those that do. We estimate that total revenue from three revenue streams – origination revenue on mortgage refinancing, net interest margin on securities-backed loans and commissions and asset management fees on assets that move from one financial institution to another – could exceed $1.3 BN[3]. Further, these revenues are associated with products that carry very low capital requirements (e.g. RoEs for securities-backed loans are typically 80-90%).

The time to act is now. Equity markets are at their highest-ever levels and rising, investors are feeling more confident, and home prices are not rising rapidly enough for homeowners to simply "ride out the storm". Most homeowners are unaware of the potential of such a product to greatly reduce their cost of debt. Once made aware of its potential, we believe demand for a Securities-backed Refinance will be extremely strong. This product also presents a great opportunity for banks and wealth managers to deepen relationships with existing customers, which is a key strategic focus. Wealth managers have long been focused on increasing the penetration of banking products within their client base, and a Securities-backed Refinance may likely be the most integrated wealth-banking offering possible.

Banks and wealth managers should take a three-pronged approach to capturing this opportunity:

- Flesh out the product design, including pricing, terms and customizable structures to allow for tailoring to specific borrower circumstances
- Target outreach to existing customers and prospects, supplementing internal data with publicly available information
- Leverage existing distribution channels, ensuring incentives are aligned across all stakeholders, e.g. advisors, branch managers and financial planners

The critical path lies in identifying customers and prospects who qualify for this product. For existing customers, banks and wealth managers should use external data to identify who is likely to be underwater on their mortgage. Data providers such as Lexis-Nexis and Acxiom aggregate public records containing data on homeownership and initial mortgage balances. For prospects, data from IXI – supplemented with internal models – can help identify availability of investable assets.

This is a significant opportunity for banks and wealth managers to lead with an offering that delivers tangible benefits to clients. In a world where trust in financial institutions is rapidly diminishing, this can provide a shot in the arm to reverse that tide. Banks and wealth managers should not look this gift horse in the mouth.

3. Assumes 30% of assets in play, i.e. $27 BN, move across financial institutions at an average RoA of 80 bps. Origination revenue from mortgage assumed to be 75 bps of balance. Net Interest Margin for securities-backed loans based on an APR of 2.5% and cost of funds equal to 1.34% (7-year swap rate as of April 25, 2013)

METHODOLOGY FOR MARKET SIZING

The market sizing for the Securities-backed Refinance outlined in this paper is based on an analysis of publicly available data from CoreLogic and the Federal Reserve Board's Survey of Consumer Finances (SCF).

The SCF was used to segment US households using a combination of outstanding home-secured lending balances and financial assets. In this way we were able to estimate the number of US households with >$500,000 of home-secured lending balances and sufficient financial assets to borrow an amount equivalent to 45% of the value of their home, i.e. enough to reduce the CLTV of their mortgage from 125% to 80%, through a securities-backed loan, assuming securities pledged at an LTV of 50%. As no data are publicly available to link home-secured lending, financial assets and primary mortgage CLTV, we applied the % of homeowners with a mortgage with a CLTV >125% in the general population, provided by the CoreLogic, to the segment in which we were interested for the purposes of this paper.

Note that the Federal Reserve Board conducts the SCF on a triennial basis. The most recent available data is from 2010. However, for our analysis, we used data from 2007. The reason for this is simply that our analysis hinges on the value of financial asset holdings among US households and the value of these holdings today is far closer to what it was in 2007 than what it was in 2010.

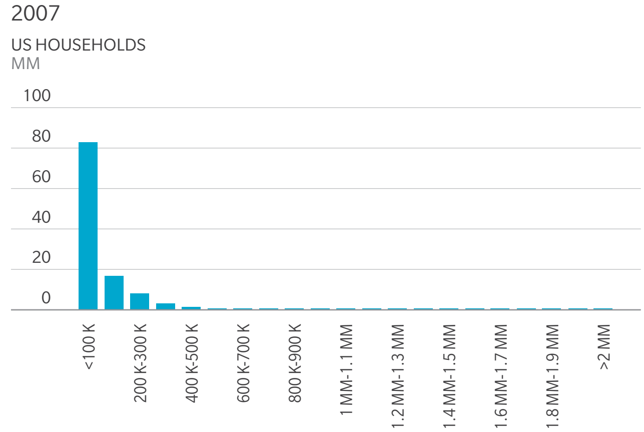
A historical view of the S&P 500 index highlights this point in Exhibit 2:

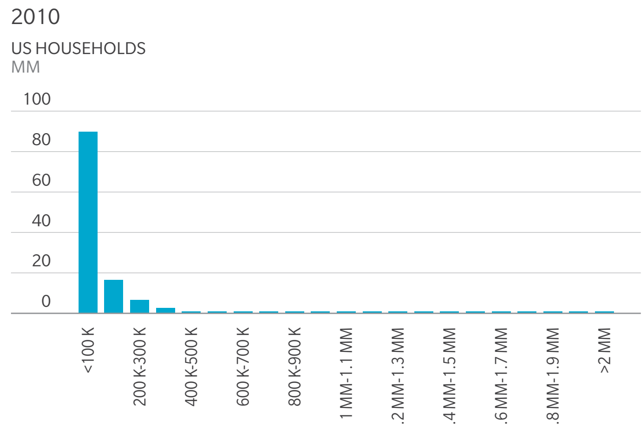
EXHIBIT 2: HISTORICAL S&P 500 CLOSINGS, 2007-2013

Source: Yahoo! Finance

In addition, the distribution of home-secured lending across the population did not change dramatically between 2007 and 2010, as shown in Exhibit 3:

EXHIBIT 3: COMPARISON OF 2007 AND 2010 HOME-SECURED LENDING





Sources: Federal Reserve Survey of Consumer Finances and Oliver Wyman analysis

As our analysis relies on the intersection of financial assets and home-secured lending, we cannot mix and match between data sets that have already been aggregated above the individual household level, i.e. we cannot use 2007 data for financial assets and 2010 data for home-secured lending. As a result, while approximate, we have chosen to use 2007 SCF data as it provides a more accurate estimate of the population for which a Securities-backed Refinance discussed in this paper would be suitable in today's market.

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