

A Letter From

Mark Hanson
Vice President of Mortgage Funding

Welcome to the Fall 2002 issue of Gold Perspective. The second quarter kept all players in the mortgage markets extremely busy. The steep yield curve continued to spur production of Freddie Mac's REMIC securities, generating near-record structured issuance volume of more than \$71.4 billion. As the third quarter draws to a close, REMIC issuance continues to remain strong. Mortgage-backed securities issuance also remains high, reaching more than \$240 billion in new Gold PCs through June 2002.

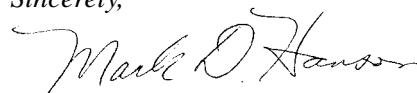
John McMurray, Freddie Mac's Vice President of Pricing, discussed the economics and accounting of mortgage servicers' refinancing practices at this summer's Capital Markets Advisory Group meeting. More on this topic can be found inside this issue. Also discussed were enhancements to Freddie Mac's pass-through and REMIC programs, including recent actions taken to improve the homogeneity of Freddie Mac's TBA programs and changes to Freddie Mac's REMIC securitization and distribution policies.

The TBA market thrives in environments where similar mortgages have similar prepayment characteristics. Without standards that facilitate

uniformity, the TBA market risks fragmentation and a concurrent reduction in liquidity. Having aberrant behavior in any one part of the TBA market disrupts this homogeneity and threatens liquidity. In an effort to promote homogeneity, financial rewards or penalties have been considered and applied for sellers and servicers.

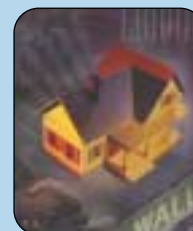
We are committed to providing you with useful information through Gold Perspective. Please let us know if there are any topics you would like to see covered in future issues.

Sincerely,



In This Issue

- Understanding Mortgage Originations
- Revised Minimum Denominations
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- Freddie Mac Announces Record Operating Earnings for Second Quarter 2002
- PC Prefix Guide Now Available
- Volumes and Performance



Understanding Mortgage Originations

Morgan Snyder
Director, Pricing Strategy
Single Family Division

During the past 18 months, we have seen one of the greatest refinance booms since the inception of mortgage securities in the 1970s. Mortgage originations totaled a record of more than \$2 trillion

in 2001, and 2002's originations will likely match last year's record. More than two thirds of all originations during this period resulted from refinancing.

While consumer advantages of refinancing are obvious—lower mortgage payments, reduction of loan term, and extraction of equity—the effect of refinancings on the mortgage banking industry is less apparent. Although mortgage bankers enjoy

the added revenue opportunities available during refinance periods, the financial impact to lenders' servicing portfolios is less straightforward. These servicing portfolios are subject to complex accounting rules and business risks that make it difficult to measure financial returns.

The mortgage banking industry consists of two business operations: mortgage servicing and mortgage originations. Whereas mortgage servicing operates under an annuity-based business model with revenue collected over time as the lender services the loan, the mortgage origination operation is a transactional business, collecting fees only when new loans are created. Lenders use these opposing operations as part of a natural hedging strategy to counterbalance the inherent volatility within each.

The mortgage servicing industry earns its revenues from the servicing spread required to be retained after a loan is sold. The minimum retained servicing spread is 25 basis points, although lenders can retain additional excess spread. The current accounting for mortgage servicing cash flows, referred to as Mortgage Servicing Rights (MSR), is covered under Financial Accounting Standard 140 (FAS 140). FAS 140 requires the capitalization of the MSR and the recognition for current period earnings. It also provides flexible amortization and impairment rules for the MSR asset. This earning potential drives lenders and their holding companies' interest to the mortgage servicing industry.

Over the past decade, the top 10 servicers have increased their share of the outstanding amount of mortgage servicing from 15% to 49% (Source: 2002 Mortgage Market Statistical Annual—Volume 1, *Inside Mortgage Finance*, 2002). The complexity of the technology, the riskiness of the servicing cash flows, and the possibilities of new consumer relationships have all lead toward the consolidation of the mortgage servicing industry. This article focuses on the mechanics and accounting of mortgage originations and the impact they have on the financial returns of mortgage servicing.

The Continuum of Mortgage Origination Channels

The mortgage origination industry derives its revenues from the collection of loan origination fees. The revenue sources include fees collected from the borrowers and premiums received for selling or capitalizing MSR. The mortgage origination industry is populated by thousands of different sized players, from mega-origination companies to one-person retail brokers. Industry consolidation has been limited due to a number of factors, including: 1) low barriers of entry, 2) the "level playing field

Did You Know?

Freddie Mac compiles a monthly average refinance share of single-family origination activity as part of its Primary Mortgage Market Survey. Visit

www.freddiemac.com/shareholders/volsum/

for more information.

effect” of new technologies, and 3) the high cost of maintaining sales and underwriting organizations. Rather than consolidation, the mortgage origination industry has matured into multiple origination business channels:

1) *Retail Channel*: The lender performs all functions of the loan origination process, from loan application to securitization and sale, into the secondary market. The lender retains the mortgage servicing rights. Usually the lender has a retail sales organization to originate the loan. Some lenders have created call center operations to bypass the traditional loan officer.

2) *Broker Channel*: The independent broker originates and processes the loan. The loan is then underwritten and closed by the lender, and subsequently securitized and sold into the secondary markets. The lender retains the mortgage servicing rights.

3) *Correspondent Channel*: The independent broker originates and closes the loan. After the loan is closed, the independent broker sells it to another lender who then securitizes and sells the loan into the secondary market. The lender retains the mortgage servicing rights.

4) *AOT Channel*: The AOT (Assignment of Trade) Channel is similar to the Correspondent Channel except the loan sale to the other lender is accompanied by the assignment of forward trade that is used to hedge the loan.

5) *Wholesale Channel*: The lender performs all functions of the loan origination process from loan application to securitization and sale into the secondary market. The lender retains the

mortgage servicing rights. After the sale of the securitization, the mortgage servicing rights are sold to another lender.

The largest mortgage bankers have built operations to include each of the business channels. Success in these originating channels centers on building an efficient yet scalable cost infrastructure; strong market presence with consumer presence and effective sales organizations; optimization of tax benefits from selling and/or securitizing whole loans; and maximization of the accounting benefits of MSR. Table 1 illustrates the impact of different components on each business channel:

Table 1

	Retail		Correspondent		Wholesale	
	Call Center	Traditional	Broker	AOT	Co-issue	
Cost Infrastructure:						
Fixed Op Costs	high				low	
Variable Op Costs	medium	low			high	
Market Presence	high				low	
MSR Accounting Benefits	immediate				over time	
Tax Benefits of Whole Loans	none	none	none	yes	yes	none
Profit Potential	high					low
GAAP Earnings Timing	current period					future periods

As Table 1 illustrates, the three primary origination channels generate a range of different operating outcomes. The retail channel produces the highest current earnings and the highest overall profit potential. However, this comes at the cost of high operating expenses that can become a significant burden during periods of slower originations. The wholesale channel produces the lowest current period earnings and overall profit, but its low cost structure can be very appealing during periods of low originations or as part of a multi-channel origination strategy. The correspondent channel is similar to the wholesale channel in terms of cost infrastructure, but it generates additional profit through tax benefits on whole loans and interest carry profit.

The Origination Income Statement

Understanding the different origination channels helps to explain why larger lenders are focused not only on mortgage servicing but also on building loan replacement capacity as well as developing multiple origination channels and scalable and efficient infrastructures. These capabilities help lenders hedge against the convexity risk inherent in the MSR compensation stream. A deeper look into the income statement and understanding the range of revenue and costs components helps to illustrate this fact.

Revenue

Below are explanations of the various revenue components found on a lender's loan origination income statement:

- *Loan origination fees*—Standard fee, usually 1% of the loan amount.
- *Service fees*—Also referred to as “junk fees.” These fees, such as document preparation fees, are designed to maximize revenue.
- *MSR Premium*—MSR Premium is the capitalized value of the estimated future cash flows of the servicing strip and its accompanying cash flows, e.g., late fees or interest earnings on escrow accounts minus the expected future costs to service the loan. The MSR's value is highly dependent on its loan level attributes, including loan size, geographic location and escrow balances. The most important accounting element of the MSR is its offsetting accounting journal entry. For the retail channel, the offsetting journal entry is revenue booked in the current period. For the correspondent and the wholesale channels, the offsetting journal entry is the cash paid out to purchase the MSR. The MSR asset is amortized based on the expected cash flows of the servicing compensation. The amortization term of the MSR asset varies between 7 and 14 years. Faster prepayments of the MSR asset may result in asset impairment. MSR assets are accounted for on a lower of cost or market (“LOCOM”) approach.

- *Captive RE*—Most large lenders have reinsurance arrangements where mortgage insurers share premium revenue on high LTV loans to the lenders in exchange for risk sharing agreements.
- *Carry*—Many loans settle prior to the end of the rate lock period. Since the rate lock period incorporates the market drops into the forward settlement prices, early loan settlements can result in additional interest income, which is captured in “carry.”
- *Pack*—Refers to the ability of a lender to reduce the amount of the MSR value imbedded in the loan rate. In periods of heavy refinancing volume, lenders often use this approach to manage business flows or increase the margins. Retail-centric lenders have the greatest ability to manage the “pack” with their customers.

Expenses

The expense side of the lender's income statement lists a number of costs, some that include expenses with high imbedded fixed overhead costs, high variable third party transaction fees, and difficult-to-manage capitalized values. These costs include:

- *Commissions*—All mortgages are retail, with commissions paid to the loan officers, whether they are working for the servicer, broker or correspondent lender. The impact of technology on the mortgage banking originations has not diminished the role of the loan officer. Call centers are only a small portion of the origination market.
- *Processing*—The collection and management of documentation necessary to underwrite a loan to its investor standards is covered by this cost. This is the largest fixed cost component for most mortgage bankers and has limited scalability. Technology plays a major role in helping to manage this portion of the loan origination expense.
- *Underwriting*—Traditionally the most laborious step in the mortgage origination process. Low cost GSE underwriting technologies like Loan Prospector® play a significant role in improving this process by reducing time and expensive labor

costs, extending the reach of underwriting to the point of sale, expanding the risk/return spectrum of loans to include A-minus loans, and reducing the cost of back-end quality control processes.

- **Closing**—This portion of the loan origination process has seen limited benefits from new technologies and includes a high variable cost portion of the origination process.
- **MSR Pay-Through**—This variable percentage expense is the amount of the MSR’s value that a lender cedes on a transaction as an inducement to close the loan. The retail channel requires less pay-through and thus higher profit margins than the correspondent or wholesale channels, where the brokers have more opportunity for price discovery.
- **MSR Impairment Costs**—When a borrower refinances, the lender loses future economic value of the MSR. Lenders must write down the lost value of the current amortized MSR value. However, current financial accounting standards do not require an immediate write-down of the paid-off loan’s MSR value. Since an individual loan’s MSR is part of a composite MSR, lenders can effectively defer the immediate write-down by extending the amortization period or using an impairment allowance.

Table 2 demonstrates the range of potential income statements for each of the different origination channels. This table affirms the conclusions demonstrated in Table 1, but adds more details into the revenue and expense components. As you can see, the retail channel, especially with a call center, has the potential to produce the highest per loan profits. Because of the high infrastructure costs and strong sales culture in the industry, however, call centers are only present in a small portion of the origination market.

The correspondent and wholesale channels do not provide as lucrative per loan revenue opportunities, but the costs structure is dramatically different.

Table 2

	Retail		Correspondent		Wholesale
	Retail	Broker	Correspondent	AOT	Co-issue
	Call Center	Traditional			
Revenues:					
MSR Value	← varies by loan attributes →				
Origination Fee	yes	yes	no	no	no
Service Fees	high				low/none
Captive RE	high				low
Carry	high			low	none
“Pack”	high		low	none	none
Costs:					
MSR Pay-Through	low				high/full
Commission	low	high			low/none
Processing	medium	high			low/none
Underwriting	low	high			low
Closing	medium	high			low/none
Current Period GAAP Potential	high				low

The Role of the MSR

Mortgage servicing rights play a critical role in mortgage originations. In mortgage originations, the ability of the lenders to capitalize the value of the MSR provides the retail channel with almost 50% of the potential revenue on the loan (see Table 3, page 6). The revenue from the MSR premium helps to make those “No Closing Cost” refinances reasonably priced, and thus, more popular. The correspondent and the wholesale channels capitalized MSR generates little net revenue (netting the majority of future servicing revenue against the amortization expense of the MSR) but offers lenders potential for future refinance opportunities. Moreover, as Table 3 demonstrates, even the low profit wholesale channel is better than just letting the loan be refinanced away.

The accounting for MSR, i.e., the ability to capitalize its amortization and impairment rules, has dramatically reduced the implied value of the 25 bps

servicing spread as an aligning mechanism between investors and servicers. Compounding this issue is the volatile nature of MSRs and the difficulties in attempting to hedge their risks. Lenders have learned that it is cheaper to invest in origination capabilities like call centers than it is to buy expensive hedging vehicles or trying to get hedge-accounting treatment for FAS 133.

An economist observing the mortgage banking industry may view the economics of a refinance as a “zero-sum” outcome. However, nothing could be further from the truth: the mortgage banking industry is one driven by accounting results, not economic theory; commissioned sales people are paid each time a loan is originated; opportunities for future fee revenues thrive; and the ability to use the accounting rules to defer its economics or perhaps outgrow them exists. ■

Table 3 Comparison of Refinance Outcomes (in a refinance market)

<i>All amounts (in price)</i>	<i>Retail</i>		<i>Broker</i>	<i>Correspondent</i>		<i>Wholesale</i>	
	<i>Retail</i>			<i>Correspondent</i>	<i>AOT</i>	<i>Co-issue</i>	<i>Ref'ed Away</i>
	<i>Call Center</i>	<i>Traditional</i>					
MSR Value (new loan)	1.60%	1.60%	1.60%	1.60%	1.60%	1.60%	1.60%
Origination Fee	1.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%
“Junk” Fees	0.20%	0.20%	0.10%	0.05%	0.03%	0.00%	0.00%
Captive RE	0.08%	0.08%	0.08%	0.05%	0.03%	0.00%	0.00%
Carry (short lock)	0.15%	0.15%	0.15%	0.05%	0.05%	0.00%	0.00%
Tax Wedge	–	–	–	0.15%	0.15%	–	–
“Pack”	<u>0.20%</u>	<u>0.15%</u>	<u>0.10%</u>	<u>0.05%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
Total Revenues	3.23%	3.18%	2.03%	1.95%	1.96%	1.60%	0.00%
MSR Write-Off (old loan)	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
MSR Pay-Through (new loan)	0.50%	0.50%	1.05%	1.30%	1.50%	1.55%	0.00%
Captive RE	0.08%	0.08%	0.08%	0.05%	0.03%	0.00%	0.08%
Commissions/Variable	<u>0.30%</u>	<u>0.95%</u>	<u>0.15%</u>	<u>0.07%</u>	<u>0.04%</u>	<u>0.03%</u>	<u>0.00%</u>
Total Variable Costs	<u>2.38%</u>	<u>3.03%</u>	<u>2.78%</u>	<u>2.92%</u>	<u>3.07%</u>	<u>3.08%</u>	<u>1.58%</u>
Contribution Margin (internal refi)	<u>0.85%</u>	<u>0.15%</u>	<u>-0.75%</u>	<u>-0.97%</u>	<u>-1.21%</u>	<u>-1.48%</u>	<u>-1.58%</u>
Contribution Margin (external refi)	<u>2.35%</u>	<u>1.65%</u>	<u>0.75%</u>	<u>0.53%</u>	<u>0.29%</u>	<u>0.02%</u>	NA

Revised Minimum Denominations

Effective with the September 2002 transactions, Freddie Mac increased the Minimum Denominations (MD) for its structured mortgage-backed securities. Prior to September 1, most REMIC bonds had an MD of \$1; retail REMICs had an MD of \$1,000; and CPC and IO/PO Strip classes had an MD of \$1,000, with additional increments of \$1.

With the change in effect, most fixed and floating rate principal and interest REMIC bonds will have an MD of \$1,000. The new MD for REMIC or Strip derivative securities (i.e. POs and IOs, including fixed rate IOs, Inverse IOs and Floating Rate IOs), will be either the lesser of \$100,000 in original notional or original principal face or the total original notional or principal face of the bond. The MD for Non-Sticky Jump and Sticky Jump bonds will be \$50,000.

Bond Type	Minimum Denomination
Derivatives (All IO, Inverse IO, Floater IO and PO)	\$100,000 Original Notional or Original Principal Face (or the total original notional or original principal balance if less than \$100,000)
Special (NSJ, SJ)	\$50,000 Original Face
All other bonds	\$1,000 Original Face

Freddie Mac reserves the right to modify the minimum denomination level and the types of bonds affected by increased minimum denominations. If you have any questions or concerns, please contact your representative at (703) 903-2767.

Refinanceable Sensitivity Analysis

The following aggregate table uses pool level data from the August 2002 factors to illustrate the amount of 15-year and 30-year collateral available that is marginally financeable and fully refinanceable. Marginally refinanceable is defined as the 12.5–50 basis point differential between a borrower's mortgage rate and the no-points and no-cost rate. If the difference between the no-points, no-cost rate and a borrower's mortgage rate is greater than 50 basis points, we refer to it as fully refinanceable.

Collateral	MR*		FR*		Total Refinanceable
	% of Current UPB	Current UPB	% of Current UPB	Current UPB	
15-Year	34%	54	40%	64	74%
30-Year	43%	200	43%	199	86%
Total					83%

MR*—Marginally Refinanceable as a 12.5–50 basis point differential between a borrower's mortgage rate and the new no-points rate.

FR*— Fully Refinanceable as >50 basis point differential between a borrower's mortgage rate and the new no-points rate.

Freddie Mac Announces Record Operating Earnings for Second Quarter 2002

Freddie Mac announced operating earnings for second quarter 2002 of \$968 million, compared to \$769 million for the same period a year ago and \$893 million for first quarter 2002. Diluted operating earnings per common

share were \$1.30 for second quarter 2002, compared to \$1.03 for second quarter 2001 and \$1.19 for first quarter 2002.

“Freddie Mac continues to deliver strong financial results in the second quarter, and we remain on track for record results in 2002,” said Leland Brendsel, Chairman and Chief Executive Officer. “We also took other steps to demonstrate our leadership in financial disclosure, voluntarily initiating SEC oversight of our disclosures and becoming among the first major financial services companies to recognize the expense of employee stock options.”

To view the full earnings release, visit www.freddiemac.com/shareholders/er/2q02.htm.

PC Prefix Guide Now Available

Enclosed in this issue of Gold Perspective is Freddie Mac's revised PC Prefix Guide.

The card is also available online at www.freddiemac.com/mbs/data/goldcard.pdf.

For more information, please call Investor Inquiry at (800) 336-3672.

Volumes and Performance

Freddie Mac Guaranteed Maturity Securities Issuance—2nd Quarter 2002

Principal Type	April	May	June	Grand Total
GMC/SEQ	\$460,000,000.00		\$593,485,526.00	\$1,053,485,526.00
GMC/SUP	\$102,573,000.00	\$42,255,000.00	\$25,445,450.00	\$170,273,450.00
GMC/TAC	\$125,260,000.00	\$238,013,700.00	\$120,000,000.00	\$483,273,700.00
GMC/SCH	\$324,029,000.00	\$50,355,000.00		\$374,384,000.00
SC/GMC/NSJ	\$260,635,000.00	\$50,000,000.00		\$310,635,000.00
SC/GMC/SEQ		\$233,652,781.00		\$233,652,781.00
GMC/SEG/SC		\$145,221,000.00		\$145,221,000.00
GMC/NSJ/SUP		\$55,236,286.00		\$55,236,286.00
GMC/NSJ/TAC		\$81,264,714.00		\$81,264,714.00
GMC/PAC			\$129,757,000.00	\$129,757,000.00
SC/GMC/TAC			\$80,548,500.00	\$80,548,500.00
SC/GMC/SUP			\$190,927,000.00	\$190,927,000.00
Total 2Q	\$1,272,497,000.00	\$895,998,481.00	\$1,140,163,476.00	\$3,308,658,957.00

Primary Mortgage Market Survey

Summary page with all rate types—U.S. averages

Quarter	U.S. 30-yr FRM	30 yr fees & points	U.S. 15-yr FRM	15-yr fees & points	U.S. 1-yr ARM	ARM fees & points	U.S. ARM margin
Q1:2000	8.26	1.0	7.85	1.0	6.68	1.0	2.78
Q2:2000	8.32	1.0	7.99	1.0	7.05	1.0	2.78
Q3:2000	8.02	1.0	7.73	1.0	7.28	0.9	2.78
Q4:2000	7.62	0.9	7.29	0.9	7.17	0.9	2.78
Q1:2001	7.01	0.9	6.59	0.9	6.46	0.9	2.78
Q2:2001	7.13	0.9	6.66	1.0	5.93	0.9	2.78
Q3:2001	6.96	0.9	6.51	0.9	5.67	0.9	2.77
Q4:2001	6.77	0.8	6.25	0.8	5.23	0.8	2.76
Q1:2002	6.97	0.7	6.46	0.7	5.09	0.7	2.78
Q2:2002	6.81	0.7	6.29	0.7	4.8	0.7	2.77

Freddie Mac Giant Volume—2nd Quarter 2002

Month	Total
April	\$4,485,517,810.00
May	\$2,718,416,325.00
June	\$2,819,074,670.00
Total 2Q	\$10,023,008,805.00

Volume of Structured Products by Month—2nd Quarter 2002

Month	REMICs	SPC	Strips	Grand Total
April	\$23,785,548,402.00			\$23,785,548,402.00
May	\$24,531,930,123.00	\$1,839,238,931.00	\$2,000,000,000.00	\$28,371,169,054.00
June	\$18,842,256,062.00	\$491,250,000.00		\$19,333,506,062.00
Total 2Q	\$67,159,734,587.00	\$2,330,488,931.00	\$2,000,000,000.00	\$71,490,223,518.00
Total YTD¹	\$130,317,213,418.00	\$5,443,414,931.00	\$12,950,000,000.00	\$148,710,628,349.00

¹ Through June 30, 2002

Total Mortgage Participation Certificates (Total PCs)

	PC Issuances	Liquidations	Net Additions	Ending Balance	Annualized Growth Rate	PCs Held in Retained Portfolio	Total PCs, Net (1)	Annualized Growth Rate
June 2001	\$ 38,133	\$ (20,337)	\$ 17,796	\$ 873,750	24.9%	\$ 269,693	\$ 604,057	30.2%
July	44,574	(19,380)	25,194	898,944	34.6%	278,825	620,119	31.9%
August	33,933	(19,060)	14,873	913,817	19.9%	287,521	626,296	12.0%
September	32,666	(18,993)	13,673	927,490	18.0%	291,646	635,844	18.3%
October	31,646	(26,887)	4,759	932,249	6.2%	296,499	635,750	-0.1%
November	38,958	(32,077)	6,881	939,130	8.9%	300,806	638,324	4.9%
December	50,532	(41,253)	9,279	948,409	11.9%	301,961	646,448	15.3%
January 2002	\$ 49,031	\$ (27,756)	\$ 21,275	\$ 969,684	26.9%	\$ 319,470	\$ 650,214	7.0%
February	47,473	(23,419)	24,054	993,738	29.8%	333,950	659,788	17.7%
March	42,545	(23,805)	18,740	1,012,478	22.6%	326,690	716,698	27.7%
April	40,704	(20,781)	19,923	1,032,401	23.6%	331,866	700,535	41.6%
May	29,831	(18,844)	10,987	1,043,388	12.8%	326,690	716,698	27.7%
June	30,767	(20,894)	9,873	1,053,261	11.4%	328,035	725,226	14.3%
July	29,335	(26,412)	2,923	1,056,184	3.3%	328,051	728,133	4.8%
YTD 2002	\$ 269,686	\$ (161,911)	\$ 107,775	\$ 1,056,184				

(1) Equal to ending balance of Total PCs net of PCs held in the retained portfolio U.S. averages

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