



WILARY WINN LLC

ADVICE TO
STRENGTHEN
FINANCIAL
INSTITUTIONS

Mortgage Banking Trends, Pipeline Risk Management and Mortgage Servicing

March 2022

3/22/2022

TOPICS FOR TODAY'S SESSION

- 1) Mortgage Marketplace
- 2) Pipeline Hedging
- 3) Mortgage Servicing Rights (MSRs)
- 4) The Good and the Bad



Douglas Winn

Mr. Winn has nearly 40 years of executive level financial experience. He is a nationally recognized expert regarding accounting and regulatory reporting for financial institutions. Doug regularly advises major accounting firms on areas where finance and accounting intersect, including valuation. Many Wilary Winn white papers, which he has authored or co-authored, are considered standards for the industry. Mr. Winn is regularly invited to speak at conferences, and he has led seminars sponsored by the AICPA, the FDIC, the FFIEC, the NCUA, and many of the country's largest accounting firms.

Doug co-founded Wilary Winn and is responsible for the firm's strategic direction. From just an idea in 2003, Wilary Winn has grown into a national presence with financial institution clients located across the United States. Wilary Winn's clients include nearly 300 community banks, 80 of which are publicly traded, and nearly 300 credit unions, including 45 of the top 100.

In his earlier career, Doug held multiple senior executive finance roles in the mortgage banking industry. He began his career as a practicing CPA for Arthur Young & Company – now Ernst & Young.

Contact Information: 651-224-1200 or dwinn@wilwinn.com

Research and Whitepapers: www.wilwinn.com



WILARY WINN LLC

Eric Nokken

Mr. Nokken has over twenty years of experience in the financial services industry and has been with Wilary Winn since 2004.

Mr. Nokken leads Wilary Winn's mortgage banking activities line of business. Eric's team provides mortgage servicing rights valuations on portfolios that range in size from \$4 million to over \$4 billion for more than 375 clients across the country. Eric is an expert in the accounting and regulatory reporting related to mortgage banking activities, including interest rate lock commitment and forward loan sale commitment derivatives, as well as mortgage servicing rights.

Mr. Nokken also values commercial servicing rights, SBA servicing rights and gain on sale calculations related to SBA loan sales as well as auto, home equity and HELOC servicing related to loan sale participations.



Contact Information: 651-224-1200 or enokken@wilwinn.com



WILARY WINN LLC



MORTGAGE MAKRRKETPLACE

Mortgage Marketplace

Residential Mortgage Loan Origination Volume - Dollars

Source Inside Mortgage Finance

Year	Government	Conforming Conventional	Jumbo	Expanded Credit	Total	ARMs	Refinance	Purchase
2004	135	1,210	515	730	2,590	1,464	1,341	1,248
2005	90	1,090	570	1,005	2,755	1,490	1,390	1,365
2006	80	990	480	1,000	2,550	1,340	1,249	1,301
2007	116	1,151	348	466	2,081	724	1,081	1,000
2008	293	928	98	65	1,384	236	702	682
2009	451	1,201	97	10	1,759	114	1,218	541
2010	377	1,092	104	8	1,581	156	1,063	518
2011	294	963	170	18	1,445	197	945	500
2012	390	1,438	225	23	2,076	213	1,489	587
2013	366	1,174	272	18	1,830	196	1,096	734
2014	277	767	235	21	1,300	220	517	783
2015	416	967	328	24	1,735	199	811	924
2016	502	1,148	383	32	2,065	212	1,028	1,037
2017	444	1,008	320	38	1,810	216	678	1,132
2018	367	937	281	45	1,630	191	479	1,151
2019	516	1,365	392	52	2,325	250	1,069	1,256
2020	765	2,863	435	37	4,100	277	2,627	1,473
2021 Q 3	605	2,645	446	34	3,730	180	2,290	1,440



WILARY WINN LLC

Mortgage Marketplace

Residential Mortgage Loan Origination Volume - Percent

Source Inside Mortgage Finance

Year	Government	Conforming Conventional	Jumbo	Expanded Credit	Total	ARMs	Refinance	Purchase
2004	5.2%	46.7%	19.9%	28.2%	100.0%	56.5%	51.8%	48.2%
2005	3.3%	39.6%	20.7%	36.5%	100.0%	54.1%	50.5%	49.5%
2006	3.1%	38.8%	18.8%	39.2%	100.0%	52.5%	49.0%	51.0%
2007	5.6%	55.3%	16.7%	22.4%	100.0%	34.8%	51.9%	48.1%
2008	21.2%	67.1%	7.1%	4.7%	100.0%	17.1%	50.7%	49.3%
2009	25.6%	68.3%	5.5%	0.6%	100.0%	6.5%	69.2%	30.8%
2010	23.8%	69.1%	6.6%	0.5%	100.0%	9.9%	67.2%	32.8%
2011	20.3%	66.6%	11.8%	1.2%	100.0%	13.6%	65.4%	34.6%
2012	18.8%	69.3%	10.8%	1.1%	100.0%	10.3%	71.7%	28.3%
2013	20.0%	64.2%	14.9%	1.0%	100.0%	10.7%	59.9%	40.1%
2014	21.3%	59.0%	18.1%	1.6%	100.0%	16.9%	39.8%	60.2%
2015	24.0%	55.7%	18.9%	1.4%	100.0%	11.5%	46.7%	53.3%
2016	24.3%	55.6%	18.5%	1.5%	100.0%	10.3%	49.8%	50.2%
2017	24.5%	55.7%	17.7%	2.1%	100.0%	11.9%	37.5%	62.5%
2018	22.5%	57.5%	17.2%	2.7%	100.0%	11.7%	29.4%	70.6%
2019	22.2%	58.7%	16.9%	2.2%	100.0%	10.8%	46.0%	54.0%
2020	18.7%	69.8%	10.6%	0.9%	100.0%	6.8%	64.1%	35.9%
2021 Q 3	16.2%	70.9%	12.0%	0.9%	100.0%	4.8%	61.4%	38.6%



WILARY WINN LLC

Mortgage Marketplace

Forecasted Residential Mortgage Loan Originations

Source Mortgage Bankers Association

RESIDENTIAL MORTGAGE LOAN VOLUME					
	2020	2021	2022	2023	2024
Total one-to-four					
Purchase	1,483	1,646	1,739	1,850	1,784
Refinance	2,625	2,345	861	676	746
Total	4,108	3,991	2,600	2,526	2,530
Refinance %	46	60	43	26	24
Percent change	NA	-2.8%	-34.9%	-2.8%	0.2%
FHA originations	255	342	265	216	210



WILARY WINN LLC

Mortgage Marketplace

Largest Loan Originators

RESIDENTIAL MORTGAGE LOAN VOLUME									
Rank	Lender	2021	4Q21	3Q21	2Q21	1Q21	Share	Change 20 - 21	Type*
1	Rocket Mortgage (Quicken), MI	355.34	80.00	88.05	83.76	103.53	7.36%	11.0%	PNB
2	PennyMac Financial, CA	235.18	47.80	59.10	61.30	66.98	4.87%	19.6%	PNB
3	United Wholesale Mortgage, MI	226.50	55.19	63.00	59.21	49.09	4.69%	24.1%	NB
4	Wells Fargo & Company, IA	205.01	48.09	51.96	53.12	51.84	4.25%	-7.6%	
5	Chase, NJ	182.31	48.10	46.10	44.90	43.21	3.78%	36.7%	
6	NewRez/Caliber, PA	180.80	40.70	45.35	44.97	49.79	3.75%	193.5%	PNB
7	loanDepot.com, CA	137.02	29.04	32.00	34.50	41.48	2.84%	35.9%	NB
8	Freedom Mortgage Corp., NJ	114.57	16.89	23.13	30.14	44.42	2.37%	-6.2%	NB
9	Guaranteed Rate Inc., IL	114.54	24.34	28.63	29.31	32.27	2.37%	55.1%	NB
10	U.S. Bank Home Mortgage, MN	102.07	25.18	28.40	23.71	24.78	2.12%	14.7%	
11	Home Point Financial, MI	96.04	20.35	20.80	25.48	29.42	1.99%	54.9%	PNB
12	Mr. Cooper Group, TX	86.80	19.50	19.94	22.23	25.13	1.80%	37.3%	NB
13	Amerihome Mortgage, CA	80.50	18.31	19.15	21.92	21.12	1.67%	24.7%	NB
14	Bank of America Home Loans, NC	79.69	22.96	21.23	20.27	15.23	1.65%	15.4%	
15	Fairway Independent Mortgage Corp., WI	72.43	16.53	18.25	18.66	19.00	1.50%	10.1%	NB
16	Truist, NC	57.69	14.46	15.85	14.30	13.08	1.20%	5.0%	NB
17	Better.com, NY	50.86	10.26	13.98	13.33	13.29	1.05%	129.2%	NB
18	Flagstar Bank, MI	49.82	10.65	12.54	12.80	13.82	1.03%	3.1%	
19	Lakeview Loan Servicing, FL	48.85	10.50	12.00	14.23	12.13	1.01%	11.0%	NB
20	Citizens Bank, RI	42.64	9.86	10.29	11.38	11.11	0.88%	5.4%	
21	Guild Mortgage Co., CA	37.54	9.50	10.06	8.19	9.78	0.78%	6.5%	PNB
22	CrossCountry Mortgage, LA	36.40	8.10	9.00	9.60	9.70	0.75%	-14.7%	NB
23	Amerisave Mortgage Corp, GA	36.14	6.00	7.52	8.28	14.33	0.75%	49.3%	NB
24	Movement Mortgage, VA	33.15	8.19	8.25	8.20	8.51	0.69%	10.7%	NB
25	Cardinal Financial, NC	32.81	7.35	8.56	8.00	8.90	0.68%	22.2%	NB
26	Citi, MO	31.18	6.93	7.14	8.95	8.15	0.65%	-8.2%	
27	First Republic Bank, CA	29.45	6.99	6.98	8.62	6.86	0.61%	23.2%	
28	Broker Solutions/New American Funding, CA	29.33	6.41	7.03	7.21	8.68	0.61%	-1.2%	NB
29	Finance of America Mortgage, PA	29.17	6.75	7.25	6.80	8.36	0.60%	0.8%	PNB
33	Navy Federal Credit Union, VA	24.86	6.45	5.92	6.72	5.77	0.52%	6.3%	

Data from Inside Mortgage Finance

Type*

PNB = Publicly Traded Non-Bank

NB = Non-Bank

Blank = Bank or Credit Union



WILARY WINN LLC



PIPELINE HEDGING

Mortgage Pipeline Hedging

Guidance

- Interagency advisory on mortgage banking – February 2003
- Interagency advisory on accounting and reporting for commitments to originate and sell mortgage loans – May 2005
- OCC Comptroller's Handbook Mortgage Banking – February 2014

Mortgage Pipeline Hedging

Interagency Advisory on Accounting and Reporting for Commitments to Originate and Sell Mortgage Loans

Provides guidance on accounting and reporting for commitments to:

- Originate mortgage loans that will be held for resale; and
- Sell mortgage loans under mandatory and best-efforts sales contracts



Mortgage Pipeline Hedging

Interest Rate Lock Commitments (“IRLCs”)

- Interest rate lock in commitments on mortgage loans that will be held for resale are derivatives
- Commitments to originate mortgage loans to be held for investment and other types of loans are generally not derivatives



Mortgage Pipeline Hedging

Types of IRLCs

- Lock ins for fixed rate loans
- Lock ins for adjustable-rate loans
- Commitments with floating rates



Mortgage Pipeline Hedging

IRLC Valuation Components

- Loan amount
- Interest rate
- Price of the loan at valuation date
- Value of servicing
- Discount points
- Direct origination fees and costs

Mortgage Pipeline Hedging

IRLC Valuation Example

Loan Amount	\$250,000
Price to the borrower at lock-in:	Par or 100
Locked Interest Rate	3.375%
Market Interest Rate	3.000%
Sales Price (locked with investor)	101.50
Value of Servicing	1.150% or \$2,875
Projected Origination Costs	1.000% or \$2,500



Mortgage Pipeline Hedging

IRLC Valuation Example

		Inception	Rates Increase 50 bp	Loan Has Been Processed	Rates Drop 100 bp	Loan Has Been Approved	Loan at Close
Loan Amount	(A)	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000
Lock In Interest Rate		3.375%	3.375%	3.375%	3.375%	3.375%	3.375%
Market Interest Rate		3.000%	3.500%	3.500%	2.500%	2.500%	2.500%
Market Value	(B)	101.50%	99.50%	99.50%	103.50%	103.50%	103.50%
Servicing Value	(C)	1.15%	1.15%	1.15%	1.15%	1.15%	1.15%
Origination Costs	(D)	1.00%	1.00%	0.50%	0.50%	0.25%	0.00%
Borrower Price	(E)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Value as a Percent of Loan (B) + (C) - (D) - (E)	(F)	1.65%	-0.35%	0.15%	4.15%	4.40%	4.65%
Dollar Value (A) * (F)	(G)	\$ 4,125	\$ (875)	\$ 375	\$ 10,375	\$ 11,000	\$ 11,625
Pull-through Percentage	(H)	30.00%	30.00%	60.00%	60.00%	80.00%	100.00%
Net Value (G) * (H)	(I)	\$ 1,238	\$ (263)	\$ 225	\$ 6,225	\$ 8,800	\$ 11,625
Value Recorded		\$ 1,238	\$ (1,500)	\$ 488	\$ 6,000	\$ 2,575	\$ 2,825



Mortgage Pipeline Hedging

Other Valuation Considerations

- Changes in interest rates can also affect the value of the servicing asset
- Pull-through assumptions in the marketplace are more complex than the simplified example



Mortgage Pipeline Hedging

Factors Affecting Pull-through and the Hedge

- Market interest rates
- Type of origination – retail or wholesale
- Length of lock
- Purpose of loan – purchase or refinance
- Type of loan – fixed or variable
- Processing status of loan



Mortgage Pipeline Hedging

Types of Sales Commitments

- Mandatory delivery
- Best efforts delivery
- Master agreements

Mortgage Pipeline Hedging

Mandatory Delivery Commitment

An institution commits to deliver a certain amount of loans to an investor at a specified price on or before a specified date

Requires a pair-off fee based on then current market prices to compensate investor for any shortfall

Examples:

- FNMA/FHLMC cash window
- MBS TBAs
- MBS Assignment of Trade (AOTs)

Mortgage Pipeline Hedging

Cash Versus MBS Pricing Components

Cash Price Components

- Commitment price
- Interest rate
- Type of loan
- Loan term
- Loan level price adjustors
- Servicing

MBS Pricing Components

- Market price
- Guarantee fee
- Buyups and buydowns
- Pooling considerations



Mortgage Pipeline Hedging

Mandatory Delivery Contracts are Derivatives

- Has a “specified underlying” – the specified price
- Requires little or no initial net investment
- Has a “notional amount” – the principal amount of the loan
- Requires or permits net settlement by paying a pair-off fee based on then current market prices
- Is a derivative



Mortgage Pipeline Hedging

Best Efforts Delivery Commitments

- An institution commits to deliver an individual loan of a specified principal amount and quality to an investor if the loan to the underlying borrower closes
- Generally not considered a derivative until the loan closes because it does not meet the net settlement criteria
- The result is that the change in the value of best-efforts contracts will not offset the change in the value of the IRLCs for accounting purposes unless fair value is elected
- An institution will want to elect fair value if they want a “hedge” against the fluctuation in the value of the IRLC



Mortgage Pipeline Hedging

Value of Forward Loan Sale Commitment

		Inception	Rates Increase 50 bp	Loan Has Been Processed	Rates Drop 100 bp	Loan Has Been Approved	Loan at Close
Loan Amount	(A)	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000
Lock In Interest Rate		3.375%	3.375%	3.375%	3.375%	3.375%	3.375%
Market Interest Rate		3.000%	3.500%	3.500%	2.500%	2.500%	2.500%
Market Value	(B)	101.50%	99.50%	99.50%	103.50%	103.50%	103.50%
Servicing Value	(C)	1.15%	1.15%	1.15%	1.15%	1.15%	1.15%
Sales Price including SRP	(D)	102.65%	102.65%	102.65%	102.65%	102.65%	102.65%
Value as a Percent of Loan (D) - (B) - (C)	(E)	0.00%	2.00%	2.00%	-2.00%	-2.00%	-2.00%
Dollar Value (A) * (E)	(F)	\$ -	\$ 5,000	\$ 5,000	\$ (5,000)	\$ (5,000)	\$ (5,000)
Pull-through Percentage	(G)	30.00%	30.00%	60.00%	60.00%	80.00%	100.00%
Net Value (F) * (G)	(H)	\$ -	\$ 1,500	\$ 3,000	\$ (3,000)	\$ (4,000)	\$ (5,000)
Value Recorded		\$ -	\$ 1,500	\$ 1,500	\$ (6,000)	\$ (1,000)	\$ (1,000)



Mortgage Pipeline Hedging

Netting of Derivatives for Reporting Purposes

- May net gains and losses of individual derivative commitments only under certain conditions, generally only under the legal right of offset
- The value of sales commitments covering the pipeline may not be netted against the value of the IRLCs, they must be reported separately
- The value of sales commitments covering the warehouse may not be netted against the value of the warehouse loans, they must be reported separately



Mortgage Pipeline Hedging

Closed Loans Held for Sale

- Loans Held for Sale (“LHFS”) are reported at lower of cost or market unless fair value is elected
- An institution will want to elect fair value if they want a “hedge” against the fluctuation in the value of the mandatory commitment

Mortgage Pipeline Hedging

Secondary Marketing Position Report Example

1 DYNAMIC RISK POSITION LIMITS
2 POSITION SUMMARY
3 POSITION RECONCILIATION
4 DYNAMIC HEDGE RECOMMENDATION
5 DYNAMIC HEDGE RECOMMENDATION BREAKDOWN
6 PIPELINE STATS
7 COVERAGE DETAIL
8 COVERAGE RECONCILIATION
9 DEALER SUMMARY REPORT
10 OPTIONS
11 RATE PROTECTION PLAN
12 OAS POSITION REVIEW
13 OAS POSITION RECONCILIATION
14 POSITION GRAPHS
15 PIE CHARTS
16 LOCK EXPIRATION ANALYSIS GRAPH
17 DETAILED RISK POSITION
18 OAS DETAILED RISK POSITION
19 MARKET DATA TABLE
20 MARKET DATA RECONCILIATION
21 POSITION SUMMARY SHOCK ANALYSIS
22 SHOCK CLOSE PERCENTS
23 FALLOUT BY STATUS
24 YIELD GRAPHS
25 NEW LOCKED LOAN ANALYSIS
26 LOCK DIFFERENTIALS
27 LOCK EXPIRATION ANALYSIS
28 NEW CLOSED LOAN ANALYSIS
29 TOTAL CLOSED LOAN ANALYSIS
30 AGED LOAN ANALYSIS
31 LOCKS BY STATUS REPORTS
32 LOCKS BY PURPOSE REPORTS
33 SUPPLEMENTAL LOCKS REPORTS
34 LOCKED WEIGHTED AVERAGES
35 MANAGEMENT GRAPHS

PRODUCTION MIX

% REFINANCE 58.85%
% PURCHASE 41.15%

POSITION	GROSS	NET OAS	MK-TO-MKT	MGN
LOCKED PIPELINE	705,830,677	542,235,560	16,347,984	2.81%
CLOSED PIPELINE	63,937,637	55,219,011	2,027,875	3.17%
TOTAL PIPELINE	769,768,314	597,454,571		
TRADES	630,085,943	585,796,814	(2,463,802)	-0.41%
NET POSITION	139,682,371	11,657,757	15,912,058	2.47%
COVERAGE %	81.85%	98.05%		
LOCKED PDELTA	0	1,417,293	713,292	0.12%
CLOSED PDELTA	0	407,327	111,019	0.17%
TRADES PDELTA	2,000,000	1,494,059	(863,899)	-0.15%
NET PDELTA	(2,000,000)	330,561	(39,588)	-0.05%
NEW LOCKS	25,445,041	18,662,031	514,656	2.58%
FALLIN	2,270,883	1,971,073	67,320	2.96%
FALLOUT	1,956,330	1,167,933	51,075	2.61%
NET FALL	314,553	803,140	16,246	5.16%
FNMA 30 YR 2.0	103.67	0.00		
DYNAMIC POS	77,303			

MGN is profit margin
Net OAS is value to hedge



WILARY WINN LLC



MORTGAGE SERVICING RIGHTS

MSR – Valuation Considerations

Retained Mortgage Servicing Rights

- MSRs are a modified interest only strip
- Many types of underlying loans
- Value varies significantly by type of MSR



MSR Valuation

Interagency Advisory on MSRs

- Requires comprehensive documentation of valuation process
- Valuation must be based on reasonable and supportable assumptions and major changes to assumptions must be approved
- Compare assumptions to actual results
- Use appropriate amortization and recognize impairment timely

MSR – Valuation Considerations

Valuation Inputs

- Loan amount
- Servicing fee percentage – varies by investor and type of loan
- Ancillary income
- Expected loan life – prepayment and loan term
- Discount rate
- Costs to service – market costs
- Float Income on P&I payments and escrow payments
- Delinquency rate and foreclosure losses – recourse versus non-recourse



MSR Valuation Inputs

Input Considerations

- Servicing fees are earned monthly based on remaining principal balance
- Servicing costs should be calculated in dollars per loan not in basis points
- Ancillary income includes late fees, insurance income and other fees earned
- Float and escrows (impounds) add value

MSR Valuation Inputs

Range of Valuation Inputs

Ancillary Income	Low	High	Average	Median
FNMA / FHLMC				
Fixed	4.34	50.36	26.61	26.03
ARM	9.95	51.11	26.68	30.00
GNMA				
Fixed	3.77	56.13	35.81	35.00
ARM		Data Not Received		
Discount Rate				
FNMA / FHLMC				
Fixed	7.06%	9.61%	9.05%	9.25%
ARM	9.00%	13.00%	10.29%	9.50%
GNMA				
Fixed	9.15%	12.50%	10.50%	10.30%
ARM	10.00%	16.10%	12.10%	12.00%
Servicing Costs				
FNMA / FHLMC				
Fixed	40.31	137.20	67.09	63.49
ARM	38.15	137.35	71.77	67.20
GNMA				
Fixed	54.19	137.24	77.75	76.19
ARM		Data Not Received		

PWC Summary as of August 31, 2021



WILARY WINN LLC

MSR Valuation

Input Sensitivity

	<u>Value</u>	<u>Change</u>	<u>% Change</u>
Base	1.159%		
Prepayments increase 30%	1.046%	-0.113%	-9.8%
Servicing costs increase 30%	1.109%	-0.049%	-4.2%
Delinquencies increase 30%	1.156%	-0.003%	-0.2%
Discount rate increases 30%	1.039%	-0.120%	-10.4%

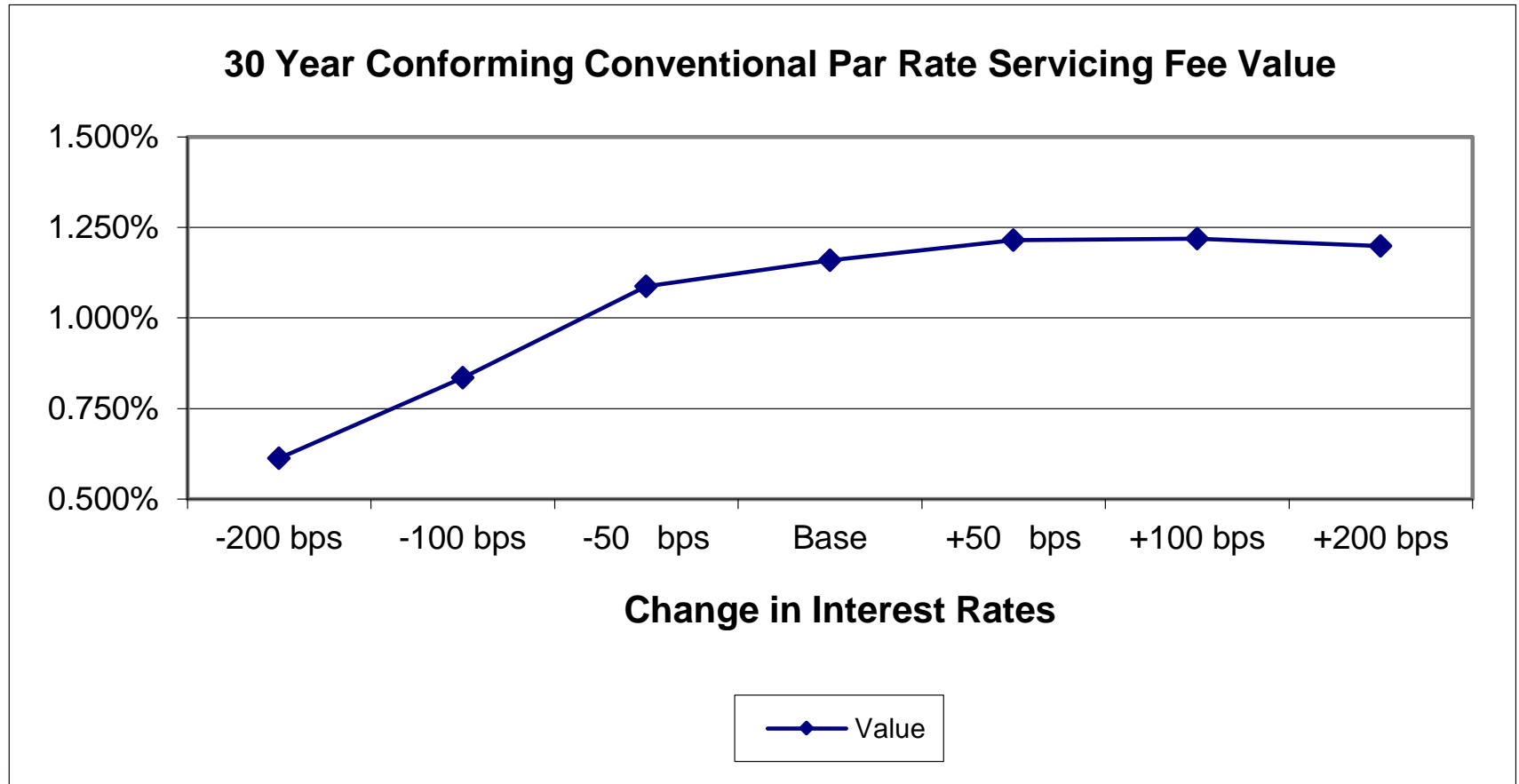
Source: Wilary Winn, January 31, 2022



WILARY WINN LLC

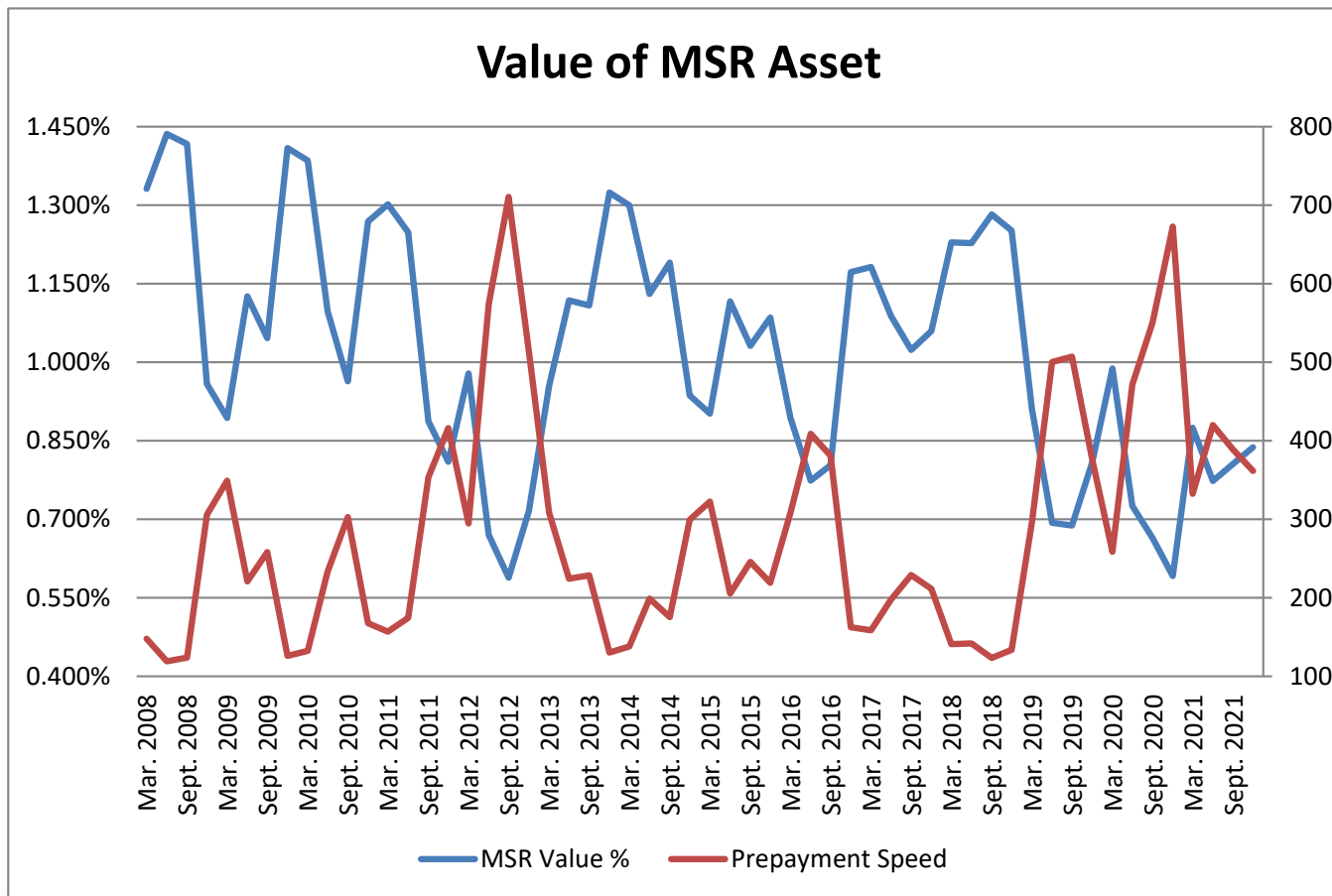
MSR Valuation

MSR Yield Curve and Convexity



MSR Valuation

MSR Values and Prepayment Input



MSR Valuation

Stochastic Modeling

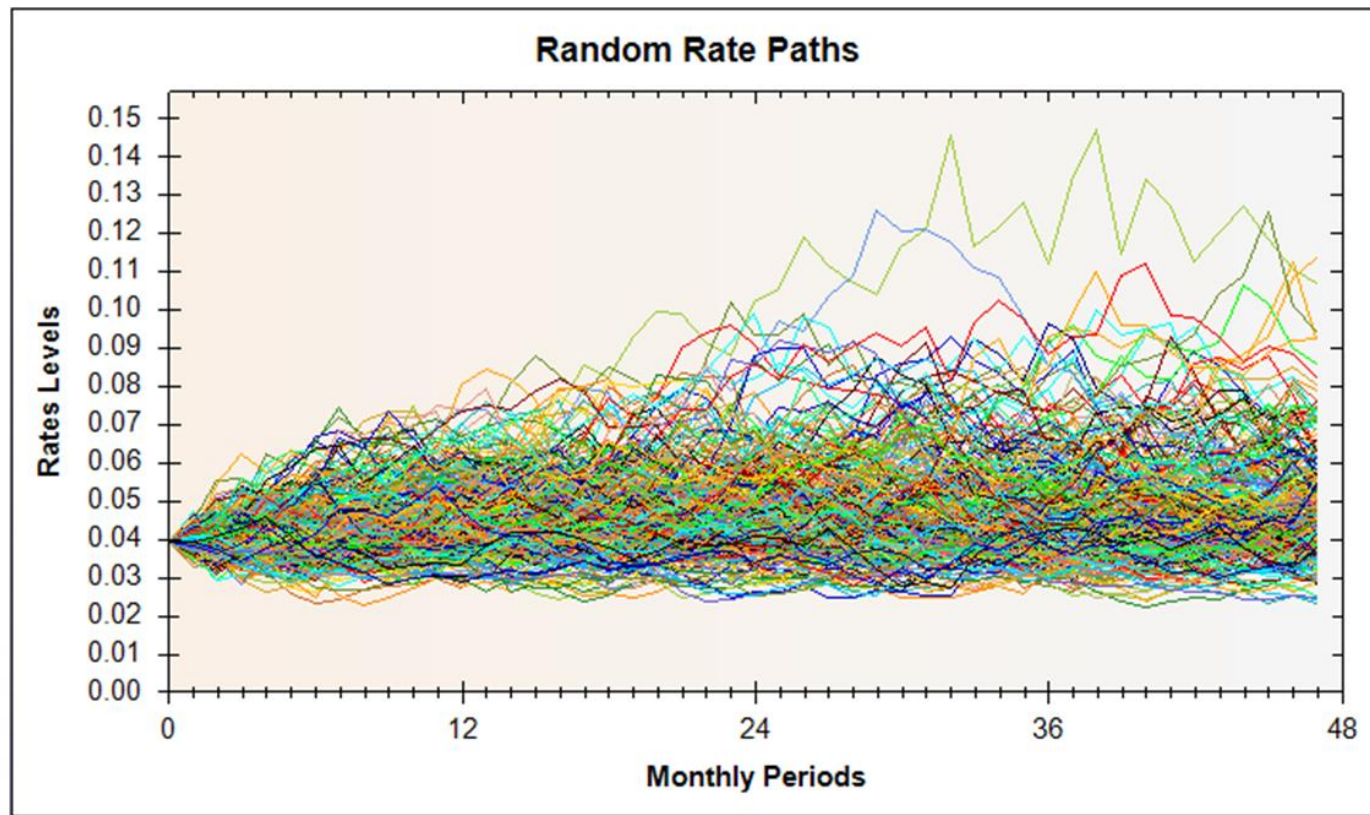
- Supply prices to solve for option adjusted spread (“OAS”) with a Monte Carlo Simulation
- Works best with residential mortgage loans and securities
- Interest rate movement is random
- Multiple simulations (thousands) of interest rate movements are performed for estimating probability distributions



MSR Valuation

Random Paths Assuming a 4% Starting Rate and a Mean Reversion Method

OAS Example



MSR Valuation

OAS Advantages

- Use of a probabilistic model consistent with the current term structure of interest rates and the assumed level of volatility
- Development of explicit pricing and valuation for embedded options, such as the prepayment option
- Use of simulation methodology that is more theoretically sound, approximating the methodologies used to value hedge instruments and mortgage securities



MSR Valuation

OAS Disadvantages

- Lack of precise market prices for specific MSAs. The OAS used in the model, like the discount rate used in static analysis, is arbitrary
- Requirement of more resources than static analysis in terms of computing power, software, and model sophistication
- Lack of set standards for OAS computation. OAS model results are highly dependent on input assumptions such as volatility, prepayment speed, default rates, inflation, the appropriate risk-free rate (Treasury or LIBOR), and the setting of model parameters, all of which can result in different OAS and MSA values
- Lack of consistency in OAS model methodology that may result in asset valuation differences



MSR Accounting

Fair Value Method

- The fair value is determined at each reporting period
- The asset is adjusted to equal its fair value
- The difference is taken into income or expense for that reporting period
- Institutions that hedge their servicing rights portfolios can benefit from the fair value method because the accounting is less complex than under FAS ASC Topic 815 – Derivatives and Hedging. Institutions that do not hedge their portfolios and that elect the fair value method could experience earnings volatility.



MSR Accounting

Amortization Method

Amortize the MSR in proportion and over the period of estimated net servicing income (level yield method) and **assess servicing assets for impairment** based on fair value at each reporting date.



MSR Impairment

Impairment Considerations

- Impairment is best measured at the loan level and is reported at the predominant risk characteristic stratum
- There is a difference between temporary impairment, which is accounted for through an allowance and permanent impairment, which requires a direct write-off



MSR Impairment

ABC Bank Servicing Portfolio as of December 31, 2021

		Principal Balance	# of Loans	Avg. Loan Size	WAC	WAM	Age	Avg Life	Service Fee	T&I Total	Prepayment PSA	Lifetime CPR%	Servicing Multiple	Fair Value %	Fair Value \$	Book Value \$	Fair Value - Book Value	Bal. Sheet Impact
40, 30, & 25 year	less than 4.750%	404,677,431	2,504	161,612	3.205%	331	29	7.00	0.250%	410,992	178	10.305%	3.9	0.980%	3,965,628	3,857,415	108,214	-
	4.750% - 6.750%	15,850,927	177	89,553	5.191%	274	86	3.98	0.250%	16,432	323	19.289%	2.3	0.570%	90,291	83,960	6,332	-
	greater than 6.750%	166,073	3	55,358	7.112%	184	176	2.67	0.250%	-	426	25.557%	1.3	0.326%	541	221	321	-
	Total 40, 30, & 25 year	420,694,431	2,684	156,742	3.282%	329	31	6.89	0.250%	427,425	184	10.650%	3.9	0.964%	4,056,461	3,941,595	114,866	-
20 year	less than 4.625%	48,814,714	350	139,471	2.957%	216	24	5.93	0.250%	56,556	157	8.999%	3.5	0.865%	422,363	364,716	57,647	-
	4.625% - 6.625%	612,175	17	36,010	5.284%	98	142	2.62	0.250%	998	283	16.991%	0.8	0.198%	1,212	757	455	-
	greater than 6.625%	-	-	-	0.000%	-	-	-	0.000%	-	0	0.000%	-	0.000%	-	-	-	-
	Total 20 year	49,426,888	367	134,678	2.986%	214	26	5.89	0.250%	57,554	159	9.098%	3.4	0.857%	423,575	365,472	58,102	-
15 year	less than 4.500%	161,265,800	1,426	113,090	2.550%	153	27	4.15	0.250%	174,768	206	11.539%	2.6	0.638%	1,028,862	939,482	89,380	-
	4.500% - 6.500%	552,077	30	18,403	4.801%	84	96	2.14	0.250%	1,862	292	17.512%	0.0	0.003%	16	(0)	16	-
	greater than 6.500%	14,829	2	7,415	6.875%	12	168	0.47	0.250%	-	293	17.578%	-1.9	-0.482%	(72)	(0)	(72)	(72)
	Total 15 year	161,832,706	1,458	110,996	2.558%	153	27	4.14	0.250%	176,630	206	11.560%	2.5	0.636%	1,028,806	939,482	89,324	(72)
12 year & less	less than 4.375%	17,315,628	177	97,828	2.343%	105	16	3.32	0.250%	18,352	201	10.617%	2.0	0.503%	87,167	77,018	10,149	-
	4.375% - 6.375%	43,553	2	21,776	4.423%	85	35	2.49	0.250%	51	292	17.292%	-0.5	-0.120%	(52)	-	(52)	(52)
	greater than 6.375%	-	-	-	0.000%	-	-	-	0.000%	-	-	0.000%	-	0.000%	-	-	-	-
	Total 12 year & less	17,359,180	179	96,979	2.348%	104	16	3.32	0.250%	18,403	201	10.634%	2.0	0.502%	87,115	77,018	10,097	(52)
Grand Total		649,313,206	4,688	138,505	3.054%	270	30	6.03	0.250%	680,012	188	10.758%	3.4	0.862%	5,595,956	5,323,567	272,390	(124)
																	Existing Impairment Reserve	(700,587)
																	(Additional) / Excess Impairment	700,463



MSR Impairment

Managing Runoff Risk

- The operational / macro hedge
- Hedge with positive convexity instruments
- Utilize appropriate amortization methodology





GOOD AND BAD

Good and Bad

Declining Delinquency Rates

	Delinquencies			
	30 day	60 day	90 day+	Total
Conf Conv				
6/30/2020	1.86%	1.72%	2.91%	6.50%
12/31/2020	1.49%	0.66%	3.21%	5.35%
12/31/2021	1.30%	0.44%	1.70%	3.44%
FHA				
6/30/2020	4.58%	3.60%	6.79%	14.97%
12/31/2020	3.84%	1.76%	10.23%	15.83%
12/31/2021	3.72%	1.23%	5.74%	10.68%
VA				
6/30/2020	2.37%	1.99%	3.32%	7.69%
12/31/2020	1.73%	0.87%	5.44%	8.03%
12/31/2021	1.44%	0.52%	3.43%	5.38%
Total				
6/30/2020	2.34%	2.05%	3.58%	7.97%
12/31/2020	1.87%	0.85%	4.47%	7.19%
12/31/2021	1.67%	0.56%	2.41%	4.63%

Total loans in forbearance
700,000 down from 8,000,000

Source: Mortgage Bankers Association



WILARY WINN LLC

Good and Bad

Increased Cost of Home Ownership

Housing Affordability		
	12/31/21	12/31/20
US Fixed Housing Affordability index	147	172
Median Family Income	88,417	84,626
Median Sales Price	364,300	313,700
P & I Payment	1,252	1,022
P & I as a Percent of Income	16.99%	14.49%
Fixed Mortgage Rate	3.15%	2.73%

P&I Payment Assumed 20%
down payment

FHLMC 30 Year Rate at
2/11/22 = 3.69%



WILARY WINN LLC

Mortgage Banking

Resources

[CAREERS](#)[OUR COMPANY ▼](#)[SERVICES ▼](#)[RESOURCES](#)[NEWS & EVENTS](#)[CONTACT US](#)

Resources

Financial accounting and regulatory reporting continue to grow increasingly complex. Find jargon-free answers to your questions here.



Accounting &
Regulatory Guidance
for the MPF®
Program [Resource]

[Read More »](#)

BASEL III [White
Paper]

[Read More »](#)

Community Bank
Leverage Ratio

[Read More »](#)

Guide to Reporting
Under BASEL III for
FHLB MPF Program
Participants

MPF SSFA Calculator
[Resource]



WILARY WINN LLC

Wilary Winn Services

Contact Information

Asset Liability Management, Capital Stress Testing, Concentration Risk Analyses, ALM Validations and CECL:

Joe Trabant	jtrabant@wilwinn.com
Mike Tessier	mtessier@wilwinn.com
Matt Erickson	merickson@wilwinn.com

Servicing Rights and Mortgage Banking Derivatives:

Anneliese Ramin	aramin@wilwinn.com
Eric Nokken	enokken@wilwinn.com

Mergers & Acquisitions and Goodwill Impairment Testing:

Cole Schulte	cschulte@wilwinn.com
Matt Erickson	merickson@wilwinn.com

Non-agency MBS, ASC 310-30, TDRs and Trust Preferred Securities:

Cole Schulte	cschulte@wilwinn.com
Anneliese Ramin	aramin@wilwinn.com
Frank Wilary	fwilary@wilwinn.com



WILARY WINN LLC

A background image of two men in business suits. One man is standing and leaning over a desk, pointing at a document. The other man is sitting at the desk, looking up at him. The image is overlaid with a dark blue semi-transparent filter.

Thank You

ADVICE TO STRENGTHEN FINANCIAL INSTITUTIONS



wilwinn.com