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School of Mortgage Banking II

MANAGING PROFITABILITY AND RISK

BOOK 2

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Servicing Portfolio Valuation

School of Mortgage Banking II

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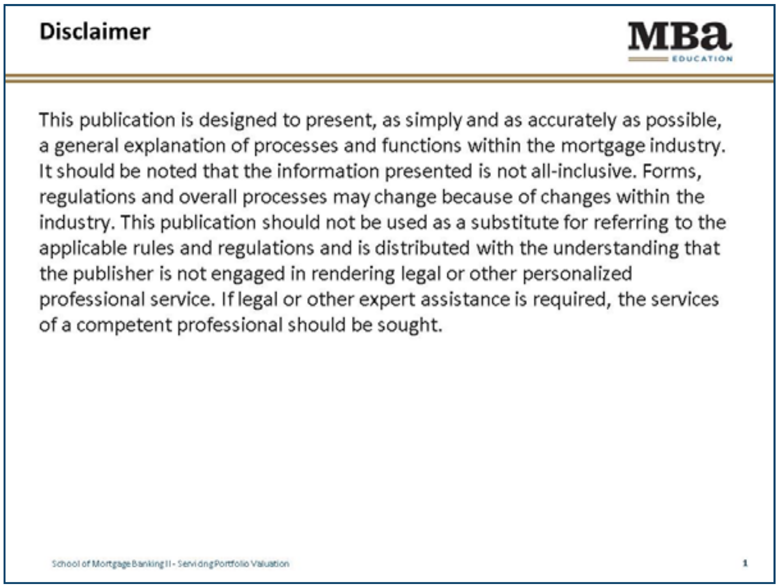
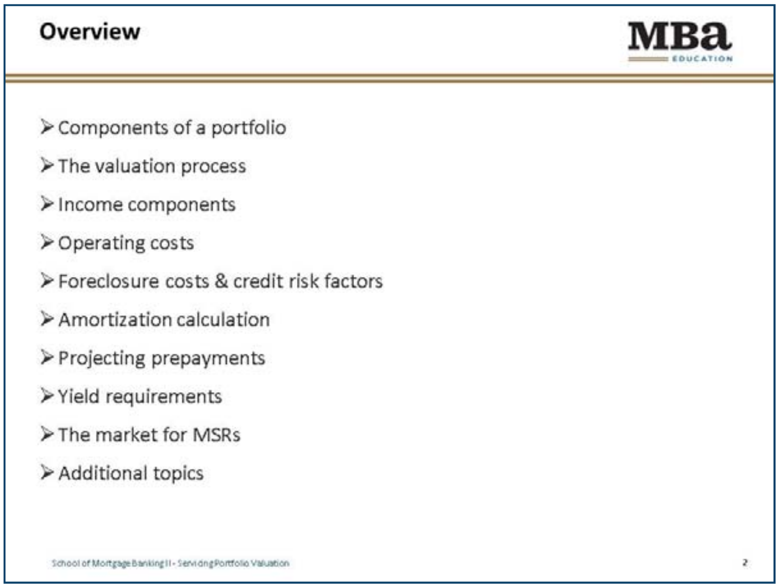


This publication is designed to present, as simply and as accurately as possible, a general explanation of processes and functions within the mortgage industry. It should be noted that the information presented is not all-inclusive. Forms, regulations and overall processes may change because of changes within the industry. This publication should not be used as a substitute for referring to the applicable rules and regulations and is distributed with the understanding that the publisher is not engaged in rendering legal or other personalized professional service. If legal or other expert assistance is required, the services of a competent professional should be sought.

Overview and Objectives

Overview



This module is designed to the many factors that must be considered when performing servicing portfolio valuation. We will review the components of the portfolio and how its make up affects the value. We will also consider how prepayments and defaults affect the portfolio. We will review income components and operating costs, identifying how each affects the ledger and cash flow. We will also discuss yield requirements.

Objectives

Upon completion of this module, you will be able to:

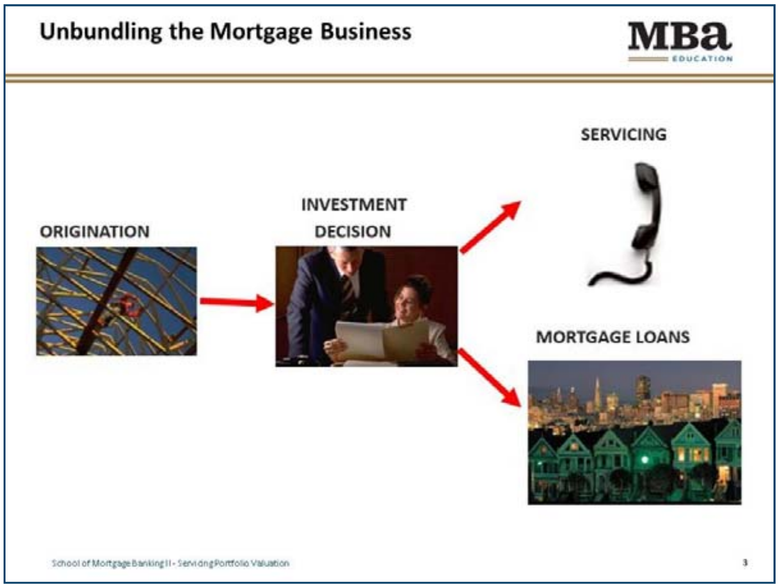
- Define servicing.
- Identify the components of a mortgage payment and the owner of each segment.
- Identify the components of a servicing portfolio.
- Explain the valuation process.
- Describe the risk associated with various servicing investment alternatives.
- Identify regulatory and accounting guidelines that dictate valuation and reporting policy.
- Understand cash flow.
- Explain the impact of prepayments and defaults on the servicing portfolio.

Servicing Basics

In this segment, we will look at the following topics:

- Unbundling the Mortgage Business
- What Is Servicing?
- Components of a Mortgage Payment
- Mortgage Servicing Rights

Unbundling the Mortgage Business



In unbundling the mortgage process and defining value to the organization, the steps can be simple.

1. Loan is originated – usually with enough income to cover the cost of origination and to pay the loan officer or correspondent who originated the loan.
2. Investment decision is made to sell the loan or retain it.
3. Another decision is made to either sell off the servicing rights or to retain them – servicing retained or servicing released?

Another Way to Look at It

Another Way to Look at It

Origination creates the opportunity to make money only once the loan is sold. On the other hand, if the institution also services the loan, it takes advantage of the stream of income generated by the retention of the servicing rights.

What Is Servicing?

What is "Servicing?"

"Loan servicing is the contractual right to receive mortgage payments from mortgagors for a fee, and remit pieces of those payments – principal, interest, taxes and insurance – to the appropriate recipients"

Source: <u>Servicing Portfolio Evaluation & Management</u>
MBA. Healy & Briggs. 1992

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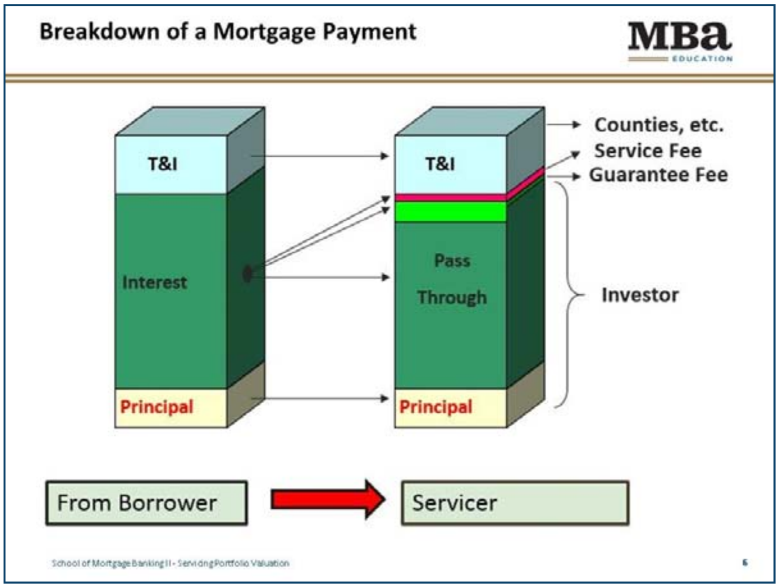
While this definition (and the amount of money a servicer is paid to service a loan and perform all of the prescribed loan administration activities) has not changed since 1992, the amount of work necessary to protect that portfolio from default and loss of value has become significantly more difficult.

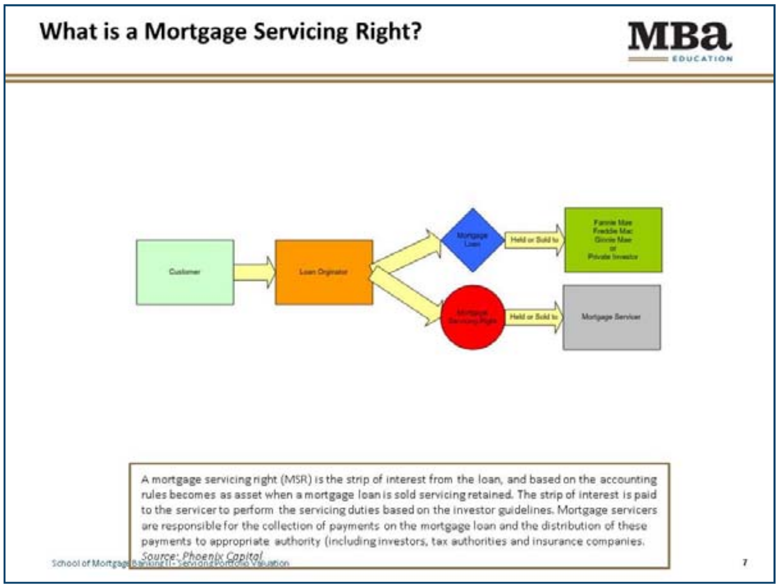
Components of a Mortgage Payment

Breakdown of Payment



At a very basic level, this slide portrays the division of responsibilities in a traditional servicing environment. The amount of principal and interest is a pass through remitted to the owner/investor of that loan; and the responsibility for the timely payment of taxes and insurance to the appropriate parties rests with the servicer. The Guarantee Fee and Service Fee come from the interest payment.

Mortgage Servicing Rights



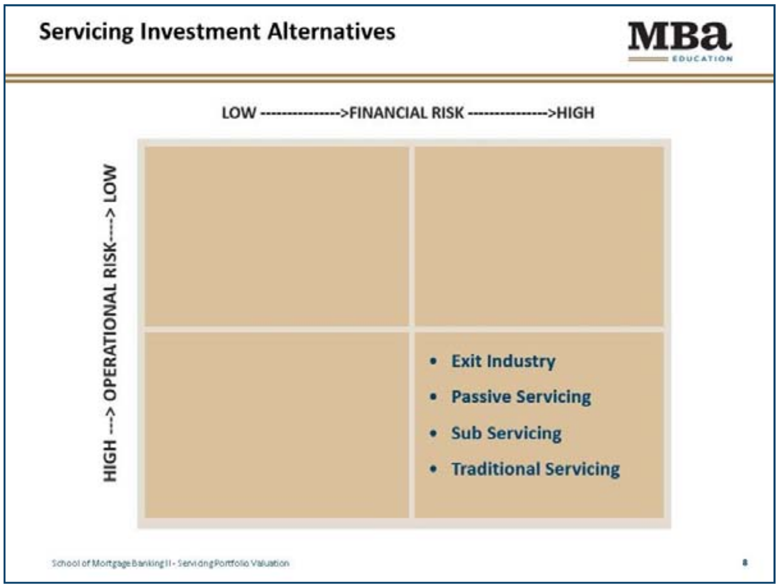
A mortgage servicing right (MSR) is the strip of interest from the loan, and based on the accounting rules becomes as asset when a mortgage loan is sold servicing retained. The strip of interest is paid to the servicer to perform the servicing duties based on the investor guidelines. Mortgage servicers are responsible for the collection of payments on the mortgage loan and the distribution of these payments to appropriate authority (including investors, tax authorities and insurance companies.

Servicing Investment Alternatives

In this segment, we will look at the following topics:

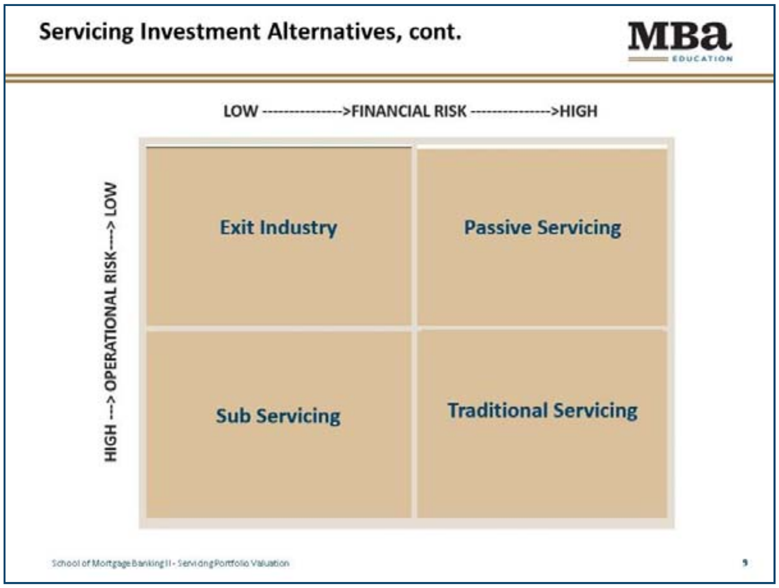
- Servicing Investment Alternatives
- MSR Portfolios

Servicing Investment Alternatives



Traditionally, small and medium sized mortgage banking firms retained little or no servicing or they may have kept a very small portfolio for relationship reasons. The infrastructure costs to service were prohibitive unless an institution had enough volume to take advantage of the economies of scale. In addition, the retention of the loan and the servicing created limits on liquidity. Mortgage bankers preferred to sell off the “whole loan” and take their profit up front.

As the aggregators grew in strength throughout the 90s and early 2000s they had a strong appetite to acquire loan servicing because the servicing income balanced some of the volatility of income from just originations.



Looking at this risk reward chart you can see that traditional servicing, where the servicer is responsible for all of the components of servicing the loan and the customer relationship, has both the potential for high operational and financial risk, but in “normal” times is balanced by the steady stream of income.

Some institutions (who retain the servicing rights and responsibilities) engage a sub-servicer to service loans at their direction for a fee. By doing this these institutions do not have to build or maintain the servicing factory or hire the experienced personnel to manage the daily servicing of those loans. They remain responsible for all of the regulatory and financial risk; but their costs to service are generally less than what they would be in a traditional servicing shop.

Other institutions may retain a passive servicing relationship where they have a financial investment in the servicing rights; some stream of income associated with that passive position, but little or no operational control. Others are exiting the servicing industry all together because the default rates on their portfolios are so high that no amount of servicing income can make up for the unexpected losses.

Source: Inside Mortgage Finance

Top Subservicers

Top Subservicers

Rank	Sub Servicer	Q4 2015 Volume (In Millions)
1	Cenlar	$391,000
2	Dovenmuehle	$255,000
3	PHH Mortgage	$126,300
4	Loan Care	$111,000
5	DiTech (Walter GreenTree)	$51,000
6	Celink	$41,000
7	Flagstar	$40,200
8	Select Portfolio Servicing	$36,000
9	Seterus	$22,000
10	Nationstar	$21,200
11	Provident Funding	$21,000
12	Ocwen	$20,900
13	LenderLive	$16,500
14	Roundpoint	$14,900
15	Specialized Loan Serv	$13,700
16	Rushmore Loan Mtg	$11,000
17	Selene Finance	$10,000
18	PennyMac	$8,800
19	Fay Servicing	$8,500
20	Wells Fargo	$4,300

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Top 20 Servicers 2015 vs. 2003

Top 20 Servicers 2015 vs. 2003

Rank	Servicer	Q4 2015 Volume (In Millions)	Market Share
1	Wells Fargo & Company	$1,649,060	16.7%
2	Chase	$910,100	9.2%
3	Bank of America	$564,920	5.7%
4	Nationstar Mortgage	$398,000	4.0%
5	*Cenlar*	*$391,000*	*4.0%*
6	U.S. Bank Home Mortgage	$296,100	3.0%
7	CitiMortgage	$291,410	3.0%
8	DiTech (Walter GreenTree)	$246,600	2.5%
9	PHH Mortgage	$226,260	2.3%
10	Quicken Loans, Inc.	$195,600	2.0%
11	PennyMac	$160,300	1.6%
12	SunTrust Mortgage, Inc.	$148,130	1.5%
13	PNC Mortgage	$137,520	1.4%
14	Branch Banking & Trust Co.	$123,010	1.2%
15	*LoanCare, LLC*	*$111,000*	*1.1%*
16	Caliber Home Loans	$85,230	0.9%
17	Lakeview Loan Servicing	$81,600	0.8%
18	Freedom Mortgage Corp	$76,290	0.8%
19	*Provident Funding*	*$74,000*	*0.8%*
20	Fifth Third Mortgage	$73,460	0.7%
	Top 5	4,209,180	42.2%
	Top 10	5,329,350	53.4%
	Top 20	6,239,590	62.5%
	Total 1 to 4 Outstanding	**9,986,020**	

Rank	Servicer	Q1 2003 Volume (In Millions)	Market Share
1	*Washington Mutual*	728,260	11.0%
2	Wells Fargo & Company	580,430	8.8%
3	Countrywide	502,080	7.6%
4	Chase	432,030	6.5%
5	Bank of America	257,200	3.9%
6	Citi Mortgage	196,870	3.0%
7	*ABN AMRO*	195,750	3.0%
8	*GMAC*	194,750	2.9%
9	*National City*	127,340	1.9%
10	Cendent (now PHH)	119,670	1.8%
11	*Principal Residential*	113,320	1.7%
12	*Golden West*	66,410	1.0%
13	*Homecomings Financial*	64,750	1.0%
14	Cenlar FSB (SS) (E)	59,820	0.9%
15	First Horizon	58,180	0.9%
16	U.S. Bank Home Mortgage	56,680	0.9%
17	*Fairbanks Capital*	53,210	0.8%
18	*CitiFinancial*	48,010	0.7%
19	HSBC	45,790	0.7%
20	*Household Mortgage Services*	44,000	0.7%
	Top 5	2,500,000	37.7%
	Top 10	3,334,380	50.3%
	Top 20	3,944,550	59.5%
	Total 1 to 4 Outstanding	**6,630,000**	

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You will note that all of the largest servicers as of 2003 were affiliated with banks or bank holding companies. Most of these entities have sold off the asset into mortgage-backed securities and now they retain only the mortgage servicing rights (MSRs).

Source: Inside Mortgage Finance

Top 20 Servicers 2015 vs. 2010

Top 20 Servicers 2015 vs. 2010

Rank	Servicer	Q4 2015 Volume (In Millions)	Market Share
1	Wells Fargo & Company	$1,649,060	16.5%
2	Chase	$910,100	9.1%
3	Bank of America	$564,920	5.7%
4	Nationstar Mortgage	$398,000	4.0%
5	Cenlar	$391,000	3.9%
6	U.S. Bank Home Mortgage	$296,100	3.0%
7	CitiMortgage	$291,410	2.9%
8	Dovenmuehle	$255,000	2.6%
9	DiTech (Walter GreenTree)	$246,600	2.5%
10	PHH Mortgage	$226,260	2.3%
11	Quicken Loans, Inc.	$195,600	2.0%
12	PennyMac	$160,300	1.6%
13	SunTrust Mortgage, Inc.	$148,130	1.5%
14	PNC Mortgage	$137,520	1.4%
15	Branch Banking & Trust Co.	$123,010	1.2%
16	*LoanCare, LLC*	*$111,000*	1.1%
17	Caliber Home Loans	$85,230	0.9%
18	Lakeview Loan Servicing	$81,600	0.8%
19	Freedom Mortgage Corp	$76,290	0.8%
20	*Provident Funding*	*$74,000*	0.7%
	Top 5	4,209,180	42.2%
	Top 10	5,584,350	55.9%
	Top 20	6,421,130	64.3%
	Total 1 to 4 Outstanding	**9,986,020**	

Rank	Servicer	Q4 2010 Volume (In Millions)	Market Share
1	Bank of America	2,069,241	21.6%
2	Wells Fargo & Company	1,808,327	18.8%
3	Chase	1,254,846	13.1%
4	CitiMortgage, Inc.	601,684	6.3%
5	*Residential Capital, LLC (GMAC)*	384,967	4.0%
6	U.S. Bank Home Mortgage	216,096	2.3%
7	PHH Mortgage	166,075	1.7%
8	SunTrust Mortgage, Inc.	165,514	1.7%
9	PNC Mortgage/*National City*	138,529	1.4%
10	*MetLife Home Loans*	115,916	1.2%
11	*OneWest Financial/IndyMac*	109,790	1.1%
12	Branch Banking & Trust Co.	83,815	0.9%
13	*American Home Mortgage Servicing, Inc.*	79,541	0.8%
14	Cenlar FSB (SS)	77,000	0.8%
15	Annaly Capital Investment	74,750	0.8%
16	*Aurora Loan Services, Inc.*	74,404	0.8%
17	Dovenmuehle Mortgage	69,750	0.7%
18	Fifth Third Mortgage	65,806	0.7%
19	Nationstar Mortgage	64,169	0.7%
20	Flagstar Bank, FSB	62,926	0.7%
	Top 5	6,119,065	63.8%
	Top 10	6,921,195	72.1%
	Top 20	7,683,146	80.1%
	Total 1 to 4 Outstanding	**9,595,103**	

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By contrast, there has been relatively little change in the top servicers in recent years.

Source: Inside Mortgage Finance

MSR Portfolios

MSR Portfolios

IN BILLIONS - MSR Portfolio Only	Q1 2015	Q2 2015	Q3 2015	Q4 2015	Q1 2016	UPB Change Q1 2016 to Q4 2015 Percentage Change	Q1 2016 to Q1 2015 UPB Percentage Change	Q1 2016 to Q1 2014 UPB Percentage Change
Penny Mac	35	37	40	42	44	4.5%	25.7%	62%
Two Harbors	44	43	48	51	55	7.6%	25.8%	33%
HomeStreet	12	13	14	15	16	4.4%	34.2%	31%
Stonegate	17	17	18	18	18	3.2%	6.5%	20%
Walter / GreenTree	193	207	207	206	207	0.3%	7.4%	17%
SunTrust	115	118	122	121	121	0.2%	5.3%	15%
NYCB	23	24	22	24	25	1.7%	7.4%	13%
PNC	113	115	122	123	125	1.2%	10.6%	10%
M and T Bank	25	24	24	24	24	(0.8%)	-3.7%	5%
Huntington	16	16	16	16	16	0.4%	4.1%	4%
US Bank	225	225	229	232	232	0.2%	3.1%	3%
BB&T	89	89	90	91	91	(0.6%)	1.5%	3%
Nationstar	343	353	355	346	333	(3.8%)	-3.0%	2%
Regions	27	27	26	26	28	8.5%	3.7%	0%
Flagstar	27	28	26	26	27	1.8%	-1.6%	-8%
Wells Fargo	1,374	1,344	1,323	1,300	1,280	(1.5%)	-6.8%	-13%
Fifth Third	64	62	60	59	58	(1.7%)	-9.4%	-16%
Chase	724	723	703	674	655	(2.8%)	-9.4%	-18%
PHH	109	105	102	99	96	(2.9%)	-11.7%	-24%
Everbank	39	35	35	31	31	0.1%	-20.5%	-26%
Bank of America	459	409	391	378	368	(2.6%)	-19.8%	-30%
HSBC	22	21	20	19	18	(4.3%)	-18.5%	-30%
CITI	212	204	199	194	185	(4.3%)	-12.5%	-31%
Ocwen Financial	337	268	238	230	224	(2.8%)	-33.6%	-42%

Provided and Collected by Seth Sprague, Phoenix Capital

Business Profit Dynamics

In this segment, we will look at the following topic:

- Business Profit Dynamics

Business Profit Dynamics

Business Profit Dynamics

	LOAN PRODUCTION	LOAN SERVICING	TOTAL
SERVICE FEES	0.00%	0.25%	0.25%
ORIGINATION & OTHER	2.00%	0.02%	2.02%
NET INTEREST	0.25%	0.05%	0.30%
MARKETING GAIN/LOSS	0.00%	0.00%	0.00%
GROSS INCOME	2.25%	0.32%	2.57%
ORIGINATION EXPENSE	3.00%	0.00%	3.00%
SERVICING COSTS	0.00%	0.09%	0.09%
CASH FLOW	- 0.75%	0.23%	- 0.52%
SERVICING VALUE	1.00	0.00%	1.00%
AMORTIZATION	0.00%	- 0.12%	- 0.12%
NET VALUE	0.25%	0.09%	0.34%

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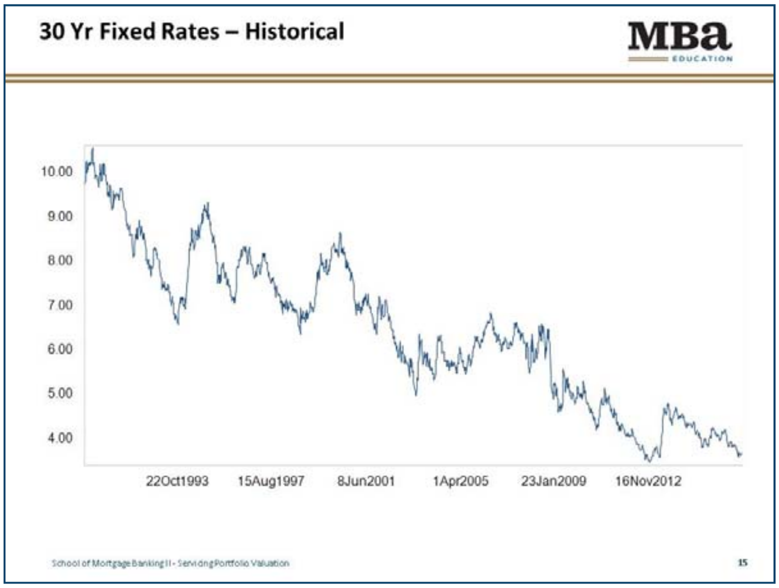
This chart depicts the components of “actual” business profits and where they are generated.

History and Trends

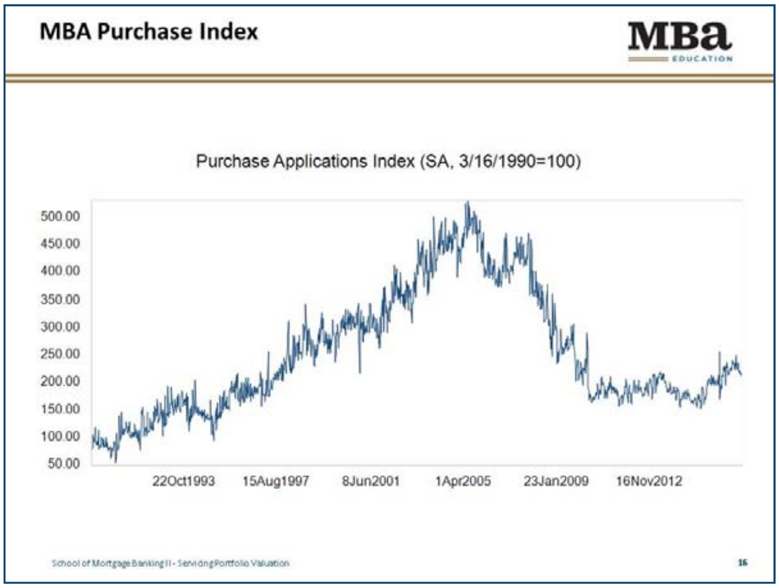
In this segment, we will look at the following topics:

- History and Trends Overview
- 30-Year Fixed Rates – Historical View
- MBA Purchase Index
- MBA Mortgage Origination Estimates
- Outstanding Mortgage Universe
- Profit & Loss Trends
- Direct Servicing Costs ($ per loan)
- Net Income Summary

30-Year Fixed Rates – Historical View

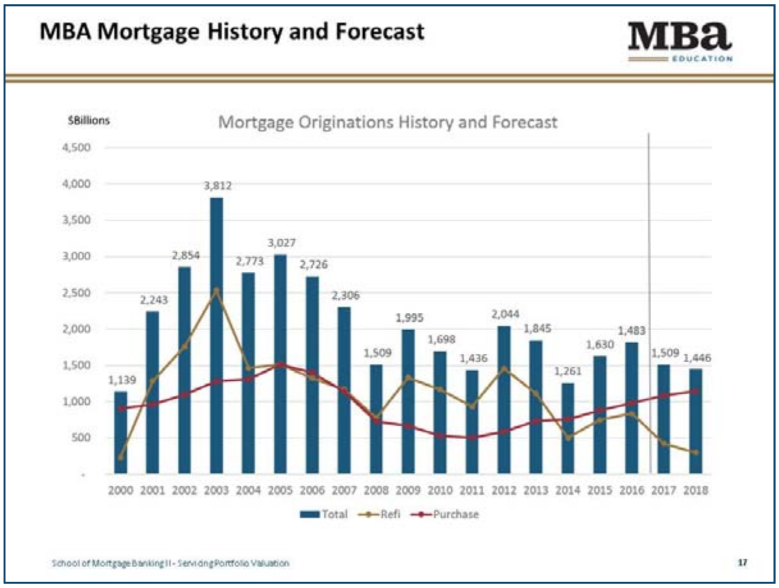


MBA Purchase Index

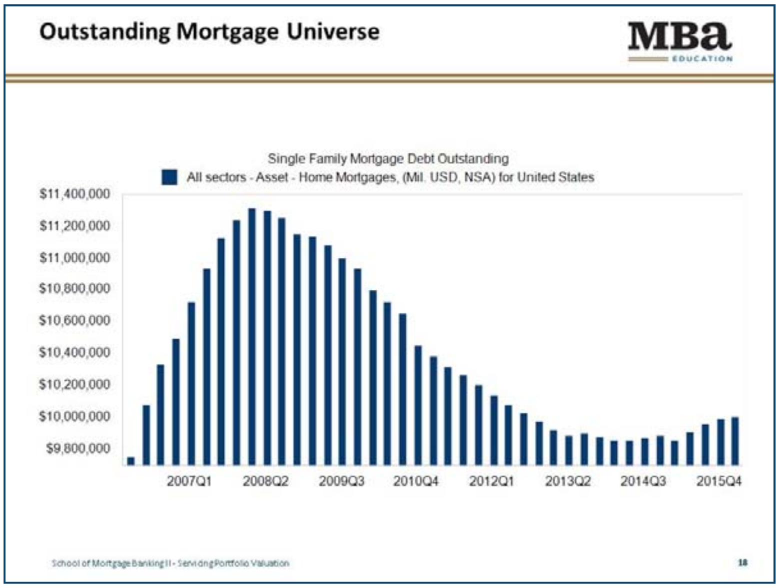


The Purchase Index includes all mortgages applications for the purchase of a single-family home. It covers the entire market, both conventional and government loans, and all products. The Purchase Index has proven to be a reliable indicator of impending home sales

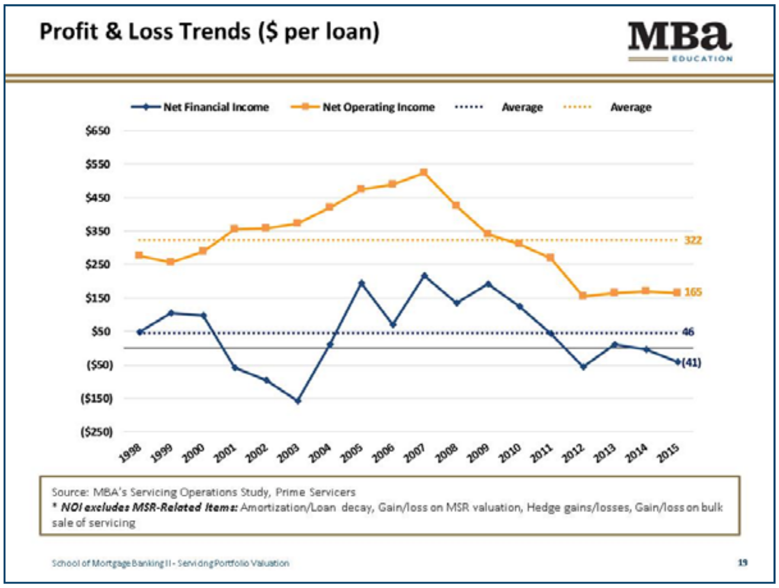
MBA Mortgage Origination Estimates



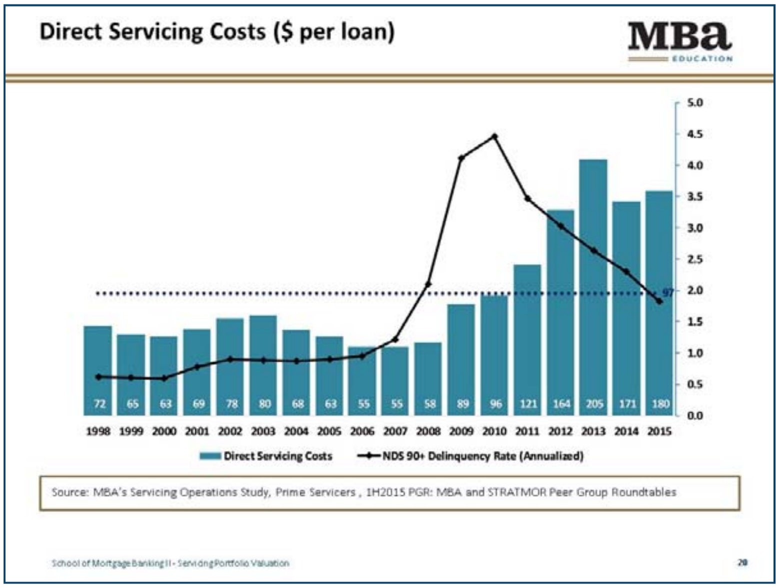
Outstanding Mortgage Universe



Profit & Loss Trends



Direct Servicing Costs ($ per loan)



Net Income Summary

2nd Quarter 2016 Results, Independent Mortgage Companies and Subs of Banks

MBA EDUCATION

$ PER LOAN	All Firms Q2 2016
DIRECT REVENUES	
Servicing Fees	464
First Mortgages, Seconds, Other	420
Subservicing Fees Earned	44
Late Fees and Other Ancillary Income	43
Total Direct Servicing Revenues	507
DIRECT EXPENSES	
Personnel	126
Occupancy and Equipment	7
Technology-Related Expenses	5
Other Direct Expenses	131
Total Direct Expenses	269
DIRECT SERVICING NET INCOME	238
INDIRECT EXPENSES	
Unreimbursed FC/REO Svg Expenses	6
Corporate Allocation	33
Total Indirect Expenses	39
Net Interest Income	(7)
NET OPERATING INCOME	192
MSR FINANCIAL ITEMS	
Amortized Cost of Servicing Rights / Loan Decay	(117)
Net Gain (Loss) on Bulk Sale of Servicing	(12)
Net Gain (Loss) from MSR Valuations & Hedging	(223)
Total Financial Items	(352)
TOTAL NET FINANCIAL INCOME	(160)
Memorandum Items:	
Average Servicing Portfolio ($000)	[illegible]
Average Servicing Portfolio (#)	78,730
Average Loan Balance ($)	180,781

Source: MBA Quarterly Performance Report for Independent Mortgage Companies and Subs of Financial Institutions as of Q415, simple averages. Note that an average of roughly 50% of average servicing portfolio for this sample is subserviced.

School of Mortgage Banking II - Servicing Portfolio Valuation 21

MBA MORTGAGE BANKERS ASSOCIATION

$ PER LOAN	All Firms Q2 2016
DIRECT REVENUES	
Servicing Fees	464
First Mortgages, Seconds, Other	420
Subservicing Fees Earned	44
Late Fees and Other Ancillary Income	43
Total Direct Servicing Revenues	507
DIRECT EXPENSES	
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Total Indirect Expenses	39
Net Interest Income	(7)
NET OPERATING INCOME	192
MSR FINANCIAL ITEMS	
Amortized Cost of Servicing Rights / Loan Decay	(117)
Net Gain (Loss) on Bulk Sale of Servicing	(12)
Net Gain (Loss) from MSR Valuations & Hedging	(223)
Total Financial Items	(352)
TOTAL NET FINANCIAL INCOME	(160)
Memorandum Items:	
Average Servicing Portfolio ($000)	13,172,898
Average Servicing Portfolio (#)	78,730
Average Loan Balance ($)	180,781

Source: MBA Quarterly Performance Report for Independent Mortgage Companies and Subs of Financial Institutions as of Q415, simple averages. Note that an average of roughly 50% of average servicing portfolio for this sample is subserviced.

Net Income Summary by Company Type

2nd Quarter 2016 Results, by Company Type

MBa EDUCATION

$ PER LOAN:	Bank/ Thrift Subs	Independent Mtg Cos.
DIRECT REVENUES		
Servicing Fees	383	494
Late Fees and Other Ancillary Income	42	39
Total Direct Servicing Revenues	425	532
DIRECT EXPENSES		
Personnel	102	132
Occupancy and Equipment	11	6
Technology-Related Expenses	6	4
Other Direct Expenses	99	148
Total Direct Expenses	217	290
DIRECT SERVICING NET INCOME	208	242
INDIRECT EXPENSES		
Unreimbursed FC/REO Svg Expenses	0	8
Corporate Allocation	27	27
Total Indirect Expenses	27	35
Escrow Earnings	0	1
Net Interest Income	(3)	(7)
NET OPERATING INCOME	178	201
MSR FINANCIAL ITEMS		
Amortized Cost of Servicing Rights / Loan Decay	(113)	(129)
Net Gain (Loss) on Bulk Sale of Servicing	2	(10)
Net Gain (Loss) from MSR Valuations & Hedging	(135)	(248)
Total Financial Items	(247)	(387)
TOTAL NET FINANCIAL INCOME	(70)	(186)
Memorandum Items:		
Average Servicing Portfolio ($000)	15,124,169	7,789,583
Average Servicing Portfolio (#)	91,169	41,220
Average Loan Balance ($)	158,402	189,299

Source: MBA Quarterly Performance Report for Independent Mortgage Companies and Subs of Financial Institutions as of Q415, simple averages. Note that an average of roughly 50% of average servicing portfolio for this sample is subserviced.

School of Mortgage Banking II - Servicing Portfolio Valuation 22

$ PER LOAN:	Bank/ Thrift Subs	Independent Mtg Cos.
DIRECT REVENUES		
Servicing Fees	383	494
Late Fees and Other Ancillary Income	42	39
Total Direct Servicing Revenues	425	532
DIRECT EXPENSES		
Personnel	102	132
Occupancy and Equipment	11	6
Technology-Related Expenses	6	4
Other Direct Expenses	99	148
Total Direct Expenses	217	290
DIRECT SERVICING NET INCOME	208	242
INDIRECT EXPENSES		
Unreimbursed FC/REO Svg Expenses	0	8
Corporate Allocation	27	27
Total Indirect Expenses	27	35
Escrow Earnings	0	1
Net Interest Income	(3)	(7)
NET OPERATING INCOME	178	201
MSR FINANCIAL ITEMS		
Amortized Cost of Servicing Rights / Loan Decay	(115)	(129)
Net Gain (Loss) on Bulk Sale of Servicing	2	(10)
Net Gain (Loss) from MSR Valuations & Hedging	(135)	(248)
Total Financial Items	(247)	(387)
TOTAL NET FINANCIAL INCOME	(70)	(186)
Memorandum Items:		
Average Servicing Portfolio ($000)	15,124,669	7,789,383
Average Servicing Portfolio (#)	93,169	43,220
Average Loan Balance ($)	158,492	189,239

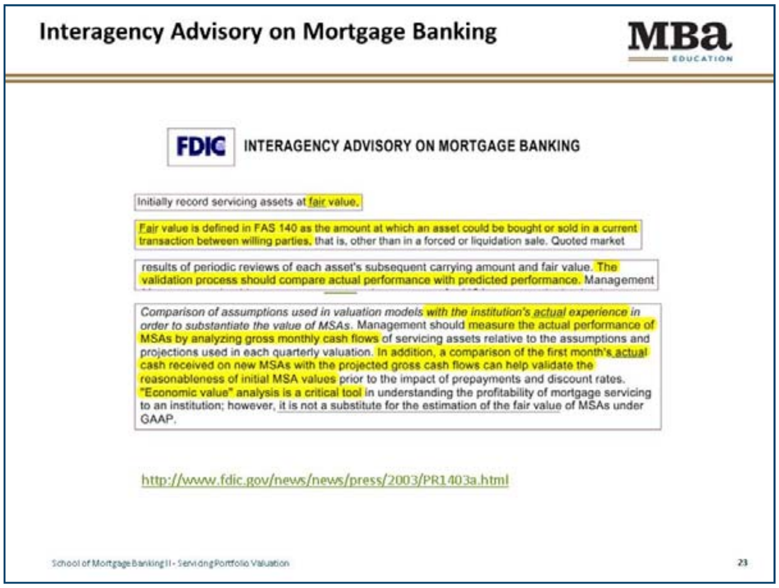
Source: MBA Quarterly Performance Report for Independent Mortgage Companies and Subs of Financial Institutions as of Q415, simple averages. Note that an average of roughly 50% of average servicing portfolio for this sample is subserviced.

Regulatory and Accounting Guidelines

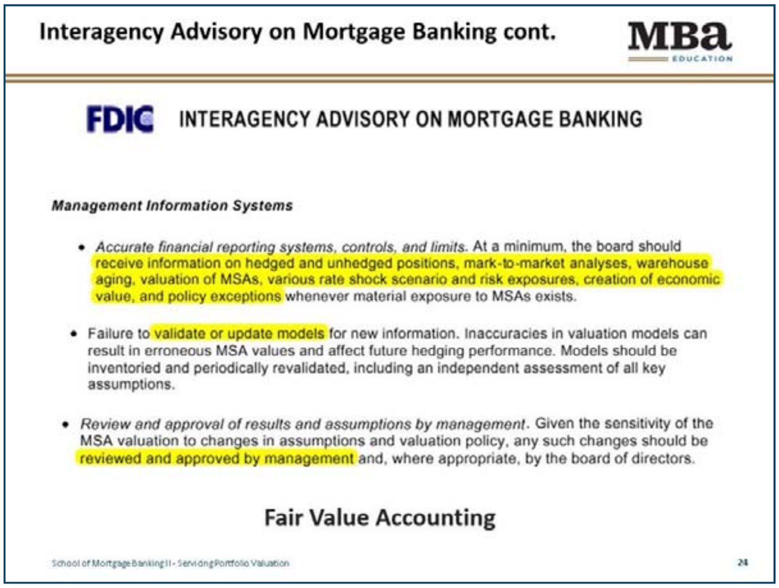
In this segment, we will look at the following topics:

- Regulatory and Accounting Guidelines Overview
- Interagency Advisory on Mortgage Banking
- Active MSR Management
- FAS 156
- MSR Fair Value Disclosure
- MSR LOCOM Disclosure

Regulatory and Accounting Guidelines Overview

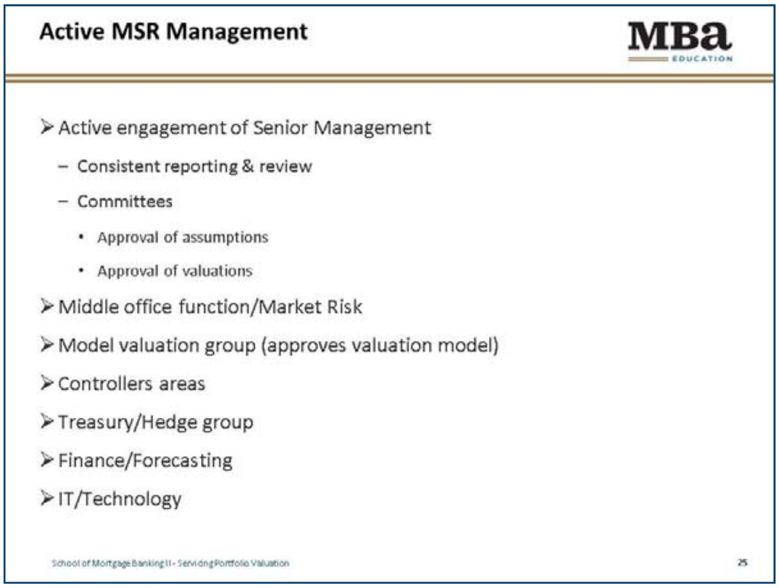


Interagency Advisory on Mortgage Banking



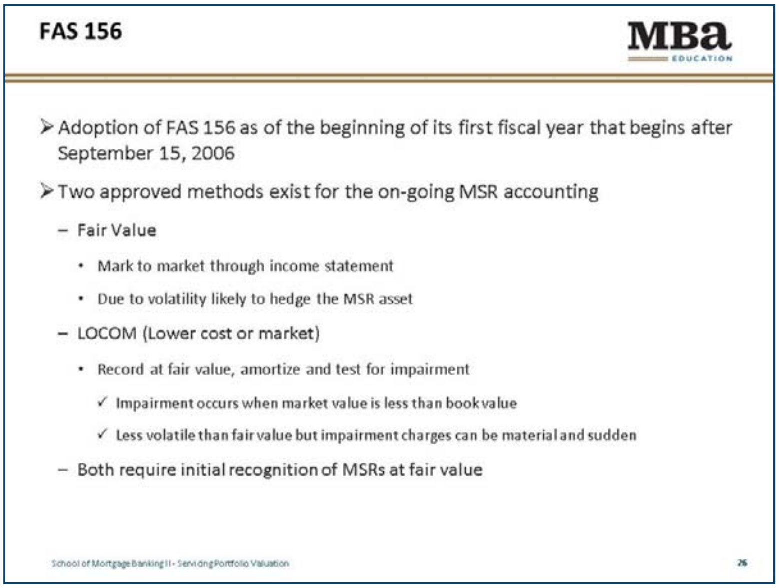
The FDIC in their Quarterly Banking Profile Glossary defines Fair Value as follows: The valuation of various assets and liabilities on the balance sheet—including trading assets and liabilities, available-for-sale securities, loans held for sale, assets and liabilities accounted for under the fair value option and foreclosed assets—involves the use of fair values. During periods of market stress, the fair values of some financial instruments and nonfinancial assets may decline.

Active MSR Management



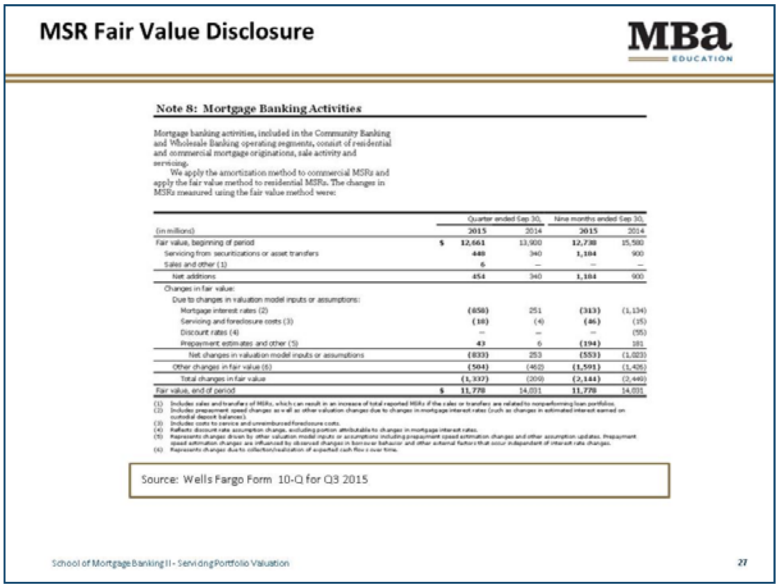
These requirements involve oversight and involvement from many parts of the organization – not just the loan administration department.

FAS 156



The adoption of FAS 156 changed the ongoing accounting and reporting of mortgage servicing rights. It is important to understand how the possibility of having to mark your MSR according to the two approved methods affects your approach to valuation.

MSR Fair Value Disclosure



MSR Fair Value Disclosure

Note 8: Mortgage Banking Activities

Mortgage banking activities, included in the Community Banking and Wholesale Banking operating segments, consist of residential and commercial mortgage originations, sale activity and servicing.

We apply the amortization method to commercial MSRs and apply the fair value method to residential MSRs. The changes in MSRs measured using the fair value method were:

		Quarter ended Sep 30,		Nine months ended Sep 30,	
(in millions)		2015	2014	2015	2014
Fair value, beginning of period	$	12,661	13,900	12,738	15,580
Servicing from securitizations or asset transfers		448	340	1,184	900
Sales and other (1)		6	—	—	—
Net additions		454	340	1,184	900
Changes in fair value:					
Due to changes in valuation model inputs or assumptions:					
Mortgage interest rates (2)		(858)	251	(313)	(1,134)
Servicing and foreclosure costs (3)		(18)	(4)	(46)	(15)
Discount rates (4)		—	—	—	(55)
Prepayment estimates and other (5)		43	6	(194)	181
Net changes in valuation model inputs or assumptions		(833)	253	(553)	(1,023)
Other changes in fair value (6)		(504)	(462)	(1,591)	(1,426)
Total changes in fair value		(1,337)	(209)	(2,144)	(2,449)
Fair value, end of period	$	11,778	14,031	11,778	14,031

(1) Includes sales and transfers of MSRs, which can result in an increase of total reported MSRs if the sales or transfers are related to nonperforming loan portfolios.
(2) Includes prepayment speed changes as well as other valuation changes due to changes in mortgage interest rates (such as changes in estimated interest earned on custodial deposit balances).
(3) Includes costs to service and unreimbursed foreclosure costs.
(4) Reflects discount rate assumption change, excluding portion attributable to changes in mortgage interest rates.
(5) Represents changes driven by other valuation model inputs or assumptions including prepayment speed estimation changes and other assumption updates. Prepayment speed estimation changes are influenced by observed changes in borrower behavior and other external factors that occur independent of interest rate changes.
(6) Represents changes due to collection/realization of expected cash flows over time.

Source: Wells Fargo Form 10-Q for Q3 2015

School of Mortgage Banking II - Servicing Portfolio Valuation 27

Note 8: Mortgage Banking Activities

Source: Wells Fargo 10-Q

MSR LOCOM Disclosure

MSR LOCOM Disclosure

Servicing Rights
The following table presents changes in the servicing rights related to residential mortgage and automobile loans for the nine months ended September 30:

($ in millions)		2015	2014
Carrying amount before valuation allowance as of the beginning of the period	$	1,392	1,440
Servicing rights that result from the transfer of residential mortgage loans		48	60
Amortization		(111)	(89)
Carrying amount before valuation allowance		1,329	1,411
Valuation allowance for servicing rights:			
Beginning balance		(534)	(469)
Provision for MSR impairment		(38)	(7)
Ending balance		(572)	(476)
Carrying amount as of the end of the period	$	757	935

Source: Fifth Third 10-Q for Q3 2015

School of Mortgage Banking II - Servicing Portfolio Valuation 28

Servicing Assets

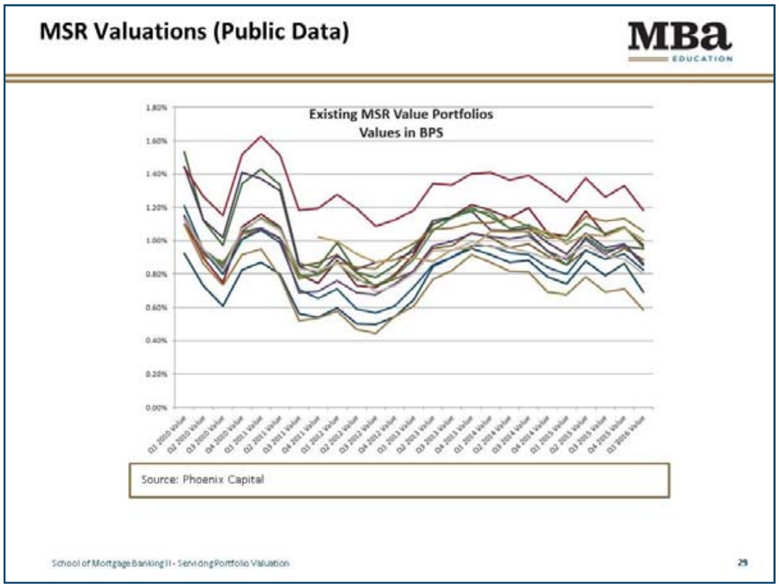
Source: Fifth Third 10-Q

MSR Valuation

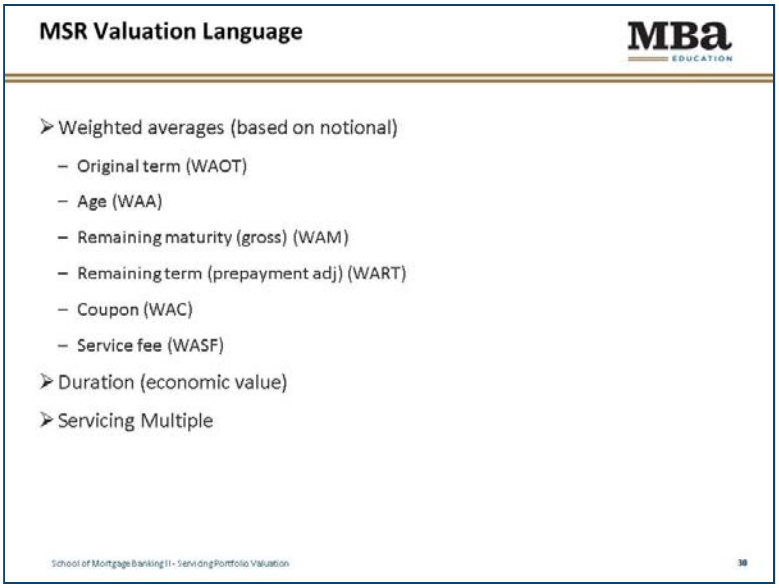
In this segment, we will look at the following topics:

- MSR Valuations (Public Data)
- MSR Valuation Language
- Weighted Average Acronyms and Examples
- Economic Duration
- Present Value – Service Fees
- Servicing Value
- Sample Cash Flow Report
- Sample Best Practices

MSR Valuations (Public Data)



MSR Valuation Language



Weighted Average Acronyms and Examples

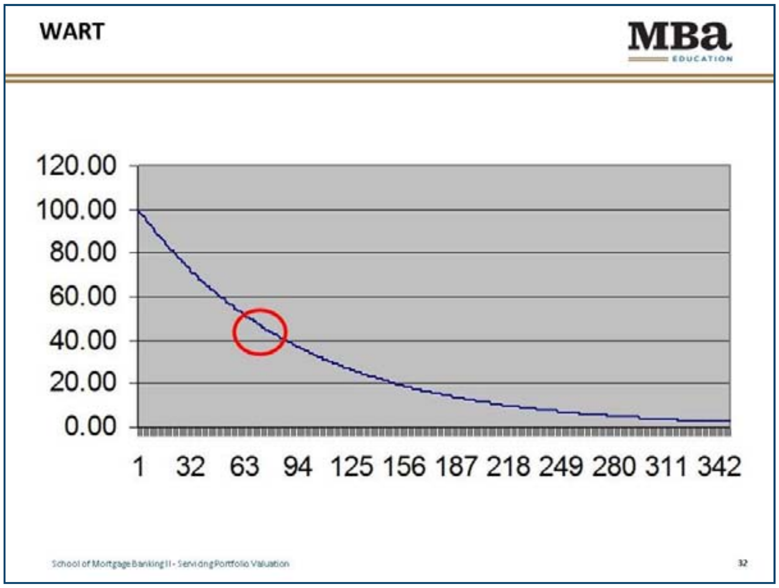
Weighted Average Acronyms (and Examples)

WAOT	Original Term (360)
WAA	Age (12)
WAM (gross)	Remaining Maturity (348)
WART (prepayment adj.)	Remaining Term (92)
WAC	Coupon (4.00)
WASF	Servicing Fee (.25)
Duration	Economic Value (59)

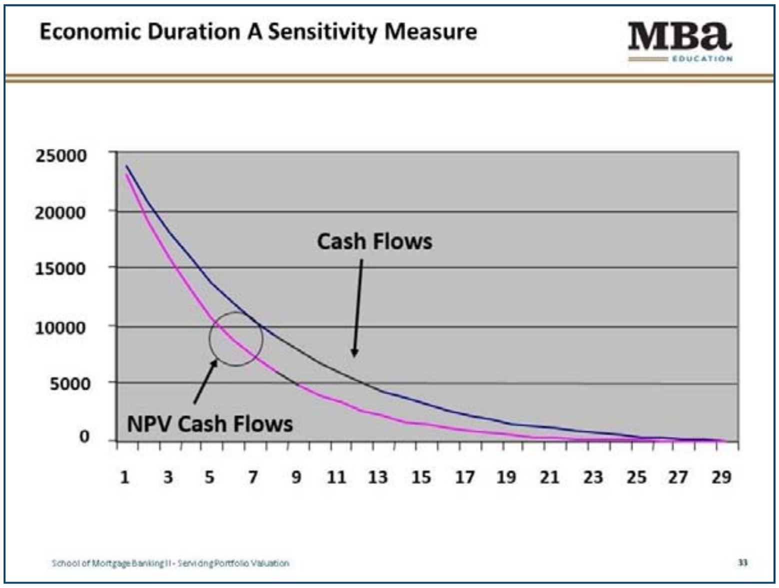
School of Mortgage Banking II - Servicing Portfolio Valuation 31

- WAOT – Weighted average original term
- WAA – Age – Average age of the assets in the portfolio
- WAM – Weighted average maturity
- WART – Weighted average remaining term
- WAC – Coupon
- WASF – Weighted average servicing fees
- Duration – Economic value

WART



Economic Duration



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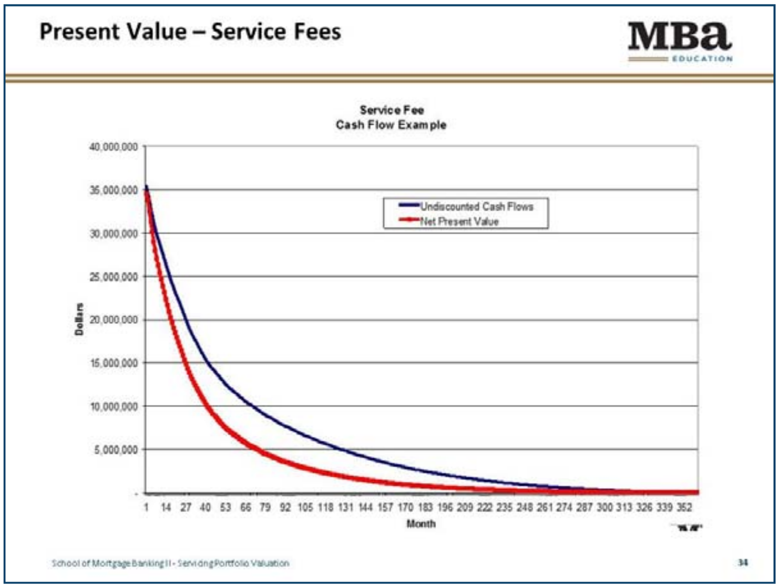
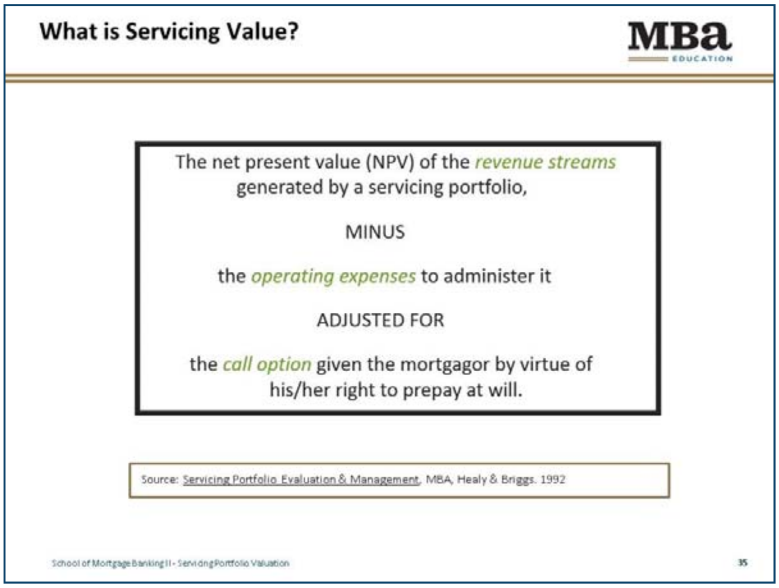
Present Value – Service Fees



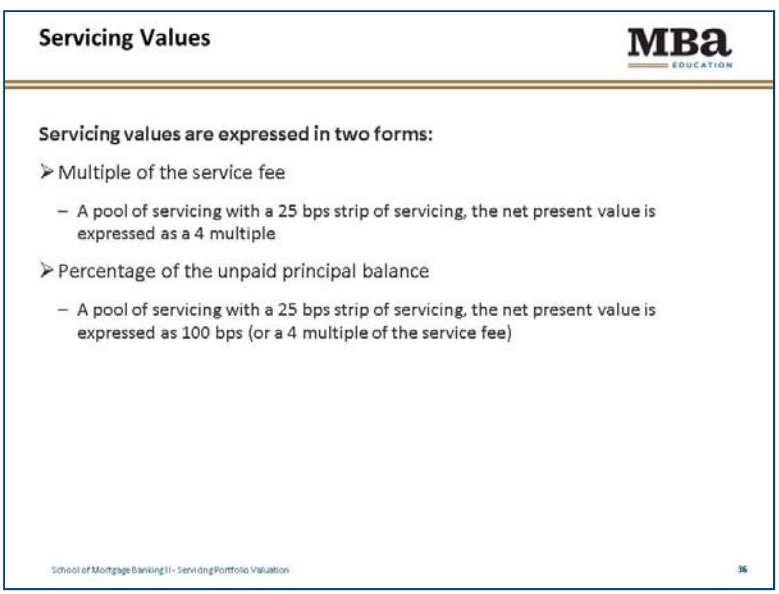
Servicing Value

What is Servicing Value?



It is the net present value (NPV) of the *revenue streams* generated by a servicing portfolio. It is important to remember this slide does not speak to actual cash flow, but to how servicing value is determined. We will look at sample cash flow analysis later.

Expression of Servicing Values



Sample Cash Flow Report

Sample Cash Flow Report

Cash Flow Report
(In Millions)

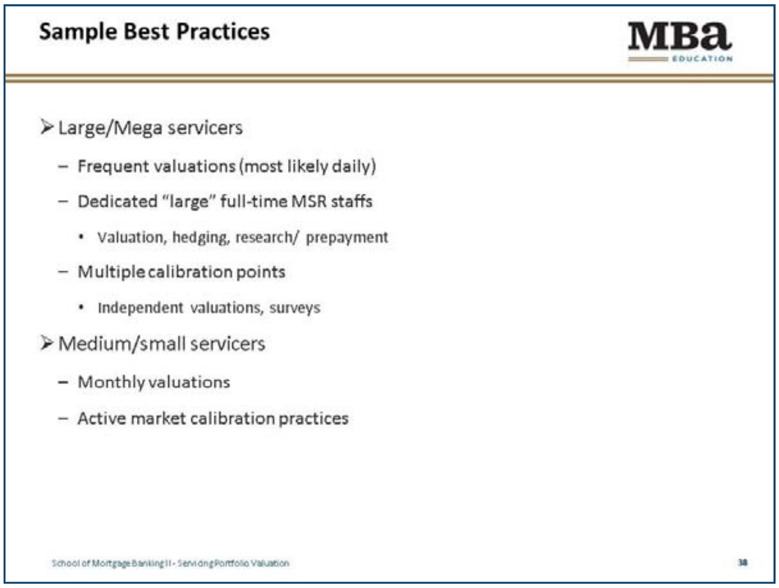
	Total Cash Flow	Service Fee	Ancillary	T&I Float	Payoff Float	P&I Float	Delq Serv Expense	Core Serv Expense	Unreimbursed F/C Expense	IOE Expense	Conversion Costs	Interest Lost	Advance Costs
0	**1,276.8**	**1,283.9**	**122.9**	**99.0**	**68.6**	**27.6**	**(119.2)**	**(113.9)**	**(17.8)**	**(6.0)**	**(17.3)**	**(44.2)**	**(6.8)**
1	13.1	35.4	3.3	0.3	0.5	0.1	(4.1)	(2.4)	(0.8)	(0.2)	(17.4)	(1.5)	(0.2)
2	30.3	34.6	3.3	0.5	0.8	0.2	(4.0)	(2.4)	(0.7)	(0.2)	-	(1.6)	(0.2)
3	29.8	33.8	3.2	0.6	1.1	0.2	(3.9)	(2.3)	(0.7)	(0.1)	-	(1.8)	(0.2)
4	28.9	32.9	3.1	0.6	0.9	0.2	(3.8)	(2.3)	(0.7)	(0.1)	-	(1.7)	(0.2)
5	28.2	32.0	3.0	0.6	0.9	0.2	(3.6)	(2.2)	(0.7)	(0.1)	-	(1.6)	(0.2)
6	27.6	31.2	2.9	0.6	0.9	0.2	(3.5)	(2.2)	(0.6)	(0.1)	-	(1.4)	(0.2)
7	27.2	30.5	2.9	0.6	0.9	0.2	(3.5)	(2.2)	(0.6)	(0.1)	-	(1.3)	(0.2)
8	26.8	29.7	2.8	0.7	0.8	0.2	(3.4)	(2.1)	(0.6)	(0.1)	-	(1.1)	(0.2)
9	26.4	29.2	2.8	0.7	0.8	0.2	(3.3)	(2.1)	(0.6)	(0.1)	-	(1.0)	(0.2)
10	25.8	28.6	2.7	0.7	0.8	0.2	(3.2)	(2.1)	(0.6)	(0.1)	-	(1.0)	(0.2)
11	25.4	28.1	2.6	0.7	0.8	0.2	(3.1)	(2.0)	(0.5)	(0.1)	-	(1.1)	(0.2)
12	24.9	27.5	2.6	0.7	0.9	0.2	(3.1)	(2.0)	(0.5)	(0.1)	-	(1.1)	(0.2)

School of Mortgage Banking II - Servicing Portfolio Valuation 37

The top line in bold in the discount cash flow (NPV). The body of the cash flow report represents undiscounted cash flows.

Cash flow report shown is only for 12 months, actual cash flow report would go out for 360 months

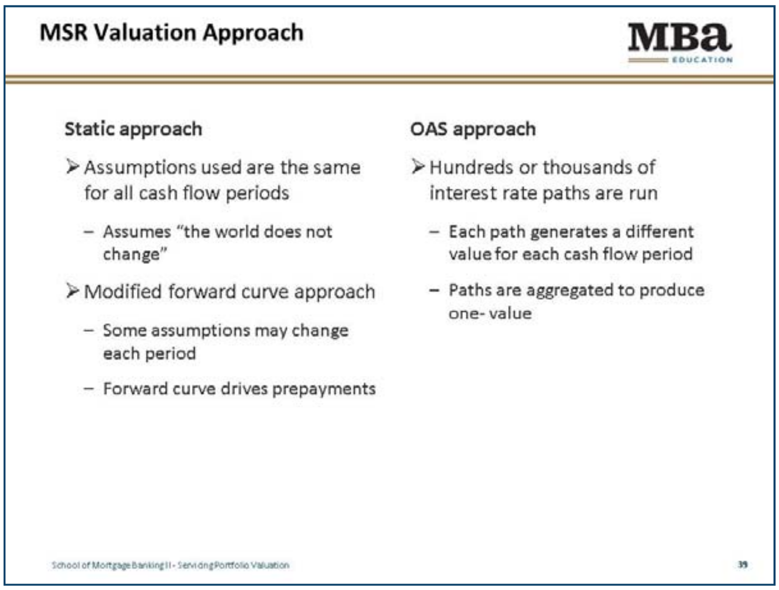
Sample Best Practices



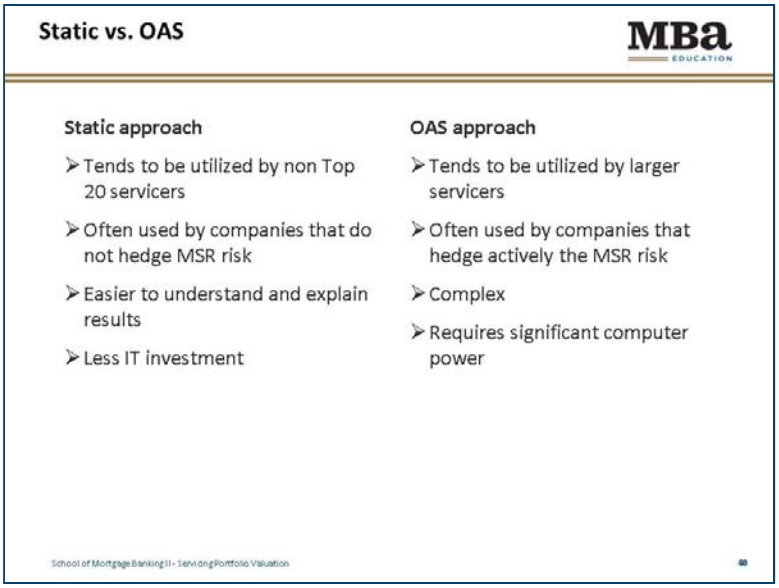
MSR Valuation Approaches

In this segment, we will look at the following topics:

- Static vs. OAS
- The Valuation Process
- Servicing Valuation Models

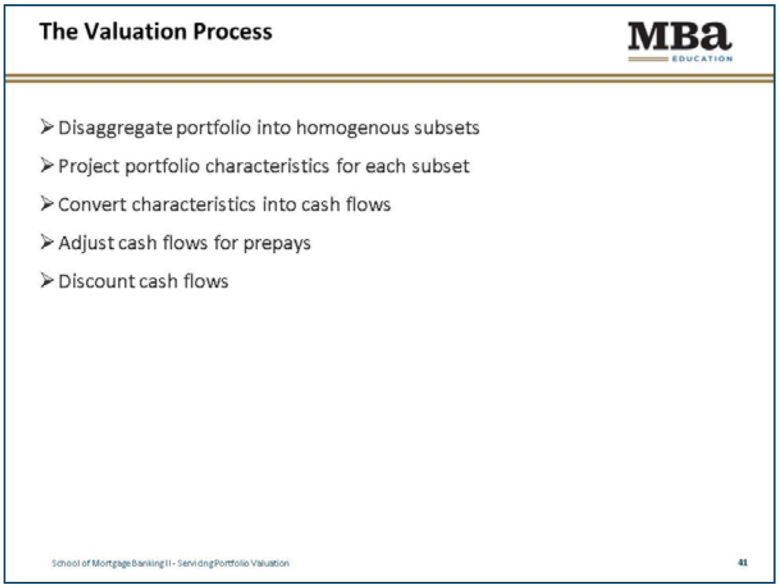


Static vs. OAS



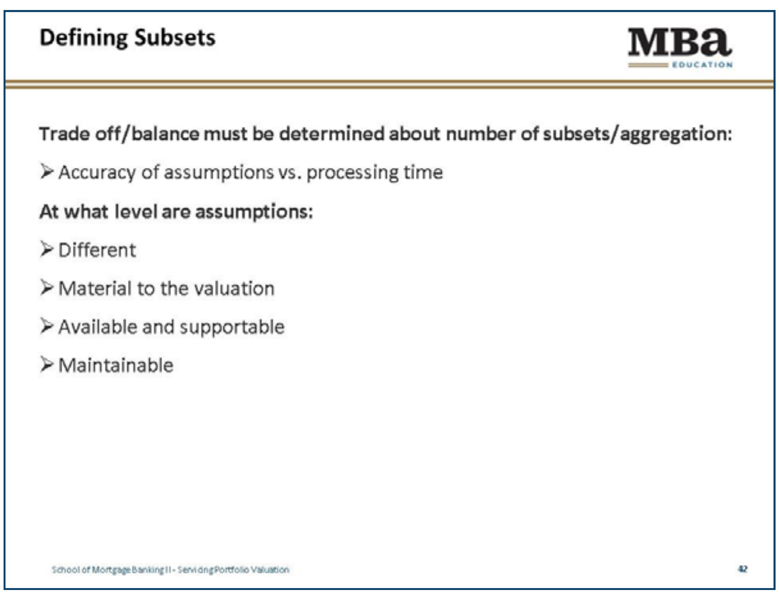
An options-adjusted spread (OAS) is typically used by a large servicer who actively hedges their MSR risk. A static approach is typically used by a smaller servicer who does not hedge for MSR risk.

The Valuation Process

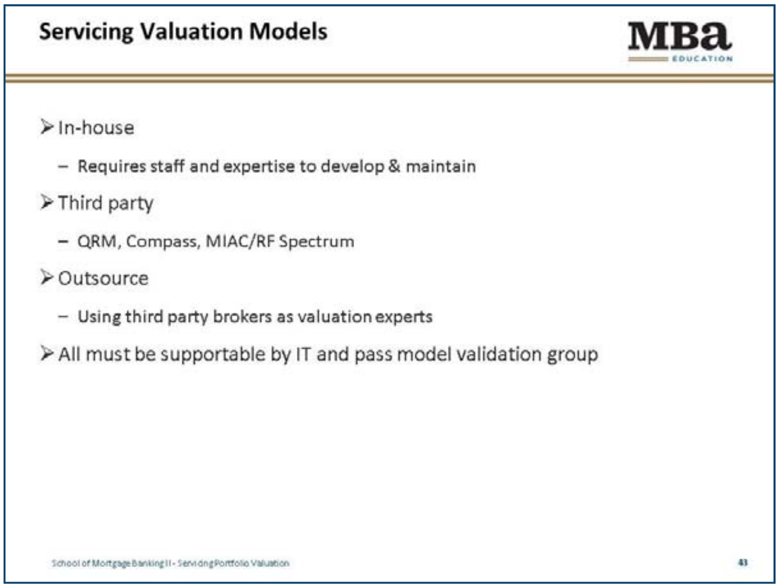


Servicing valuation models may differ, but the process is the same. The portfolio is separated into homogeneous subsets and portfolio characteristics are projected for each subset. These characteristics are converted into potential cash flows and adjusted for prepays. A discount is applied to the cash flows and the aggregate cash flows determine value.

Defining Subsets



Servicing Valuation Models



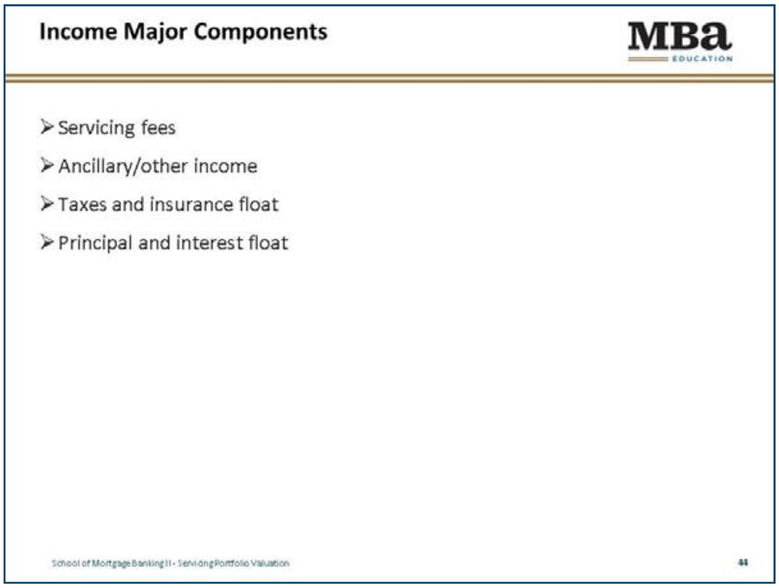
Servicing valuation can be accomplished in a number of ways, all of which require close monitoring by internal management. Whichever path or combination of paths is chosen, the responsibility for the validation and reporting remains with the organization. However, for a small to medium lender who chooses to retain MSR the opportunity to take advantage of proven models or have the support outsourced completely is available.

Income Components

In this segment, we will look at the following topics:

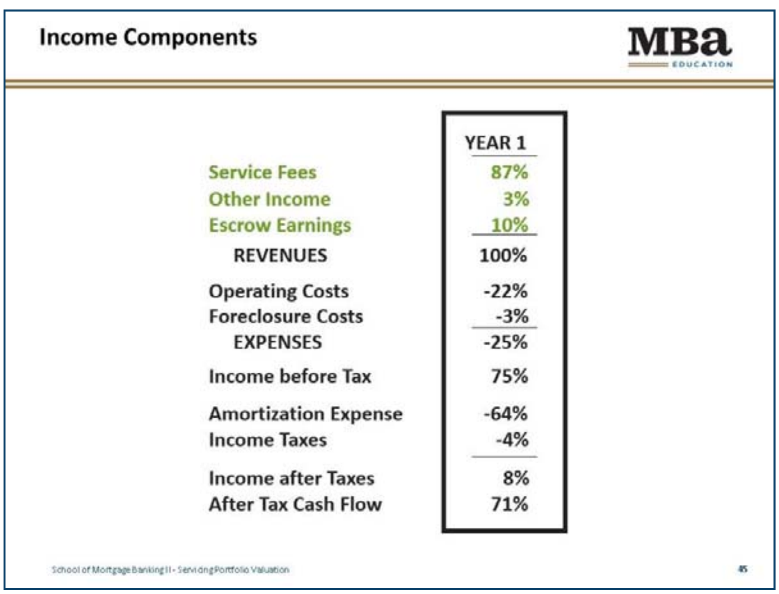
- Income Major Components
- Service Fees
- Ancillary/Other Income
- Taxes and Insurance Float
- Principal and Interest Float

Income Major Components



The following represent income components in a MSR portfolio:

- **Servicing fees** – 25bps for a conventional fixed rate, .375 for an adjustable loan and 50bps for a government loan
- **Other income** – late fees, miscellaneous fees i.e. an amortization schedule
- **Escrow accounts** – float on funds held in these accounts for taxes and insurance
- **Principal and Interest**



Cash Flow Report – Revenue

Cash Flow Report – Revenue

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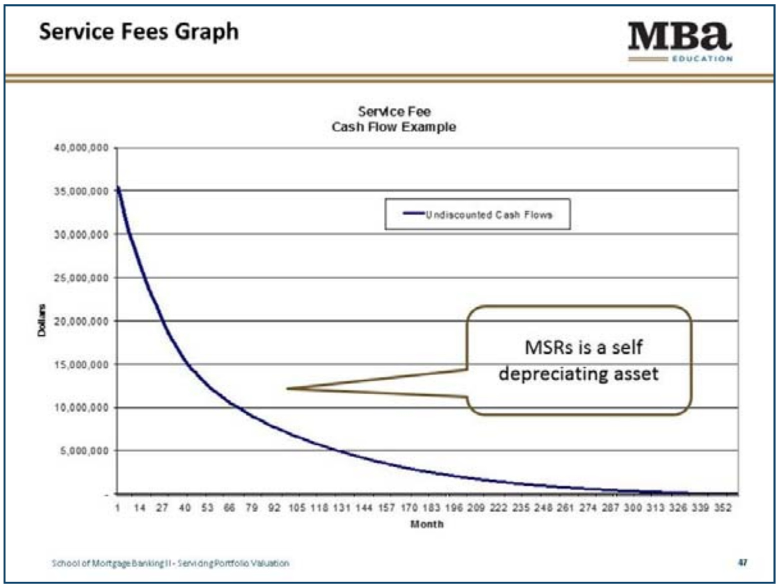
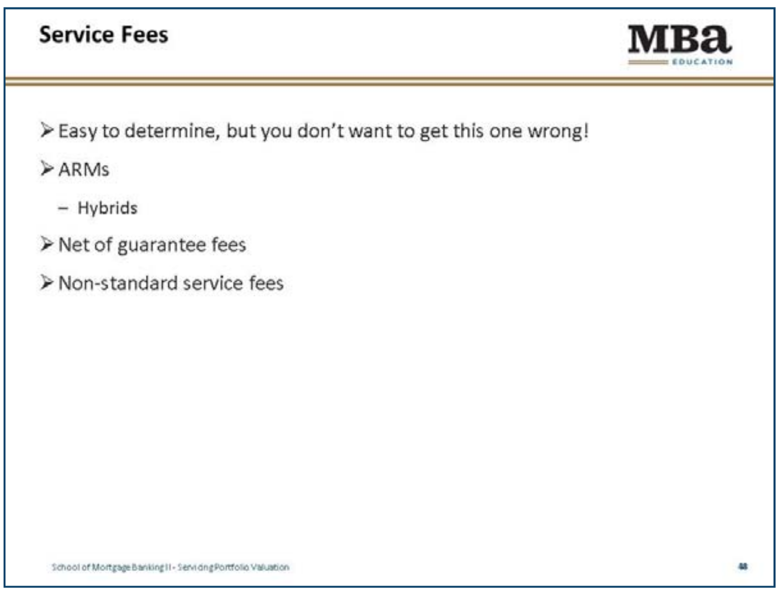
Cash Flow Report
(In Millions)

	Total Cash Flow	Service Fee	Ancillary	T&I Float	Payoff Float	P&I Float
0	**1,276.8**	**1,283.9**	**122.9**	**99.0**	**68.6**	**27.6**
1	13.1	35.4	3.3	0.3	0.5	0.1
2	30.3	34.6	3.3	0.5	0.8	0.2
3	29.8	33.8	3.2	0.6	1.1	0.2
4	28.9	32.9	3.1	0.6	0.9	0.2
5	28.2	32.0	3.0	0.6	0.9	0.2
6	27.6	31.2	2.9	0.6	0.9	0.2
7	27.2	30.5	2.9	0.6	0.9	0.2
8	26.8	29.7	2.8	0.7	0.8	0.2
9	26.4	29.2	2.8	0.7	0.8	0.2
10	25.8	28.6	2.7	0.7	0.8	0.2
11	25.4	28.1	2.6	0.7	0.8	0.2
12	24.9	27.5	2.6	0.7	0.9	0.2

School of Mortgage Banking II - Servicing Portfolio Valuation 46

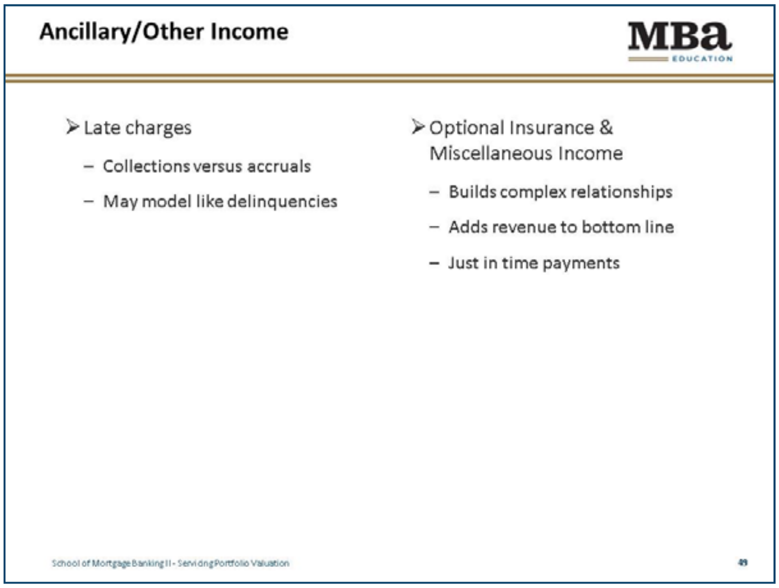
Service Fees



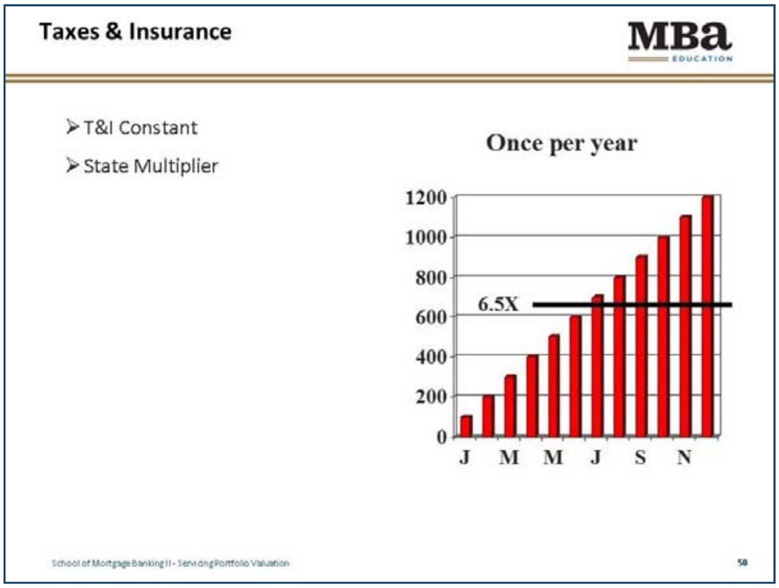


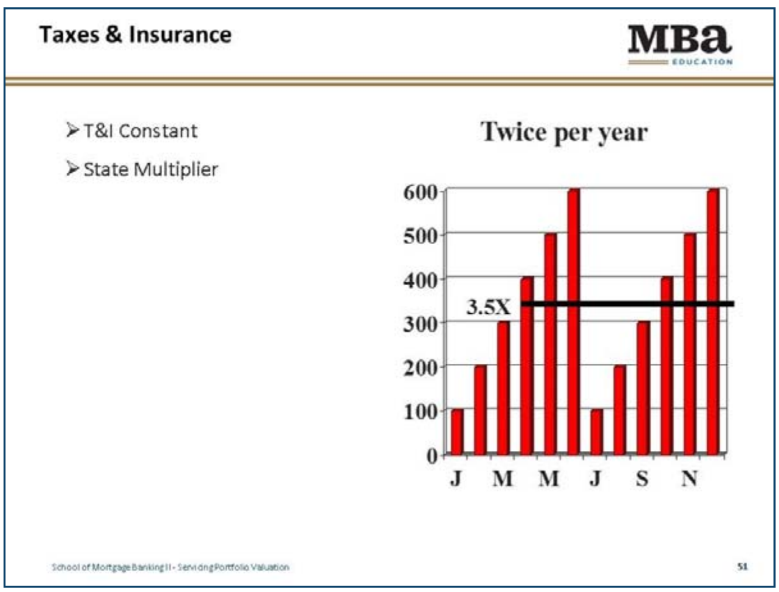
When valuing a MSR portfolio, be sure to include service fees. However, it is also important to understand the possibility of fluctuations or fees that may have been earned on nontraditional servicing that also carries higher costs.

Ancillary/Other Income



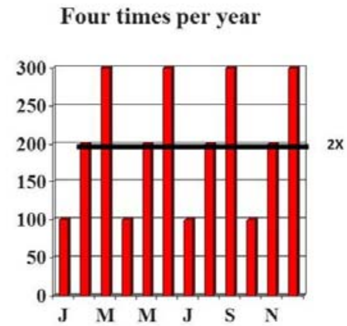
Taxes and Insurance Float





Taxes & Insurance

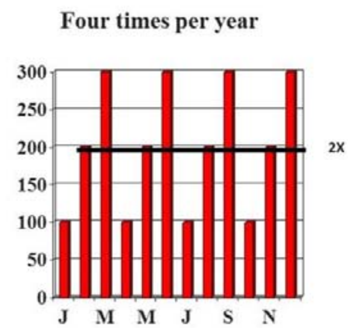
- T&I Constant
- State Multiplier



School of Mortgage Banking II - Servicing Portfolio Valuation 52

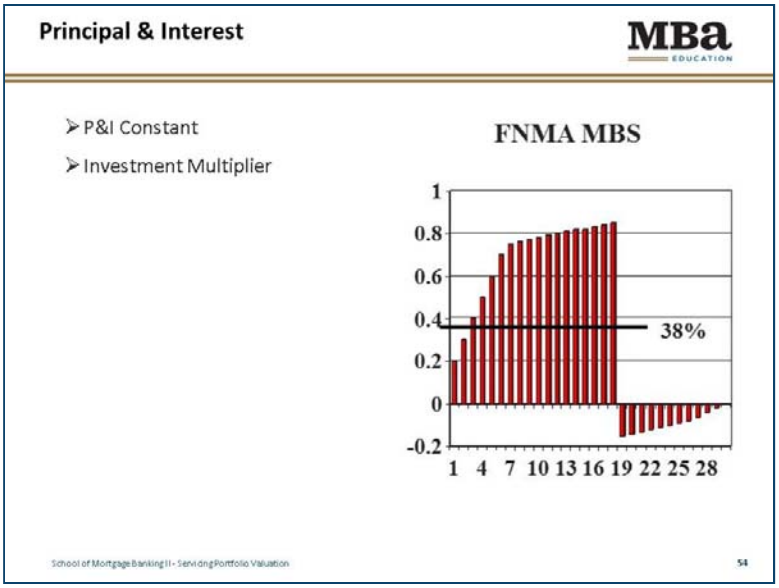
Taxes & Insurance

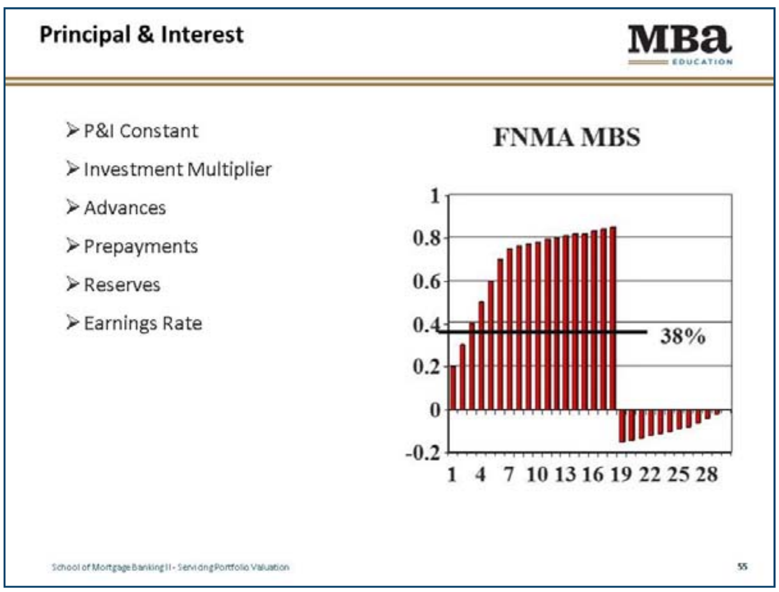
- T&I Constant
- State Multiplier
- Surpluses/Shortages
- Interest on Escrows
- Reserves
- Earnings Rate



School of Mortgage Banking II - Servicing Portfolio Valuation 53

Principal and Interest Float



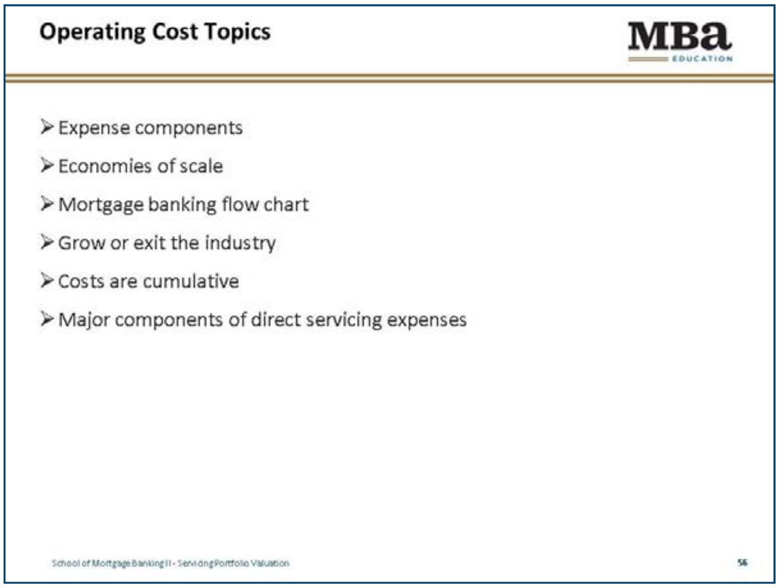


Operating Costs

In this segment, we will look at the following topics:

- Operating Costs Topics
- Expense Components
- Economies of Scale
- Mortgage Banking Flowchart
- Grow or Exit the Industry
- Costs Are Cumulative
- Servicing Costs by Function – Prime Servicers
- Conversion Costs

Operating Costs Topics



To be successful it is critical that a difference is made in small savings on operating cost per loan. When looked at in the aggregate, it can make thousands of dollars of difference in expense.

Expense Components

Expense Components

	YEAR 1
Service Fees	87%
Other Income	3%
Escrow Earnings	10%
REVENUES	100%
Operating Costs	-22%
Foreclosure Costs	-3%
EXPENSES	-25%
Income before Tax	75%
Amortization Expense	-64%
Income Taxes	-4%
Income after Taxes	8%
After Tax Cash Flow	71%

School of Mortgage Banking II - Servicing Portfolio Valuation 57

Cash Flow Report – Expenses

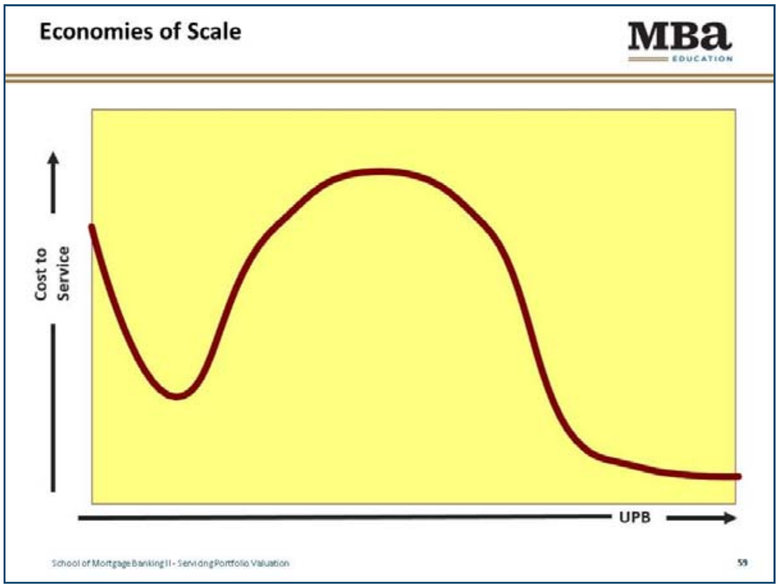
Cash Flow Report - Expenses

Cash Flow Report
(In Millions)

	Total Cash Flow	Delq Serv Expense	Core Serv Expense	Unreimbursed F/C Expense	IOE Expense	Conversion Costs	Interest Lost	Advance Costs
0	**1,276.8**	**(119.2)**	**(113.9)**	**(17.8)**	**(6.0)**	**(17.3)**	**(44.2)**	**(6.8)**
1	13.1	(4.1)	(2.4)	(0.8)	(0.2)	(17.4)	(1.5)	(0.2)
2	30.3	(4.0)	(2.4)	(0.7)	(0.2)	-	(1.6)	(0.2)
3	29.8	(3.9)	(2.3)	(0.7)	(0.1)	-	(1.8)	(0.2)
4	28.9	(3.8)	(2.3)	(0.7)	(0.1)	-	(1.7)	(0.2)
5	28.2	(3.6)	(2.2)	(0.7)	(0.1)	-	(1.6)	(0.2)
6	27.6	(3.5)	(2.2)	(0.6)	(0.1)	-	(1.4)	(0.2)
7	27.2	(3.5)	(2.2)	(0.6)	(0.1)	-	(1.3)	(0.2)
8	26.8	(3.4)	(2.1)	(0.6)	(0.1)	-	(1.1)	(0.2)
9	26.4	(3.3)	(2.1)	(0.6)	(0.1)	-	(1.0)	(0.2)
10	25.8	(3.2)	(2.1)	(0.6)	(0.1)	-	(1.0)	(0.2)
11	25.4	(3.1)	(2.0)	(0.5)	(0.1)	-	(1.1)	(0.2)
12	24.9	(3.1)	(2.0)	(0.5)	(0.1)	-	(1.1)	(0.2)

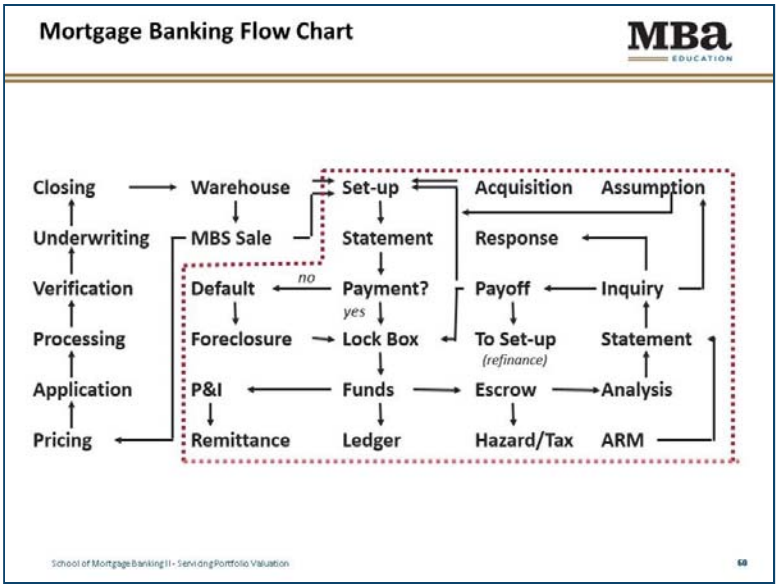
School of Mortgage Banking II - Servicing Portfolio Valuation 58

Economies of Scale



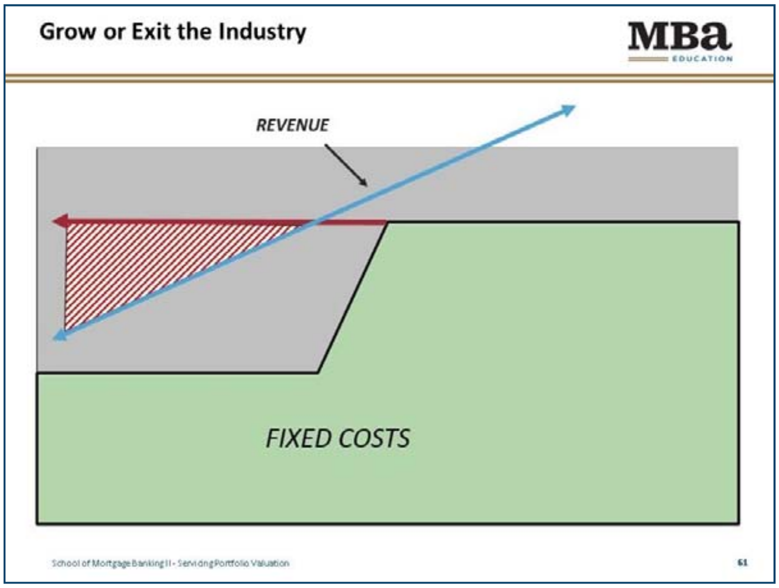
Remember that with the exception of interest only loans, the unpaid principal balance on a loan reduces slightly each month, which in turn reduces the servicing income. Therefore, loans need to be replaced with new high outstanding balance loans on a regular basis.

Mortgage Banking Flowchart



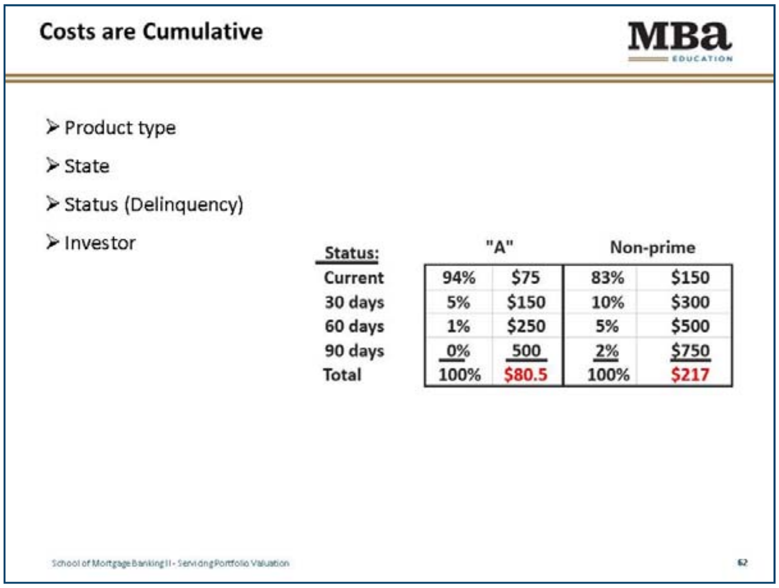
Consider the details on this slide to be a loan lifecycle beginning with the origination of the loan and following it through all the steps associated with loan administration/servicing.

Grow or Exit the Industry

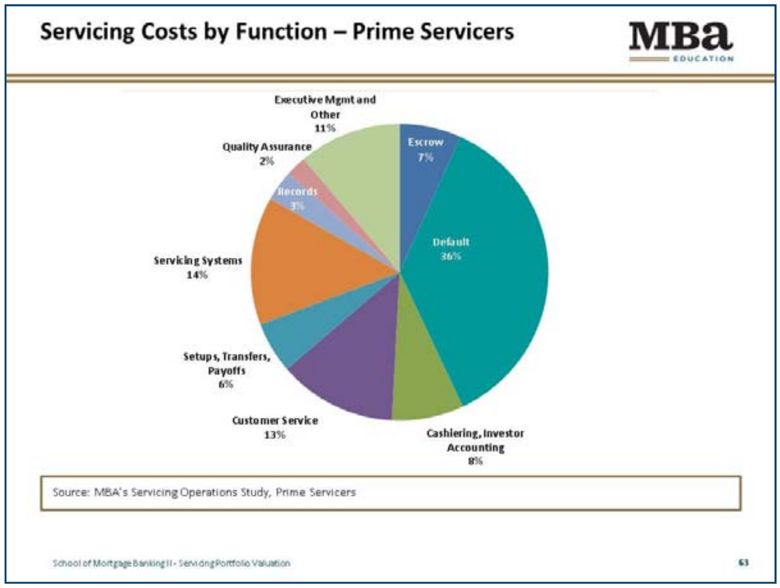


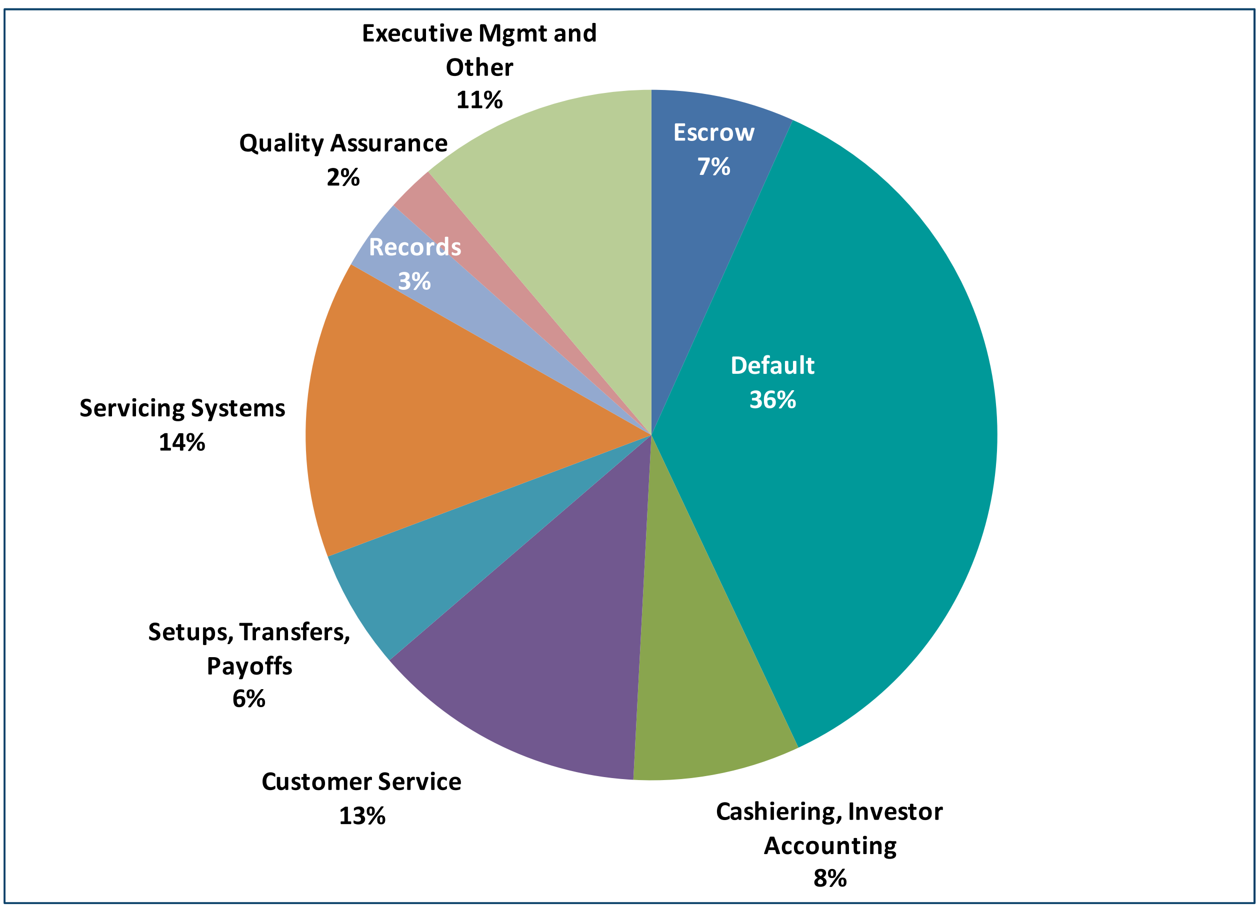
This graph depicts one of the reasons that the mega servicers have grown so significantly. The cost of servicing over the past few years and the risks associated with continued default can cause smaller institutions to exit the business completely or to give up servicing for themselves.

Costs Are Cumulative



Servicing Costs by Function – Prime Servicers

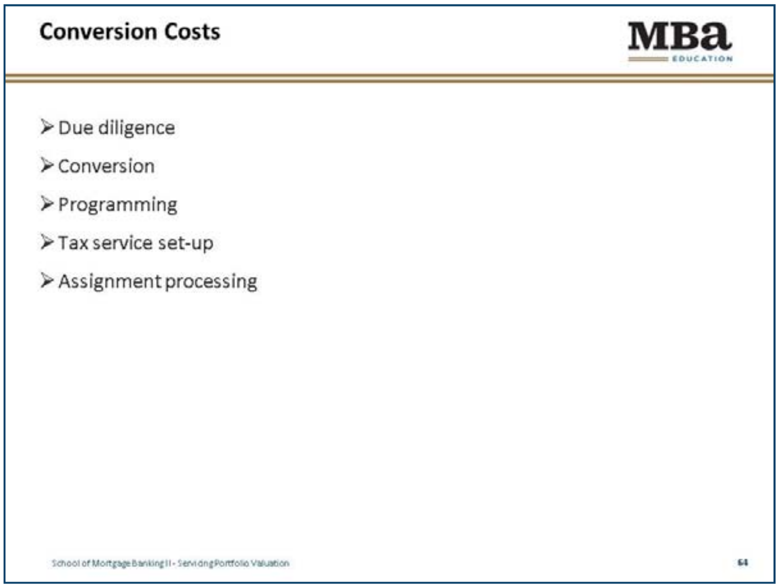




Source: MBA's Servicing Operations Study, Prime Servicers

Almost 60% of the costs today are for personnel and the need is greater than ever for trained, experienced personnel, especially in dealing with early intervention, default and loss mitigation. These pieces cannot be supported technologically in the same way as traditional servicing is supported.

Conversion Costs



Conversion is a term used to indicate that a portfolio of MSR or even whole loans has been acquired and the servicing is going to be transferred to your portfolio. While for most institutions this is a process supported by technology and the loan servicing data is “converted” electronically, there are steps in the process of preparing for the conversion and actually setting up the support of those new loans that incur significant costs.

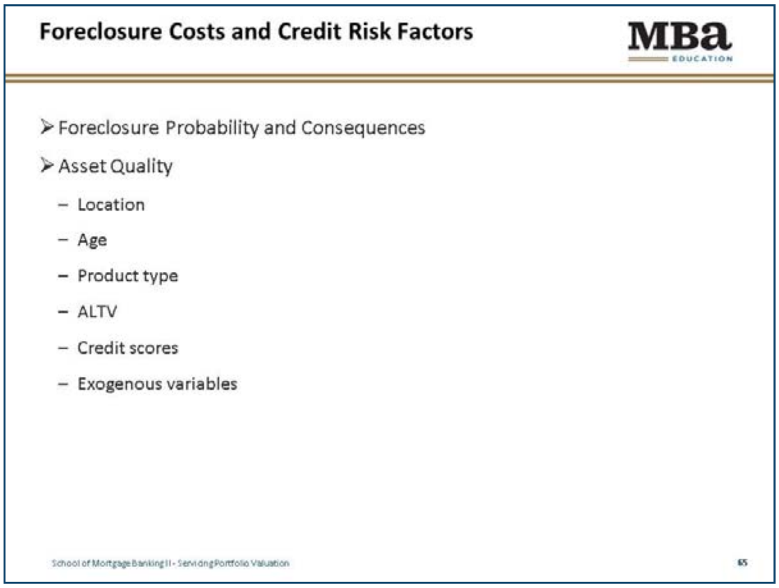
Due diligence needs to be done in order to understand the loan profile and determine what data exceptions might need to be addressed. Is the servicing system the same or do the data sets need to be mapped to ensure compatibility with your system?

Foreclosure Costs and Credit Risk Factors

In this segment, we will look at the following topics:

- Foreclosure Costs and Credit Risk Factors
- Foreclosures Trends
- Asset Quality

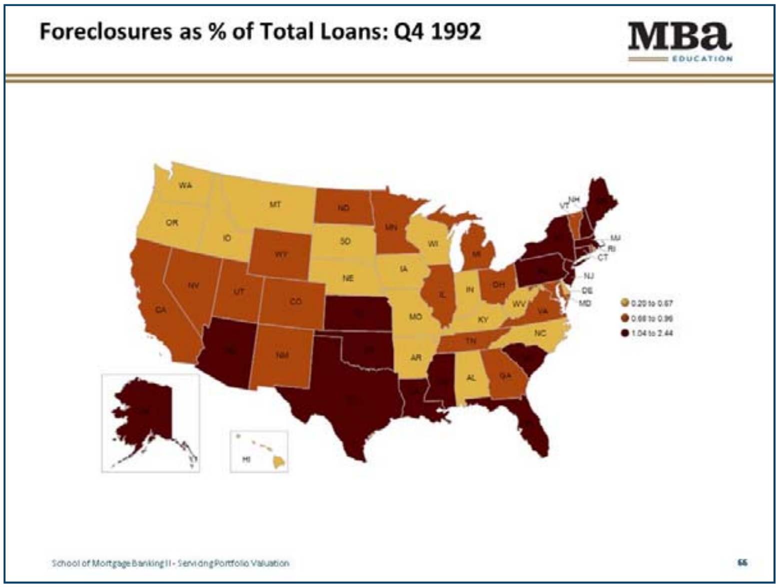
Foreclosure Costs and Credit Risk Factors

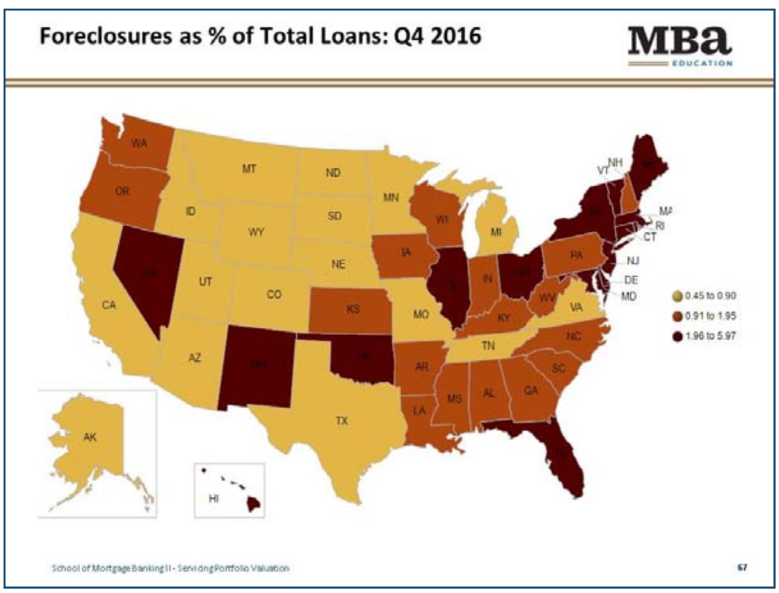


Even before a portfolio of MSR is converted, an analysis must be completed to understand the risk associated with the loans. While the evaluation of these risks may have taking place during the negotiations to acquire the servicing rights, the amount of work/costs may be dramatically impacted by the factors listed above.

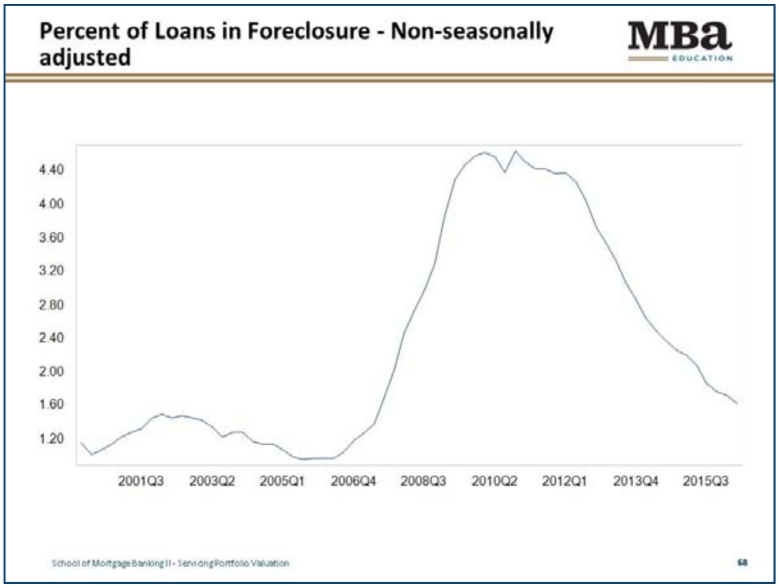
Foreclosure Trends

Foreclosure as % of Total Loans – Then and Now



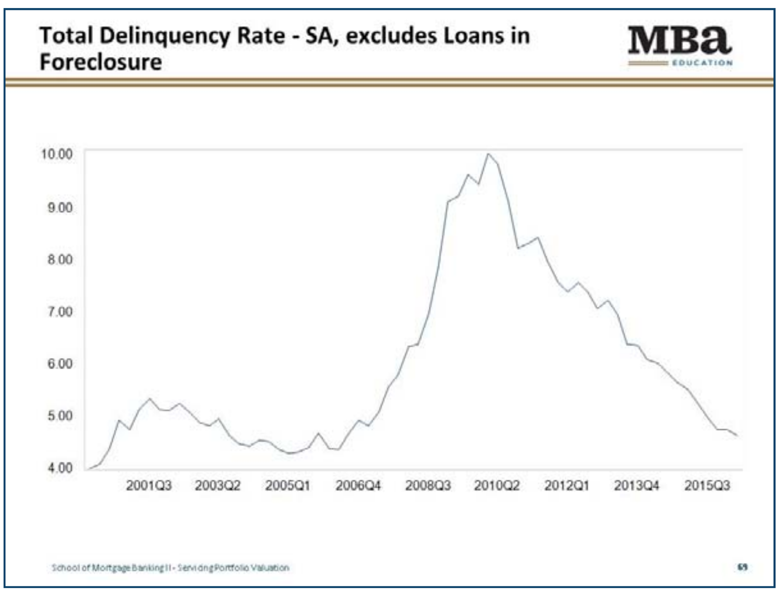


Percent of Loans in Foreclosure

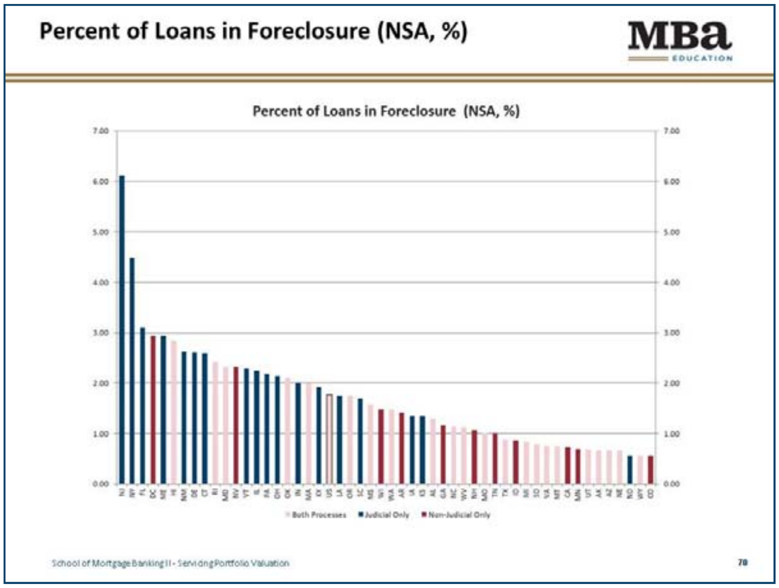


Total Delinquency Rate

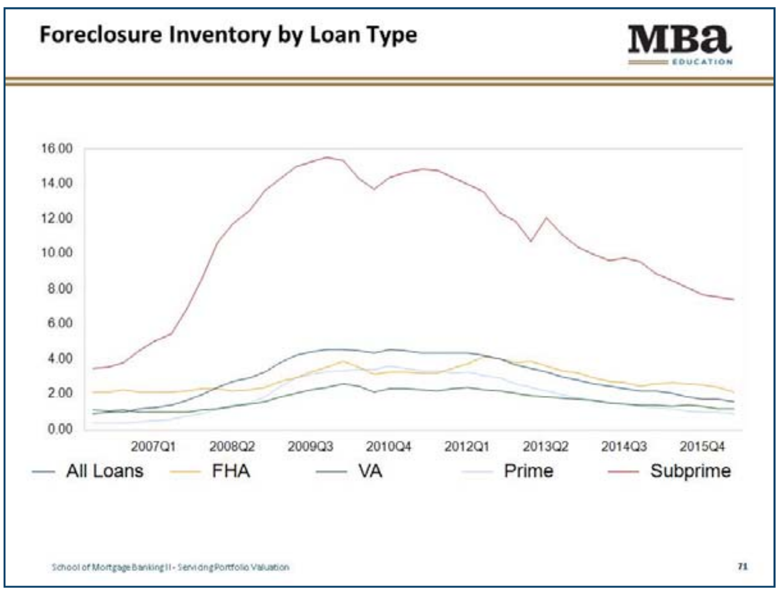
Total Delinquency Rate - SA, excludes Loans in Foreclosure



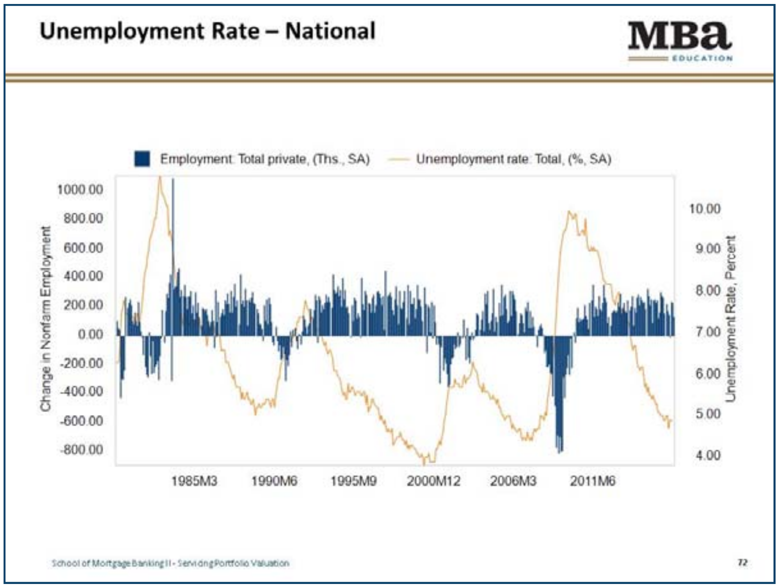
Percentage of Loans in Foreclosure by State



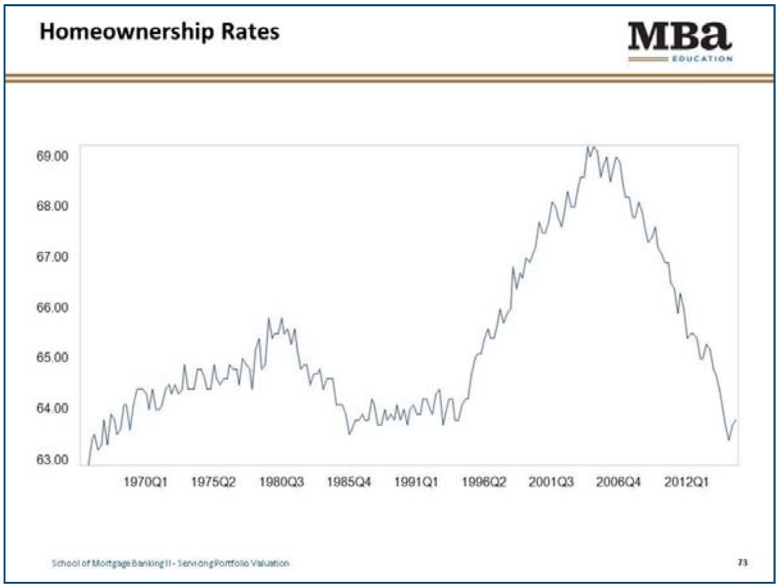
Foreclosure Inventory by Loan Type



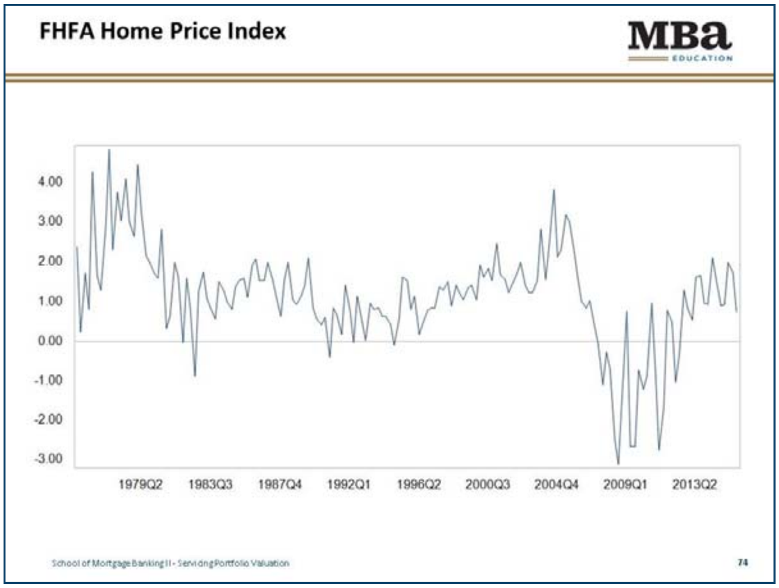
Unemployment Rate – National



Homeownership Rates



FHFA Home Price Index



Asset Quality

Asset Quality

- Location
- Age
- Product type
- ALTV
- Credit scores
- Exogenous variables

School of Mortgage Banking II - Servicing Portfolio Valuation 75

Location – Natural Disaster Risk

Natural Disaster Risk

Source: www.PredictiveData.Info

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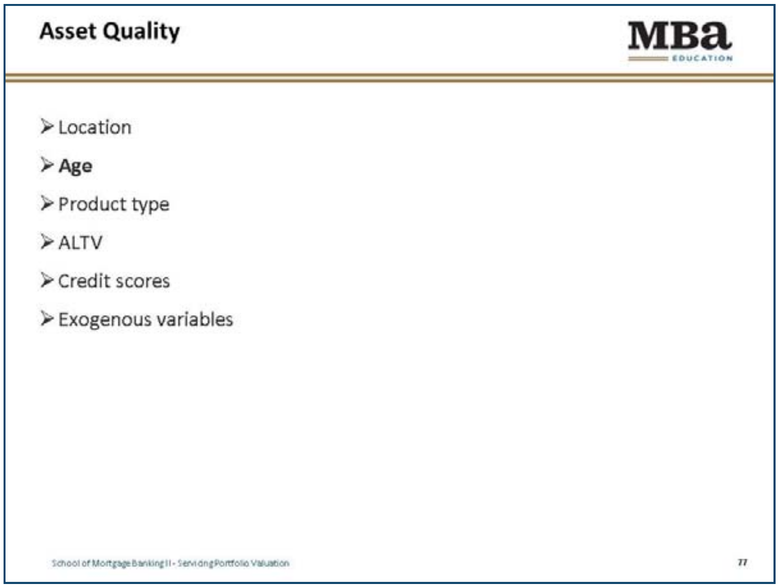
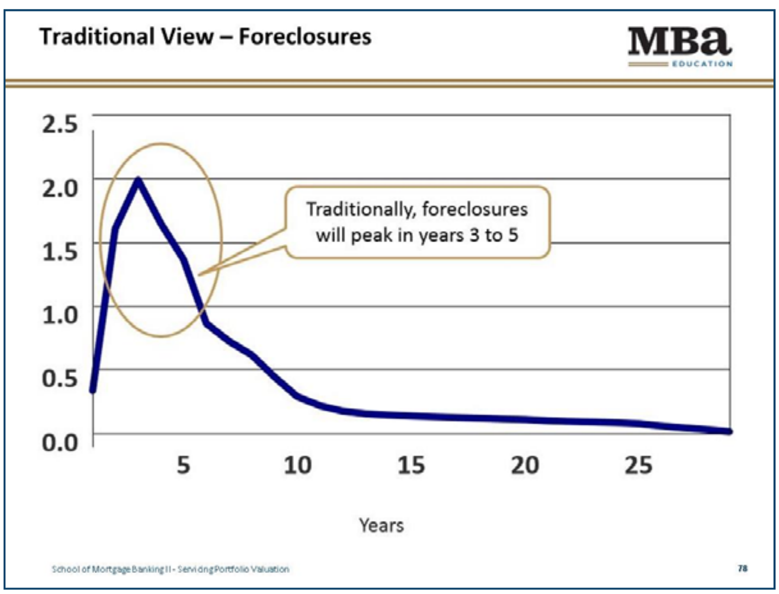
Some portfolios have inherent geographical risk. Earthquakes, flooding, hurricanes, etc., are all potential natural disasters and risk factors that must be considered in valuing a portfolio of MSR.

Age

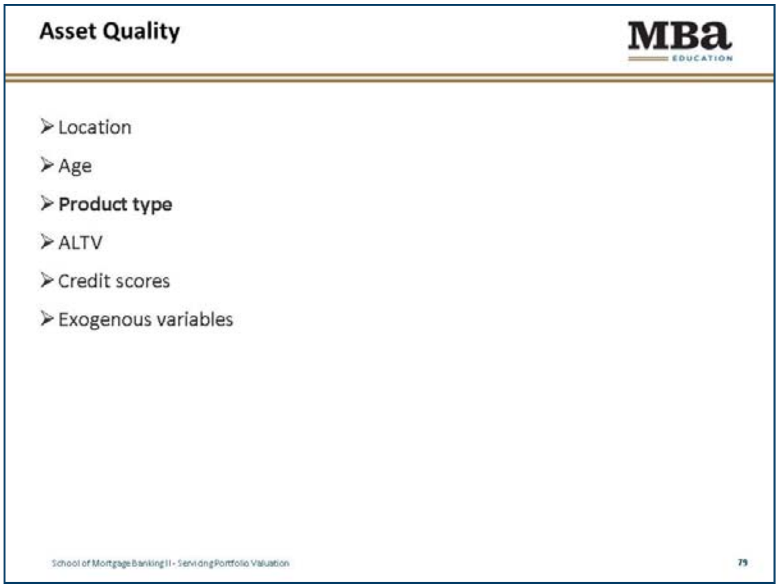


Age can be a factor if there is any issue on the appraisal indicating a disproportionate economic life to the property versus the term of the loan.

Traditional View – Foreclosure

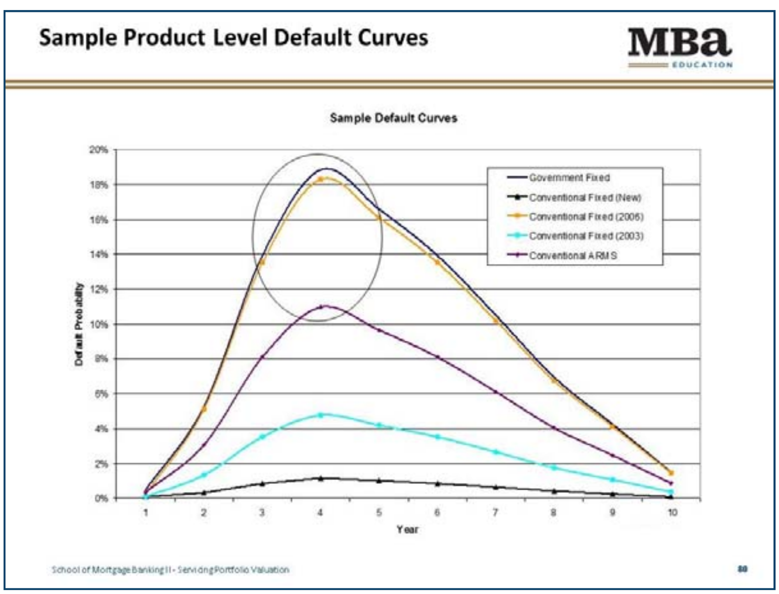


Product Type

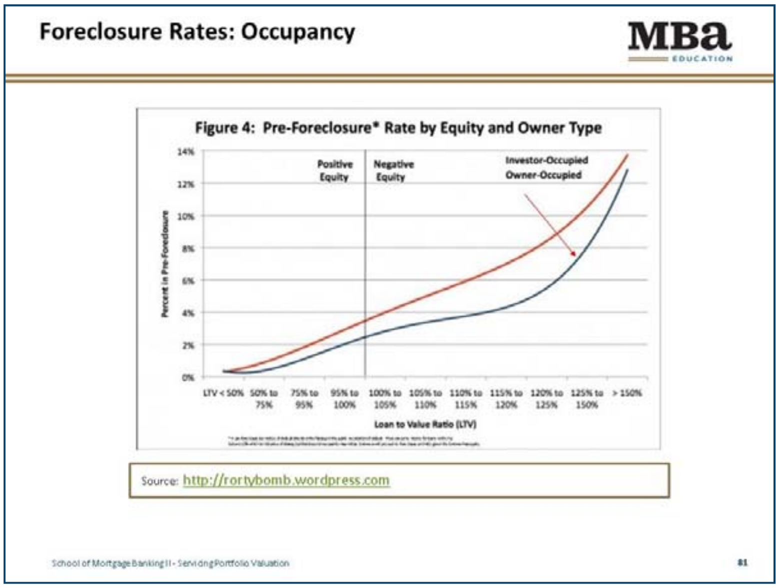


Some product types have traditionally carried higher risks. However, the interest- only option ARM – with other layers of risk, such as high LTVs, second mortgages, no MI and limited or no documentation have changed the traditional models and created new concerns about how we look at quality production.

Sample Product Level Default Curves

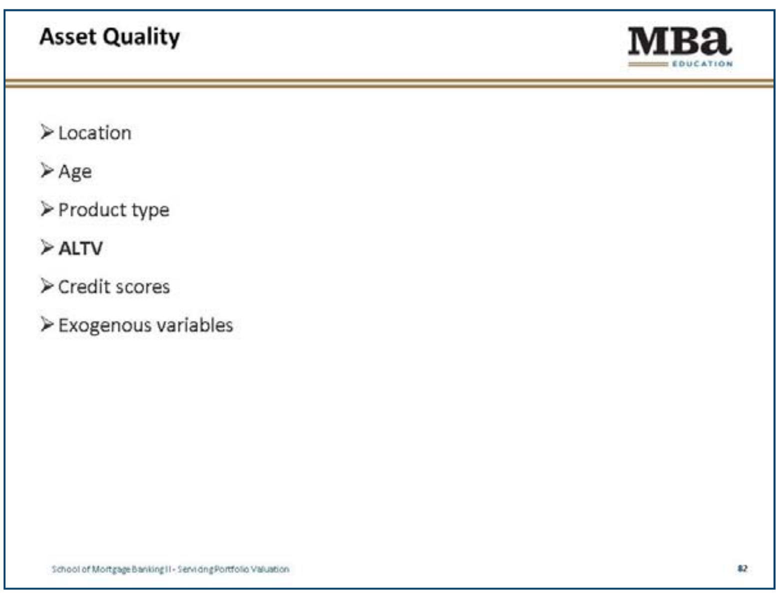


Foreclosure Rates – Occupancy

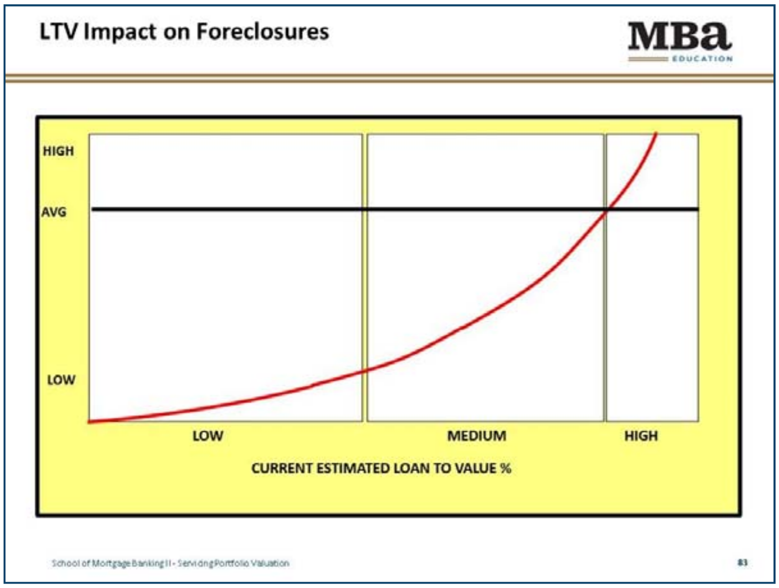


This graph shows how dramatically the LTV (affected by declining values) tracks with foreclosure for both owner-occupied and non-owner-occupied.

ALTV

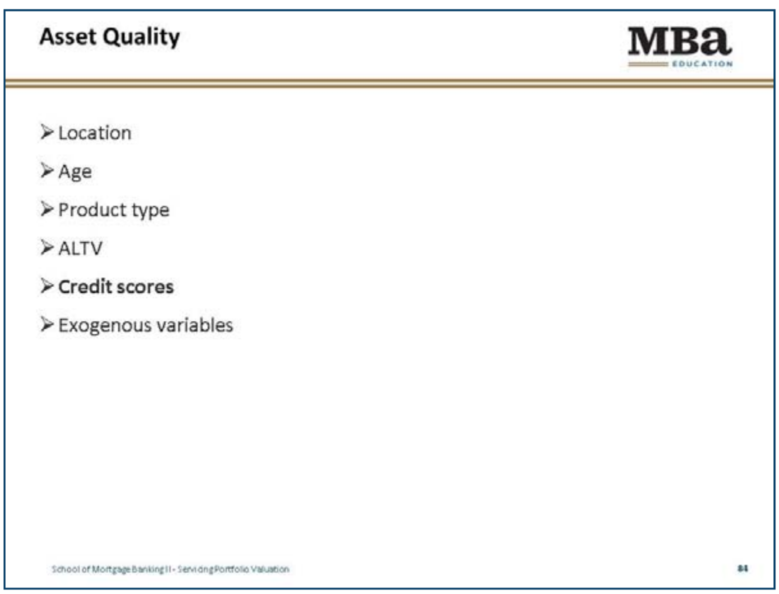


LTV Impact on Foreclosures



It is also important to understand that the interest-only option arms with some other layer of risk often had very high credit scores.

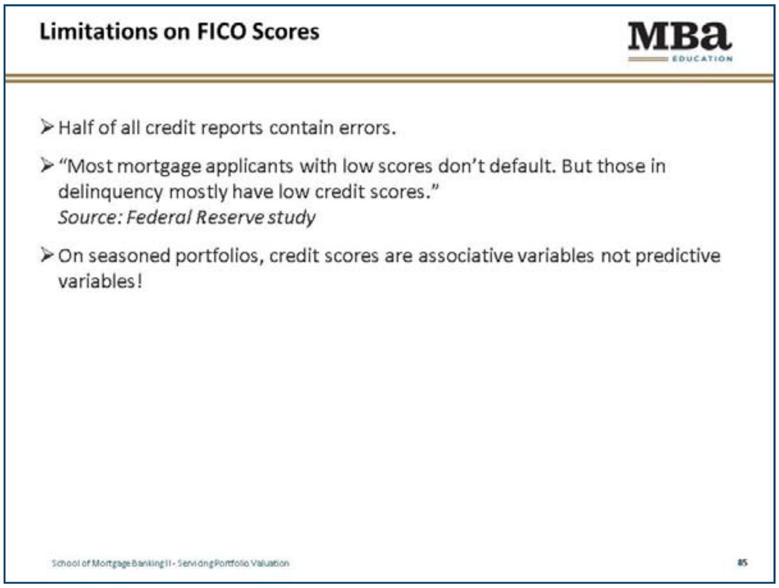
Credit Scores



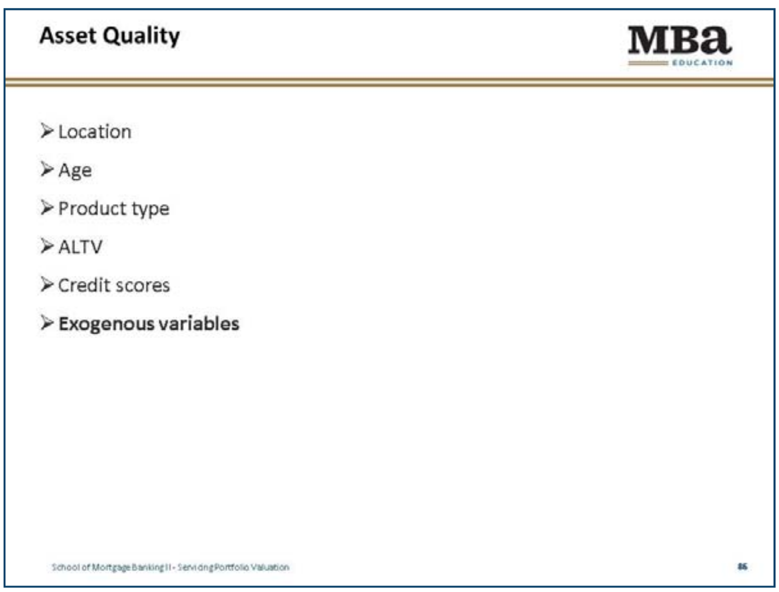
When considering the purchase of a portfolio of loans or just the servicing rights it is critical to look carefully at the average credit scores. It is very important to remember that the interest-only option arms with some other layer of risk often had very high credit scores at the time they were originated.

Understanding how a borrower's credit may have been impacted by the economic and financial conditions of the past few years will be a complicated matter as we look at MSR valuation in the future.

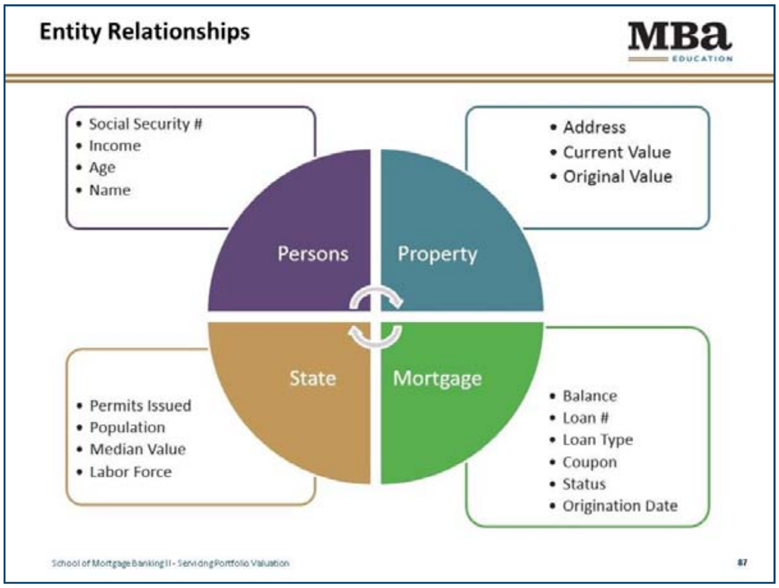
Limitations on FICO Scores



Exogenous Variables



Entity Relationship Diagram



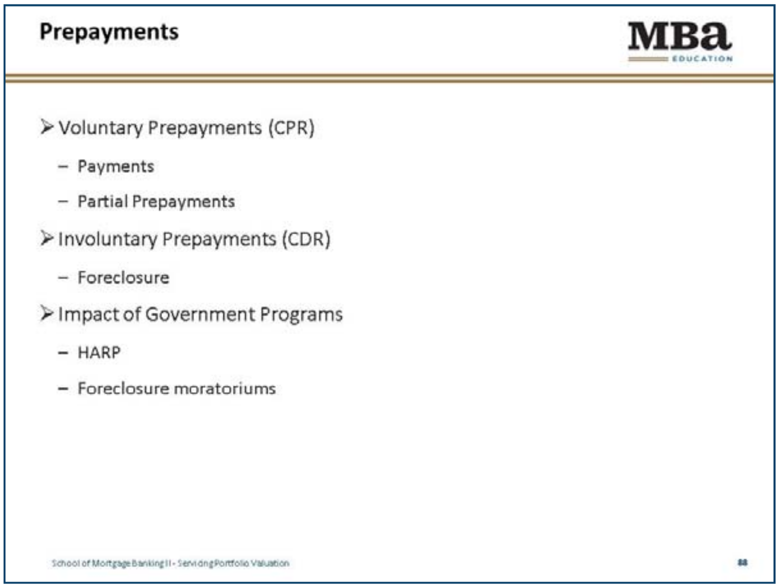
This diagram represents a tool for understanding all the variables that must now be considered when talking about both the performance of an existing loan as well as how it will perform in the future – all part of the valuation process.

Impact of Prepayments

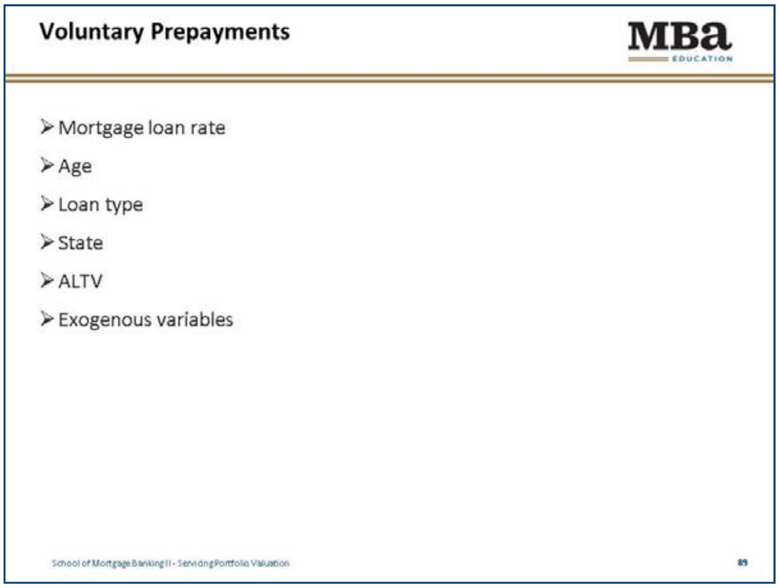
In this segment, we will look at the following topics:

- Prepayments
- Voluntary Prepayments
- Prepayment Models
- Involuntary Prepayments

Prepayments



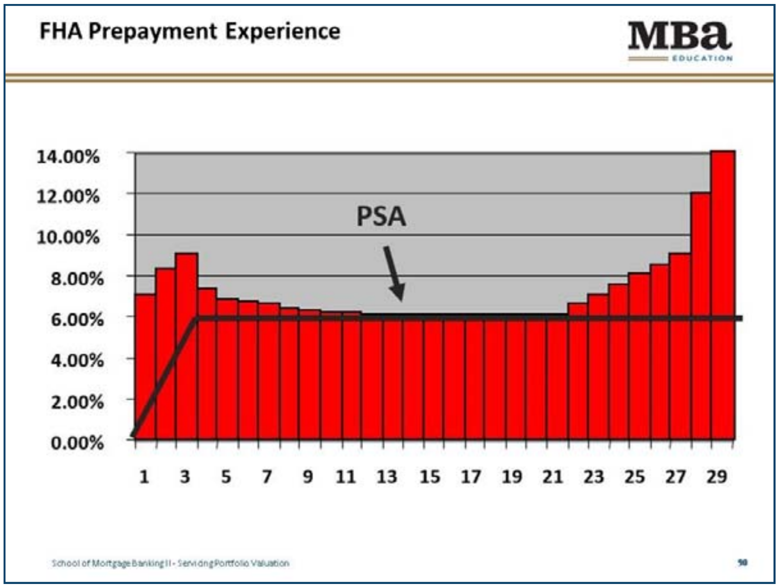
Voluntary Prepayments



Prepayment risk is difficult to capture as the rules are changing. There was a time when it was said that on average, a person lived in their home for about 7 years. So in valuing the income stream on a portfolio of MSR, it was reasonable to expect that stream of income and payments to an investor to last about 7 years.

However, the world has changed and prepayment of loans can be difficult to predict. Many factors contribute to this variable, including interest rates, product type, geography, available employment and property values.

FHA Prepayment Experience



PSA/CPR – Another View

PSA/CPR – Another View

Month	100 PSA	200 PSA	300 PSA	600 PSA	900 PSA
1	0.2	0.4	0.6	1.2	1.8
2	0.4	0.8	1.2	2.4	3.6
3	0.6	1.2	1.8	3.6	5.4
4	0.8	1.6	2.4	4.8	7.2
5	1.0	2.0	3.0	6.0	9.0
6	1.2	2.4	3.6	7.2	10.8
:					
10	2.0	4.0	6.0	12.0	18.0
:					
:					
18	3.6	7.2	10.8	21.6	32.4
:					
:					
24	4.8	9.6	14.4	28.8	43.2
:					
:					
30	6.0	12.0	18.0	36.0	54.0
31	6.0	12.0	18.0	36.0	54.0
32	6.0	12.0	18.0	36.0	54.0
:					
360	6.0	12.0	18.0	36.0	54.0

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Sample Prepayments – Bloomberg

Sample Prepayments - Bloomberg

FNCL4 Agency Generic
Data as of 12/31/2015 Source: Bloomberg

Firm	Base PSA	Maturity	WAC	Down 300	Down 200	Down 100	Down 50	Base	Up 50	Up 100	Up 200	Up 300
BAR	196	348	4.6	1028	828	605	440	270	178	157	99	85
BNP	302	325	4.6	701	508	334	234	155	127	114	102	96
BOA	215	341	4.49	633	622	585	499	341	166	113	71	68
CS	161	348	4.6	827	817	622	416	213	163	127	103	89
DB	155	359	4.5	1404	1121	651	435	286	196	151	117	110
JPS	226	347	4.6	882	809	580	427	278	173	130	108	99
MS	162	348	4.55	781	725	609	475	271	152	125	96	76
RBS	274	345	4.48	545	520	434	347	237	146	137	122	120
Average	**211**			**848**	**744**	**552**	**409**	**256**	**163**	**129**	**102**	**93**
Median	**206**			**804**	**766**	**594**	**431**	**271**	**165**	**129**	**103**	**93**

FNCL4 Agency Generic
Data as of 12/31/2012 Source: Bloomberg

Firm	Base PSA	Maturity	WAC	Down 300	Down 200	Down 100	Down 50	Base	Up 50	Up 100	Up 200	Up 300
BAR	500	350	4.4	860	860	654	592	500	335	246	135	106
BNP	479	335	4.6	876	876	716	597	479	363	250	126	114
BOA	381	342	4.49	437	436	422	407	381	337	250	125	96
CS	391	338	4.5	656	656	564	455	391	212	160	123	103
DB	657	359	4.5	1055	996	897	804	657	476	324	179	123
JPS	410	333	4.43	779	751	673	549	410	285	190	113	92
MS	712	354	4.49	951	966	946	878	712	497	363	245	142
RBS	424	339	4.5	770	730	639	515	424	316	248	104	82
UBS	326	344	4.47	600	596	552	470	326	211	149	139	138
Average	**464**			**776**	**763**	**674**	**585**	**464**	**337**	**242**	**144**	**111**
Median	**424**			**779**	**751**	**654**	**549**	**424**	**335**	**248**	**135**	**106**

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Prepayment by Vintage

Prepayment by Vintage

As of February 2016

Coupon	12 Month CPR	Outstanding UPB (In Billions)
2.00	3.0	0.05
2.50	5.60	10.68
3.00	7.60	357.53
3.50	11.30	563.74
4.00	16.70	407.32
4.50	19.80	176.77
5.00	20.90	89.45
5.50	21.10	62.97
6.00	21.10	40.02
6.50	19.20	15.54
7.00	17.10	5.59
7.50	14.60	1.31
8.00	12.80	0.59
8.50	11.60	0.18
9.00	11.60	0.08
9.50	12.90	0.03

As of December 2014

Coupon	12 Month CPR	Outstanding UPB (In Billions)
	No Data	
2.50	3.80	11.16
3.00	4.90	324.22
3.50	7.00	394.34
4.00	10.70	428.19
4.50	14.70	225.42
5.00	18.40	120.20
5.50	22.10	85.38
6.00	24.20	54.23
6.50	22.60	20.59
7.00	20.80	7.26
7.50	16.90	1.68
8.00	13.60	0.75
8.50	11.90	0.24
9.00	11.60	0.11
9.50	11.70	0.05

As of December 2013

Coupon	12 Month CPR	Outstanding UPB (In Billions)
2.50	No Data	
3.00	No Data	
3.50	No Data	
4.0	7.50	315.94
4.5	13.00	237.48
5.0	19.70	150.16
5.5	26.60	115.50
6.0	30.70	75.48
6.5	29.00	28.13
7.0	26.30	9.63
7.5	19.10	2.16
8.0	14.40	0.94
8.5	15.40	0.30
9.0	14.00	0.14
9.5	9.80	0.07
10.0	11.20	0.03

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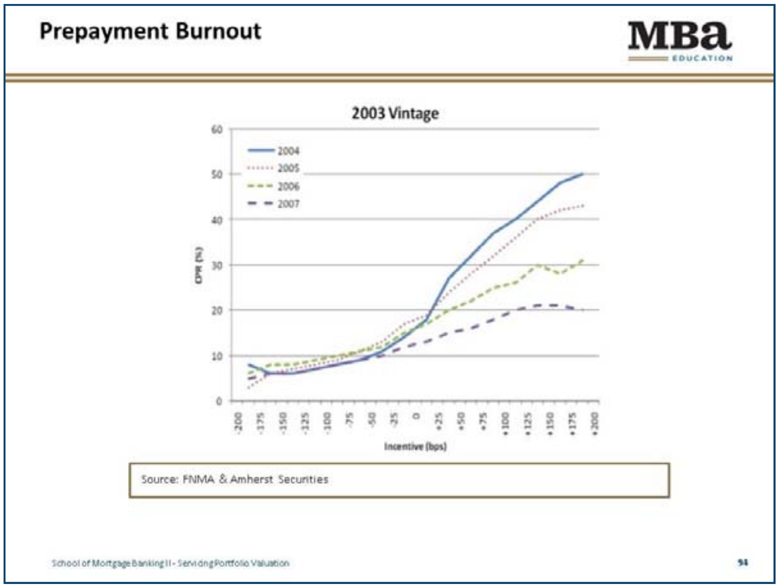
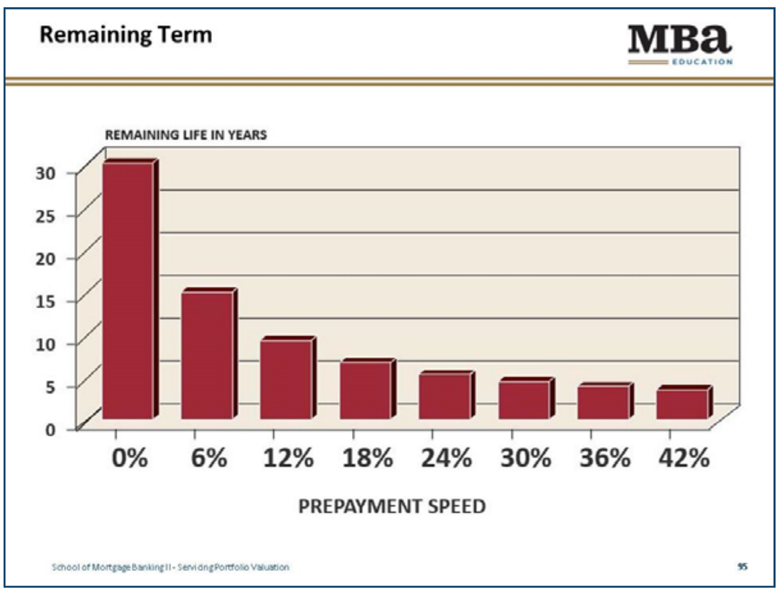
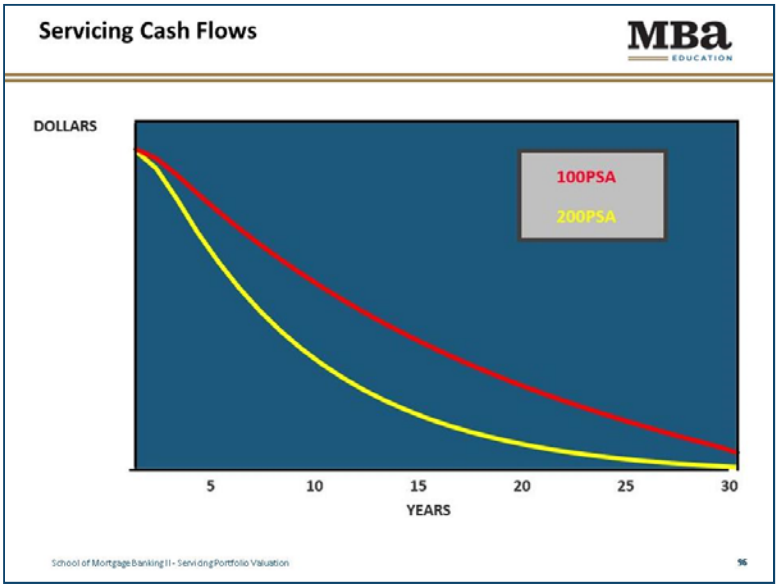
Prepayment Burnout



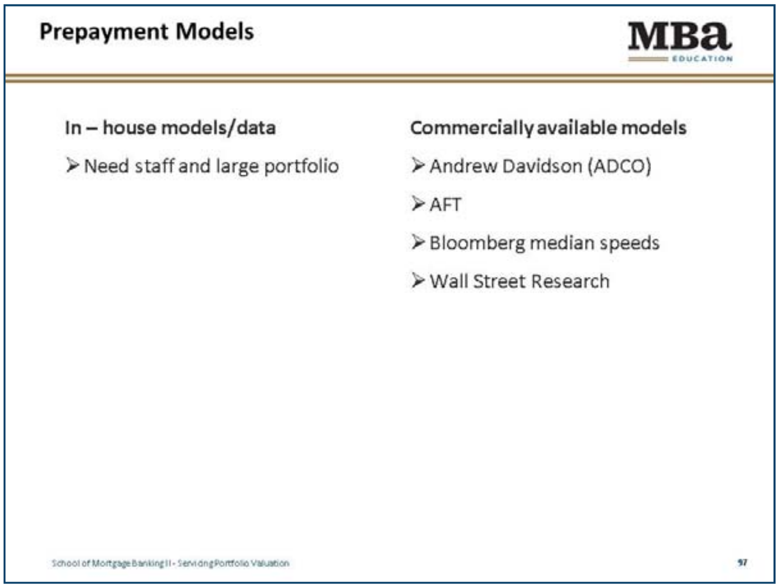
Remaining Term



Servicing Cash Flows

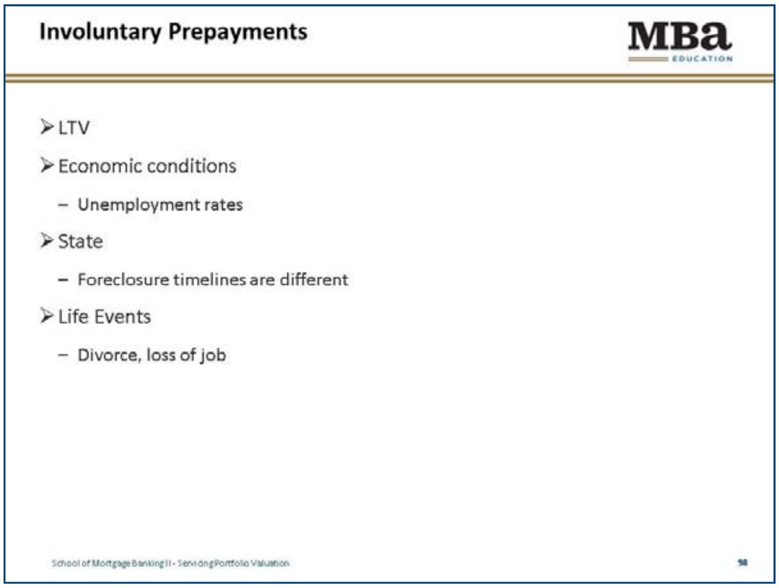


Prepayment Models



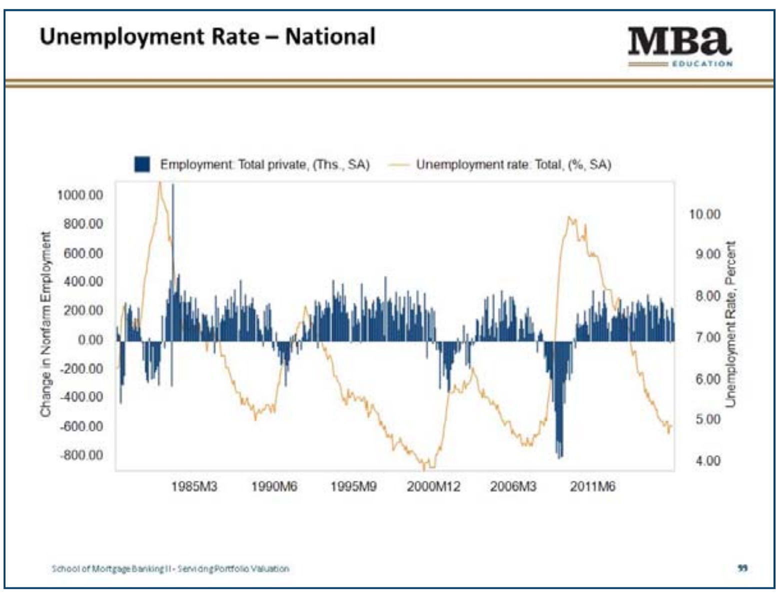
Resources are available if the decision is to purchase the tools necessary to project prepayment or to outsource.

Involuntary Prepayments



These factors make it difficult to predict involuntary prepayments, as we have no precedent for the kinds of numbers we are seeing today.

Unemployment Rate – National



Impact of Default

In this segment, we will look at the following topic:

- Default Modeling Summary

Default Modeling Summary

Default Modeling Summary

- Intense area of focus
- Modeling behavior of borrower based on:
  - Cumulative LTV
  - State
  - Age
  - Payment history
  - FICO
  - Property type
- Overall economic conditions

School of Mortgage Banking II - Servicing Portfolio Valuation 100

MBA Economic Forecast

MBA Economic Forecast

Please see handout for current data

School of Mortgage Banking II - Servicing Portfolio Valuation 101

MBA Finance Forecast

MBA Finance Forecast

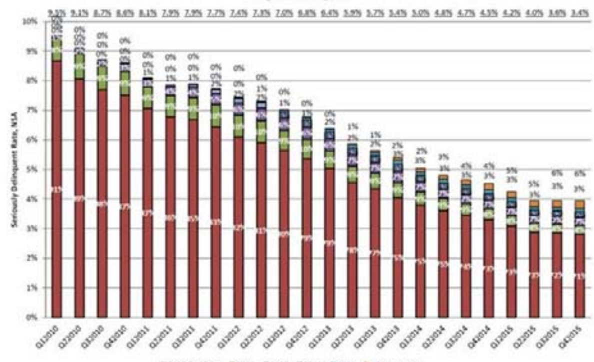
Please see handout for current data

School of Mortgage Banking II - Servicing Portfolio Valuation 102

Delinquency by Vintage

Delinquency by Vintage

<u>All Loans:</u> Trend in the composition of seriously delinquent loans by origination year



Source: Mortgage Bankers Association (MBA) - National Delinquency Survey 3rd Quarter 2015 Preliminary Origination Year Analysis Materials

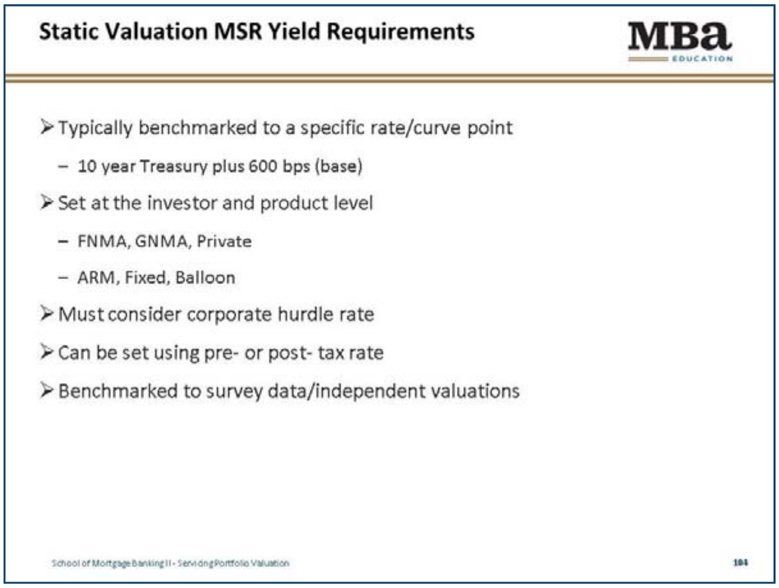
School of Mortgage Banking II - Servicing Portfolio Valuation 103

Yield Requirements

In this segment, we will look at the following topics:

- Static Valuation MSR Yield Requirements
- OAS Valuation Yield Requirements
- Alternative View: IRR Approach
- After-Tax Cash Flows for Two Competing Products

Static Valuation MSR Yield Requirements



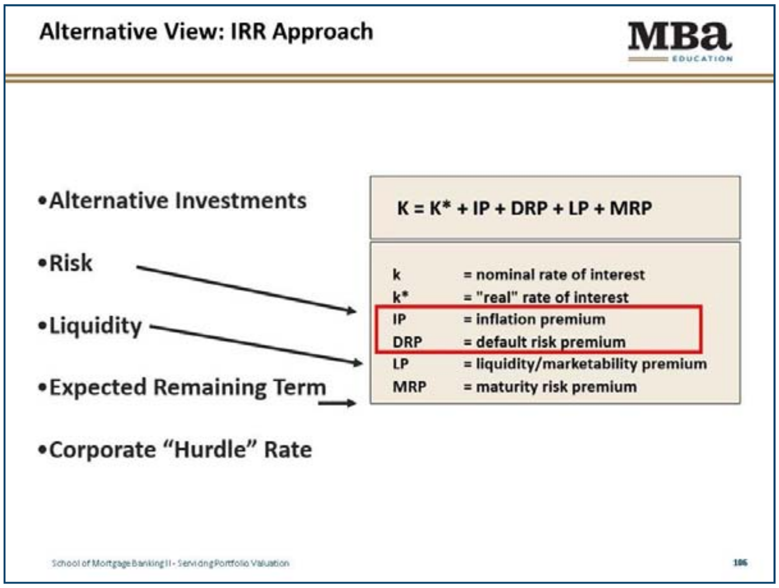
MBa MORTGAGE BANKERS ASSOCIATION

OAS Valuation Yield Requirements

OAS Valuation Yield Requirements

- Set to a spread over a specific curve
  - 700 bps above the LIBOR or Treasury curve
- Adjustments for products likely
- Must consider corporate hurdle rate
- Tends to be used to solve for market price
  - OAS is adjusted to get back to market
  - Assumes that price is known
- Benchmarked to survey, independent valuations or interest only securities

Alternative View: IRR Approach



After-Tax Cash Flows for Two Competing Products

After-tax Cash Flows forTwo Competing Products

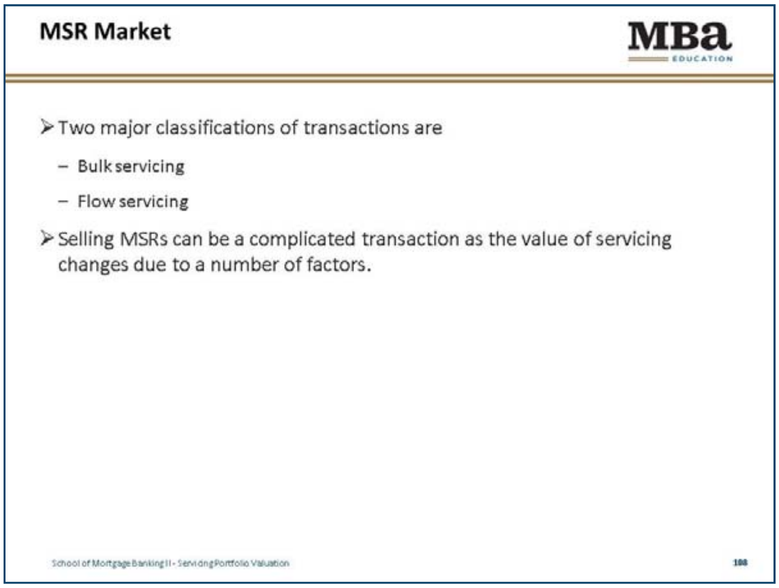
YEAR	Project S	Project L
0	-1000	-1000
1	500	100
2	400	300
3	300	400
4	100	600
IRR	14.5%	11.8%

MSR Market

In this segment, we will look at the following topics:

- MSR Market
- Bulk Servicing
- Flow / Co-Issue
- Servicing Sales

MSR Market


MSR Market
MBa EDUCATION
Two major classifications of transactions are
– Bulk servicing
– Flow servicing
Selling MSRs can be a complicated transaction as the value of servicing changes due to a number of factors.
School of Mortgage Banking II - Servicing Portfolio Valuation

Bulk Servicing

Bulk Servicing

- Defined as servicing that has existed for some period of time (more than 3 to 6 months old)
  - Borrower has made a number of payments to existing servicer
- Bulk packages allow the buyer to see the actual performance and have actual data to analyze as part of the bid process

School of Mortgage Banking II - Servicing Portfolio Valuation 109

Bulk Bids

Bulk Bids

- A number of items (in addition to price) must be considered in the overall evaluation of bids.
  - Counterparty
  - Servicing system
  - Tax and flood contracts
  - Interim servicing fee
  - Prepayment penalty language

School of Mortgage Banking II - Servicing Portfolio Valuation 110

Flow / Co-Issue

Flow/Co-issue

- Defined as less than three months old and often the servicing is sold simultaneously to selling to loan
- Flow packages allow the seller to sell future production based on a prospective view of what the seller is expected to originate

School of Mortgage Banking II - Servicing Portfolio Valuation 111

Sample Basic Flow Grid

Sample Basic Flow Grid

				25bps			
Loan Amount	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Tier 6	Tier 7
-	-	-	-	-	-	-	-
$417,001 - Limit	119	116	113	108	102	101	95
$275,000 - $417,000	135	132	129	124	118	117	111
$225,000 - $274,999	132	129	126	121	115	114	108
$190,000 - $224,999	131	128	125	120	114	113	107
$160,000 - $189,999	129	126	123	118	112	111	105
$130,000 - $159,999	126	123	120	115	109	108	102
$110,000 - $129,999	123	120	117	112	106	105	99
$90,000 - $109,999	119	116	113	108	102	101	95
$70,000 - $89,999	113	110	107	102	96	95	89
$50,000 - $69,999	103	100	97	92	86	85	79
$0 - $49,999	84	81	78	73	67	66	60

Each tier represents a different set of states.

Source Phoenix Capital

School of Mortgage Banking II - Servicing Portfolio Valuation 112

Common Co-Issue / Flow Adjustors

Common Co-Issue/Flow Adjustors

- A Co-Issue grid in addition to the states adjustors will include a number of other adjustments including:
  - Par rate language
  - Excess service fee
  - Remittance
  - FICO
  - LTV
  - Product

School of Mortgage Banking II - Servicing Portfolio Valuation 113

Servicing Sales

Additional Topics

In this segment, we will look at the following topics:

- Servicing Sensitivities
- Shock Profiles

Servicing Sensitivities

Additional Topics

- Servicing Sensitivities
- Shock Profiles
- Hedging
- LOCOM Amortization

Fifth-Third Servicing Sensitivities

Fifth Third Servicing Sensitivities

At September 30, 2015, the sensitivity of the current fair value of residual cash flows to immediate 10%, 20% and 50% adverse changes in prepayment speed assumptions and immediate 10% and 20% adverse changes in other assumptions are as follows:

($ in millions)[a]	Rate	Fair Value	Weighted-Average Life (in years)	Prepayment Speed Assumption: Rate	Impact of Adverse Change on Fair Value: 10%	20%	50%	Residual Servicing Cash Flows: OAS Spread (bps)	Impact of Adverse Change on Fair Value: 10%	20%
Residential mortgage loans:										
Servicing rights	Fixed	$ 731	5.7	11.7 %	$ (34)	(66)	(146)	706	$ (19)	(37)
Servicing rights	Adjustable	25	2.5	32.7	(2)	(3)	(7)	668	-	(1)

(a) *The impact of the weighted-average default rate on the current fair value of residual cash flows for all scenarios is immaterial.*

These sensitivities are hypothetical and should be used with caution. As the figures indicate, changes in fair value based on these variations in the assumptions typically cannot be extrapolated because the relationship of the change in assumption to the change in fair value may not be linear. The Bancorp believes variations of these levels are reasonably possible; however, there is the potential that adverse changes in key assumptions could be even greater. Also, in the previous table, the effect of a variation in a particular assumption on the fair value of the interests that continue to be held by the Bancorp is calculated without changing any other assumption; in reality, changes in one factor may result in changes in another (for example, increases in market interest rates may result in lower prepayments), which might magnify or counteract these sensitivities.

Source: Fifth Third 10-Q for Q3 2015

SunTrust Servicing Sensitivities

SunTrust Servicing Sensitivities

A summary of the key inputs used to estimate the fair value of the Company 's MSR s at September 30, 2015 and December 31, 2014 , and the sensitivity of the fair values to immediate 10% and 20% adverse changes in those inputs, are presented in the following table.

(Dollars in millions)	September 30, 2015	December 31, 2014
Fair value of MSRs	$1,262	$1,206
Prepayment rate assumption (annual)	11%	11%
Decline in fair value from 10% adverse change	$51	$46
Decline in fair value from 20% adverse change	98	88
Option adjusted spread (annual)	8%	10%
Decline in fair value from 10% adverse change	$55	$55
Decline in fair value from 20% adverse change	105	105
Weighted-average life (in years)	6.4	6.4
Weighted-average coupon	4.1%	4.2%

These MSR sensitivities are hypothetical and should be used with caution. Changes in fair value based on variations in assumptions generally cannot be extrapolated because (i) the relationship of the change in an assumption to the change in fair value may not be linear and (ii) changes in one assumption may result in changes in another, which might magnify or counteract the sensitivities. The sensitivities do not reflect the effect of hedging activity undertaken by the Company to offset changes in the fair value of MSR s. See Note 13 , "Derivative Financial Instruments," for further information regarding these hedging activities.

Consumer Loan Servicing Rights

In June 2015, the Company completed the securitization of $1.0 billion of indirect auto loans, with servicing rights retained, and recognized a $13 million servicing asset at the time of sale. See Note 8 , "Certain Transfers of Financial Assets and Variable Interest Entities," for additional information on the Company 's securitization transactions.

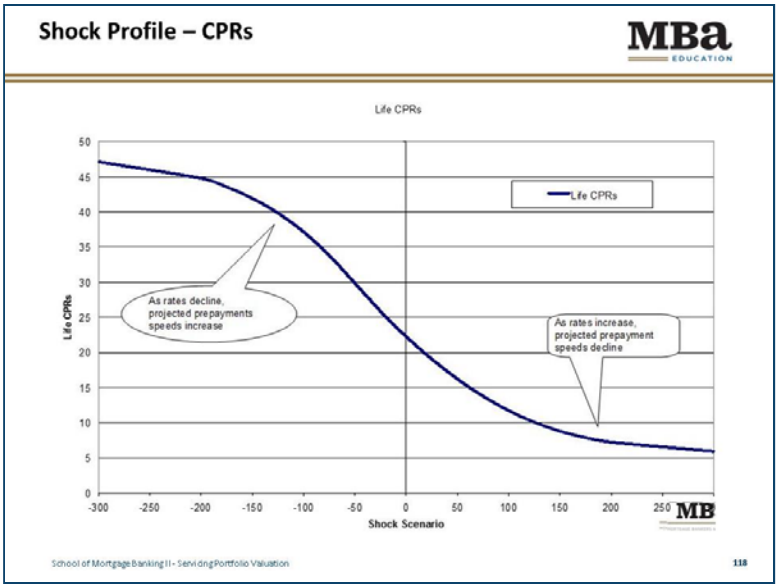
Income earned by the Company on its consumer loan servicing rights is derived primarily from contractually specified servicing fees and other ancillary fees. Such income earned for the three and nine months ended September 30, 2015 was $2 million and $3 million , respectively, and is reported in other noninterest income in the Consolidated Statements of Income. There was no income earned on consumer loan servicing rights for the three and nine months ended September 30, 2014 .

At September 30, 2015 , the total UPB of consumer indirect loans serviced was $889 million , all of which were serviced for third parties. No consumer loan servicing rights were purchased or sold during the nine months ended September 30 , 2015 and 2014 .

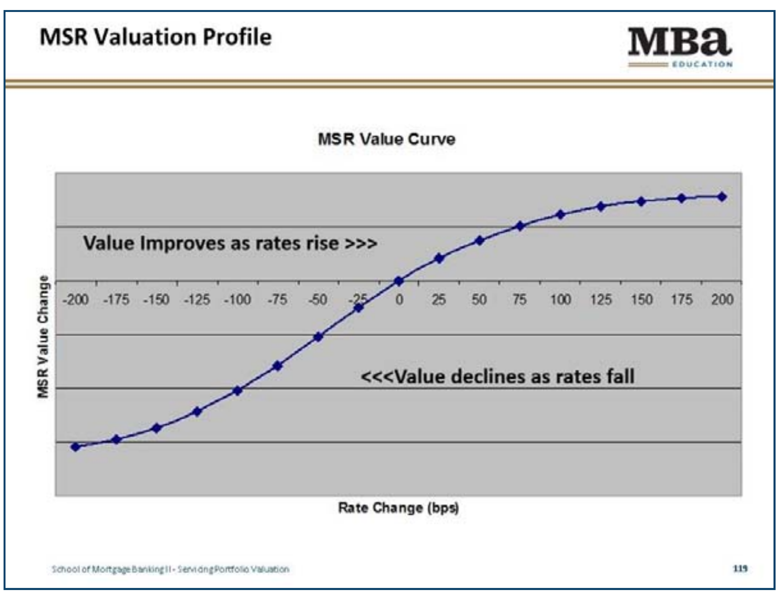
Consumer loan servicing rights are accounted for at amortized cost and are monitored for impairment on an ongoing basis. The Company calculates the fair value of consumer servicing rights using a valuation model that calculates the present value of estimated future net servicing income using prepayment projections and other assumptions. Impairment, if any, is recognized when changes in valuation model inputs reflect a fair value for the servicing asset that is below its respective carrying value. At September 30, 2015 , both the amortized cost and the fair value of the Company 's consumer loan servicing rights were $11 million .

Shock Profiles

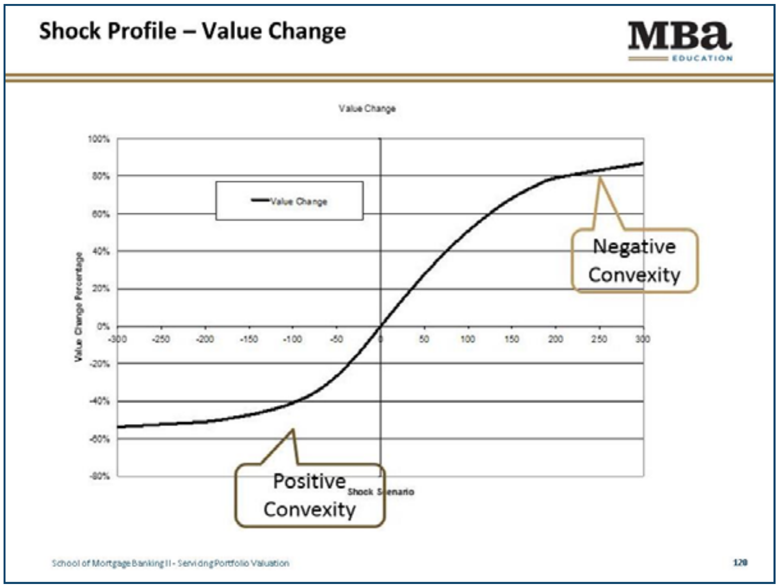
Shock Profile – CPRs



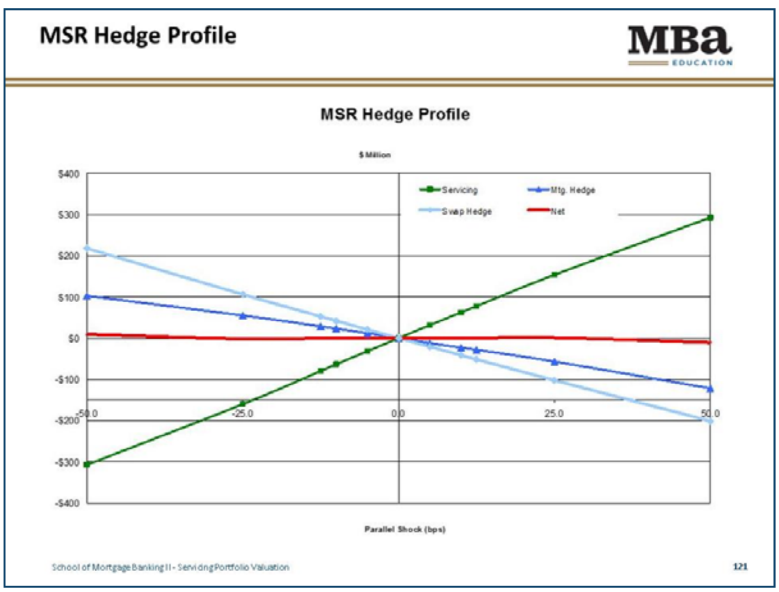
MSR Valuation Profile



Shock Profile – Value Change



MSR Hedge Profile



Amortization Example (Detail)

Amortization Example (Detail)

- Initial MSR asset 2,000,000
  - ($200 million @ 1% (MSR value)
- Less Amortization Expense $(30,000)
  - Month one cash flows divided by total cash flows
  - Example 1.5%
- Ending Book Value 1,970,000
- Impairment Test
  - Compare Market Value to Book Value
  - If MV < BV, then have impairment

School of Mortgage Banking II - Servicing Portfolio Valuation 122

Servicing Portfolio Valuation Practice Activities

In this segment, we will look at the following topics:

- Portfolio Offering
- Portfolio Offering Exercise
- Servicing Portfolio Valuation Quiz

Portfolio Offering

Disclaimer

This Memorandum contains confidential and proprietary information regarding Seller. In no event may the recipient disclose, duplicate, or publish any of the contents of this Memorandum to any third party without the prior written consent of Seller, or utilize any of the information therein for any purpose whatsoever, other than for evaluating a potential transaction with Seller. Upon written request, the recipient shall immediately return this Memorandum to Seller or Phoenix Capital, Inc. along with any copies or summaries of it in its possession.

The information presented herein was prepared by Seller and Phoenix Capital, Inc. Phoenix Capital, Inc. has not assumed responsibility for independently verifying any information contained herein or otherwise made available in connection with any investigation of Seller by the recipient and makes no representations or warranties as to the accuracy or completeness of any such information.

Neither delivery of this Memorandum nor consummation of any transaction shall imply that there has been no change in the business, assets, financial, or other condition of Seller since the date of this Memorandum. Neither Seller nor Phoenix Capital, Inc. represents, warrants, or covenants whether the business, assets, financial, or other condition of Seller on the date of any transaction will differ materially from that described herein.

Please do not contact the Seller directly without express written permission. For additional information, please contact one of the Phoenix Capital, Inc. representatives below.

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Phoenix CAPITAL

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Phoenix CAPITAL

EXECUTIVE SUMMARY

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Executive Summary

Phoenix Capital, Inc. (PCI) is pleased to present the following \$25 million/month Fannie Mae A/A and \$15 million/month Government flow mortgage servicing rights offering for your consideration, with opportunity for future growth. Seller is an independent mortgage banker established in 2003. Products available and general characteristics are as follows (all figures are approximate):

Conventional
- \$25 million per month
- 100% FNMA A/A
- 100% Retail
- 85-90% TX geography
- Avg Bal (30yr): \$200k-\$225k
- 80-85% Purchase Money
- wAvg FICO 740-745; wAvg LTV 80-81
- 80% Fixed 30yr term

Government
- \$15 million per month
- 70% FHA / 24% VA / 6% RHS
- 100% Retail
- 90-95% TX geography
- Avg Bal (30yr): \$160k-\$180k
- 90-95% Purchase Money
- wAvg FICO 680-700; wAvg LTV 95-97
- 99% Fixed 30yr term

- **Subserviced by Cenlar utilizing the MSP/LPS servicing system**
- **Flow offers are expected to be valid for a minimum of three to six months and include at least the following:**
  - **Base (0.25) and Excess (>0.25) servicing pricing for Fannie Mae A/A Fixed and ARM cash loans**
  - **Servicing pricing for Ginnie Mae Fixed and ARM Securities (0.19, 0.315, 0.44, 0.565, 0.69 NSF)**
- **Offers should describe all applicable adjustments, restrictions, fees and other material pricing terms/conditions**
- **Seller prefers to utilize Fannie Mae concurrent sale/transfer and GNMA PIIT program**
- **Seller anticipates first flow Sale and Transfer Date(s) in March 2014**

Written bids are due at 5pm EST, Thursday, January 30, 2014

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CONVENTIONAL FLOW SERVICING PROFILE

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Conventional Flow Servicing Profile

Phoenix Capital Inc.

Conventional Origination Characteristics: Sept – Nov 2013

	SEPT	OCT	NOV	wAvg	Range
Loan ct	164	180	131	160	131-180
Principal Bal	$ 35,218,041	$ 39,301,238	$31,329,994	$ 35,283,091	$31m-$39m
Avg Bal	$ 214,744	$ 218,340	$ 239,160	$ 220,281	$214k-$239k
Fixed 30yr %	79%	81%	79%	80%	79-81%
Retail %	100%	100%	100%	100%	100%
Purchase %	83%	81%	86%	83%	81-86%
Owner %	93%	93%	91%	92%	91-93%
Single Family/PUD %	94%	92%	96%	94%	92-96%
wAvg FICO	747	743	747	746	743-747
wAvg LTV	80	81	81	81	80-81
Loan esc'd %	73%	75%	77%	75%	73-77%
TX %	91%	88%	87%	88%	87-91%

*All % by UPB

Portfolio highlights include:

- 87-91% Texas properties
- 100% Retail originations
- 81-86% Purchase Money originations
- $214k-$239k Avg Balance
- 79-81% Fixed 30yr loans
- 743-747 wAvg FICO; 80-81 wAvg LTV
- 92-96% Single Family/PUD

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Conventional Flow Servicing Profile

Monthly Conventional Production: Sept – Nov 2013

Flow production is approximately 80% Fixed 30yr with 80-81 wAvg LTV and wAvg 743+ FICO.

SEPTEMBER

Agency	Type	Term	Loan Ct	Principal Bal	Avg Bal	wAvg Int Rate	wAvg NSF	wAvg LTV	wAvg FICO
FNMA A/A	Fixed	30	129	$ 26,774,883	$ 207,557	4.804%	0.2500	82	744
FNMA A/A	Fixed	15	29	$ 5,505,650	$ 189,850	3.809%	0.2500	75	754
FNMA A/A	ARM	30	6	$ 2,937,508	$ 489,585	3.367%	0.2500	81	762
			164	$ 35,218,041	$ 214,744	4.528%	0.2500	80	747

OCTOBER

Agency	Type	Term	Loan Ct	Principal Bal	Avg Bal	wAvg Int Rate	wAvg NSF	wAvg LTV	wAvg FICO
FNMA A/A	Fixed	30	146	$ 33,376,077	$ 228,603	4.735%	0.2500	83	744
FNMA A/A	Fixed	15	31	$ 5,028,410	$ 162,207	3.699%	0.2500	65	736
FNMA A/A	ARM	30	3	$ 896,751	$ 298,917	3.665%	0.2500	68	755
			180	$ 39,301,238	$ 218,340	4.578%	0.2500	81	743

NOVEMBER

Agency	Type	Term	Loan Ct	Principal Bal	Avg Bal	wAvg Int Rate	wAvg NSF	wAvg LTV	wAvg FICO
FNMA A/A	Fixed	30	103	$ 23,170,322	$ 224,955	4.609%	0.2500	83	744
FNMA A/A	Fixed	15	25	$ 6,055,297	$ 242,212	3.558%	0.2500	75	757
FNMA A/A	ARM	30	3	$ 2,104,375	$ 701,458	3.445%	0.2500	80	758
			131	$ 31,329,994	$ 239,160	4.328%	0.2500	81	747

*All Averages are weighted by UPB

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GOVERNMENT FLOW SERVICING PROFILE

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Government Flow Servicing Profile

Phoenix Capital Inc.

Government Origination Characteristics: Sept – Nov 2013

	SEPT	OCT	NOV	wAvg	Range
Loan ct	100	79	90	90	79-100
Principal Bal	$16,198,219	$ 12,929,990	$ 15,872,550	$15,000,253	$13m-$16m
Avg Bal	$ 161,982	$ 163,671	$ 176,362	$ 165,861	$162k-$176k
Fixed 30yr %	100%	97%	99%	99%	97-100%
FHA %	69%	70%	80%	73%	69-80%
Retail %	100%	100%	100%	100%	100%
Purchase %	96%	96%	94%	95%	94-96%
Owner %	100%	100%	100%	100%	100%
Single Family/PUD %	99%	100%	99%	99%	99-100%
wAvg FICO	693	686	692	690	686-693
wAvg LTV	95	97	96	96	95-97
Loan esc'd %	100%	100%	100%	100%	100%
TX %	97%	90%	91%	93%	90-97%

*FHA % calculated by Loan Count; all other % by UPB

Portfolio highlights include:

- 90-97% Texas properties
- 100% Retail originations
- 69-80% FHA originations
- 94-96% Purchase Money originations
- 97-100% Fixed 30yr loans
- 99-100% Single Family/PUD

Government Flow Servicing Profile

Monthly Government Production: Sept – Nov 2013

Flow production is approximately 99% Fixed 30yr; 70% FHA

SEPTEMBER

Agency	Type	Term	Loan ct	Principal Bal	AVG Bal	wAvg Int Rate	wAvg NSF	FHA %	VA %	RHS %	wAvg LTV	wAvg FICO
Govt	Fixed	30	100	$ 16,198,219	$ 161,982	4.618%	0.3127	69%	18%	13%	95	693

OCTOBER

Agency	Type	Term	Loan ct	Principal Bal	AVG Bal	wAvg Int Rate	wAvg NSF	FHA %	VA %	RHS %	wAvg LTV	wAvg FICO
Govt	Fixed	30	77	$ 12,541,070	$ 162,871	4.429%	0.2970	70%	22%	8%	97	686
Govt	Fixed	15	2	$ 388,920	$ 194,460	3.750%	0.1900	50%	50%	-	96	696
			79	$ 12,929,990	$ 163,671	4.409%	0.2938	70%	23%	8%	97	686

NOVEMBER

Agency	Type	Term	Loan ct	Principal Bal	AVG Bal	wAvg Int Rate	wAvg NSF	FHA %	VA %	RHS %	wAvg LTV	wAvg FICO
Govt	Fixed	30	87	$ 15,579,849	$ 179,079	4.311%	0.3039	79%	18%	2%	96	691
Govt	Fixed	15	1	$ 128,681	$ 128,681	3.500%	0.4400	100%	-	-	97	755
Govt	ARM	30	1	$ 97,578	$ 97,578	5.455%	0.4400	100%	-	-	55	717
Govt	ARM	15	1	$ 66,442	$ 66,442	5.330%	0.3150	100%	-	-	65	639
			90	$ 15,872,550	$ 176,362	4.316%	0.3058	80%	18%	2%	96	692

*FHA, VA, and RHS % are calculated by Loan Count; all other averages are weighted by UPB

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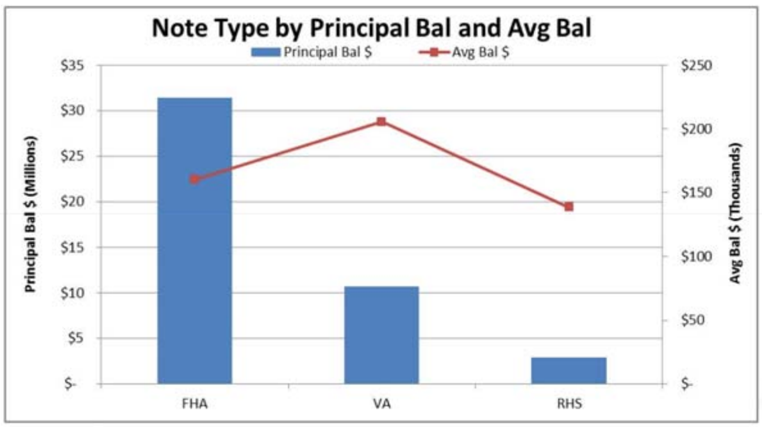
Government Flow Servicing Profile

Government Note Type Summary: Sept - Nov 2013

Note Type	Loan Ct	Principal Bal	Avg Bal	% by UPB	wAvg Int Rate	wAvg NSF	wAvg LTV	wAvg FICO
FHA	196	$ 31,399,967	$ 160,204	70%	4.444%	0.3055	95	686
VA	52	$ 10,698,131	$ 205,733	24%	4.437%	0.3071	98	703
RHS	21	$ 2,902,661	$ 138,222	6%	4.582%	0.2894	101	691
	269	$ 45,000,759	$ 167,289	100%	4.451%	0.3048	96	690



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Phoenix CAPITAL
OFFERING
DISCLOSURES &
MISCELLANEOUS INFO
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Transaction Details

Miscellaneous Transaction Details

- Technology
  - Subserviced by Cenlar utilizing the MSP/LPS servicing system
- Tax
  - 100% of loans have life-of-loan, fully transferable tax contracts in place with Cenlar using Corelogic
- Flood
  - 100% of loans have life-of-loan, fully transferrable flood contracts in place with First American Flood
- MERS
  - 100% of loans are registered with MERS
- PMI Companies
  - Primary mortgage insurance provided by Radian where applicable
- Document Custodian
  - Bank of New York Mellon
- Documentation
  - All loan files are available in imaged form

Transaction Details

The acceptance of an offer by the Seller will be made on the basis of 1) the timely receipt of Phoenix CAPITAL, Inc. of a written letter of intent and the terms and conditions contained therein; 2) the price offered for the servicing rights; 3) the financial strength and the quality of the current servicing performed by Purchaser, as well as; 4) the ability of Purchaser to perform within the time guidelines for closing, sale, and transfer; 5) Purchaser is Fannie Mae approved servicer and Ginnie Mae approved issuer in good standing; 6) no bid shall be considered accepted by Purchaser or Seller until a written letter of intent is received and executed by Purchaser and Seller.

Portfolio Offering Exercise

School of Mortgage Banking II – Class Exercise

Scenario:

The attached flow mortgage servicing right ("MSR") offering arrives in your email. You currently work at a company that is interesting in growing its MSR portfolio. From the Offering – please complete the following:

	Fannie Mae (FNMA)	Ginnie Mae (GNMA)
Retail percentage		
Correspondent / Broker percentage		
Purchase percentage range		
Refinance percentage range		
Average FICO range		
Average projected loan balance		
Average loan to value range		
Texas percentage range		
30 year fixed percentage		
Remittance percentage – Fannie only		N/A
FHA/VA percentage – Ginnie only	N/A	

1) Given the above data, what are your thoughts about the quality of this flow offering in terms underwriting and risk of future defaults/ and/or repurchase demands?

    -
    -

2) Given the above data, what are your thoughts about the quality of this flow offering in terms of voluntary prepayment risk?

    -
    -

1

School of Mortgage Banking II – Class Exercise

3) Given the above data, what are your thoughts about the ability to cross sell additional products to the borrowers?

   -
   -

4) Given the remittance on the Fannie Mae within the offering, if the servicing becomes delinquent what advances will need to be made?

   - Principal and interest YES or NO
   - Taxes and insurance YES or NO

5) Given the remittance on the Ginnie Maes are schedule / schedule, if the servicing becomes delinquent what advances will need to be made?

   - Principal and interest YES or NO
   - Taxes and insurance YES or NO

6) Based on the offering data, what are some factors that lead you to believe that is portfolio **could** experience an elevated level of voluntary prepayments?

   -
   -
   -
   -

7) Based on the offering data, what are some factors that lead you to believe that is portfolio **could** experience an elevated risk of defaults?

   -
   -
   -
   -

School of Mortgage Banking II – Class Exercise

Please complete the following based on the data provided in the servicing offering:

Where are the loans currently being serviced?	
Is the seller currently using a sub servicer? If yes, who is the sub servicer?	
What is the current servicing system?	
Does this servicing have life of loan transferrable tax contacts?	
Who is the tax service provider?	
Does this servicing have life of loan flood contacts in place?	
Who is the flood contract provider?	
If private mortgage service contracts are required, who is the provider?	
Is the servicing registered on MERS?	
What is the format of the loan files?	
Who is the document custodian?	

8) Scenario: Your Company is on FISERV as is servicing system and does not use CoreLogic for tax contracts or First American for flood contracts, would your company experience a higher or lower amount of transaction costs and why?

-
-
-

Servicing Portfolio Valuation Quiz

1. What is the **most important** servicing valuation assumption?
   a. Cost to Service
   b. Other Income
   c. Prepayment Speed
   d. Discount rate

2. A $100MM *servicing* portfolio might sell in the secondary market for approximately:
   a. $100MM
   b. $1MM
   c. $25MM
   d. $101MM

3. A $100MM *loan* portfolio of "par rate loans" might sell serviced released for approximately:
   a. $100MM
   b. $51MM
   c. $101MM
   d. $1MM

4. Prepayment speeds can be discussed in terms of:
   a. CPR
   b. PSA
   c. SMM
   d. Involuntary or voluntary
   e. All of the above

5. The PSA on a 4-year old portfolio prepaying at 12% CPR is:

   a. 12

   b. 200

   c. 600

   d. 2

6. The CPR on a 3-year old portfolio prepaying at a 200 PSA is:

   a. 12%

   b. 9%

   c. 2%

   d. 6%

7. The PSA on a 10-month old portfolio prepaying at 12% CPR is:

   a. 12

   b. 200

   c. 600

   d. 2

8. Default classes (loan characteristics that impact defaults) include all <u>except</u>:

   a. Loan type

   b. Geography

   c. Remittance type

   d. Loan-to-value

   e. Owner occupancy

   f. Property type

9. A mortgage servicer can earn float income on:

   a. Escrow balances

   b. Service costs

   c. Late charges

   d. Ancillary income

10. Ordinarily, the largest contributor to servicing revenue is:

    a. Service fees

    b. Escrow earnings

    c. Late charges

    d. Ancillary income

11. As a portfolio ages, the following cash flow decreases the most:

    a. Servicing costs

    b. Servicing fees

    c. Escrow earnings

    d. Ancillary income

12. Servicing value is defined as the net present value of the:

    a. Before-tax GAAP income

    b. After-tax GAAP income

    c. Before-tax cash flows

    d. After-tax cash flows

13. Per loan servicing costs are driven by:

    a. Outstanding principal balance

    b. Activity on the loan

    c. Service fee

    d. FAS 91

14. Ordinarily, the largest contributor to servicing cost is:

    a. Corporate overhead

    b. Personnel

    c. Interest paid on escrow balances

    d. Technology

15. Servicing portfolio valuations are performed primarily because they are:

    a. Needed by risk management areas within the organization

    b. Required by the auditors and regulators

    c. Reported in the financial statements

    d. All of the above

16. Mortgage servicers are concerned only with voluntary prepayments when it comes to MSR valuations:

    a. True

    b. False

17. Traditionally, a borrower is more likely to voluntary prepay:

    a. When rates have declined and the borrower rate is above current “market” rate

    b. During the winter months

    c. When rates have increased and the borrower rate is below current “market” rate

    d. Around the 15th of the month

18. Traditionally, a borrower is more likely to involuntary prepay when:

    a. Property values have increased

    b. Loan-to-value is less than 80%

    c. Loan-to-value is over 100%

    d. Borrower FICO scores have increased

19. As a MSR Valuation Manager concerned about voluntary prepayments/runoff within the portfolio, which of the following factors might keep you up at night?

    a. The weighted average coupon of the portfolio is 75 bps above the current par mortgage rate

    b. The MBA Application Index is at an all-time high

    c. The servicing portfolio is made up of ARMs close to a reset date

    d. All of the above

20. As a MSR Valuation Manager concerned about involuntary prepayments/defaults within the portfolio, which of the following factors might keep you up at night?

    a. The weighted average FICO score on the servicing portfolio has declined from 760 to 715

    b. The servicing portfolio is now over 50 percent GNMA servicing

    c. Unemployment figures are at 5-year highs

    d. All of the above

21. When bidding on a servicing offering, prime servicing offerings are bid with a higher yield requirement than an ALT A servicing package:

    a. True

    b. False

22. When bidding on a servicing offering consisting of seasoned servicing, the bidder should anticipate of significant amount of cross-sell income:

    a. True

    b. False

23. When bidding on a servicing offering consisting of brand new production (age is zero months – co-issue), the bidder should anticipate defaults to increase (and therefore higher servicing costs in the future):

    a. True

    b. False

Fill in the Blanks

List six default classes (loan characteristics that impact defaults):

1.
2.
3.
4.
5.
6.

List five factors that can impact prepayments:

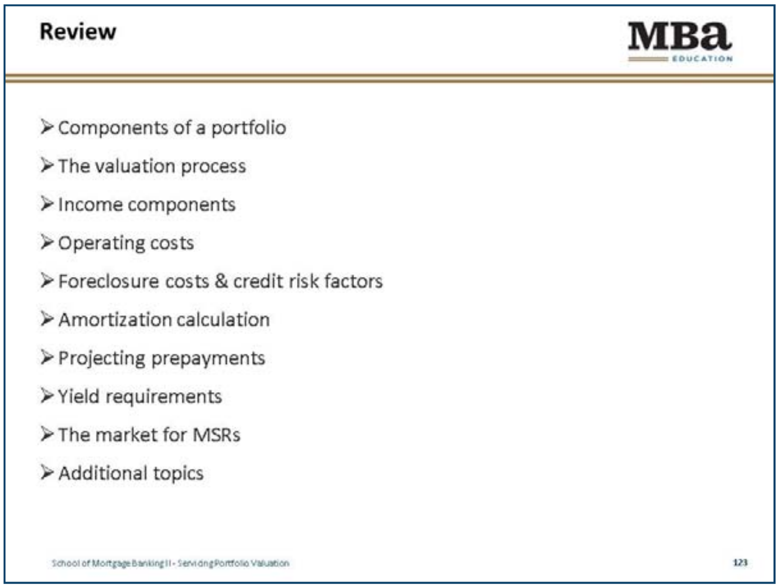
1.
2.
3.
4.
5.

List five factors (loan characteristics) that can impact cost to service:

1.
2.
3.
4.
5.

Please see appendix for quiz answer key.

Review



Objectives Review

Upon completion of this module, you will be able to:

- Define servicing.
- Identify the components of a mortgage payment and the owner of each segment.
- Identify the components of a servicing portfolio.
- Explain the valuation process.
- Describe the risk associated with various servicing investment alternatives.
- Identify regulatory and accounting guidelines that dictate valuation and reporting policy.
- Understand cash flow.
- Explain the impact of prepayments and defaults on the servicing portfolio.

Appendix

In this segment, we will look at the following topics:

- PSA
- Glossary of Acronyms

PSA

Month	100 PSA	200 PSA	300 PSA	600 PSA	900 PSA
1	0.2	0.4	0.6	1.2	1.8
2	0.4	0.8	1.2	2.4	3.6
3	0.6	1.2	1.8	3.6	5.4
4	0.8	1.6	2.4	4.8	7.2
5	1.0	2.0	3.0	6.0	9.0
6	1.2	2.4	3.6	7.2	10.8
7	1.4	2.8	4.2	8.4	12.6
8	1.6	3.2	4.8	9.6	14.4
9	1.8	3.6	5.4	10.8	16.2
10	2.0	4.0	6.0	12.0	18.0
11	2.2	4.4	6.6	13.2	19.8
12	2.4	4.8	7.2	14.4	21.6
13	2.6	5.2	7.8	15.6	23.4
14	2.8	5.6	8.4	16.8	25.2
15	3.0	6.0	9.0	18.0	27.0
16	3.2	6.4	9.6	19.2	28.8
17	3.4	6.8	10.2	20.4	30.6
18	3.6	7.2	10.8	21.6	32.4
19	3.8	7.6	11.4	22.8	34.2
20	4.0	8.0	12.0	24.0	36.0
21	4.2	8.4	12.6	25.2	37.8
22	4.4	8.8	13.2	26.4	39.6
23	4.6	9.2	13.8	27.6	41.4
24	4.8	9.6	14.4	28.8	43.2
25	5.0	10.0	15.0	30.0	45.0
26	5.2	10.4	15.6	31.2	46.8
27	5.4	10.8	16.2	32.4	48.6
28	5.6	11.2	16.8	33.6	50.4
29	5.8	11.6	17.4	34.8	52.2
30	6.0	12.0	18.0	36.0	54.0
31 - 360	6.0	12.0	18.0	36.0	54.0

Glossary of Acronyms

Glossary of Acronyms

- Glossary of Acronyms
  - IRR — Internal Rate of Return
  - MIRR — Modified Internal Rate of Return
  - ROE — Return on Equity
  - ROA — Return on Assets
- Other Tests and Measures
  - CPR — Conditional Prepayment Rate
  - OAS — Option adjusted spread
  - PSA — Public Securities Association
  - WAM — Weighted average maturity
  - WAOT — Weighted average original term
  - WART — Weighted average remaining term

Session Evaluation

Class:
Module:
Instructor:
Date:

Instructor Evaluation

Please respond to the following statements using the numeric scale of:
4 - Strongly Agree **3** = Agree **2** = Disagree **1** = Strongly Disagree **N/A** = Not applicable

The instructor demonstrated a superior knowledge of the subject material.	
The instructor provided clear, comprehensive, and satisfactory answers to questions and allotted enough time to answer all questions.	
The instructor used a delivery and presentation style that inspired my attention and interest in the topic.	
The instructor successfully managed the session's time allotment.	

Course Materials and Content

The session felt well paced and allowed for effective knowledge, acquisition, and retention.	
The session content increased my comfort level with the subject matter.	
Interactive exercises such as practice and discussion questions, case studies, quizzes, etc., were engaging and helped me learn the material.	

Overall

With regard to overall content, presentation and delivery, I am satisfied with the value of this session.	

If there was any information you believe is erroneous or out-of-date that should be reviewed by a subject matter expert, please indicate the page number and/or slide title.

Please use the back of this page to provide any additional feedback you have.

Additional Feedback

Please add any additional comments you have.

Thank you for your valuable feedback!

Negotiating and Structuring the Commercial Loan

School of Mortgage Banking II

Table of Contents

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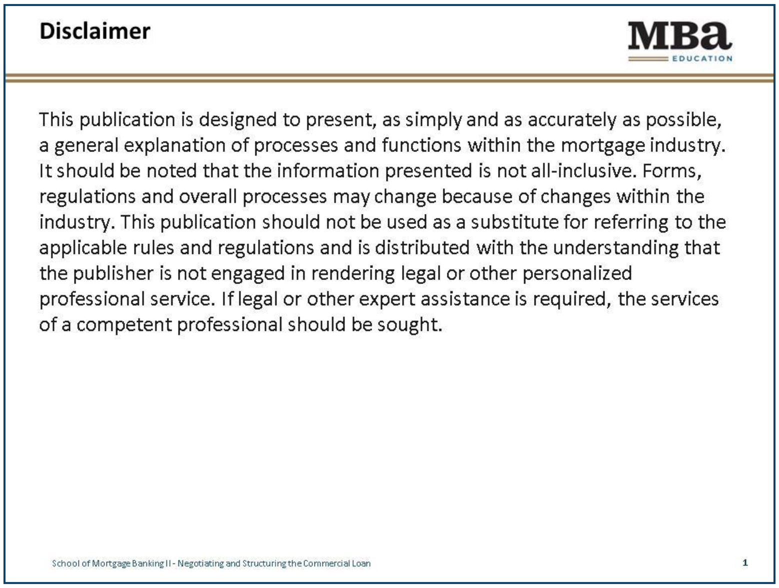


This publication is designed to present, as simply and as accurately as possible, a general explanation of processes and functions within the mortgage industry. It should be noted that the information presented is not all-inclusive. Forms, regulations and overall processes may change because of changes within the industry. This publication should not be used as a substitute for referring to the applicable rules and regulations and is distributed with the understanding that the publisher is not engaged in rendering legal or other personalized professional service. If legal or other expert assistance is required, the services of a competent professional should be sought.

Overview and Objectives

Overview

Overview

MBa EDUCATION

- Review players and property types in the commercial mortgage market
- Discuss how commercial mortgage bankers make money
- Assess risk utilizing underwriting criteria
- Practice valuing and underwriting property

School of Mortgage Banking II - Negotiating and Structuring the Commercial Loan 2

This module is designed to focus on commercial properties and commercial deals. We will discuss how best to assess the value and potential success of a property. In addition, we will also discuss methods for negotiating and structuring a commercial loan. The session will conclude with a case study.

Objectives

Upon completion of this module, you will be able to:

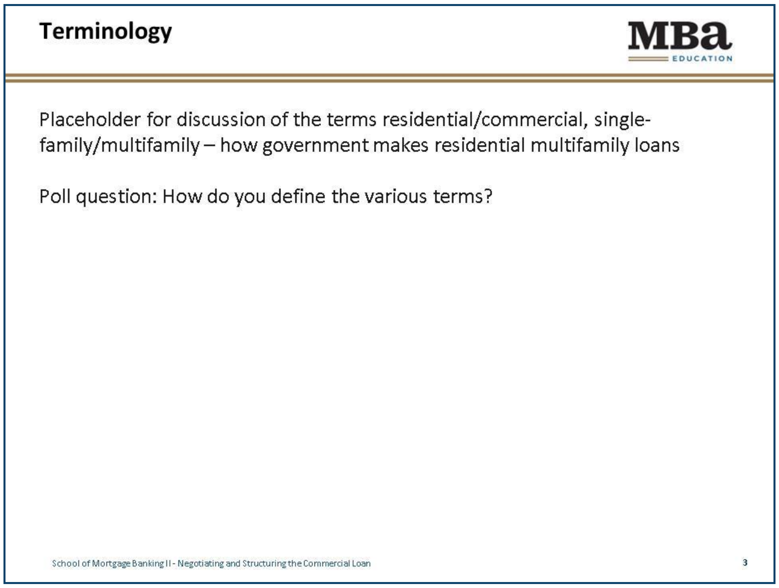
- Understand how commercial real estate properties are underwritten and valued.
- Describe how commercial mortgage bankers make money.
- Assess risk using responsible underwriting guidelines.
- Perform basic valuation and underwriting for commercial properties.

Introduction to Commercial/Multifamily Lending

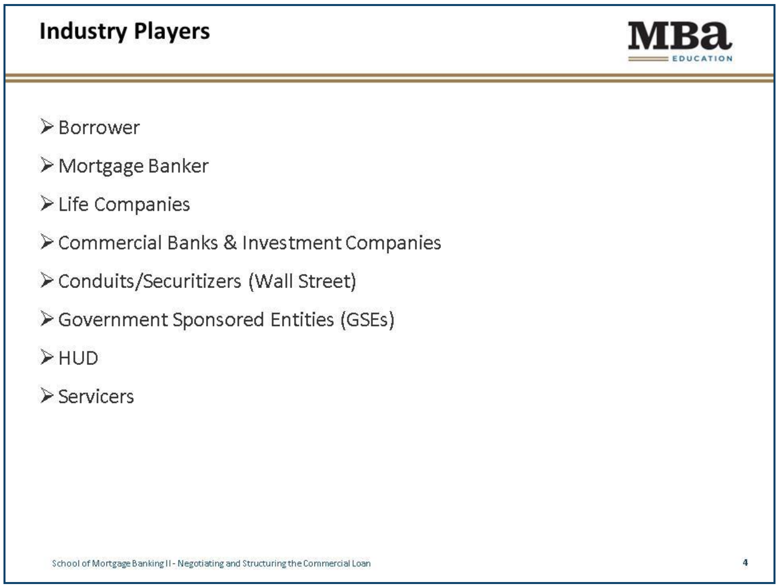
In this segment, we will look at the following topics:

- Terminology
- Industry Players
- How a Mortgage Banker Makes Money
- Property Types

Terminology



Industry Players



I. Industry Players – Parties to the Financing Transaction

a. Borrower

i. Individual
ii. Trust
iii. Investors
iv. Limited Partnership
v. General Partnership
vi. LLC (Most commonly used today)
    1. Generally set up as a single asset entity (SAE)
    2. Provides liability protection to the Members
    3. Lenders typically require SAE Borrowers
iv. Corporations
v. Tenants-In-Common
vi. Developers
vii. Life Insurance Companies
viii. Pension Funds
ix. REIT

b. Intermediaries

i. Mortgage Bankers
    1. Typically Represents both borrower & Lender (Dual Agency)
    2. Originates the loan
    3. Underwrites the loan
    4. Closes the loan
    5. Services the loan
vi. Mortgage Brokers
    1. Typically Represents both borrower & Lender (Dual Agency)
    2. Originates the loan
    3. Underwrites the loan

c. Lenders

i. Portfolio Lenders - Life Companies/Pension Funds
    1. These lenders fund the loan for their own portfolio
    2. Matching up to loans to their long term liabilities
iii. Mortgage REITS
    1. These lenders fund the loans against funds raise by stock sale
ii. Commercial Banks & Investment Co's
iii. Conduits/Securitizers (Wall Street) (Encroachments)
iv. Government-sponsored Entities (GSE)

        1. Fannie Mae
        2. Freddie Mac
    iii. HUD
        1. Typically Low to Moderate Income projects

d. Service Providers

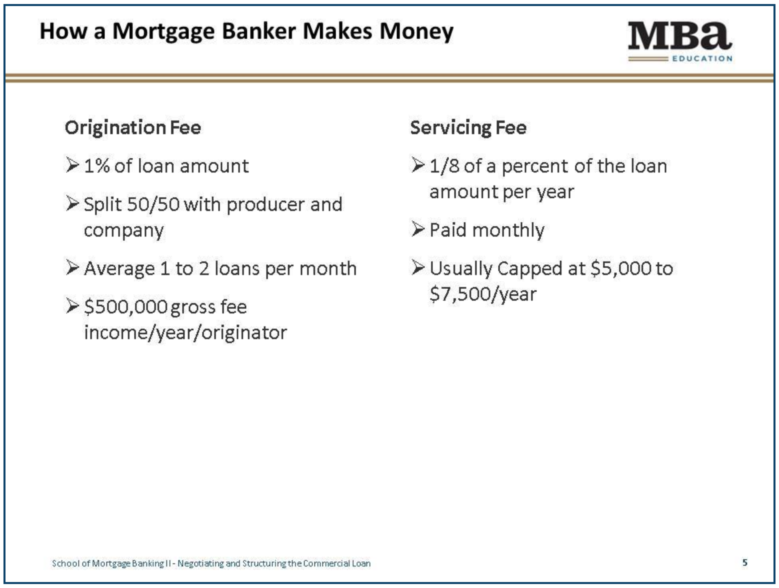
    i. Title Companies (Easements, Liens, Etc.)
        1. Provide Title Insurance to insure title interest to lenders
    ii. Escrow
        1. Co-ordinates the closing follows up on:
            a. Disbursement of funds wired into escrow
            b. Loan Documents
            c. Recording of all documents
    iv. Appraiser – Typically MAI
        1. Analyze Market Data
        2. Determine 3 approaches to value
            a. Cost
            b. Market
            c. Income
    iv. Environmental Contractors
        1. Engineer will review Regional and statewide data for environmental spills or contamination records
        2. Will review historical ownership records
        3. Will review historical aerials for past use information
    iv. Engineering Contractors
        1. Inspect buildings to see if they conform to the plans and regional building codes
        2. Determine if the buildings are engineered to current seismic standards
    iii. Surveyors – ALTA Survey (Encroachments)
        1. Reviews Title for any possible encroachment or easement issues
        2. Plot all easements and encroachments
    iii. Attorneys
        1. Lenders Attorney – Drafts loan documents
        2. Borrowers Attorney – Reviews documents for borrower and provides Opinion Letter

e. Others

    i. City Zoning & Building Department (CO & Zoning Letters)
    ii. Architects
    iii. Tenants (Estopple & SNDA)
    iv. Loan Closers

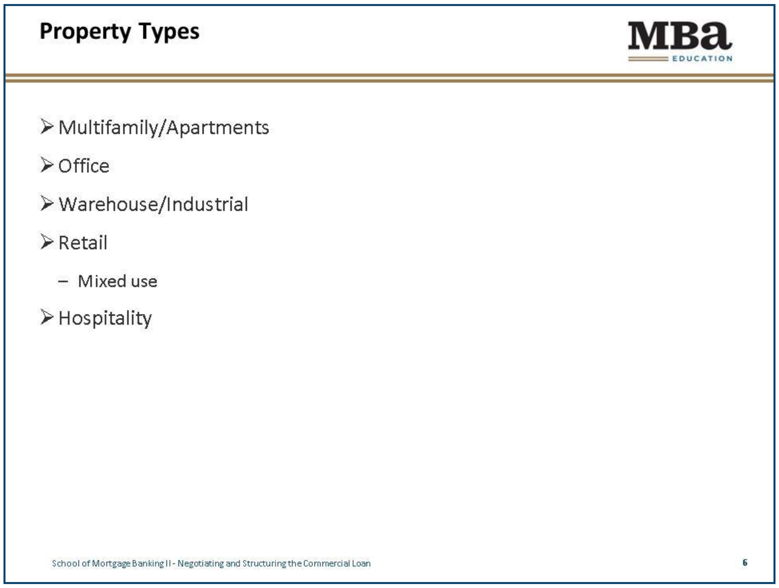
v. Property Managers
vi. Leasing Agents

How a Mortgage Banker Makes Money



1. Origination of commercial mortgages and the fees associated with the origination and funding of that loan.
2. Servicing Fees – Ongoing stream of income associated with servicing the loan for the term of the contract.

Property Types



I. Apartments

a. Types

   i. High-rise, low-rise, garden apartments
   ii. Urban, suburban & rural
   iii. Efficiency to luxury & upscale

b. Complex Size

   i. 200+ Institutional (most new properties)
   ii. 50 to 200– Investor
   iii. 5 to 50 – Smaller Investor

c. Revenue Source

   i. Rent
   ii. Laundry
   iii. Utilities
   iv. Parking.

d. Cash flows & Sales analyzed on per-unit basis
e. Tend to have higher LTV's than other property types.
f. Sector favored by investors

   i. Revenues tend to rise with expenses
   ii. Ultimate multi-tenant property

g. Lease Type – Tend to be shorter than other real estate

   i. Month to month
   ii. 1 year leases
   iii. Gross & Modified Gross

h. Amenities

   i. Washer Dryers in units
   ii. Carports Garages
   iii. Swimming pool
   iv. Fitness facility
   v. Concierge
   vi. Club House

i. Other

   i. White paper conversion to condominiums

II. Office

a. Types

   i. Location
      1. Central Business District
      2. Suburban
      3. Suburban CBD
   iv. High-rise (Typically CBD & Suburban CBD)
   v. Mid-rise (Suburban & office parks)
   vi. Low-rise & Garden office (Stand alone and owner user)

b. Revenue Sources

   i. Space Rent
   ii. Parking
   iii. Expense Reimbursement
   iv. TI Amortization, Antenna, Etc.

c. Lease Type / Terms

   i. Lease Type
      1. Gross
      2. Modified Gross (plus Utilities)
      3. Net
   iv. Term
      1. Longer term leases (typically 3 to 10 years) reduce turnover & provide for steady cash flows.
      2. Shorter Term allows for movement in rents in a tighter market.

d. Cash flows analyzed on per-square foot basis

e. BOMA Standard of Measurement

   i. Gross
   ii. Rentable (Core/Efficiency Factor) Most often used for calculation for rent
   iii. Leaseable (Area inside tenant area)

f. Roll-over costs tend to be higher

   i. Re-tenant improvements are more expensive per square foot
   ii. In the larger spaces, improvements tends to be specialized

III. Industrial

a. Types

i. R & D
    1. More Highly Improved – Higher re-lease costs
    2. Higher Parking Ratios

iii. Manufacturing, Distribution, Storage
    1. Typically low if no finish
    2. Larger trucking areas
    3. Turning radius and dock access
    4. Column spacing
    5. Configuration of Docks
        a) Cross/Docking
        b) Distribution
        c) Shipping
    6. Usually found in areas near major transportation corridors – roads, rail, shipping or airports.

v. Multi-tenant
    1. Size 1000 to 5000 square feet
    2. “Business Industrial”
    3. Related businesses in same complex
    4. Condos

b. Cash flows analyzed on a per-square foot, sometimes per-usage type basis.

c. Revenue Sources

i. Space Rent

ii. Expense Reimbursement

d. Lease Type/Terms

i. Net or Industrial Gross

ii. Typically 3 to 10 year
    1. Multi tends to be shorter
    2. Single Tenant and larger bay buildings - 5 years and longer

iii. Multi-tenancy typically provides for steady cash flows

e. Roll-over Costs

i. R&D tend to have higher more specialized improvements

ii. Multi-tenant usually need paint and carpet

iii. Distribution – Broom sweep

IV. Retail

a. Types

i. Strip & Shadow Anchored Centers
    1. Smaller non-anchored
    2. “Shadowed” anchored
    3. Typically non-credit tenants
iv. Neighborhood Center
    1. Grocery & drugstore anchored
    2. Service Providing shop tenants
    3. Shop tenants depend on anchors for traffic flow
iv. Community Centers
    1. Larger anchored centers
    2. Usually have several anchor tenants
    3. Additional anchors – Jr. department “big box” stores
iv. Power Centers
    1. Big Box or “Category Killers”
    2. Few if any shop tenants
    3. Market area tends to be freeway concentric
iv. Regional Mall
    1. Large, enclosed, anchored
    2. Usually has 4 to 6 anchors
    3. “Mega-malls”
iv. Lifestyle Center
    1. Market-specific, from discount to upscale
    2. Typically has theaters and restaurants

b. Revenue Sources

i. Rent
ii. Percentage Rent
iii. Expense Reimbursements

c. Cash flows analyzed on a per-square foot of leaseable space basis
d. Intermediate to long term leases
e. Roll-over Costs

i. Moderate make-ready costs when leases expire and tenants change, “Vanilla Shell”

V. Hotels
a. Types

i. Flagged - Marriott, Hyatt, Hilton, etc.
ii. Unflagged
    1. Local Chain

2. Individual Hotel (La Valencia)

iii. Motels (Motel 6)

iv. Limited Service - Has no food or bar facilities

v. Full Service

1. 1. Central Business District Hotels
2. 2. Convention Hotels
3. 3. Has Restaurants, banquet, and meeting facilities

b. Revenues

i. Room Income

ii. Meeting

iii. Food & Beverage

iv. Parking

v. Internet & Resort Fees, miscellaneous

c. Cash flow

i. Income is calculated on per-room basis

VI. Mobile Home Parks

a. 5 Star – Has numerous amenities, curbs/gutters and most if not all of the homes are double-wide.

b. 4 Star – Has fewer amenities, no curbs/gutters and some of the homes are double-wide.

c. 3 Star – Has few if any amenities, no curbs/gutters and most of the homes are single-wide.

VII. Other

a. Senior & Assisted Living Facilities

b. Medical Office/Hospitals

c. Self Storage

d. RV Parks

Information Required to Process a Loan

In this segment, we will look at the following topic:

- Information Required to Process a Loan

Information Required to Process a Loan

Information Required to Process a Loan

- Rent roll
- Year-to-date plus 3 years operating statements
- Pictures, site plans, floor plans
- Copies of leases
- Appraisal
- Environmental Phase I
- Engineering – to include ADA

I. Analysis of the Borrower

a. Understanding Financing needs of Borrower or Property
b. Financial – Net Worth
c. Experience –Type of Real Estate
d. Management Capabilities
e. Credit Check, Credit History
f. Type of Entity
g. Lender carve outs and how they are handled
    i. Fraud, Misrepresentation, Waste
    ii. Warm Body vs. Entity
    iii. California One Action Rule

II. Tenants, Leases and Rollover

a. Tenancy
    i. Single-tenant (Retail, Industrial, Office)
        1. Credit
            a. Government (GSA-General Services Administration)
            b. Walgreens – Credit
            c. Walmart
        2. Non-Credit
            a. Local Retailers
            b. Rite-Aid
            c. Vons
    iv. Multi-tenant (Apartment, Retail, Office, Industrial)
b. Rollover & Reserve Costs
    i. Tenant Improvement – Carpet, paint, or all
    ii. Leasing commissions
    iii. Capital costs (structural, exterior, parking)
    iv. How do you determine reserves
    v. Are they accounted for above the line?
    vi. Uneven roll (big one year, small the next)
    vii. Reserves for lease terms at or beyond loan term
c. Lease Clauses
    i. Expansion rights
    ii. Options to purchase
    iii. Casualty and condemnation
    iv. Kickout clauses

1. Amount and type of improvements
2. Over standard tenant improvements

iii. Future Tenant Improvement Obligations

iv. Income

1. Rental
2. Percentage Rent
3. Parking Rent
4. Utility Reimbursements
5. CAM or NNN Expense Reimbursements
6. Amortization of Tenant Improvements
7. Free Rent

viii. Expenses

1. Net
2. Gross
3. Gross + Utilities
4. Base Year, Expenses Stop

v. Go Dark Clauses

vi. Subordination

vii. Co-Tenancy

viii. Gross Sales

d. Is there a "hangout"? (Lease term vs. Loan Term)

e. How do you determine if the clauses are detrimental

i. Landlord

ii. Tenant

iii. Lender (Subordination)

III. Mitigation Strategy and Underwriting Risk

a. Loan to Value (loan divided by value)

b. Cross-collateralization

i. More security for lender

ii. Provides additional collateral

c. Letters of Credit

d. Recourse

e. Location

f. Market Occupancy - Strong markets provides comfort to lender

g. Market Trends

h. Market Trends

i. Borrower Experience - Has borrower sufficient experience in property type?

j. Management Expertise
k. Building Utility vs. Special Purpose - Can building be used by other tenants?
l. Secondary Financing
m. State & Local Economy Trends (Military closures)
n. Universities and Linkage
o. Availability of Land, Homes, Jobs, Education, Affordable?

IV. Operating Statements – Look at all of these items over 3 to 5 years to estimate proforma costs

a. Income

    i. Stability
        1. Trending up or down
    ii. Vacancy
        1. Do you underwrite Market or Actual?
    ii. Market Fluctuations
    iii. Rollover
        1. More than 25% to 35% in one year?
    ii. Bad Debt, Late Charges
        1. Why
    ii. Interest Income
        1. Usually not underwritten
    ii. Property Income
        1. Rental
        2. Percentage Rent
        3. Parking Rent
        4. Laundry Income
        5. Antenna or Bill Board Rent
        6. Utility Reimbursements
        7. CAM or NNN Expense Reimbursements
        8. Amortization of Tenant Improvements

b. Expenses

    i. Management
    ii. Repair & Maintenance
    iii. Utilities = Water, Sewer, Phone, Electric
    iv. Capital (Expensing of capital items)
    v. Reserves
    vi. Fluctuations in any of the categories
    vii. Partnership or Asset Costs (above or below)

c. Reserves

i. Above the line
ii. Tenant Improvement
iii. Leasing Commissions
iv. Capital Items

d. Valuation (Use Valuation Template)

i. Net Operating Income
ii. Capitalization Rates
iii. Value Per S.F.
iv. Additional Collateral, Land

e. Loan Ratios

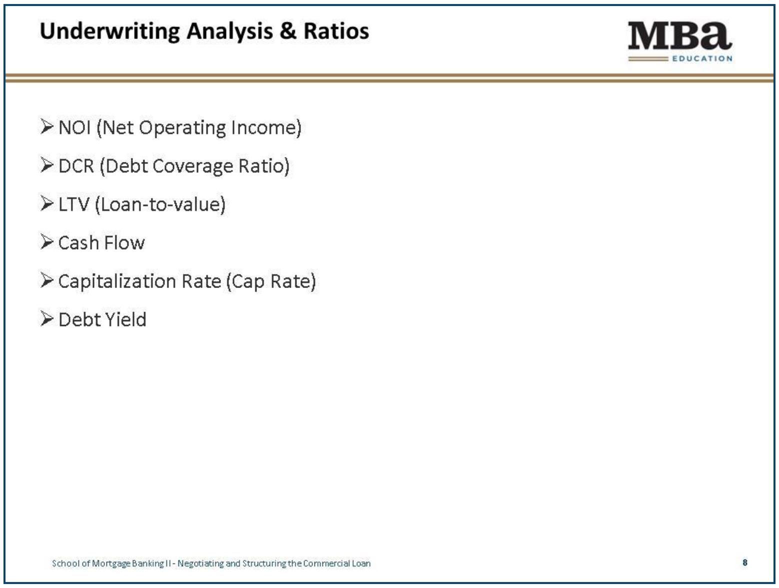
i. Loan Per S.F.
ii. Rate
iii. Term
iv. Spread over Treasuries
v. Amortization
vi. Constant
vii. Payment
viii. Debt Coverage Ratio

Underwriting Analysis & Ratios

In this segment, we will look at the following topics:

- Underwriting Analysis and Ratios
- Net Operating Income
- Debt Coverage Ratio
- Loan-to-Value Ratio
- Capitalization Rate
- Example Problem

Underwriting Analysis and Ratios



Underwriting calculation and ratios depend a great deal on the details of the loan transaction, factors that affect risk and the type of a commercial venture being undertaken. For example, a residential condominium project would be considered differently than a property being used strictly as a warehouse.

Net Operating Income

Net Operating Income

The amount remaining after total operating expenses (excluding interest payments) are deducted from effective gross income.

NOI ÷ Cap Rate = Value
$925,000 ÷ .085 = $10,882,000

School of Mortgage Banking II - Negotiating and Structuring the Commercial Loan 9

I. Gross Income

a. Annual Rental Income
b. Parking Income
c. CAM Reimbursements
d. Expenses Reimbursements
e. Laundry, Antenna
f. All Income Derived from Property

II. Less Vacancy from All Forms

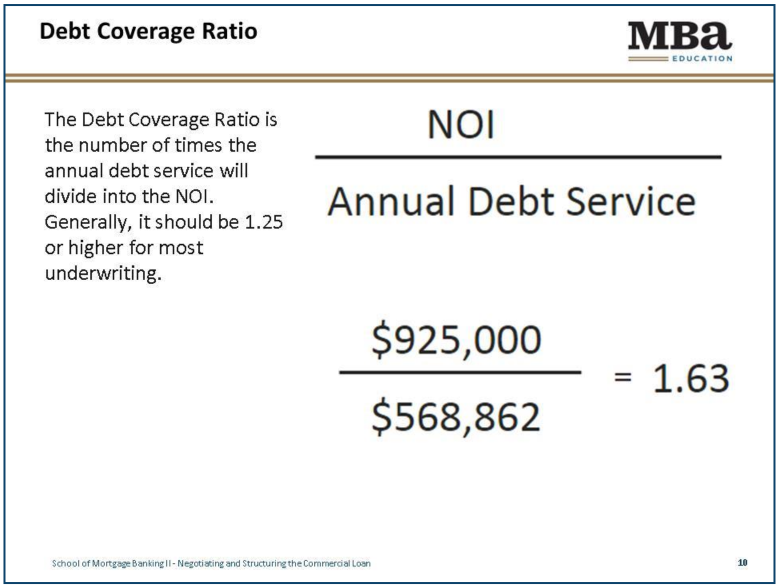
a. Market Vacancy
b. Actual Vacancy

III. Effective Gross Income = Gross Income – Vacancy

a. Expenses

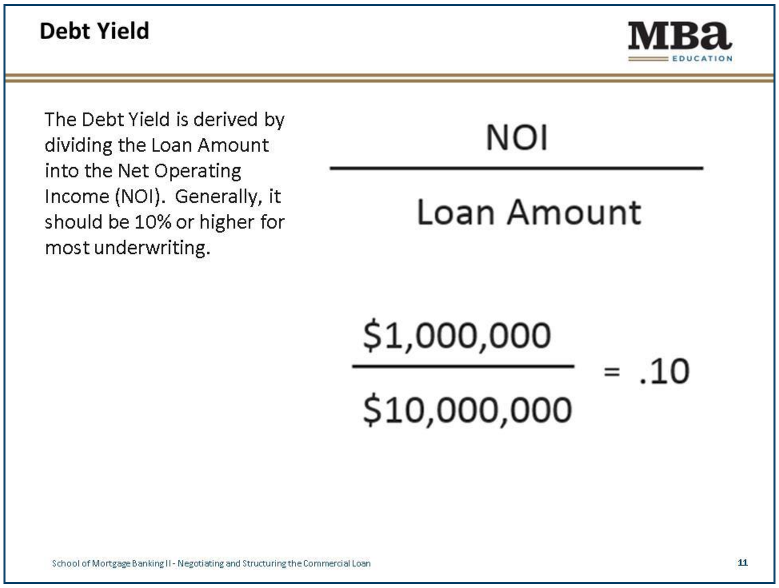
    i. Repairs & Maintenance
    ii. Real Estate Taxes
    iii. Insurance
    iv. Elevator, Janitorial, HVAC
    v. Utilities including Electric, Gas, Water
    vi. Management Fees
    vii. Reserves for Capital Expenses including tenant improvements, leasing commission.

Debt Coverage Ratio



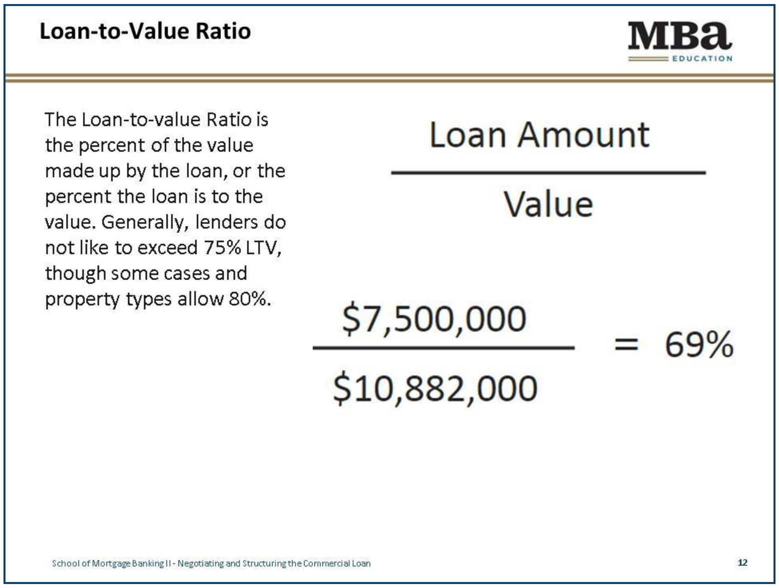
Debt Coverage Ratio (DCR) is the indicator of how much Net Operating Income (NOI) there is in excess of the debt service. If the property experiences greater expenses than normal or vacancy issues during the term of the loan, the greater the DCR the more likely the property will be able to continue to pay the debt service.

Debt Yield



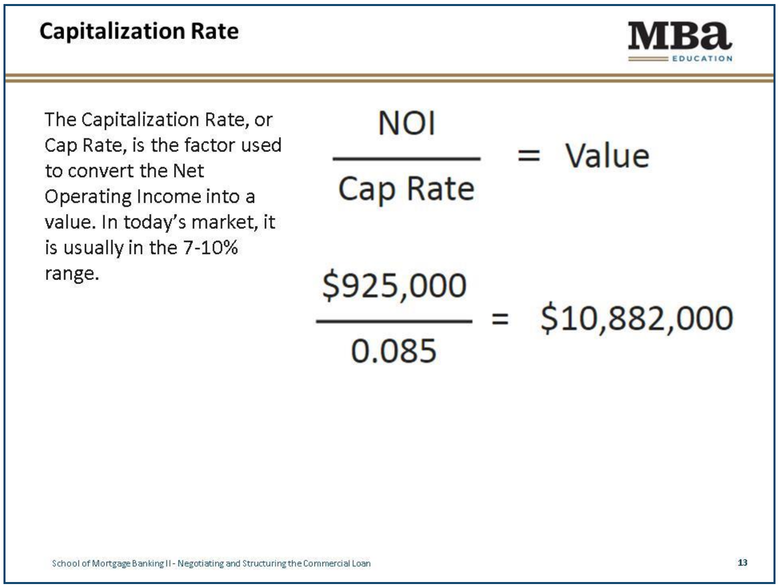
Debt Yield (DY) is the indicator of how much Net Operating Income (NOI) there is to make payments on the Debt, regardless of the rate of interest. If, at the time of refinance interest rates are higher, it gives an indication as to how likely a property may be refinanced.

Loan-to-Value Ratio



Loan-to-Value is the amount of the loan as a ratio of the value of the property. The lower the loan-to-value (LTV) the lower the risk that the lender assumes.

Capitalization Rate



The capitalization rate is derived from the market from the sales of other comparable properties.

Example Problem

Example Problem I

EXAMPLE PROBLEM I:
FAIRFAX OFFICE BUILDING
234 Farifax, VA
Rent Roll

TENANT	SQ FT	BLDG %	LSE.TERM	EXPIRE	$/SF/YR	MONTHLY	ANNUAL
CBS Radio	11,660	66%	New Lease	10 Years	$ 20.21	$ 19,637	$ 235,644
American Radio Towers	3,141	18%	New Lease	10 Years	$ 22.26	$ 5,826	$ 69,912
Advantage Title	2,982	17%	10 Years	5 Years	$ 25.15	$ 6,250	$ 75,000
Total Leased	17,783				$ 21.40		$ 380,556
Total Vacant	0				$ -		
Total Building	17,783				$ 21.40		$ 380,556

School of Mortgage Banking II - Negotiating and Structuring the Commercial Loan 14

Example Problem I: cont.

Fairfax Office
234 Main Street
Fairfax, Va.

Operating Proforma

Income	17,783	FSPMC Proforma	
Base Rents		$ 380,556	
CAM Reimbursements		$ 66,864	
Potential Gross Income		**$ 447,420**	
Vacancy/Collection Loss	5.00%	(22,371)	
Effective Gross Income		**$ 425,049**	
Income/SF		23.90	
Expenses			
Taxes	1.30	23,118	
Insurance	0.30	5,335	
Repairs	2.50	44,458	Reimb
Management	4.00%	$ 17,002	
Utilities	1.75	$ 31,120	
CAM	0.51	$ 9,069	Reimb
Landscaping & Snow Removal	0.75	$ 13,337	Reimb
Reserves for Replacements	$ 0.10	$ 1778	
Total Expenses		**$ 145,217**	
Expenses/SF		$ 8.17	
Net Operating Income		**$ 279,832**	
NOI/SF		$ 15.74	

School of Mortgage Banking II - Negotiating and Structuring the Commercial Loan 15

Example Problem I: cont.

FAIRFAX OFFICE BUILDING 234 Main Street, Fairfax, VA Loan Request Summary			
Loan Amount			$2,630,000
Interest Rate	T-Bill	2.00%	
	Spread	2.00%	
			4.00%
Constant			6.334%
Term			10 Years
Amortization			25
Payment			$166,585
Net Operating Income			$279,832
Capitalization Rate			8.00%
Capitalized Value			$3,500,000
Value Per Square Foot			$196.82
Loan Per SF			$147.89
Loan to Value			75%
Debt Coverage Ratio			1.68
Debt Yield			10.64%
Square Footage			17,783

School of Mortgage Banking II - Negotiating and Structuring the Commercial Loan 16

Example Problem I: cont.

Practice Example

Tenant Name	SF	% of Bldg.	Commencement	Expiration	Rent/ SF	Monthly Rent	Annual Rent
Tenant One	12,000	60%	2 Years Ago	10 Year Lease	$ 20.00		
Tenant Two	5,000	25%	3 Years Ago	10 Year Lease	$ 14.40		
Tenant Three	3,000	15%	3 Years Ago	10 Year Lease	$ 20.00		
Total Leased	**20,000**	**100.00%**			**$ -**	**$ -**	**$ -**
Current Vacancy		0.00%			$ -	$ -	$ -
Total Building	**20,000**	**100.00%**			**$ -**	**$ -**	**$ -**
					Wtd. Ave.		

School of Mortgage Banking II - Negotiating and Structuring the Commercial Loan 17

Example Problem I: cont.

Income	20,000		**Proforma**		
Base Rent					
CAM Reinbursements			$	54,000	
Potential Gross Income					
Vacancy/Collection Loss		5.00%		-	
Effective Gross Income			$	-	
	Income/SF			0.00	
Expenses					
Taxes		1.20			Reimb
Insurance		0.25			Reimb
Repairs		1.25			
Management		3.00%			
Utilities		1.60			
CAM		0.50			Reimb
Landscaping & Snow Removal		0.75			Reimb
Reserves for Replacements		0.15			
Total			$	-	
Expenses	Expenses/SF		$	-	
Net Operating Income			$	-	
	NOI/SF		$	-	

School of Mortgage Banking II - Negotiating and Structuring the Commercial Loan 18

Example Problem I: cont.

Practice Example

Loan Request Summary

Loan Amount	$	-	
Interest Rate		6.30%	
Term		10	years
Amortization		25	years
Monthly P&I Payment	$	-	
Annual P&I Payment	$	-	
Net Operating Income	$	-	
Capitalization Rate		9.50%	
Capitalized Value	$	-	
Loan to Capitalized Value		74.90%	
Debt Service Coverage			times
Loan per Square Foot	$	-	
Value per Square Foot	$	-	
Square Feet (SFNRA)		20,000	

T-Bill	4.50%
Spread	1.80%
	6.30%

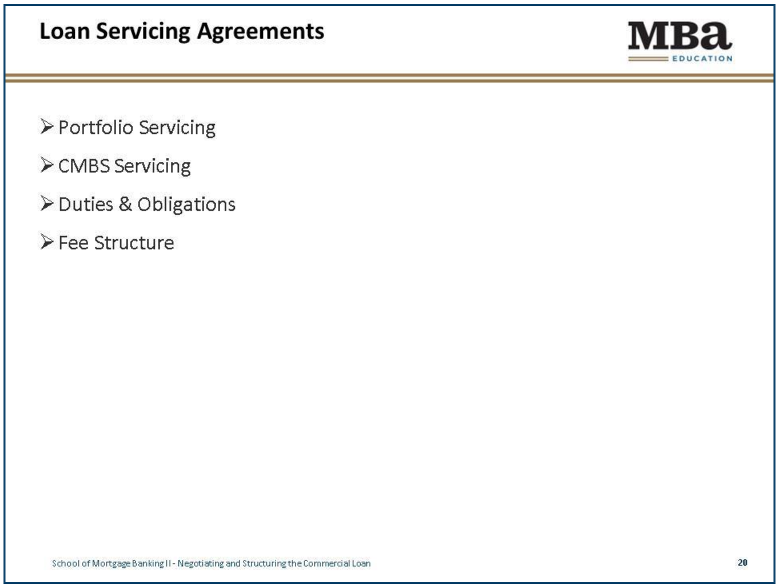
School of Mortgage Banking II - Negotiating and Structuring the Commercial Loan 19

Commercial Loan Servicing

In this segment, we will look at the following topics:

- Loan Servicing Agreements
- Receipt of Closed Loan File
- Setting Up the Loan
- Collection of Payments
- Disbursement of Payments
- Review of Escrow Reserves
- Insurance Policy Review
- Processing Loan Requests
- Annual Operating Statements
- Annual Property Inspections
- Default Issues

Loan Servicing Agreements



- Portfolio Servicing
    - Correspondent Loan Servicing Agreement
    - Outline of Duties and Obligations
    - Agreements

- CMBS Servicing
    - Agreements
        - PSA Agreement
        - Master Servicer Agreement
        - Primary Servicing Agreement
        - Sub-Servicing Agreement
    - Outline of Duties – Different for each of the above
    - Servicing fee structure

Receipt of Closed Loan File

Receipt of Closed Loan File

- Loan Documents
- Reports
- Other Documents

- Loan Documents
    - Note
    - Deed of Trust
    - Environmental Agreement
    - Assignment of Leases and Rents
    - Reserve/Escrow Agreements
- Reports
    - MAI Appraisal
    - Environmental Reports
    - Engineering Report
    - Seismic Reports
- Other Documents
    - ALTA Survey
    - Certificates of Occupancy
    - Zoning Letter
    - Estoppel Certificates
    - SNDAs
    - Leases
    - Insurance Certificates
    - Property Tax Bills
    - Title Report

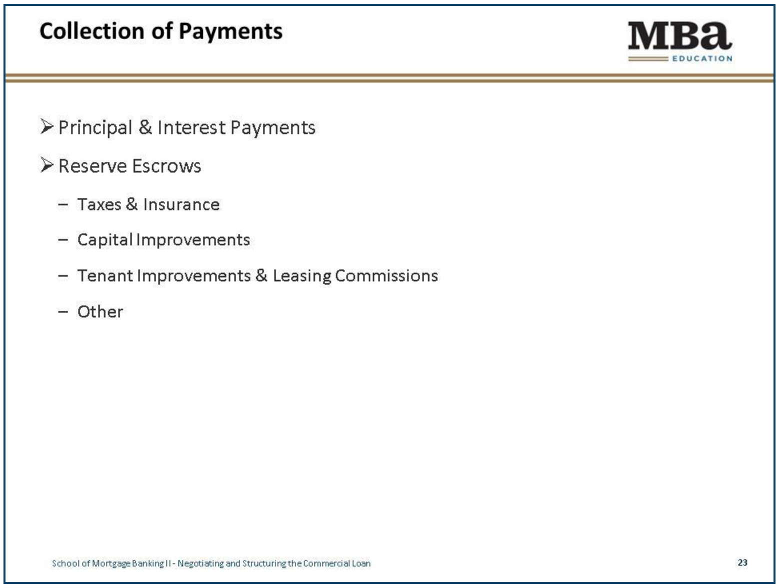
Setting Up the Loan

Setting Up The Loan

- Technology
- Servicing Software
- Boarding Loan Information
- Borrower Welcome Letter
- Monthly Payments
- Escrows
- Special Conditions

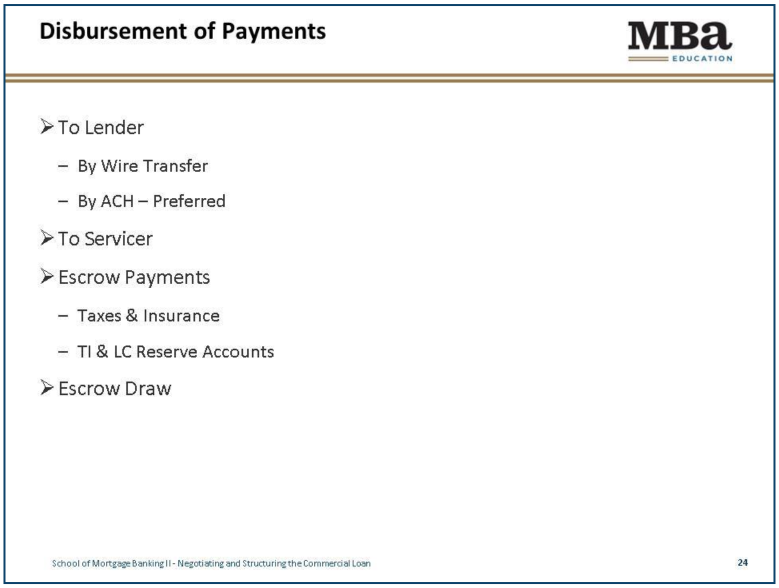
- Technology
- Servicing Software
    - FICS
    - McCracken
    - Enterprise
    - Real Synergy
- Boarding the Loan
    - Borrower Contact Information
    - Property Management Info
    - Loan Info
    - Major Tenants
    - Unusual Loan Conditions
    - Options
- Welcome Letter to Borrower
    - Introduction of Servicer to Borrower
    - Re-confirm Payment Amounts
    - Payment Dates
    - Amortization Schedule of Loan Balance
- Monthly Payments
    - Check
    - ACH
    - Wire Transfer
- Reserves
    - Taxes and Insurance
    - Capital Improvement Accounts
    - Tenant Improvement & Leasing Commissions
    - Other
- Special Conditions
    - Post Closing Items
    - Springing Conditions
    - Options
    - Variable Interest Rate Payment Monitoring

Collection of Payments



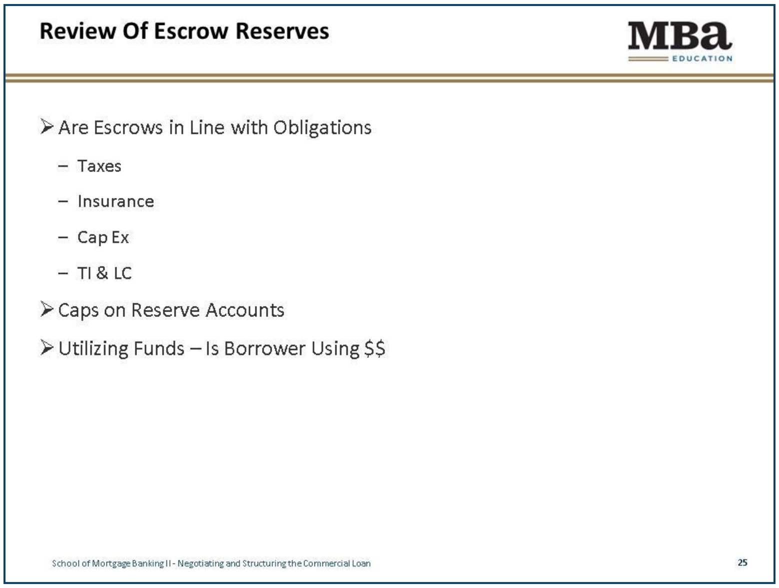
- Principal and Interest
- Reserves
    - Taxes
    - Insurance
    - Capital Reserves
    - Tenant Improvement and Leasing Commissions
    - Holdback Escrows from Closing

Disbursement of Payments



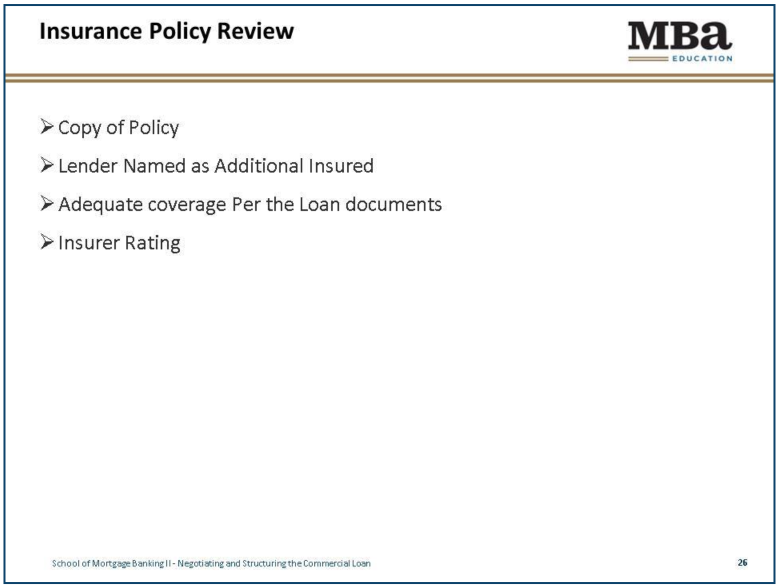
- To Lender - Remit Payments
- To Servicer - Hold Servicing Strip
- Pay Taxes and Insurance from Escrow Accounts
- Funding Other Reserves
    - Capital Reserves
    - Tenant Improvement and Leasing Commissions
    - Number of Draws

Review of Escrow Reserves



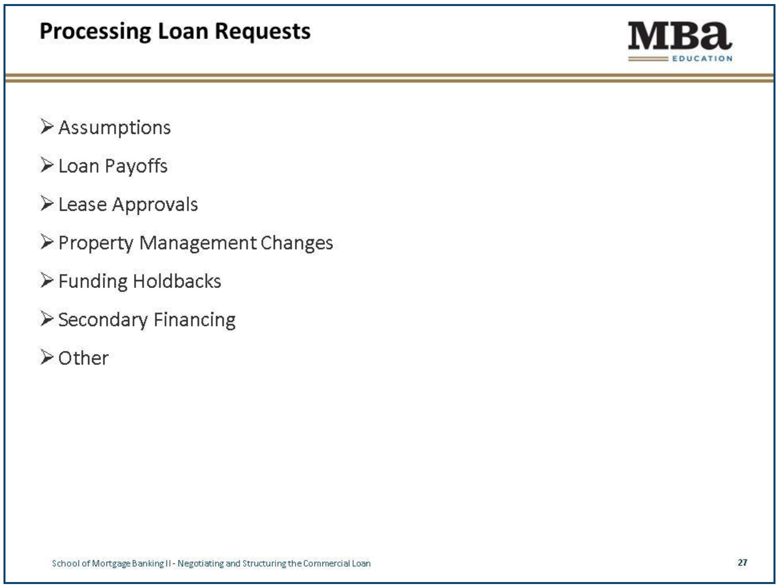
- Are balances in line with obligations
    - Taxes
    - Insurance
    - Capital Expense
    - Tenant Improvement and Leasing Commissions
- Caps on Reserve Accounts
- Are funds being used
    - Capital Expense
    - Tenant Improvement and Leasing Commissions

Insurance Policy Review



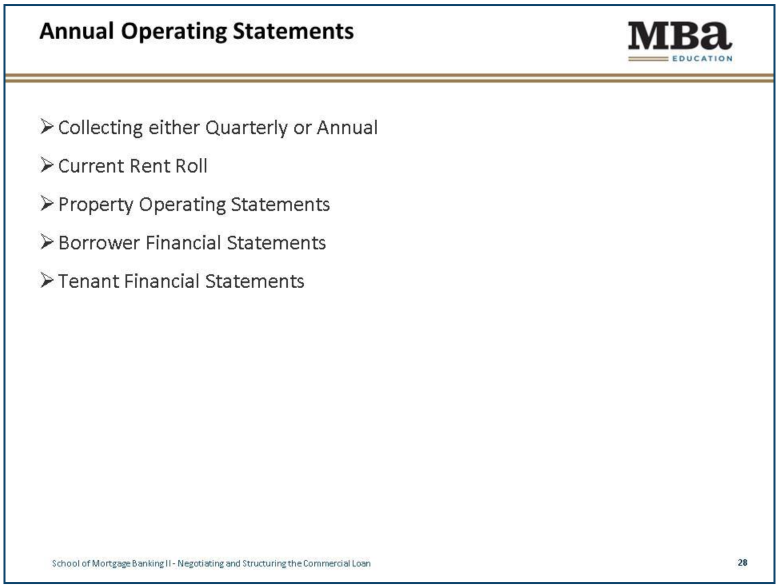
- Copy of the entire current policy vs. getting the Accord form
- Lender Named as additional Insured
- Adequate Coverage – Liability, Casualty, Terrorism, Flood, etc. that meet loan document requirements
- Insurance Company Quality Rating

Processing Loan Requests



- Assumptions / Ownership Changes
  - Yield Maintenance
  - Defeasance
  - Fixed
  - Time Frames
- Payoff and Prepayment Premiums
- Lease Approvals
- Change of Property Management Company
- Funding Holdbacks
- Secondary Financing
- Other loan issues and modifications (lot lines, replace building, etc)
  - Contemplated
  - Un-Contemplated

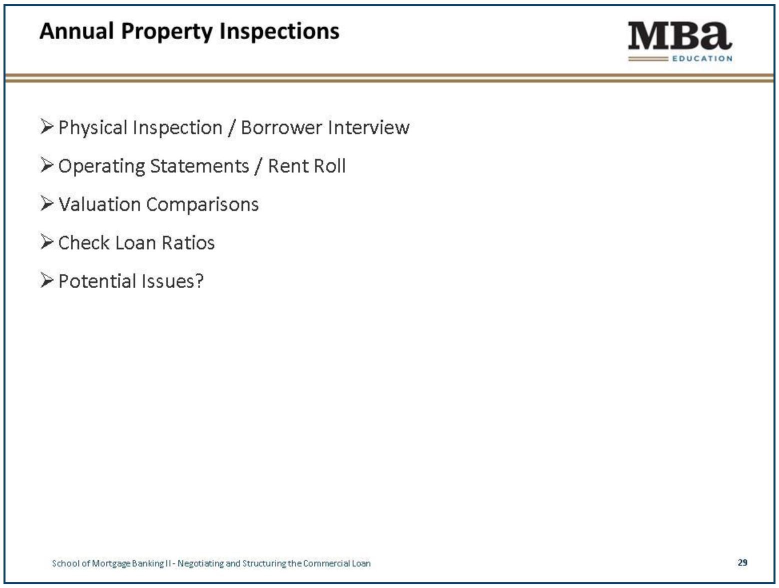
Annual Operating Statements



Collection of Annual Operating Information:

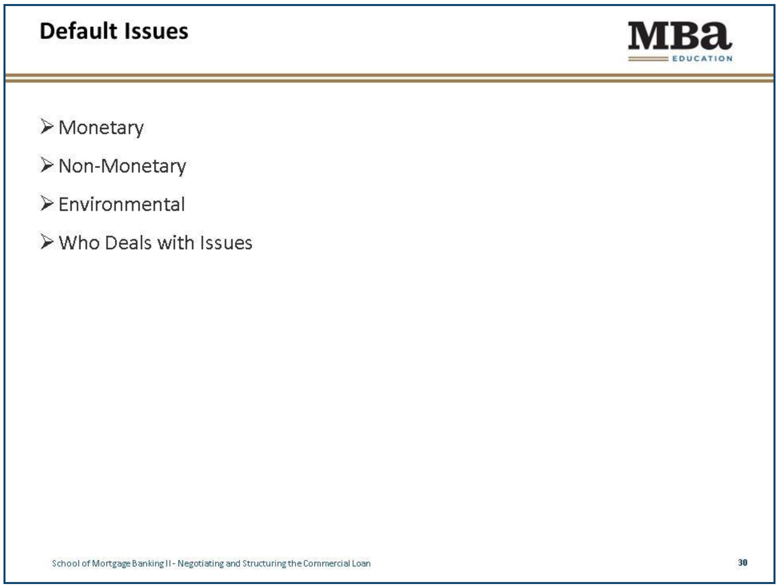
- Quarterly or Annually
- Current Rent Roll
- Operating statement for property and the borrowing entity
- Borrower Financial Statements
- Tenant Statement
    - Financial
    - Sales

Annual Property Inspections



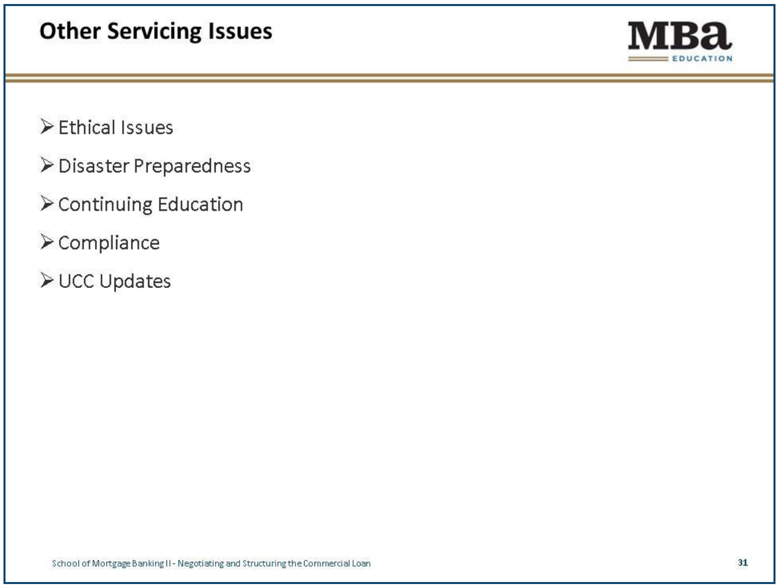
- Physical Inspection and Borrower Interview
- Rent Roll and Operating Statement Review
- Work up new Proforma and Valuation Comparison
- Check current loan ratios
- Look for potential problems
    - Vacancy Issues
    - Market Rents
    - Deferred Maintenance

Default Issues



- Monetary Default
  - Late or missed payments
  - Non-payment of Escrow amounts
- Non-Monetary Default
  - Non- delivery of Operating Statements
  - Default Triggers
- Environmental Issues
- Portfolio - Working with Lender
- Commercial Mortgage-Backed Securities - Passing Loan off to Special Servicer

Other Servicing Issues



- Ethical Decision Making
- Disaster Planning/Preparedness
- Continuing Education
- Compliance
    - E&O Insurance
    - Fidelity Insurance
    - Attestation
    - Accounting Audit
    - Reg. AB Compliance
- Uniform Commercial Code (UCC) Updates

Practice Activities

In this segment, we will look at the following topics:

- Practice Exercise
- Case Study

Practice Exercise

Formulas

	GROSS INCOME
Less	VACANCY
=	EFFECTIVE GROSS INCOME
Less	OPERATING EXPENSES
=	NET OPERATING INCOME (NOI)

LOAN-TO-VALUE = Loan Amount/ Value

APPRAISED VALUE = NOI/Cap Rate

LOAN AMOUNT = Appraised Value x Loan-to-Value Ratio

ANNUAL PRINCIPAL AND INTEREST = Loan Amount x Constant (or use calculator = debt service coverage)

DEBT COVERAGE RATIO = NOI/Debt Service Coverage

CASH FLOW = NOI - Debt Service Coverage

Use Common sense:

GBA = gross building area
NRA = net rentable area

Rent is collected only on NRA but some expenses can be on the GBA. READ the problem -- everything is given!

Exercise 1

Tenant A	20,000 sf	8.50/sf =	______
Tenant B	30,000 sf	7.75/sf =	______
Tenant C	20,000 sf	6.50/sf =	______
	Gross Income		______
	Less 7% Vacancy		______
	Effective Gross Income		______
Expenses			
	Taxes	$1/sf	______
	Insurance	.30/sf	______
	Mgmt	4%	______
	Utilities	.75/sf	______
	Misc.	.50/sf	______
	Total Expenses		______
	NOI		______
	Less Debt Service		______
	Cash Flow		______

DCR

Value	
Cap Rate: .10	10%
LTV:	75%
Rate:	6%
Amor:	25 yr
Constant	0.07731

Exercise 2

Free-Standing Walgreens

20-year NNN lease

12,000 sf	$25/sf =	________
Gross Income		________
Less Expenses		
Mgt.	2%	________
Misc.	.25/sf	________
Total Expense		________
NOI		________
Less Debt Service		________
Cash Flow		________

DCR

Value	
Cap Rate: .085	8.5%
LTV:	75%
Rate:	6.25%
Amor:	20 yr
Constant	0.08777

Please see appendix for exercise answer key.

Case Study

Instructions for

SOMB II Case Study

The case study on the following pages is in the format of an electronic package that can be delivered to prospective lenders over the internet. Maps, aerials, pictures all can be dropped into the excel format and sent quickly to lenders for a first look. This, in general, provides enough information for the lender to formulate an opinion of the transaction and provide a quote. After an introductory phone call to the prospective lender, the e-mail package is sent, reviewed by the lender and then followed up with additional conversations and requests for more information.

Complete the following steps on this case study:

1. Finish the rent roll to arrive at an annual income for the whole project

2. Take a vacancy from the market information provided to get your EGI

3. Complete the expense portion of the proforma and arrive at a NOI

4. Capitalize the NOI into a value and decide an appropriate LTV (70% to 75%)

5. Compute the annual debt service

6. Compute the DCR

7. Compute the cash flow after debt service

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Presents
McLean Office Building
Requested Loan Amount:
$9,000,000

Richard K. Juergens Jr

(301) 320-0410

July 2016

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McLean Building

Executive Summary

Financing Objective: The borrower is requesting a loan to pay off the existing first trust deed of approximately $7,000,000 and a mezzanine loan of approximately $2,000,000 (total debt $9,000,000). The Mezzanine loan was used to fund the renovation and releasing costs of two of the floors in the building which had been vacant for 3 months while being renovated.

Now that the renovations are completed, the building is a fully leased and renovated 66,000sf office building in downtown McLean, Virginia.

Borrower: The borrower for this property is Bowling Alley Associates LLC. It is owned (50%) by the Mason Development Company and (50%) by the Lon Family Trust, the original owners of the land. The managing partner will be George Mason IV, principal of the Mason Development Company. The Mason Development is a 4th generation development company with substantial experience in the Northern Virginia market. The company has a portfolio of office, retail and industrial properties valued in excess of $65,000,000 The management will be handled by the Mason Management Company. The Lon Family Trust owned and operated a bowling alley on the property until the mid 1980's when it was demolished for the office building presently on the site. The family is involved as an investor only and is not active in the day to day management of the property.

The borrowers have combined statements of $25,000,000 and liquid assets of over $1,000,000. They are well positioned to transition the property from its current condition through the renovation and releasing.

Location:	The subject property is located on Elm Street in McLean Virginia, one block off Rt 123, Dolly Madison Road, a major 4 lane divided road connecting Washington DC over Chain Bridge to Tyson's Corner and the Washington Beltway, Rt 495. McLean is located 10 miles Northwest of downtown Washington DC, 3 miles West of the Potomac River and 2 miles East of Tyson's Corner, the major office and retail complex in Fairfax County. McLean is an unincorporated area of Fairfax County which has a population of just over 1 million. All amenities are with easy reach of the subject, including hotels and restaurants, shopping and access to all major roads. All utilities are available at the site.
Property Description:	The property is a 66,000sf 4 story office building constructed in 1983. The building has lobby entrances on two ends allowing access to parking on all sides of the building. There are two passenger elevators and one freight elevator for tenants use. Construction is of concrete frame, with precast panels and glass curtain wall. Interior finish is dropped ceiling and florescent lighting. Heating and cooling will have four zones per floor after completion of the renovation. The roof is rubber membrane and is 5 years old. The building is in excellent condition for a property of this age. There are 264 parking spaces or 4/1,000 which exceeds zoning requirements.
The Market	The market in the area is strong with vacancies just under 10%. One large building is reported to be under contract to an owner user and once sold, the vacancy rate will drop to 7.5%. McLean is an attractive sub market, out of the downtown traffic and not far from the largest office complex in the Northern Virginia area, Tyson's Corner. It is expected that the McLean Submarket will continue to be attractive to prospective tenants and that vacancies will remain low. Sales of similar buildings in the northern Virginia area have been strong in the past few years. Cap rates indicated from the sales range from a low of 6% for a building occupied with a credit tenant under long term lease to as high as 8% for a building with substantial vacancies that has suffered from poor management.

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Sources and Uses

Sources

New First Trust Deed	$	9,000,000
Total Sources	**$**	**9,000,000**

Uses

Existing debt after November Payment	$	7,000,000
Transaction Costs	$	200,000
Lobby & Interior Renovations	$	450,000
Operating Exp Carry	$	350,000
Contingency	$	75,000
Tenant Improvements ($20/ft)	$	660,000
Leasing Commissions	$	225,000
Other Soft Costs	$	40,000
Total Uses	**$**	**9,000,000**

6/16/2016

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McLean Associates
McLean, Virginia
Rent Roll For August 2014

Tenant	Sq. Ft.	% of Bldg.	Comm.	Expiration	Rent/SF	Monthly Rent	Annual Rent
Computers Unlimited	16,500	25.00%	Sep-06	Sept-16	$ 25.00	**$ 34,375**	$ 412,500
International Trade Asso.	16,500	25.00%	May-10	May-17	$ 19.00	**$ 26,125**	$ 313,500
Virginia Mortgage	16,500	25.00%	Aug-15	Aug-25	$ 25.00	**$ 34,375**	$ 412,500
SOMB Development Co.	16,500	25.00%	Aug-14	Aug-21	$ 24.00	**$ 33,000**	$ 396,000
Cingular Wireless Antenna	Roof						$ 22,000
Total Occupancy	**66,000**	**100.00%**			**$ -**		
Total Building	**66,000**					**$ 127,875**	**$ 1,556,500**

6/16/2016

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Proforma

NRSF **66,000**

Income			**2013 Actual**		**2014 Actual**		**2015 Actual**
Gross Potential Rent		$	1,178,000	$	1,258,000	$	1,342,000
Op Ex Reimbursements		$	-	$	-	$	-
Other Income (1)		$	-	$	-	$	-
Potential Gross Income		**$**	**1,178,000**	**$**	**1,258,000**	**$**	**1,342,000**
Vacancy/Collection Loss		$	-	$	-	$	(335,500)
Effective Gross Income		**$**	**1,178,000**	**$**	**1,258,000**	**$**	**1,006,500**
	Income/SF	$	17.85	$	19.06	$	15.25
Expenses							
Utilities		$	75,241	$	103,654	$	41,250
Maintenance & Repairs		$	125,210	$	68,000	$	72,541
Contract Services		$	115,241	$	125,250	$	98,526
General & Administrative		$	8,404	$	8,953	$	13,599
Real Estate Taxes		$	73,960	$	77,188	$	86,521
Management Fee		$	47,120	$	50,320	$	40,260
Insurance		$	14,729	$	15,665	$	19,800
Total Expenses		**$**	**459,906**	**$**	**449,030**	**$**	**372,497**
	Expenses/SF	$	6.97	$	6.80	$	5.64
Net Operating Income		**$**	**718,094**	**$**	**808,970**	**$**	**634,003**
	NOI/SF	$	10.88	$	12.26	$	9.61

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Proforma NRSF **66,000**

			2016
Income			**Proforma**
Gross Potential Rent			
Op Ex Reimbursements			
Other Income (1)			
Potential Gross Income			
Vacancy/Collection Loss			
Effective Gross Income			
	Income/SF		
Expenses		**$/SF**	
Utilities		1.65	
Maintenance & Repairs		1.20	
Contract Services		2.20	
General & Administrative		0.25	
Real Estate Taxes		1.75	
Management Fee		4.00%	
Insurance		0.30	
Total Expenses			
	Expenses/SF		
Net Operating Income			
		NOI/SF	

TI & LC Assumptions:

Loan Term	10
# of S.F. expiring during loan term	0
Renewal Probability	65%
Avg. T.I. for New Leases	$10.00
Avg. T.I. for Renewal Leases	$5.00
Avg. Rental Rate per S.F.	$0.00
Avg. Lease Term (# of years)	5
Leasing Commission for New Leases	5.0%
Leasing Commission for Renewal Leases	2.0%

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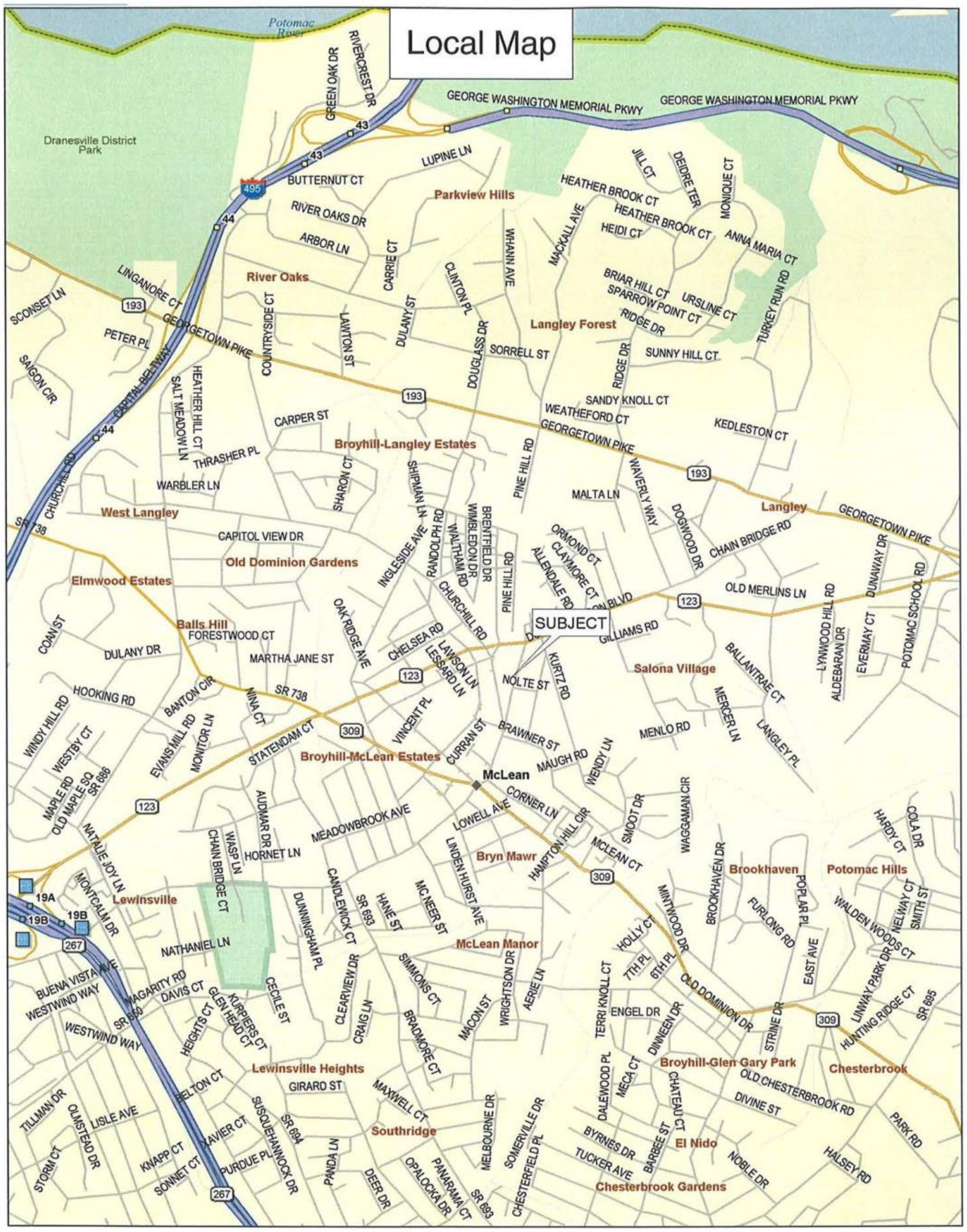
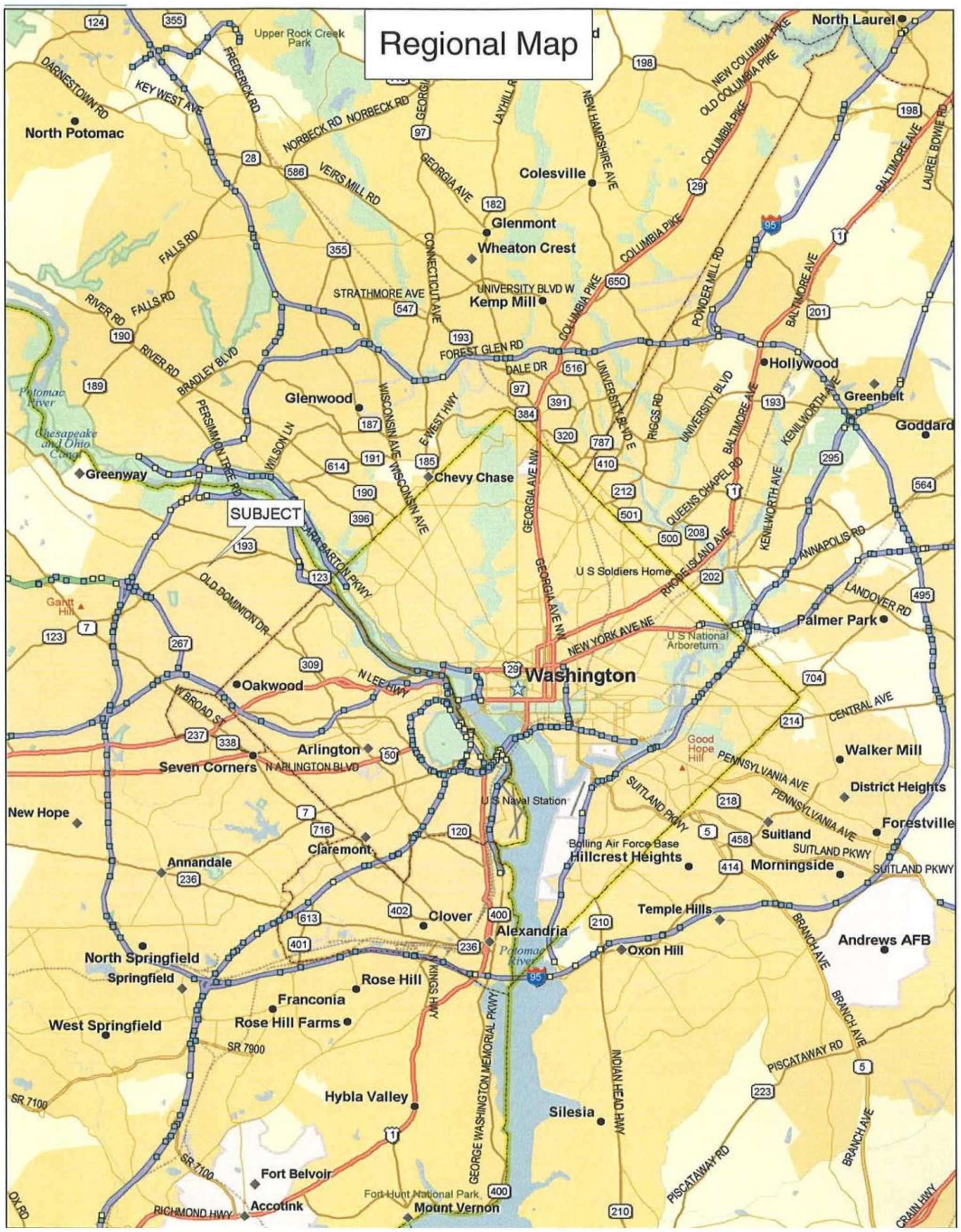
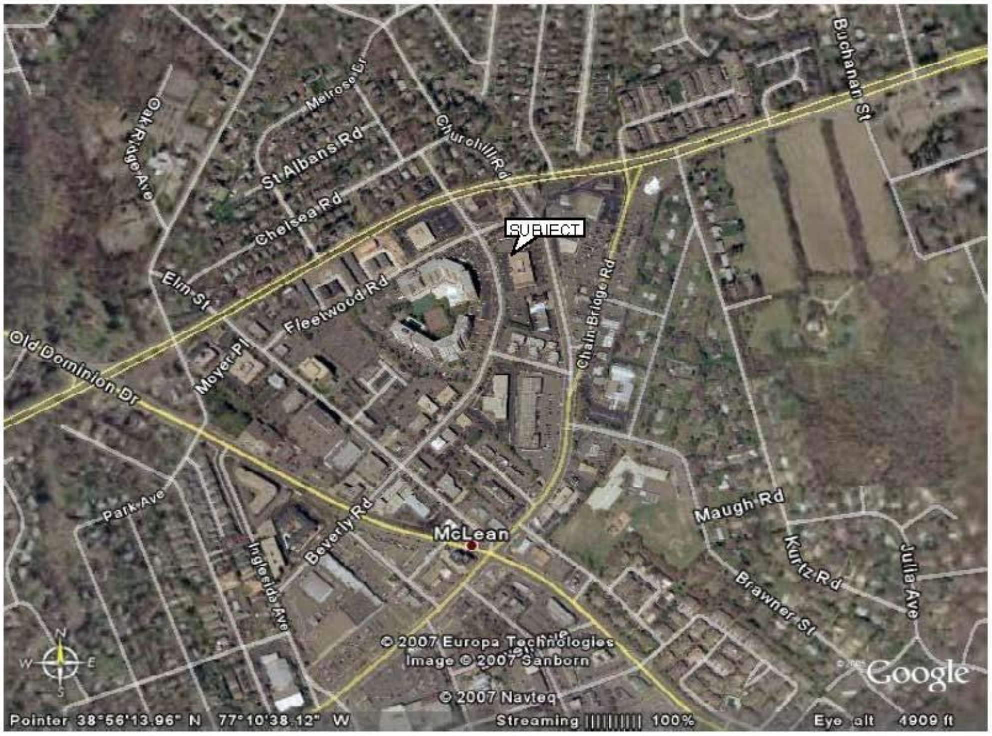
Loan Request Summary
McLean Associates

	Stabilized Funding
Loan Amount	
Interest Rate Calculations	
Base Treasury	2.00
Spread	2.00
Interest Rate	4.00%
Term	10
Amortization	25 years
Constant	6.33%
Monthly P&I Payment	
Annual P&I Payment	
Net Operating Income	
Cash Flow	
Capitalization Rate	
Capitalized Value	
Loan to Capitalized Value	
Debt Service Coverage	
Loan per Square Foot	
Capitalized Value per Square Foot	
Square Feet	66,000



MBa
MORTGAGE BANKERS ASSOCIATION


Regional Map
SUBJECT
Washington
North Potomac
Colesville
Glenmont
Wheaton Crest
Kemp Mill
Hollywood
Greenbelt
Goddard
Glenwood
Chevy Chase
Greenway
U S Soldiers Home
Palmer Park
Oakwood
Arlington
Seven Corners
Walker Mill
District Heights
Forestville
Suitland
New Hope
Claremont
Annandale
Hillcrest Heights
Morningside
Temple Hills
Andrews AFB
Clover
Alexandria
Oxon Hill
North Springfield
Springfield
Rose Hill
Franconia
West Springfield
Rose Hill Farms
Hybla Valley
Silesia
Fort Belvoir
Accotink
Mount Vernon
North Laurel
Upper Rock Creek Park
U S Naval Station
Bolling Air Force Base
U S National Arboretum
Fort Hunt National Park



Please see appendix for case study answer key.

Review

Review

- Review players and property types in the commercial mortgage market
- Discuss how commercial mortgage bankers make money
- Assess risk utilizing underwriting criteria
- Practice valuing and underwriting property

School of Mortgage Banking II - Negotiating and Structuring the Commercial Loan 32

Objectives Review

Upon completion of this module, you will be able to:

- Understand how commercial real estate properties are underwritten and valued.
- Describe how commercial mortgage bankers make money.
- Assess risk using responsible underwriting guidelines.
- Perform basic valuation and underwriting for commercial properties.

Session Evaluation

Class:
Module:
Instructor:
Date:

Instructor Evaluation

Please respond to the following statements using the numeric scale of:
4 - Strongly Agree **3** = Agree **2** = Disagree **1** = Strongly Disagree **N/A** = Not applicable

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The instructor successfully managed the session's time allotment.	

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Additional Feedback

Please add any additional comments you have.

Thank you for your valuable feedback!

Construction Lending

School of Mortgage Banking II

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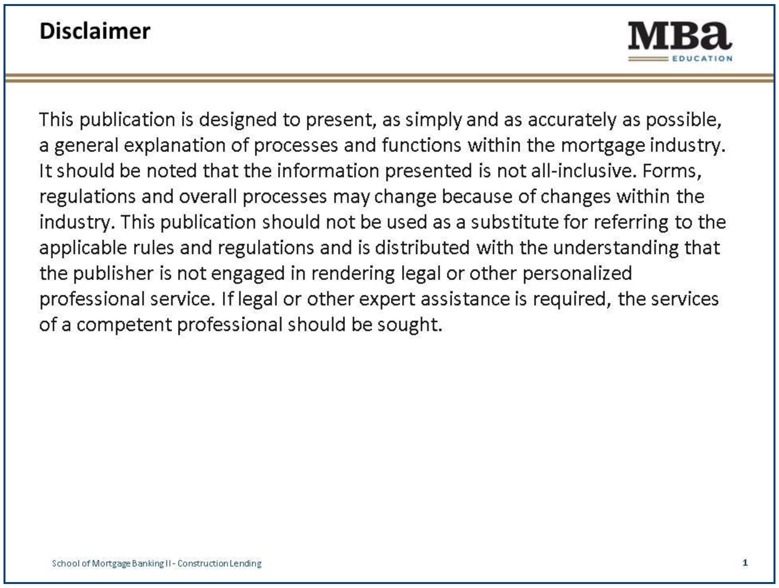
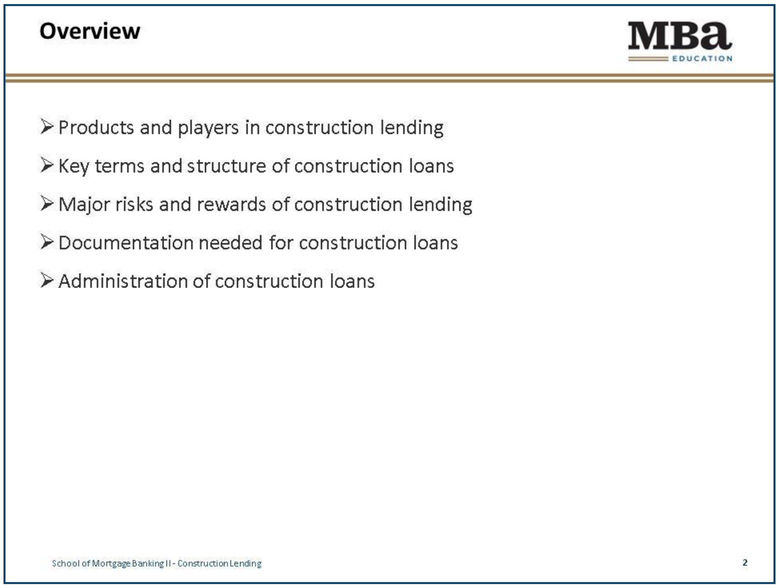


This publication is designed to present, as simply and as accurately as possible, a general explanation of processes and functions within the mortgage industry. It should be noted that the information presented is not all-inclusive. Forms, regulations and overall processes may change because of changes within the industry. This publication should not be used as a substitute for referring to the applicable rules and regulations and is distributed with the understanding that the publisher is not engaged in rendering legal or other personalized professional service. If legal or other expert assistance is required, the services of a competent professional should be sought.

Overview and Objectives

Overview



This module is designed to key terms used in the construction lending business and the structure of construction loans. The major risks and rewards of being involved in construction lending will be considered and some of the major issues for construction lenders during the past few years will be addressed. Then we will turn our attention to some of the administrative challenges for a mortgage lender in the support of construction lending while balancing allocation of draws and advances against performance and completion of the projects.

Objectives

Upon completion of this module, you will be able to:

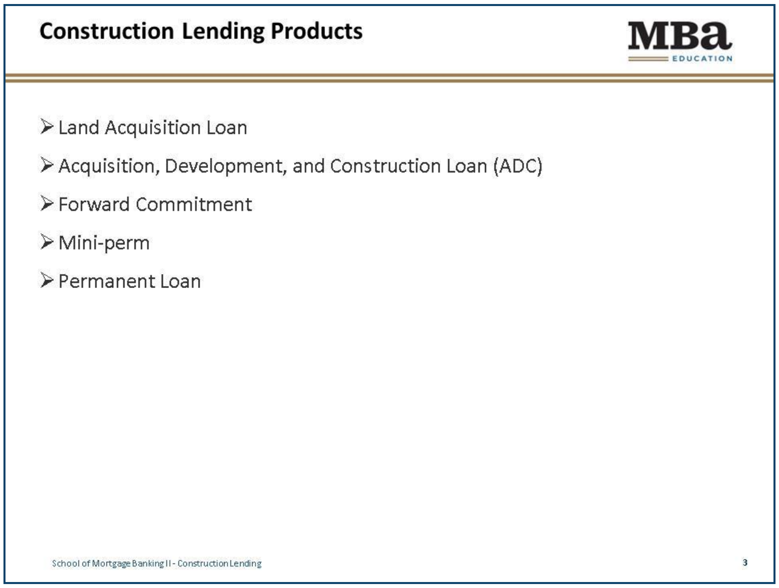
- Identify the products and players in construction lending.
- Define key terms used to describe the product and the components of the transaction.
- Analyze risks and rewards of construction lending.
- Discuss the documentation needed for construction loans.
- Describe the administrative support and requirements for construction loans.

Introduction to Construction Lending

In this segment, we will look at the following topics:

- Construction Lending Products
- Construction Lending Players
- Key Terms and Structure

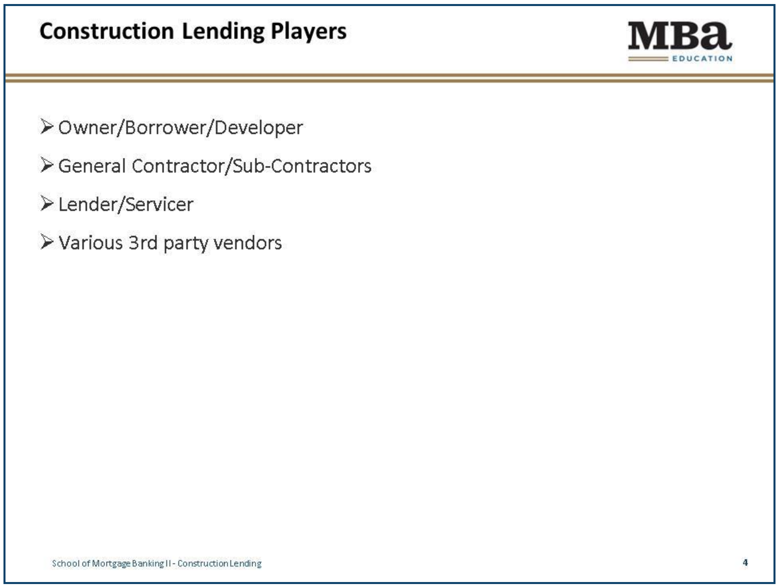
Construction Lending Products



The suite of products associated with construction lending is fairly limited, but they are also somewhat interdependent:

- Land acquisition loan – this loan is used to support the purchase of raw land for the purpose of construction.
- Acquisition, Development and Construction or better known as an ADC loan supports all three stages.
- Forward commitment – an agreement between a buyer and seller for delivery of a specific amount of mortgage coverage to be delivered at some time in the future, at a price determined at the time the forward commitment is negotiated.
- Mini-perm – a commercial real estate mortgage usually made in conjunction with a construction loan and usually three to five years in duration.
- Permanent loan – A mortgage loan, usually covering development costs, interim loans, construction loans, financing expense and marketing, administrative, legal and other costs. This loan goes in place after the project is constructed and open for occupancy. It is a long-term obligation, usually for at least ten years.

Construction Lending Players



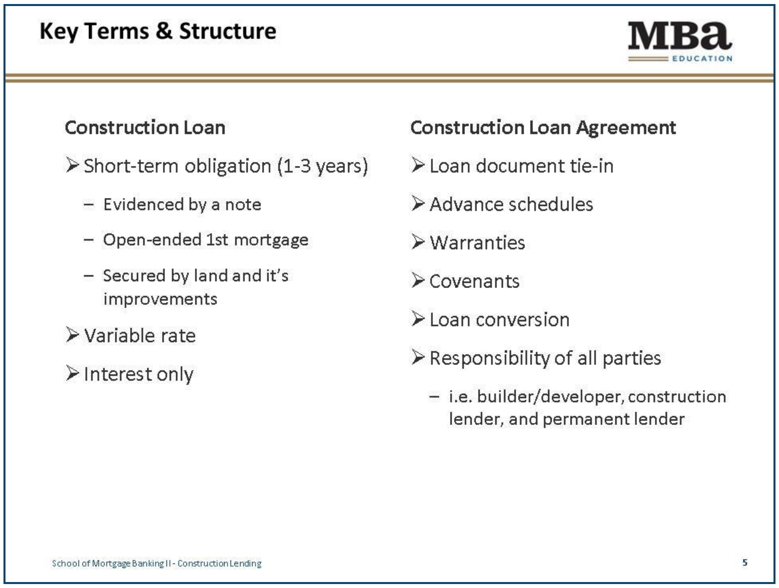
There are a number of players in construction lending and each one plays an important role in getting to the next step:

Owner/Borrower/Developer – this can be the same person/entity or two entirely different people/entities. The developer is a person/entity that prepares raw land for building sites or rehabilitates existing buildings.

General Contractor/Sub-Contractors – the general contractor is a party that supervises the development/construction of property according the executed contract terms with the owner/borrower. Typically, the general contractor can use their own employees or they can use the services of other contractors or sub-contractors.

Lender/Servicer – the company or bank that writes the construction loan typically services the loan as well.

Key Terms and Structure



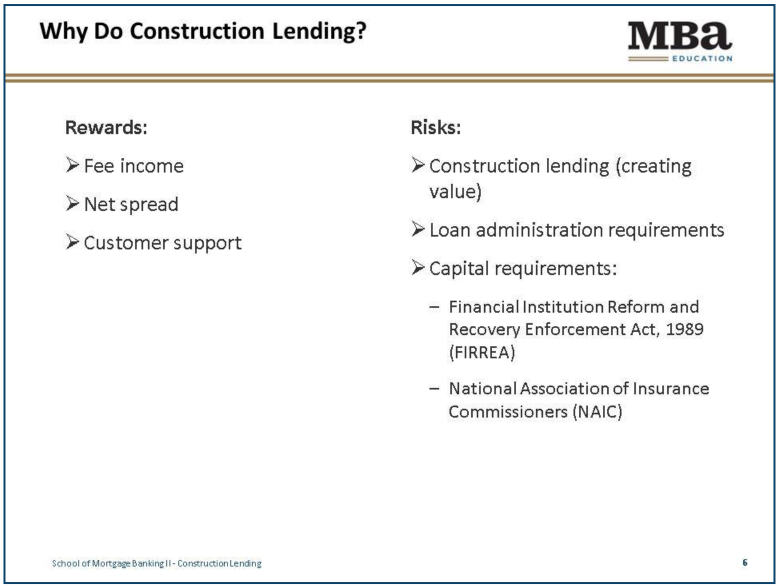
Loan Agreement – this is the most important document in the construction loan. It should contemplate and address all possible scenarios and issues. All players have some responsibility tied to the loan agreement.

Benefits and Risks of Construction Lending

In this segment, we will look at the following topics:

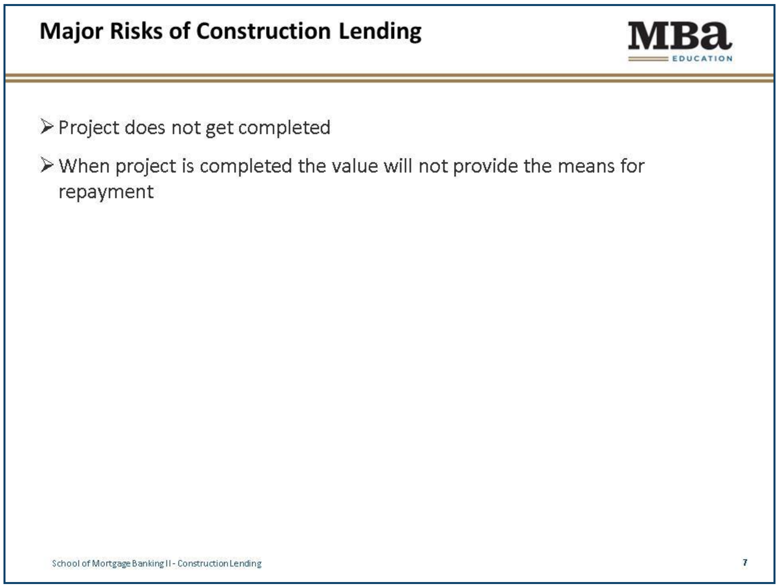
- Why Do Construction Lending?
- Risks of Construction Lending

Why Do Construction Lending?



Lenders usually are involved in construction lending because it suits their strategic plan and the needs of their customers. There is the opportunity for significant fee income in addition to the return on the investment and the net spread on the monies extended. There is also the possibility of extending relationships to expand outreach to new customers through the process of doing underlying mortgages on the properties being developed.

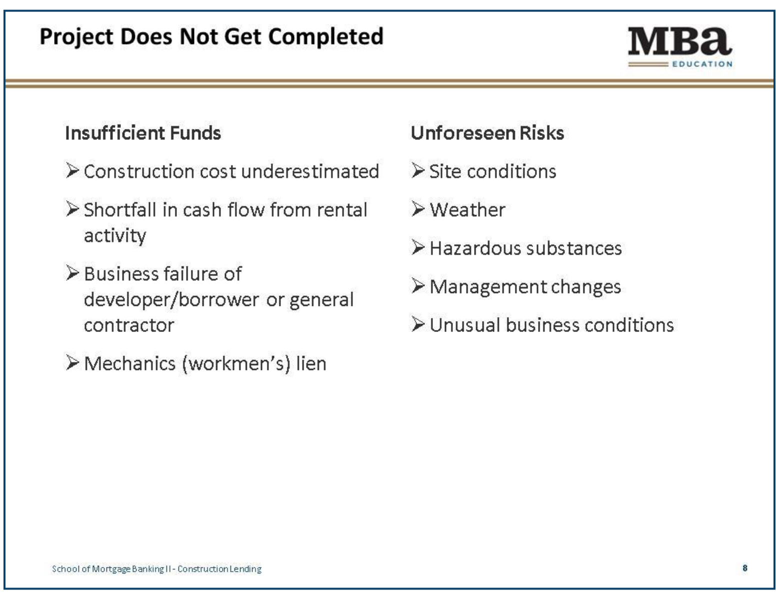
Risks of Construction Lending



Experience with the builder or contractor is an important consideration so that some of the following risks can be avoided:

- The project never gets completed.
- When complete the value does not support or provide the means for repayment.

Project Does Not Get Completed

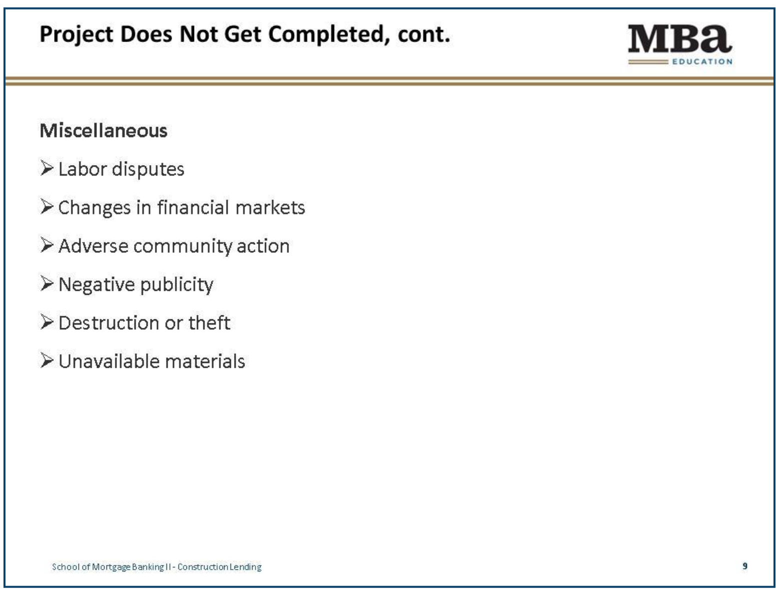


Insufficient Funds:

- Construction cost underestimated – often an issue with new or inexperienced builders.
- Shortfall in cash flow from rental activity – requires feasibility study before commitment.
- Business failure of developer/borrower, or general contractor – before entering into a business relationship the lender must vet out the contractor/developer; this can be mitigated when the developer provides bonds.
- Mechanics (workmen's) lien – working with proven contractors can avoid these issues.

Unforeseen Risks:

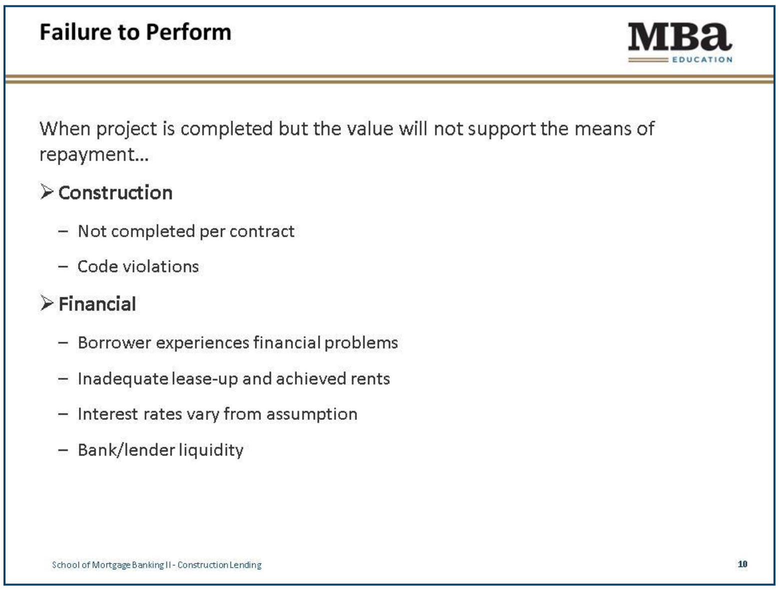
- Site conditions – discovery of rock or an environmental hazard that was not identified during due diligence
- Weather – need to research and anticipate local weather patterns
- Management changes – working with reputable companies should ease any disruptions if this happens



Miscellaneous:

- Labor disputes – if union labor is required, research the stability before moving forward with the project.
- Changes in financial markets – lock in the prices of major materials.
- Adverse community action – market research should uncover any potential issues.
- Destruction or theft – insurance policies and security must be confirmed before a commitment is made to the developer.
- Unavailable materials – contingency plans need to be in place for issues that arise.

Failure to Perform



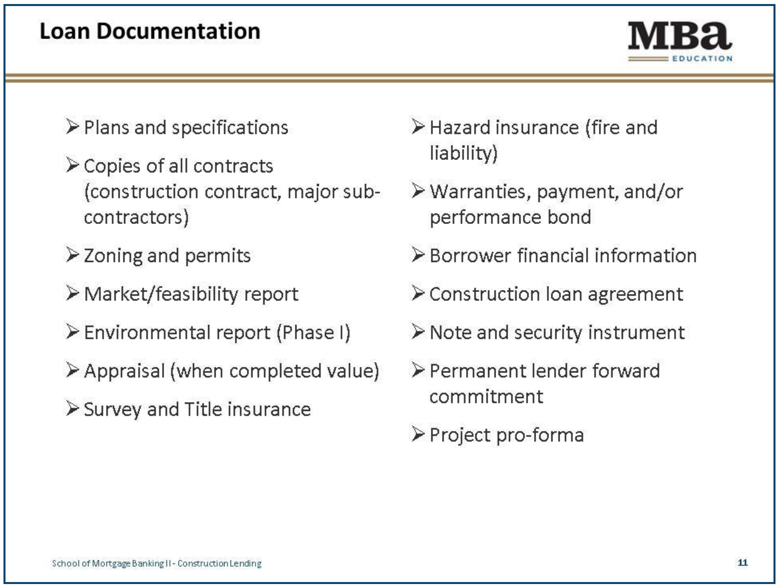
These are all contingencies that need to be negotiated and addressed before the extension of all of the monies under the commitment to lend.

Loan Documentation

In this segment, we will look at the following topics:

- Loan Documentation
- Sample Construction Loan Pro Forma

Loan Documentation



The items listed above all need to be examined in order to protect the lender from the risks discussed on earlier slides. Construction monies are most often put at risk when the lender does not properly underwrite the builder or contractor before the negotiations on any loan or construction site are undertaken. The loan documentation, especially market and feasibility studies must be undertaken prior to even discussing the terms of what a construction loan might entail.

Sample Construction Loan Pro Forma

Sample Construction Loan Pro Forma

Cost of Project Pro Forma

Advance	# 1	180,000	Architect/Engineer	150,000
	# 2	220,000	Permits/Bonds/Ins	40,000
	# 3	295,600	Project Management	50,000
	# 4	350,000	Signs/Brochures	45,000
	# 5	79,760	Lender/Broker Fees	80,000
	# 6	18,000	MA1 Appraisal	5,000
	# 7	133,500	Legal and Audit	165,000
	# 8	149,870	Leasing Commission	150,000
	# 9	355,000	Real Estate Tax	75,000
	# 10	275,000	Settlement/Closing	62,000
	# 11	175,000	Developer's Fee	250,000
	# 12	225,000	Contingency	123,500
	0	0	Interest Reserve	385,000
Hard Costs		2,456,730	Soft Costs	1,580,500
Land		450,000		
Total Costs		**4,487,230**		

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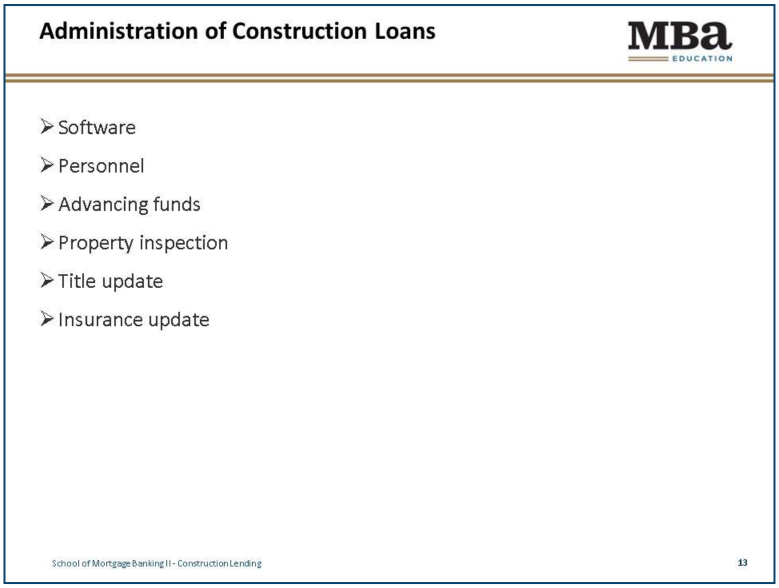
Determining whether a builder or contractor has the experience to carry the project to fruition can often be analyzed in the Pro Forma. An experience developer will consider all the possible consequences and build those contingencies into a pro forma.

Administration of Construction Loans

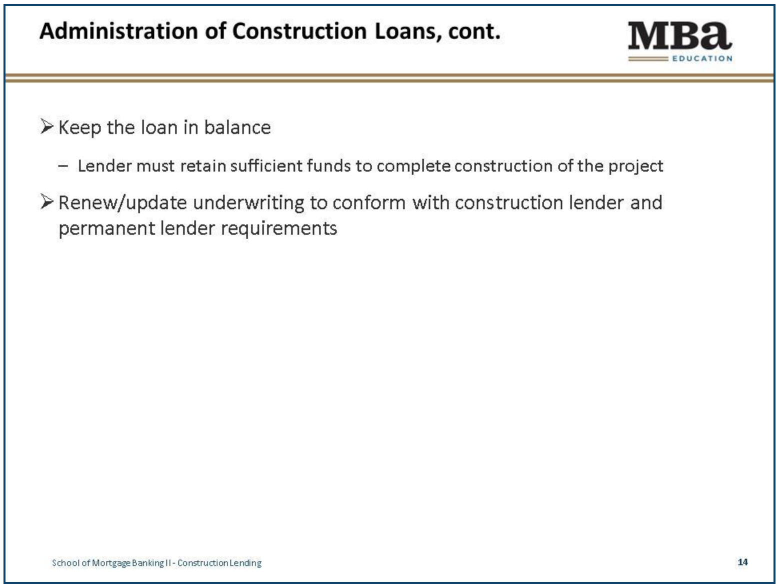
In this segment, we will look at the following topic:

- Administration of Construction Loans

Administration of Construction Loans



The servicing department that is familiar with partial draws will be able to use their software to issue draws and schedule and complete inspections. Having personnel familiar with advancing funds and completing inspection requirements can help to support the construction lending process. Title insurance updates during the construction and completion stages are critical to determining that no additional liens are levied against the property during construction. The final title search will also determine the exact amount of the liens that must be paid in order to retire the construction portion of the process. Insurance coverage is also a critical component to ensure that the bank or lender is protected during the construction phase of the process. It is important that the amount of insurance coverage is extended to cover the value of the property as the process moves through the construction phases to completion.



Keeping the loan in balance is critical:

- Lender must retain sufficient funds to complete construction of the project.
- Underwriting must continue to review the file in order to ensure that the requirements conform to the original underwriting as well as any updates required by the investor or permanent lender.

Review

Review

- Products and players in construction lending
- Key terms and structure of construction loans
- Major risks and rewards of construction lending
- Documentation needed for construction loans
- Administration of construction loans

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Objectives Review

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Appendix: Answer Keys

School of Mortgage Banking II

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Servicing Portfolio Valuation

Servicing Portfolio Valuation Quiz

1. What is the **most important** servicing valuation assumption?
    a. Cost to Service
    b. Other Income
    c. Prepayment Speed
    d. Discount rate

2. A $100MM *servicing* portfolio might sell in the secondary market for approximately:
    a. $100MM
    b. $1MM
    c. $25MM
    d. $101MM

3. A $100MM *loan* portfolio of "par rate loans" might sell serviced released for approximately:
    a. $100MM
    b. $51MM
    c. $101MM
    d. $1MM

4. Prepayment speeds can be discussed in terms of:
    a. CPR
    b. PSA
    c. SMM
    d. Involuntary or voluntary
    e. All of the above

5. The PSA on a 4-year old portfolio prepaying at 12% CPR is:

   a. 12

   b. 200

   c. 600

   d. 2

6. The CPR on a 3-year old portfolio prepaying at a 200 PSA is:

   a. 12%

   b. 9%

   c. 2%

   d. 6%

7. The PSA on a 10-month old portfolio prepaying at 12% CPR is:

   a. 12

   b. 200

   c. 600

   d. 2

8. Default classes (loan characteristics that impact defaults) include all <u>except</u>:

   a. Loan type

   b. Geography

   c. Remittance type

   d. Loan-to-value

   e. Owner occupancy

   f. Property type

9. A mortgage servicer can earn float income on:

   a. Escrow balances

   b. Service costs

   c. Late charges

   d. Ancillary income

10. <u>Ordinarily</u>, the largest contributor to servicing revenue is:

    a. Service fees
    b. Escrow earnings
    c. Late charges
    d. Ancillary income

11. As a portfolio ages, the following cash flow decreases the most:

    a. Servicing costs
    b. Servicing fees
    c. Escrow earnings
    d. Ancillary income

12. Servicing value is defined as the net present value of the:

    a. Before-tax GAAP income
    b. After-tax GAAP income
    c. Before-tax cash flows
    d. After-tax cash flows

13. Per loan servicing costs are driven by:

    a. Outstanding principal balance
    b. Activity on the loan
    c. Service fee
    d. FAS 91

14. Ordinarily, the largest contributor to servicing cost is:

    a. Corporate overhead
    b. Personnel
    c. Interest paid on escrow balances
    d. Technology

15. Servicing portfolio valuations are performed primarily because they are:
    a. Needed by risk management areas within the organization
    b. Required by the auditors and regulators
    c. Reported in the financial statements
    d. All of the above

16. Mortgage servicers are concerned only with voluntary prepayments when it comes to MSR valuations:
    a. True
    b. False

17. Traditionally, a borrower is more likely to voluntary prepay:
    a. When rates have declined and the borrower rate is above current "market" rate
    b. During the winter months
    c. When rates have increased and the borrower rate is below current "market" rate
    d. Around the 15th of the month

18. Traditionally, a borrower is more likely to involuntary prepay when:
    a. Property values have increased
    b. Loan-to-value is less than 80%
    c. Loan-to-value is over 100%
    d. Borrower FICO scores have increased

19. As a MSR Valuation Manager concerned about voluntary prepayments/runoff within the portfolio, which of the following factors might keep you up at night?
    a. The weighted average coupon of the portfolio is 75 bps above the current par mortgage rate
    b. The MBA Application Index is at an all-time high
    c. The servicing portfolio is made up of ARMs close to a reset date
    d. All of the above

20. As a MSR Valuation Manager concerned about involuntary prepayments/defaults within the portfolio, which of the following factors might keep you up at night?

    a. The weighted average FICO score on the servicing portfolio has declined from 760 to 715

    b. The servicing portfolio is now over 50 percent GNMA servicing

    c. Unemployment figures are at 5-year highs

    d. All of the above

21. When bidding on a servicing offering, prime servicing offerings are bid with a higher yield requirement than an ALT A servicing package:

    a. True

    b. False

22. When bidding on a servicing offering consisting of seasoned servicing, the bidder should anticipate of significant amount of cross-sell income:

    a. True

    b. False

23. When bidding on a servicing offering consisting of brand new production (age is zero months – co-issue), the bidder should anticipate defaults to increase (and therefore higher servicing costs in the future):

    a. True

    b. False

Fill in the Blanks

List six default classes (loan characteristics that impact defaults):

1. Loan type
2. Occupancy
3. Property type (single-family, high-rise condo)
4. LTV
5. FICO
6. Geography (also documentation type and product type)

List five factors that can impact prepayments:

1. Interest rate
2. Type (ARM vs. Fixed)
3. Age
4. Economic conditions including HPI
5. FICO (access to credit); also loan size, state

List five factors (loan characteristics) that can impact cost to service:

1. Any of the answers to the above two fill in the blanks are appropriate because prepayments and defaults impact cost to service.
2.
3.
4.
5.

Commercial Lending

Commercial Lending Practice Exercise Answers

Exercise 1

Tenant A	20,000 sf	8.50/sf =	170,000
Tenant B	30,000 sf	7.75/sf =	232,000
Tenant C	20,000 sf	6.50/sf =	130,000
	Gross Income		532,500
	Less 7% Vacancy		-37,275
	Effective Gross Income		495,225
Expenses			
	Taxes	$1/sf	70,000
	Insurance	.30/sf	21,000
	Mgmt	4%	19,809
	Utilities	.75/sf	52,500
	Misc.	.50/sf	35,000
	Total Expenses		198,309
	NOI		296,916
	Less Debt Service		172,014
	Cash Flow		124,901

DCR = 1.72

V = 296,916/.10 = 2,969,160 (Rounded = 2,970,000)

Loan = 2,225,000

Exercise 2

Free-Standing Walgreens

20-year NNN lease

12,000 sf	$25/sf =	300,000
Gross Income		300,000
Less Expenses		
Mgt.	2%	6,000
Misc.	.25/sf	3,000
Total Expense		9,000
NOI		291,000
Less Debt Service		224,979
Rounded Cash Flow		66,021

DCR = 1.29

Value	
Cap Rate: .085	8.5%
LTV:	75%
Rate:	6.25%
Amor:	20 yr
Constant	0.08777

Value = (291,000/.085) = 3,423,529 (Rounded = **3,425,000**)

LTV = (3,425,000x .75) = 2,568,750 (Rounded = **2,569,000**)

Commercial Lending Case Study Solution

PHILLIPS
REALTY CAPITAL

Proforma NRSF **66,000**

Income			2016 Proforma	2015 Actual	2014 Actual	2013 Actual
Gross Potential Rent			$ 1,556,500	$ 1,342,000	$ 1,258,000	$ 1,178,000
Op Ex Reimbursements			$ -	$ -	$ -	$ -
Other Income (1)			$ -	$ -	$ -	$ -
Potential Gross Income			**$ 1,556,500**	**$ 1,342,000**	**$ 1,258,000**	**$ 1,178,000**
Vacancy/Collection Loss		7.50%	$ (116,738)	$ (335,500)	$ -	$ -
Effective Gross Income			**$ 1,439,763**	**$ 1,006,500**	**$ 1,258,000**	**$ 1,178,000**
	Income/SF		$ 21.81	$ 15.25	$ 19.06	$ 17.85
Expenses		**$/SF**				
Utilities		1.65	$ 108,900	$ 41,250	$ 103,654	$ 75,241
Maintenance & Repairs		1.20	$ 80,000	$ 72,541	$ 68,000	$ 125,210
Contract Services		2.20	$ 130,000	$ 98,526	$ 125,250	$ 115,241
General & Administrative		0.25	$ 16,500	$ 13,599	$ 8,953	$ 8,404
Real Estate Taxes		1.75	$ 96,000	$ 86,521	$ 77,188	$ 73,960
Management Fee		4.00%	$ 57,591	$ 40,260	$ 50,320	$ 47,120
Insurance		0.30	$ 20,000	$ 20,000	$ 15,665	$ 14,729
Total Expenses			**$ 508,991**	**$ 372,697**	**$ 449,030**	**$ 459,906**
	Expenses/SF		$ 7.71	$ 5.65	$ 6.80	$ 6.97
Net Operating Income			**$ 930,772**	**$ 633,803**	**$ 808,970**	**$ 718,094**
		NOI/SF	$ 14.10	$ 9.60	$ 12.26	$ 10.88

6/16/2016

PHILLIPS
REALTY CAPITAL

Loan Request Summary
McLean Associates

		Stabilized Funding			Interest Rate Calculations	
Loan Amount	$	9,000,000			Base Treasury	2.00
					Spread	2.00
Interest Rate		4.00%			Interest Rate	4.00
Term		10	years			
Amortization		25	years			
Constant		6.334%				
Monthly P&I Payment	$	47,505				
Annual P&I Payment	$	570,064				
Net Operating Income	$	930,772				
Cash Flow	$	360,708				
Capitalization Rate		7.00%				
Capitalized Value	$	13,300,000				
Loan to Capitalized Value		68%				
Debt Yield		10.34%				
Debt Service Coverage		1.63	times			
Loan per Square Foot	$	136.36				
Capitalized Value per Square Foot	$	201.52				
Square Feet		66,000				

6/16/2016

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