A Missed Assessment of Real Estate Debt Risk:

How the Credit Rating Agencies and Commercial Bank Regulators Missed the Assessment of Real Estate Debt Risk, Creating the Largest Real Estate Bubble in U.S. History

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Written in Memory of Mentor, Robert A. Crane, CRE

Editor's note: The views expressed herein are those of the author. They are not to be construed in any way as the views of Bank of the West or its senior management.

INTRODUCTION

This article addresses real estate aggregate debt risk assessment on both income property mortgage markets and single-family mortgage markets. The risk assessment described here is recommended to be added to other probability of loan loss risk factors such as property type and loan underwriting credit quality in a specific origination. Aggregate debt risk assessment can be applied to both income property and single-family markets in similar ways. This article provides recommendations on the income property debt markets and addresses, more specifically, risk assessment of commercial mortgage-backed security (CMBS) issuances compared year over year. This author proposes an Accumulated Aggregate Debt Loss Probability Rate methodology to correctly assess risk on mortgage-backed issuances and other financial institution loan originations.

THE EXISTING CREDIT RATING SYSTEM OF DEBT INVESTMENTS

The Nationally Recognized Statistical Rating Organizations (NRSROs)—Moody's, Standard & Poor's and Fitch—are franchises currently authorized by the Securities and Exchange Commission (SEC). In the past, buyers and sellers relied upon these agencies' debt ratings when making purchasing decisions, believing that no additional due diligence was warranted. Many investors, over the years, believed that the risk of owning these CMBS securities was increasing but continued to base purchase decisions on the high reliability of the risk grades as assessed by the NRSROs.

About the Authors

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Those perceptions began to change in the summer of 2007. The markets began trading low risk AAA securities at a significant discount because of concerns about aggressive risk assessment designations by the NRSROs. An example of missed assessment of risk in mortgage-backed securities is observed when studying the interest spreads on CMBS AAA tranches relative to other corporate debt AAA designated tranches in the marketplace. After hitting a low point of 23 basis points in December 2006, super senior (very low risk) AAA issuances traded as high as 1,150 basis points, or 11.50 percent on Feb. 27, 2009, while comparably traded AAA corporate bonds were trading at about 6.50 percent. This relative market variance indicated the credit rating agencies had missed the assessment of risk on CMBS issuances. In other words, the market no longer believed the AAA risk assessment on CMBS bond tranches.

Uncovering a Flaw in Real Estate Debt Risk Assessment

SAVINGS AND LOAN AGGREGATE RISK

The framework for the theory presented here is based on the author's experience working out problem income property loans and collections for savings and loans (S&Ls) from 1987–1997. A pattern became evident when observing the correlation of defaults associated with the year of origination. Income property portfolios at two California-based S&Ls experienced very high growth rates from 1986–1989. Many competing S&Ls and commercial banks showed the same pattern, providing easy credit to income property borrowers in the market and, at the same time, increasing speculative buying and supporting the increase in income property and single-family prices.

However, a pattern between year-of-loan origination and loan loss rates was not evident until 1993–1994. From 1991–1996, most of the loans that originated from 1986–1989 had become distressed because of lower property cash flows and valuations. From 1991–1994, the aggregate income property debt shrank 10.4 percent before again growing moderately at 1.6 percent in 1995. At a minimum, based on findings and conclusions presented here, an estimated 20 percent shrinkage of the outstanding $3.4 trillion income property debt in the U.S. can be expected to occur through 2014. Keep in mind that an undetermined amount of this shrinkage in loan amounts outstanding from the 1991–1994 period and forecasted for the 2010–2014 time frame will be the result of full loan repayments from the recapitalization of the real estate by investors injecting new equity capital and reducing debt to meet lower debt qualifying amounts. In addition, this author expects the aggregate loan shrinkage rate and time-to-clear forecast of 2015 to be a best-case scenario, given the increased complexity and collection times (as compared with the S&L period) to clear the market of overleveraged income property in commercial banks and within CMBS issuances. This aggregate debt growth risk assessment methodology is the basis for this loan loss probability and loan loss severity forecasting.

COMMERCIAL AND MULTIFAMILY DEBT MARKET GROWTH

The growth in aggregate debt for income property was 123 percent from 2000–2008, versus 29 percent from 1990–1999. There appeared to be no question that a cause for the high aggregate growth in income property since 2000 was due to the high growth of a relatively new entrant in the marketplace. After reviewing the Mortgage Banking Association (MBA) Data Books[1] and the debt markets, it became clear that the cause for excessive aggregate debt growth was the high growth in CMBS loan originations.

Figure 1

U.S. Commercial and Multifamily Debt Outstanding Growth

(Change in Outstandings   B=Billion)

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 2nd QTR
$106.6B	$109.80B	$99.60B	$126.8B	$171.50B	$249.2B	$274.8B	$110.4B	($21.8B)	($22.81B)
9.5%	10%	8%	11%	11%	14%	13%	13%	(.5%)	(.5%)

Source: Flow of Funds Accounts, Federal Reserve Board of Governors (MBA Q2 2009 Data Book)

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In the S&L growth period from 1985–1994, a similar pattern of change in debt outstandings occurred as follows:

Figure 2

U.S. Commercial and Multifamily Debt Outstanding Growth

(Change in Outstandings   B=Billion)

1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
$69.8B	$60.3B	$91.2B	$71.9B	$35.1B	$18.7B	($13.3B)	($44B)	($25.2B)	($14.8B)
13.6%	12.5%	13.2%	9.2%	4.6%	1.7%	(1.5%)	(5.2%)	(2.7%)	(1.4%)

Source: Flow of Funds Accounts, Federal Reserve Board of Governors (MBA Q2 2009 Data Book)

The aggregate growth rate in income property loans in the U.S. from 1980–1989 was 127 percent. This loan growth over a decade is similar to the 123 percent aggregate income property loan growth rate from 2000–2008.

COMMERCIAL MORTGAGE-BACKED SECURITIES DEBT MARKET GROWTH

The growth rate in CMBS was likened to what was observed during the S&L crisis. Instead of the S&Ls, it was the CMBS market that was providing easy credit—supporting speculative behavior in income property investing. From 2004–2007, CMBS base loan outstandings more than doubled, from $383.29 to $820.94 billion. Figure 3 provides annual CMBS loan originations and annual growth rates of CMBS issuances from 2000 through the second quarter of 2009.

Through mortgage production conduits—some of the largest owned by commercial banks—CMBS loan production steadily grew from 2003–2007. Until 2005, CMBS issuances were influenced by the market feedback from B-piece bond buyers. The B-piece bond buyers had a first-loss position in these CMBS issuances and therefore, carried the most risk. Until 2005, B-piece bond buyers influenced which loans were included in the CMBS issuance, or passed on buying issuances they assessed as too risky. This discipline in the CMBS marketplace was removed once B-piece buyers began competing with collateralized debt obligations (CDO) pools—sponsored by the investment banks to increase the production of income property loans— and corresponding fee income in the CMBS market. In addition, to continue to keep risk low in CDO issuances, credit default swaps (CDS), or default insurance, was offered to investors to help back the higher risk CDO and CMBS issuances for institutional investment grade investors.

Figure 3

U.S. CMBS Issuance Growth (Production)

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 2nd QTR
$52.05B	$71.16B	$54.03B	$77.99B	$93.78B	$168.17B	$202.69B	$230.17B	$12.15B	($0)B
	37%	(24%)	44%	20%	79%	21%	14%	(95%)	(%)

Source: Commercial Real Estate Direct (MBA Q2 2009 Data Book)

Figure 4

U.S. CMBS Issuance Growth

(Change in Outstandings   B=Billion)

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 2nd QTR
$27.99B	$44.93B	$34.11B	$46.59B	$56.89B	$101.50B	$147.18B	$188.98B	($32.05)B	($22.81)B
16%	22%	14%	17%	17%	26%	30%	30%	(4%)	(2.5%)

Source: Wachovia Capital Markets, LLC, and Intex Solutions, Inc. (MBA Q2 2009 Data Book)

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COMMERCIAL BANKING INDUSTRY IMPACT

During the CMBS aggregate growth period, commercial banks were under pressure to book high-earning commercial real estate loans. Most commercial banks became incrementally aggressive over time to maintain market share, as CMBS was growing as a formidable competitor in the market. During this period, commercial banks continued to maintain market share with a 42.8 percent share of all commercial real estate loans in Q4 2004 compared to a 44.8 percent share in Q2 2009.[1]

As did credit rating agencies, commercial bank regulators missed the assessment of real estate debt risk during this high debt growth period. According to *Bloomberg.com* in an Oct. 19, 2009 article by Alison Vekshin,[2] the FDIC failed to limit the amount of commercial real estate loans as a percentage of capital within banks. The FDIC regulations indicated a maximum guidance amount of commercial real estate loans to be no more than 300 percent of capital. One bank referred to in the Vekshin article was Security Pacific Bank in Los Angeles, which had, as of September 2008, nearly 1,400 percent commercial real estate loans to capital. The bank was closed two months later by the FDIC. "Of 95 U.S. bank failures before September 2009, 71 were caused by non-performing commercial real estate loans," said Chip MacDonald, a partner specializing in financial services at Atlanta-based law firm Jones Day.

Although there was a rising concern by many FDIC regulators during the period from 2005–2007, regulators seemed to have difficulty enforcing their own regulations. When economic times are considered favorable, commercial bank regulators complete audit reviews assessing very low risk of probable loss as supported by a high debt service coverage ratio, and also supported by recent comparable sales of the real estate collateralized loan. Unless a uniform aggregate real estate risk assessment is deployed by all financial intermediaries in the market, discrepancies in risk-taking will impact the overall lending behavior of competing financial institutions in their attempt to maintain earnings growth and market share.

RESIDENTIAL MORTGAGE-BACKED SECURITIES DEBT MARKET GROWTH

In order to better understand the overall capital markets, it is necessary to study the risks associated with the much larger single-family mortgage market, which comprises $11.4 trillion in loans. Applying the same risk assessment to single-family markets, it is clear that the highest risk in the U.S. economy resides in the excesses in aggregate debt growth in the single-family mortgage market. This debt market grew from $5.5 trillion in 2000 to $11.4 trillion at the end of 2008—a 107 percent increase in its aggregate debt. This debt market is significant as it relates to the U.S. economy, owing to its large scale as compared to annual gross domestic product (GDP). In 2000, the U.S. single-family aggregate debt relative to GDP was 50 percent. In 2008, it rose to more than 100 percent. It is not likely that households can "grow" the economy to outpace aggregate single-family debt growth when consumers comprise up to 70 percent of the GDP. If consumers are saddled with single-family mortgage debt, they are less able to contribute to the consumption of products and services which, in large part, are drivers for the U.S. economy. In addition, the mounting losses in single-family mortgages are likely to continue for years, keeping housing prices at relatively low levels compared to the amount of mortgage collateralized by single-family homes. Applying an aggregate debt risk assessment, one can estimate loan loss probability on the single-family mortgage market to be in the trillions of dollars over the next 10 years. With single-family housing prices now falling to 2000–2003 prices in many distressed markets, the single-family appreciation rates that supported the growth in aggregate home mortgages is no longer supporting the aggregate amount of debt in the single-family marketplace.

How to Correctly Calibrate Risk in Aggregate Debt Assessment Models

The following is an aggregate debt risk assessment model (see Figure 5) that is recommended to enhance existing credit rating and risk assessment models developed by credit rating agencies, bank regulators, economists and academics. The values were estimated by this author and used as a basis to develop the model and postulate a thesis. However, there appears to be a predictive quality of this methodology and presented value assumptions. Using a second order Polynomial regression with Accumulated Aggregate Debt Loss Probability Rate (6) (ADLPR) as the independent variable from 1991–2008, this regression explained 78 percent of the annual income property mortgage delinquencies rates, incorporating a three-year time period lag. These results suggest that there is a reasonable predictive quality in the aggregate debt risk model's current basic form to predict delinquen-

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cies three years from now using current data with the Accumulated ADLPR (6). (References and personal experience were used to determine many of these values and to compute annual aggregate debt growth factors. Although these are close approximations to scientifically derived calculations, the reader is advised to develop a more precise scientific method in developing these factors and to use the best data available.)

Question: What is the correct aggregate debt risk factor for 2006 using the aggregate debt risk assessment model?

Data: Year 2005 annual real GDP of 3.1 percent x 50% = 1.6%

Year 2005 annual *Consumer Price Index* of 3.4 percent x 50% = 1.7%

The 50% weighted economic debt growth rate for year 2000 was 3.2 percent

Definitions:

The Economic Growth Rate (1):

real gross domestic product prior year (2005) + *Consumer Price Index* prior year (2005)
$$\frac{\text{real gross domestic product prior year (2005)} + \textit{Consumer Price Index} \text{ prior year (2005)}}{2}$$

$$= \quad \frac{3.1\% + 3.4\%}{2} \quad = \quad 3.2\%$$

Actual Annual Aggregate Income Property Debt Growth (2):

This data can be found in the Federal Reserve flow of funds accounts or from the MBA Data Book.

Aggregate Debt Growth Risk Rate (3)

13.8% increase in prior year 2005 Aggregate Debt less 3.2% Economic Growth Rate = 13.8% less 3.2% = 10.6% Aggregate Debt Growth Risk Rate

This factor represents the excess in probable loan loss risk because the aggregate debt growth is higher than the Economic Growth Rate (1) in any one year. At 10.6 percent, this risk rate value is assessed as high.

With this value at above 5 percent, the rate of aggregate debt growth for that year is assessed as overheated and will be characterized by either loose lending standards or low interest rates. With this value at above 8 percent, as observed in years 2006, 2007 and 2008, the risk is high that the probability of aggregate debt loss in those loan production years will rise, given that the momentum of the debt market is creating high risk excesses in loan quality. This combined with very low interest rates fuels a rapid aggregate debt growth rate.

Aggregate Debt Growth Risk Rate Factor (4):

This author estimated the debt loss factor on income property loans incurred by all real estate lenders in a year based on the following table of values:

Aggregate Debt Growth Risk Rate Factor Table		
ADGRR < 0%	(62%)	Very Low Aggregate Debt Growth Risk
0% <= ADGRR < 5%	5%	Normal Aggregate Debt Growth Risk
5% <= ADGRR < 8%	20%	High Aggregate Debt Growth Risk
ADGRR >= 8%	38%	Very High Aggregate Debt Growth Risk

For ADGRR less than zero percent, the debt risk factor is to be applied directly to the Accumulative Aggregate Debt Loss Probability Rate (6) to reduce it to support lending after a year when average GDP and CPI have dropped below zero.

Aggregate Debt Loss Probability Rate (5):

10.6% x Aggregate Debt Risk Factor of **38% = 10.6%** x **38% = 4.0% Aggregate Debt Loss Probability Rate.**

This Aggregate Debt Loss Probability Rate (ADLPR) of 4.0 percent is added to prior year values. The aggregate debt growth rates above the economic growth rate increases risk for the year of loan origination. If this aggregate debt growth pattern continues, the following years' aggregate debt growth risk rises. For example, if applied from 1980 to a forecast into 2019, the values would be as follows:

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Figure 5
Aggregate Debt Analysis Since 1980

Risk Factor	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Real GDP Prior Year	3.1%	-0.3%	2.5%	-1.9%	4.5%	7.2%	4.1%	3.5%	3.2%	4.1%
CPI Prior Year	13.3%	12.5%	8.9%	3.8%	3.8%	3.9%	3.8%	1.1%	4.4%	4.4%
Economic Growth Rate (1)	8.2%	6.1%	5.7%	0.9%	4.2%	5.6%	4.0%	2.3%	3.8%	4.3%
Debt Growth (2)	11.4%	8.2%	9.7%	7.4%	12.3%	15.8%	9.2%	10.0%	11.2%	9.7%
ADGRR (3)	3.2%	2.1%	4.0%	6.5%	8.2%	10.3%	5.2%	7.7%	7.4%	5.5%
Debt Growth Risk Factor (4)	5.0%	5.0%	5.0%	20.0%	38.0%	38.0%	20.0%	20.0%	20.0%	20.0%
ADLPR (5)	0.2%	0.1%	0.2%	1.3%	3.1%	3.9%	1.0%	1.5%	1.5%	1.1%
Accum. ADLPR (6)	0.2%	0.3%	0.5%	1.8%	4.9%	8.8%	9.8%	11.4%	12.8%	13.9%
Comm'l Mortgage Loan Delinquencies										

Risk Factor	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Real GDP Prior Year	3.6%	1.9%	-0.2%	3.4%	2.9%	4.1%	2.5%	3.7%	4.5%	4.4%
CPI Prior Year	4.6%	6.1%	3.1%	2.9%	2.7%	2.7%	2.5%	3.3%	1.7%	1.6%
Economic Growth Rate (1)	4.1%	4.0%	1.4%	3.1%	2.8%	3.4%	2.5%	3.5%	3.1%	3.0%
Debt Growth (2)	4.2%	2.1%	-2.6%	-4.8%	-2.1%	-2.1%	1.4%	3.2%	5.6%	9.0%
ADGRR (3)	0.1%	-1.8%	-4.0%	-8.0%	-4.9%	-5.4%	-1.2%	-0.3%	2.5%	6.0%
Debt Growth Risk Factor (4)	5.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	5.0%	20.0%
ADLPR (5)	0.0%	-1.2%	-2.5%	-5.0%	-3.1%	-3.4%	-0.7%	-0.2%	0.1%	1.2%
Accum. ADLPR (6)	13.9%	12.8%	10.2%	5.2%	2.1%	-1.3%	-2.0%	-2.2%	-2.1%	-0.9%
Comm'l Mortgage Loan Delinquencies		11.5%	9.8%	6.7%	4.3%	3.4%	2.9%	2.2%	2.0%	1.5%

Risk Factor	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Real GDP Prior Year	4.8%	4.1%	1.1%	1.8%	2.5%	3.6%	3.1%	2.7%	2.1%	0.4%
CPI Prior Year	2.7%	3.4%	1.6%	2.4%	1.9%	3.3%	3.4%	2.5%	4.1%	0.1%
Economic Growth Rate (1)	3.8%	3.8%	1.3%	2.1%	2.2%	3.4%	3.2%	2.6%	3.1%	0.3%
Debt Growth (2)	13.5%	8.8%	9.6%	7.7%	9.8%	10.2%	13.8%	12.6%	12.7%	5.7%
ADGRR (3)	9.8%	5.0%	8.3%	5.6%	7.6%	6.8%	10.6%	10.0%	9.6%	5.4%
Debt Growth Risk Factor (4)	38.0%	5.0%	38.0%	20.0%	20.0%	20.0%	38.0%	38.0%	38.0%	20.0%
ADLPR (5)	3.7%	0.2%	3.2%	1.1%	1.5%	1.4%	4.0%	3.8%	3.6%	1.1%
Accum. ADLPR (6)	2.8%	3.1%	6.2%	7.4%	8.9%	10.2%	14.3%	18.1%	21.7%	22.8%
Comm'l Mortgage Loan Delinquencies	1.5%	1.9%	1.6%	1.4%	1.1%	1.0%	1.3%	2.8%	5.5%	8.7%

Risk Factor (Projections)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Real GDP Prior Year	-2.0%	2.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
CPI Prior Year	1.8%	2.0%	2.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Economic Growth Rate (1)	-0.1%	2.0%	2.8%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
Debt Growth (2)	-5.0%	-10.0%	-4.0%	-4.0%	-1.0%	3.0%	4.0%	5.0%	6.0%	7.0%
ADGRR (3)	-4.9%	-12.0%	-6.8%	-7.3%	-4.3%	-0.3%	0.8%	1.8%	2.8%	3.8%
Debt Growth Risk Factor (4)	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%	5.0%	5.0%	5.0%	5.0%
ADLPR (5)	-3.1%	-7.6%	-4.3%	-4.6%	-2.7%	-0.2%	0.0%	0.1%	0.1%	0.2%
Accum. ADLPR (6)	19.7%	12.2%	7.9%	3.3%	0.7%	0.5%	0.5%	0.6%	0.8%	1.0%
Comm'l Mortgage Loan Delinquencies	14.6%	21.4%	23.7%	17.5%	6.4%	2.9%	1.1%	1.2%	1.2%	1.2%

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Forecast Notes for Figure 5: Debt growth was estimated beginning in 2010 by doubling the aggregate debt losses in the S&L crisis years of 1991–1994 and adding one more year at a negative 3 percent to reduce this Accumulated ADLPR (6) value to near zero. CPI and Real GDP rates are estimated. If higher inflation rates are experienced in the economy, fewer aggregate debt reductions would be expected.

Accumulated Aggregate Debt Loss Probability Rate (6):

The Accumulated Aggregate Debt Loss Probability Rate (Accumulated ADLPR (6)) is the factor to be used by credit rating agencies in CMBS issuances and by regulators of financial institutions to calculate probability of loss risk. As indicated above, the probability of loss due to the Accumulated ADLPR (6) factor for all CMBS issuances in the 2007 vintage year is 18.1 percent. Please note that if this assessment methodology had been implemented in 2000 by both bank regulators and credit rating agencies, the Accumulated ADLPR (6) factor would not have risen above 2000 or 2001 levels. Given the self-regulating nature of this model, the probability of loss risk would have been too high to originate the higher amount of aggregate debt.

As noted in the tables, the Accumulated ADLPR (6) value drops below zero in years 1995–1999, which were considered low-risk loan underwriting years. (For risk assessment purposes, an Accumulated ADLPR (6) value of less than zero is not to be used in the loan origination years as it does not contribute to aggregate debt growth risk.) However, aggregate debt growth began rising in 1998 at 9 percent and, in 1999, at 13.5 percent, putting the Accumulated ADLPR (6) at a positive 2.8 percent value in 2000 to be applied on debt originated that year. Because this Accumulated ADLPR (6) was not yet developed to underwrite the additional risk of growing aggregate debt beyond the growth in real GDP and CPI (Economic Growth Rate (1)), this Accumulated ADLPR (6) value continued to raise the risk of debt originated in subsequent years, reaching a peak in 2009 of 22.8 percent. As a result, less lending was taking place in 2008 and 2009 when the risk of previous origination years began to appear in higher loan default and loan delinquency rates of 5.48 percent in 2008 and 8.74 percent in 2009.

As debt growth rises above economic growth and price factors in the U.S. economy, the risk of loan default naturally increases. However, the most appealing attribute of this aggregate debt risk assessment methodology is that it self-regulates the growth of aggregate debt in the U.S. if it is applied to all income property lenders. As debt

growth rises above economic growth and prices in the U.S. economy, the rising risk of loss is factored into the new debt originated in that year. Given that the risk of the loan origination becomes higher using this accumulated risk assessment methodology, the associated minimum risk investment return requirement for debt investors will increase as well, requiring either higher interest rates or a reduction in the loan amount, which, in effect, will reduce aggregate debt growth in the following high Accumulated ADLPR (6) issuance year.

This author believes that from 2010–2015, the ADLPR (5) will be negative. This will begin the period of reducing risk in Accumulated ADLPR (6) and the risk of new loan underwriting over subsequent years, lowering loan origination risk to a neutral level in 2015. Does that mean that the origination of new loans in 2010 will have less risk than those loans originated in 2006 and 2007? The answer is "Yes!" With real estate prices lower in 2010 compared with the peak in 2007, loan-to-appraised values have reduced loan amounts for new loans compared against property appraised at higher values in those previous vintage loan origination years. However, the risk of probable loss remains high on debt positions originated in years 2003–2008. With the threat of high foreclosures increasing supply of income properties in the markets from previous high leverage vintage year positions, the risk of issuing new debt remains high. And, lending in a weak economic environment increases the uncertainty of income property cash flows, which in combination of excess supply of foreclosed income properties, keeps underwriting risk high through 2010–2014. Lending is recommended by this author to proceed, but at conservative lending levels together with third-party support if speculation risk exists of future leasing fill-up or higher rents on commercial real estate loans. On residential income property loans, employment rates and economic regional growth are larger factors in loan underwriting, but residential income property is expected to be impacted by price deflation risk on both sale prices and rents in many distressed markets through 2014 as well.

If this aggregate debt risk methodology had been used by credit rating agencies and bank regulators in 2000, the aggregation of real estate debt would not have occurred at the same high rate or with the same low interest rates. The aggregate debt growth rate possibly would have grown more in line with both GDP and CPI growth rates since real estate debt would have had been assessed as more risky, translating into more costly debt.

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Why Financial Intermediaries Should Implement Aggregate Debt Risk Assessment Factors

The credit rating agencies did not know they were flawed in their assessment of risk in CMBS issuances as the actual risk of probable loss was increasing from 2005–2007. If the agencies had appropriately assessed probable loss risk as increasing each year, the percentage of CMBS AAA-rated tranches would have decreased during this period, with a corresponding increase in BBB tranches. Had any of the credit rating agencies known about aggregate debt risk and chosen not to assess risk correctly because of a reason as yet undisclosed, they may be liable to the investment public they serve. As well, commercial banks likely would have been more conservative in lending. A uniform risk assessment methodology employed by credit rating agencies and bank regulators likely would have increased interest rates on the CMBS issuances and commercial bank real estate loans. The higher interest rates would, in turn, lower qualifying amounts for loans. This author believes that adopting this recommendation would result in the correct alignment of debt risk assessment models backed by real estate mortgages with AAA credit risks.

Had this aggregate risk assessment methodology been applied to home mortgages, the home mortgage debacle would have been less severe, and the banking crisis and many other negative unintended consequences would not have occurred. More broadly speaking, the financial crisis would not have occurred if the credit rating agencies and commercial bank regulators had developed and implemented an aggregate debt growth risk methodology no later than year 2000. ■

ENDNOTES

1. *Commercial Real Estate/Multifamily Finance (CREF) Quarterly Data Books*, Mortgage Bankers Association. Data beginning in 4th quarter 2004 through 2nd quarter 2009.

2. Alison Vekshin, "FDIC Failed to Limit Commercial Real-Estate Loans, Reports Show," *www.Bloomberg.com*, Oct. 19, 2009.

3. Annual loan delinquency data and annual aggregate debt growth data was gathered from the website *www.federalreserve.gov*.

4. Real gross domestic product data was gathered from the website: *www.bea.gov*.

5. CPI Index data was gathered from the website: *www.bls.gov*.