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The American Real Estate Society

Relativity to Index Value: A methodology to enhance forecasting trends and Basel II regulations to increase management of risk positions in real estate loan portfolios.

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Disclaimer: 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.



Author's Background

- An income property real estate banker for the past 24 years.
- 10 years of income property distressed loan work-out experience.
- Driven by a loan work-out experience with John Martin.
- Currently heading-up a senior housing and care lending group for Bank of the West in Walnut Creek, CA.



Purpose of Paper

- The proposed Basel II regulation identifies speculation risk and regulates growth in mortgage loans using a time and quality of property calibrated relative index methodology in appraising real estate for use by regulated financial intermediaries and within Mortgage Backed Securities (RMBS and CMBS).
- The author contends that this relative index methodology, if fully implemented world-wide, would have prevented the large scale of this boom-bust cycle through appropriate regulation of debt growth and reduction of speculation risk in debt portfolios.



Speculation Risk

- Using a Relativity to Index Value methodology, speculation risk can be quantified in real estate loan portfolios.
- The author estimates that speculation risk is embedded in permanent income property loan portfolios in the amount of up to \$1.1 Trillion.
- In addition, single-family loan portfolios in the amount of up to \$5 Trillion.



Relativity to Index Value I

- Index: MIT Center for Real Estate Transactions Based Index (TBI Price Index)
- The TBI Price Index is based on data received by MIT/CRE on a quarterly basis by the National Council of Real Estate Investment Fiduciaries (NCREIF).



Relativity to Index Value II

- The TBI is based only on the transactions data supplied quarterly by NCREIF members with estimated portfolio values of approximately \$1 Trillion.
- The TBI Relative Price Index represents movements in transaction prices in closed deals in the market.
- Appraisals are used in the TBI Relative Price Index only to control for cross-sectional differences in properties, not to influence the longitudinal price changes tracked by this index.



Relativity to Index Value III

- MIT/CRE indicates on its website that the TBI Price Index can often provide a more up to date or precise picture of movements in the real estate market than other types of commercial real estate indexes. It is also being provided for research purposes as a service to the industry and academic research communities.



Relativity to Index Value IV

- The author concluded based on trend analysis that the TBI Price Index as an index is best to start in 2000. Inflating it at a CPI rate of 2.5% annually for speculation risk assessment purposes in income property loan portfolios.
- The product types included in the TBI Relative Price Index are office, retail, hotel, warehouse/industrial, and multi-family.
- For single-family loan portfolios, the S&P Case/Shiller price index was used beginning at the same base year of 2000 and inflated at 2.5% annually for speculation risk assessment purposes.



General Forecast Assumptions I

- An economic forecast whereas GDP turns positive for the U.S. in 3rd quarter 2010 and in the world in the 1st qtr 2011.
- A beginning of a recovery in income property values in 2015 and 2020 for single-family homes.
- The U.S. government is the largest provider of income property and single-family home mortgage debt.
- Assumes a disintermediation of private investors in the real estate mortgage market due to compromised investor and lender collection rights and excessive loan losses.

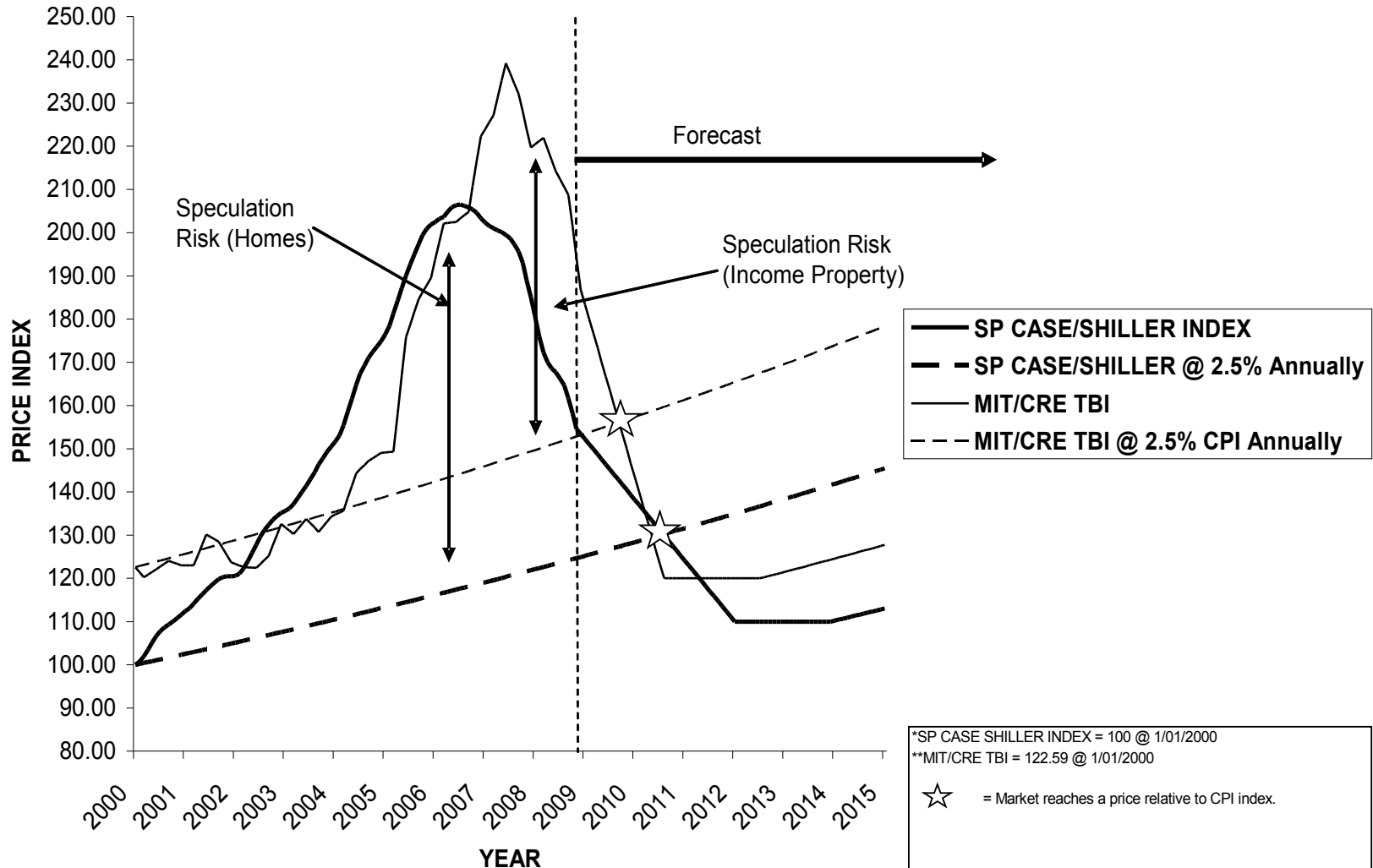


General Forecast Assumptions II

- The negative slope rate of both price indexes is equal to the positive slope rate as price indexes were going up from 2000 through to the price index apex point.
- The down slope rate stops at a point the author forecasts to be at a bottom price index point whereas the velocity of continued foreclosures and debt short-sales suppress price index increases through to 2015 for income property and 2020 for single-family homes.



PRICE INDEX FORECAST



*SP CASE SHILLER INDEX = 100 @ 1/01/2000
 **MIT/CRE TBI = 122.59 @ 1/01/2000
 ☆ = Market reaches a price relative to CPI index.

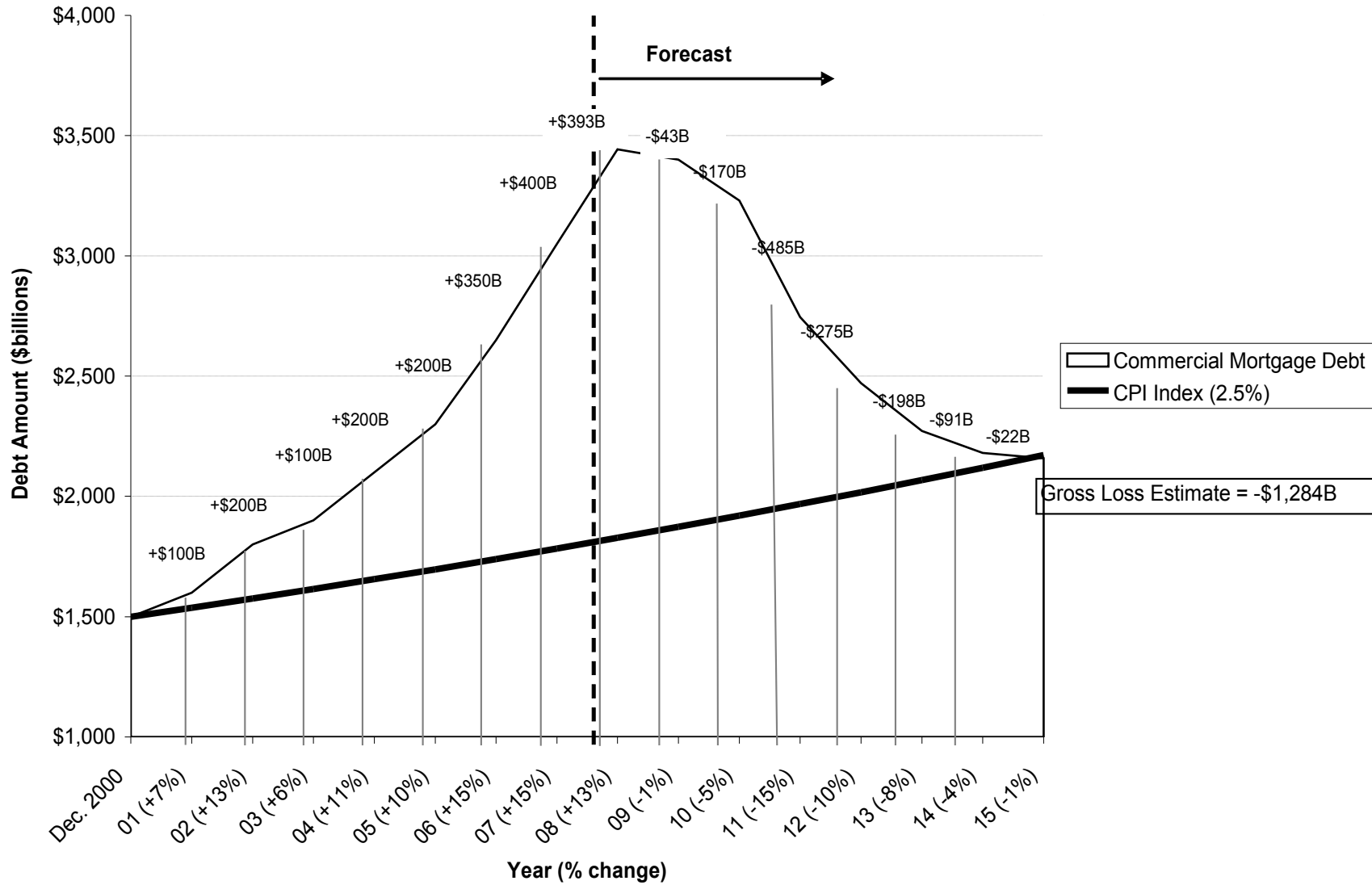


Income Property Debt Forecast Assumptions

- Banks and CMBS investors employ a strategy to modify most defaulted loans to wait-out the depressed market and/or postpone losses.
- Actual losses on an aggregate debt level accelerate after loan modifications begin failing in 2010 through 2014.
- In 2015, investors begin to forecast an opportunity of higher occupancy, rent growth, and increased cash flow resulting in appreciation on most property types.



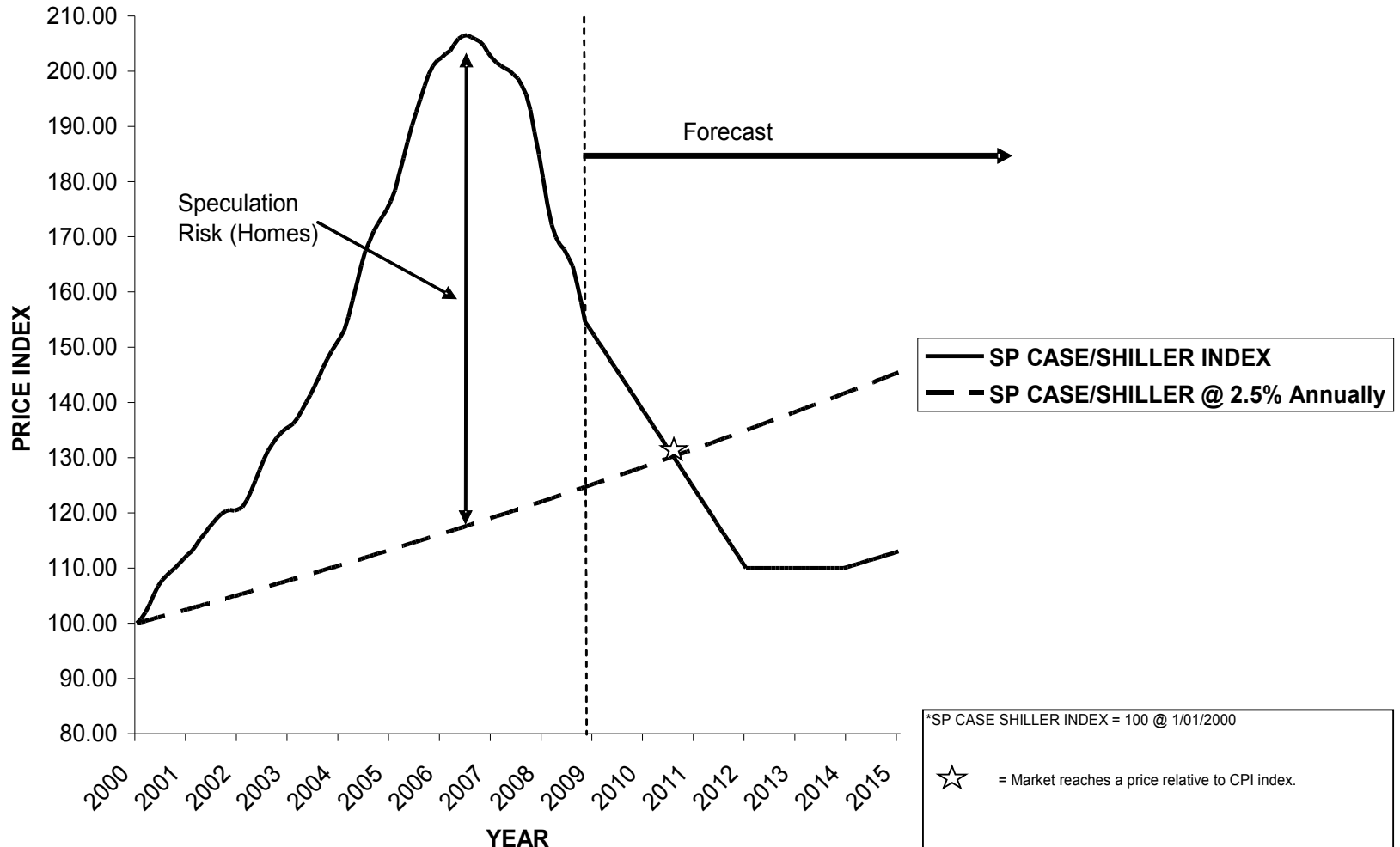
Commercial Mortgage Debt Outstanding and Forecast



Prepared by: Marc R. Thompson, (



PRICE INDEX FORECAST



Single-Family Residence Debt Forecast Assumptions I

- Banks, RMBS servicers, and Federal and State governments employ a strategy to modify most defaulted loans to wait-out the depressed market, to keep people in their homes, and/or postpone losses.
- Collection and lender remedy rights are subordinated to the public interest to “save the economy from financial collapse”. This is in the form of foreclosure moratoriums for example passed by the California legislature.

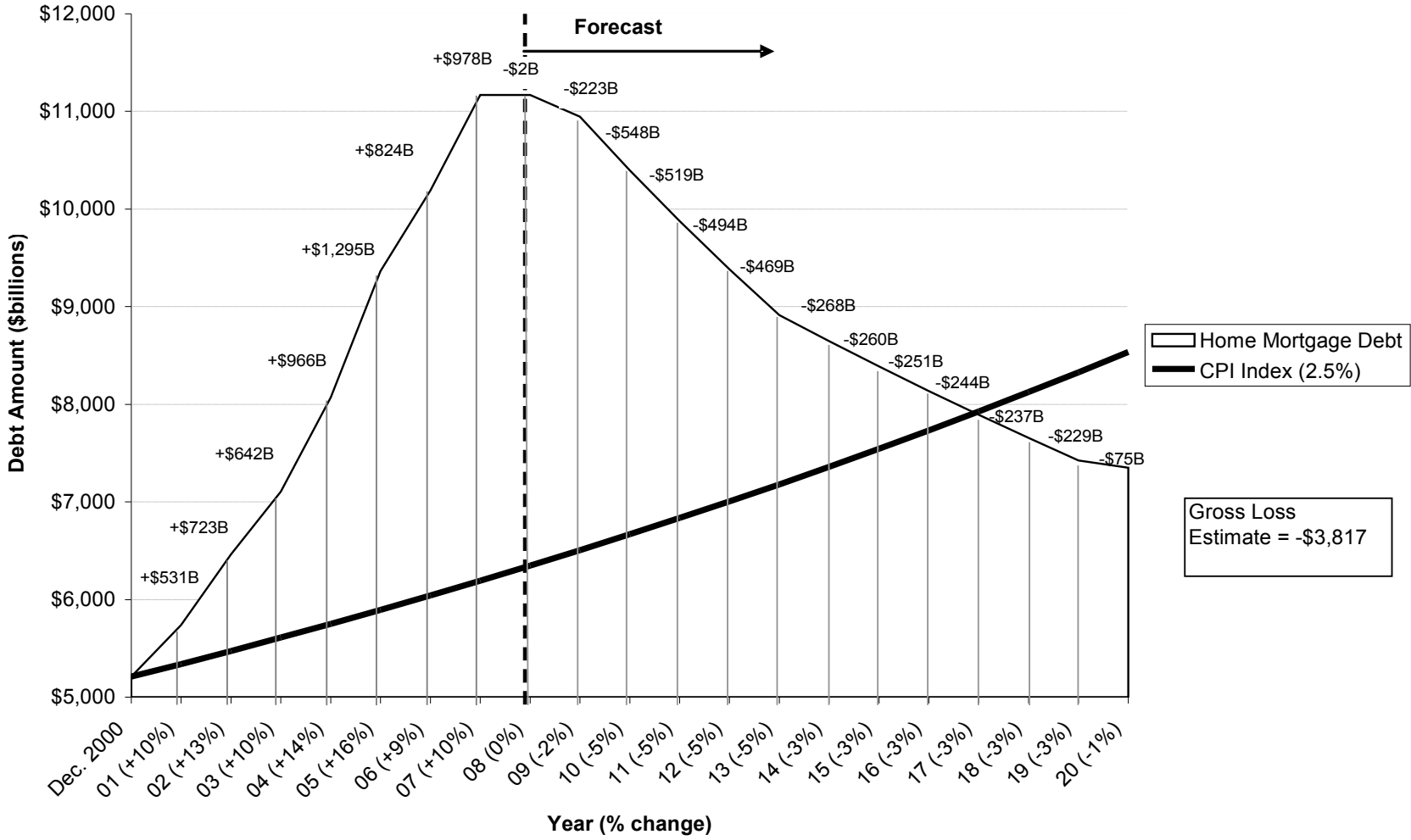


Single-Family Residence Debt Forecast Assumptions II

- Actual losses on an aggregate debt level accelerate after unsustainable loan modifications begin failing in 2008 and continue through 2020.
- Home prices remain unstable through 2020 given that a consistent amount of foreclosed homes continue to be sold at low auction prices by sellers offering no representations or warranties on the home auctioned for sale.
- In 2020, over-leveraged SFR's have cleared the market and private mortgage investors begin investing back into the market.



Home Mortgage Debt Outstanding and Forecast



Research Help Needed

- For both index price and aggregate debt graphs, newly constructed real estate inventory was not factored into the projections. This was more of a concern in the single-family projections since it may account for as much as \$1.5 Trillion in new debt created.
- However, a counter-factor is that about \$500 Billion of that newly created debt on new homes is estimated to be impacted by speculation risk.



Why Existing Basel II Regulation Policy Does Not Work

- Probability of Loss and Severity of Loss amounts are ineffective rear-view mirror estimates that proliferate boom-bust cycles.
- The existing Basel II mathematical models are too complex: If a Bank President cannot figure it out, neither can the marketplace.



Why Authors Proposed Basel II Regulation Policy Will Work (1)

- The CPI adjusted TBI Price Index Value begins in a base year of 2000 when prices had increased moderately back from the TBI Price Index Values low points of 1993-1996.
- The CPI adjusted TBI Price Index Value methodology or “debt regulated value calculation” for regulating debt growth is simple: A bank president can figure it out as well as real estate investors and home owners in the marketplace.



Why Authors Proposed Basel II Regulation Policy Will Work (2)

- The CPI adjusted TBI Price Index Value or “debt regulated value” only regulates the cap on debt growth on a real estate property over time. Lenders will still have different risk appetites for specific debt levels underneath the “debt regulated value” for a property.
- The “debt regulated value” does not affect the price an investor is willing to pay for a property. It only caps the amount of regulated debt that is available to finance the property.



Why Authors Proposed Basel II Regulation Policy Will Work (3)

- In markets where rents and/or prices are escalating rapidly above CPI rates (markets with high speculation risk), investors would invest more cash equity above the “debt regulated value”.
- Investors will pay a higher price than the “debt regulated value” since the higher rents will provide the required return for that cash equity.
- As a consequence, regulated loan portfolios will not be subject to high amounts of speculation risk and resulting large debt loss consequences.



Why Authors Proposed Basel II Regulation Policy Will Work (4)

- Existing U.S. Basel II regulations were only adopted in October of 2008 by Bank Board of Directors.
- Proposed Basel II regulations are to be phased in over a three year time span through 2011.
- There is still time to develop, modify, and implement in a parallel regulation policy the proposed relativity to index value methodology regulations into U.S. and financial institutions world-wide.



Need help from Appraisal Institute to develop “debt regulation value” I

- To develop methods and procedures for licensed and/or certified appraisers to implement an additional Basel II required “debt regulation value” based on the CPI adjusted TBI Price Index Value beginning from the 2000 base year.
- To establish procedures to value a subject property in 2000 to obtain a “base year debt regulation value”. This “base year debt regulation value” to be influenced over time up by additional improvements, the CPI rate or down by functional obsolescence through time to the valuation date.



Need help from Appraisal Institute to develop “debt regulation value” II

- To develop methods and procedures to calibrate real estate built after the regulation base year to a “debt regulation value” that eliminates speculation risk.
- To establish methods and procedures to eliminate speculation risk in the “debt regulation value” calculation in the underwriting of a new construction loan. A cost approach is a good place to start. However, speculation risk in the cost of the land and in the cost relative to other like-kind “debt regulation valued” real estate is to be considered into the calculation.



Need help from Appraisal Institute to develop “debt regulation value” III

- The amendment to Basel II needs to include a procedure and professional standards to calibrate to an individual property specific qualities and amenities as of the base date and changes to the property to reach a “debt regulation value” at the time of the appraisal. It is the value all regulated institutions will use for determining the maximum amount of debt to be financed on the property.
- Market value is the value of the property an investor will buy it for given existing market conditions and willingness of the investor to take on speculation risk.



Need help from Appraisal Institute to develop “debt regulation value” IV

- The difference between “debt regulation value” and “as-is market value” or “estimated market value at stabilization” is defined as speculation risk.
- It is the author’s contention that speculation risk is to be taken by equity investors in the property and not the world-wide regulated financial system.

Example of a calculation of “debt regulation value”

- Investor is under contract to buy an office building at \$600 per square foot.
- The base year TBI price index value in the first quarter of 2000 was estimated by the certified and licensed appraiser at \$334 per square foot.
- The TBI price index value in the 1st quarter of 2000 is inflated by a compounded 2.5% CPI rate annually to the sales contract date of December 2008.
- The debt regulation value is \$406 per square foot with no additional adjustments up for improvements to the property or down for functional obsolescence.



Example of a calculation of “debt regulation value”

1. Contract Sales Price \$600/sf
2. 2000 TBI Price Index Value = \$334/sf
3. CPI adjusted TBI Price Index = \$406/sf
4. “debt regulation value” Leverage 80%
5. “debt regulation value” loan amount \$325/sf
6. Speculation risk “46% Investor Equity” \$275/sf

* The CPI adjusted TBI Price Index = “debt regulation value”



Conclusion

- It is the author's contention that speculation risk is to be only taken by equity investors and home-owners in a property and not by debt markets.
- The rapid growth of debt in the world-wide regulated financial system was largely comprised of speculation risk and subject to the negative consequences of it.
- Together with the proposed Standardized Inflation Adjusted Index Board (SIAIB), the author is calling for help from real estate researchers, the Appraisal Institute and governing regulators to remove speculation risk from world-wide real estate secured debt markets to provide for a stable world-wide financial system.

