

An Introduction to Radar Logic Data



April 28, 2009

R A D A R L O G I C
I N C O R P O R A T E D
Making property derivatives real
www.radarlogic.com



Overview

Introduction

The Residential Property Index (RPX)

- RPX Methodology

RPX Derivatives Market

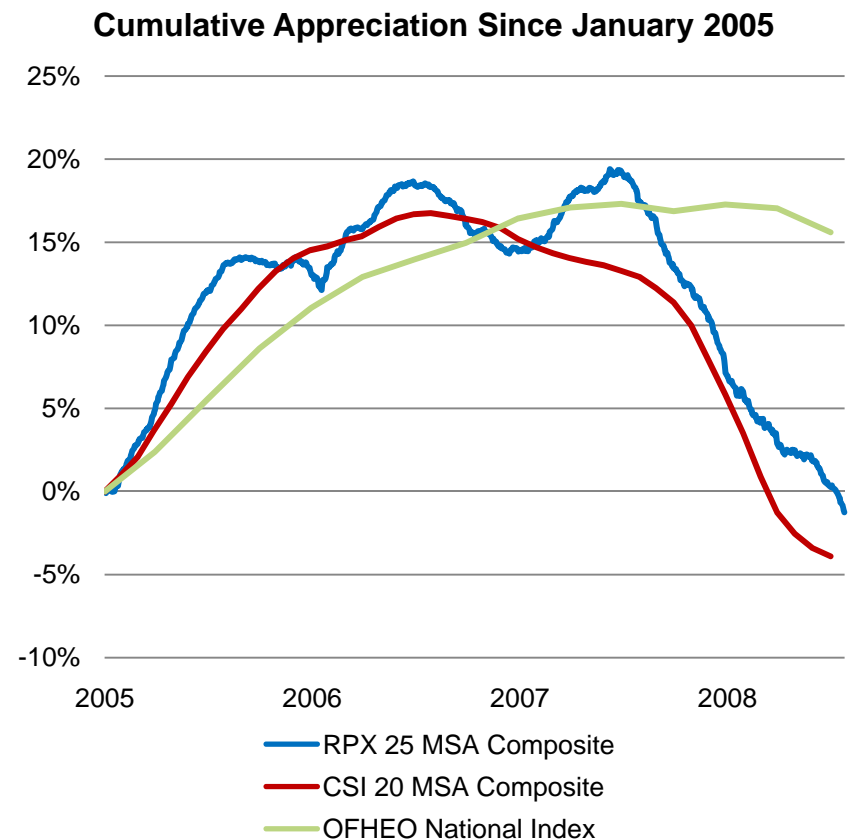
- The RPX Forward Market
- RPX Forward Curves



The Residential Property Index (RPX)

Residential Property Indices (RPX) are available for 25 U.S. Metropolitan Statistical Areas (MSAs), the Manhattan condo market, eight Manhattan Neighborhoods and a 25-MSA composite (shown right in comparison with other widely-used indices).

These prices reflect the actual prices paid for residential real estate on any given day and are computed using a proprietary but publically disclosed methodology.





RPX Methodology

Data are gathered from public source property records nationwide. Sources include recorders' offices, local tax assessors' offices and building departments. No broker data is included.

Data are processed using a pattern recognition algorithm which produces a single daily price for residential property, expressed as a price per square foot.

We generate a probability distribution function with parameters derived from a year's worth of data and use it to calculate the price per square foot that one is most likely to observe in each market, each day.

The methodology behind the RPX was designed to be transparent. Its mechanics are available to the public and can be found on our website at <http://www.radarlogic.com/methodology.html>.



RPX Derivatives Markets

Markets in RPX derivatives reached a cumulative volume of \$3 billion after 18 months of trading.

Available trading vehicles include:

- Swaps
- Forwards
- Options
- Structured notes

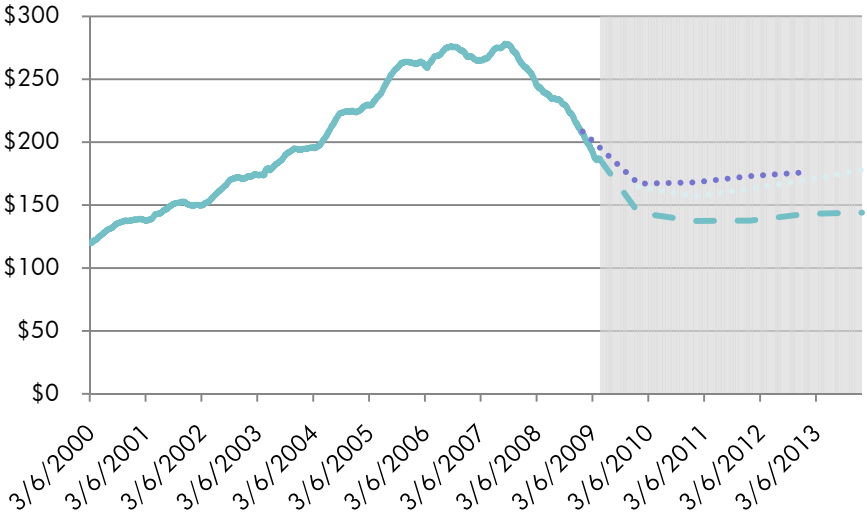
Markets in RPX forwards are the most liquid.



RPX Forward Curves

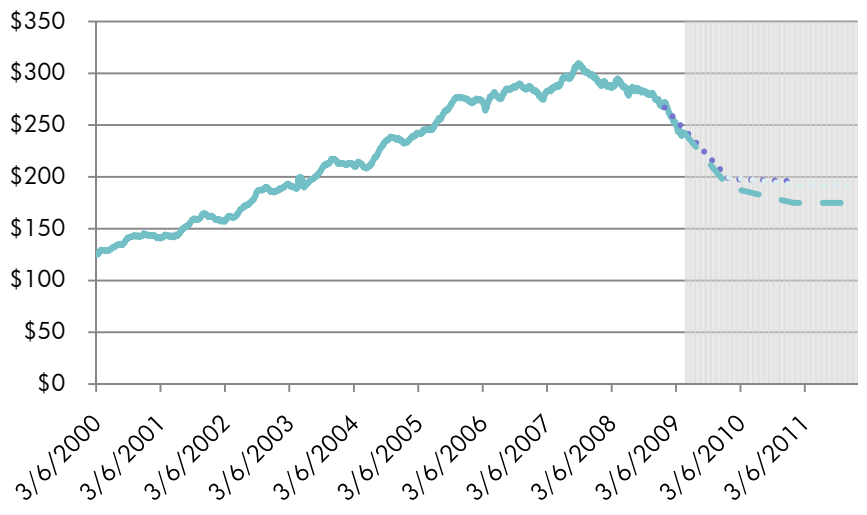
Published daily, RPX forward price fixings reflect the latest market sentiment. Fixings are established through a poll of market makers.

RPX Composite Price History with Implied Forward Curves



- RPX Composite Price
- December 19 RPX Composite Forward Curve
- February 20 RPX Composite Forward Curve
- - - April 20 Composite Forward Curve

RPX New York Price* History with Implied Forward Curves



- RPX New York Price
- December 19 RPX New York Forward Curve
- February 20 RPX New York Forward Curve
- - - April 20 New York Forward Curve

*Includes Manhattan Condo and the rest of the New York Metropolitan Statistical Area, as defined by the U.S. Census Bureau.



Radar Logic Incorporated

180 Varick Street, Suite 502

New York, New York 10014

Phone: (212) 965-0300

www.radarlogic.com

info@radarlogic.com

Michael A. Feder, President & CEO

Direct: (212) 965-9980

Email: mfeder@radarlogic.com

Quinn W. Eddins, Associate

Direct: (212) 965-9982

Email: qeddins@radarlogic.com



Modeling and Hedging WL and MSR Sensitivity to Housing Values

Rob Kessel

415.462.7500

www.compass-analytics.com

Agenda

- Overview
- Necessary Data
- Modeling Dynamics
- Hedge Dynamics
- Sample Reports



Overview

- House Values (Current and Future):
 - Give us LTV which
 - Impact our Delinquency & Default Probability Assumptions:
 - More/Less Borrower Equity (Skin in the Game)
 - Possible Negative Equity
 - Drive Loan Loss Severity (LS) Expectations:
 - $LS = \text{Final Loan Balance} - \text{Final Sales Proceeds} + \text{Foreclosure Costs} + \text{Cumulative Property Maintenance Expenses} + \text{Loan Advances/Fees}$
- We Desire Current Property Values (as opposed to Original)
- We Need to Forecast Property Values

Necessary Data

- **Current Property Value:**
 - New Production – Appraisal
 - Seasoned Loans:
 - Appraisal, BPO or AVM
 - Index-Based Update:
 - State, MSA and Zip (Depends on Loan Data)
 - Origination Loan Data (Date, Original Appraised Value or Original LTV and UPB)
 - Applicable HPI Data
- **Future Property Value:**
 - Applicable Forecast Data:
 - State, MSA and Zip Forecasts
 - Implied HPA Forecasts from Forwards
 - HPA Forecasts/Vectors Reflecting Future Values

HPA Forecast Sample

Month	STATE GROUP 1	STATE GROUP 2	STATE GROUP 3
1	0.99	1	1
2	0.98	0.99	0.98
3	0.97	0.98	0.97
4	0.96	0.975	0.965
5	0.95	0.97	0.96
6	0.94	0.965	0.955
7	0.93	0.96	0.95
8	0.92	0.955	0.945
9	0.91	0.95	0.94
10	0.9	0.945	0.935
11	0.89	0.95	0.94
12	0.88	0.96	0.95
24	0.85	1	1
36	0.9	1.1	1.1
48	1	1.2	1.2
120	1.2	1.3	1.3
240	1.3	1.5	1.5
480	1.5	1.5	1.5

Modeling Dynamics

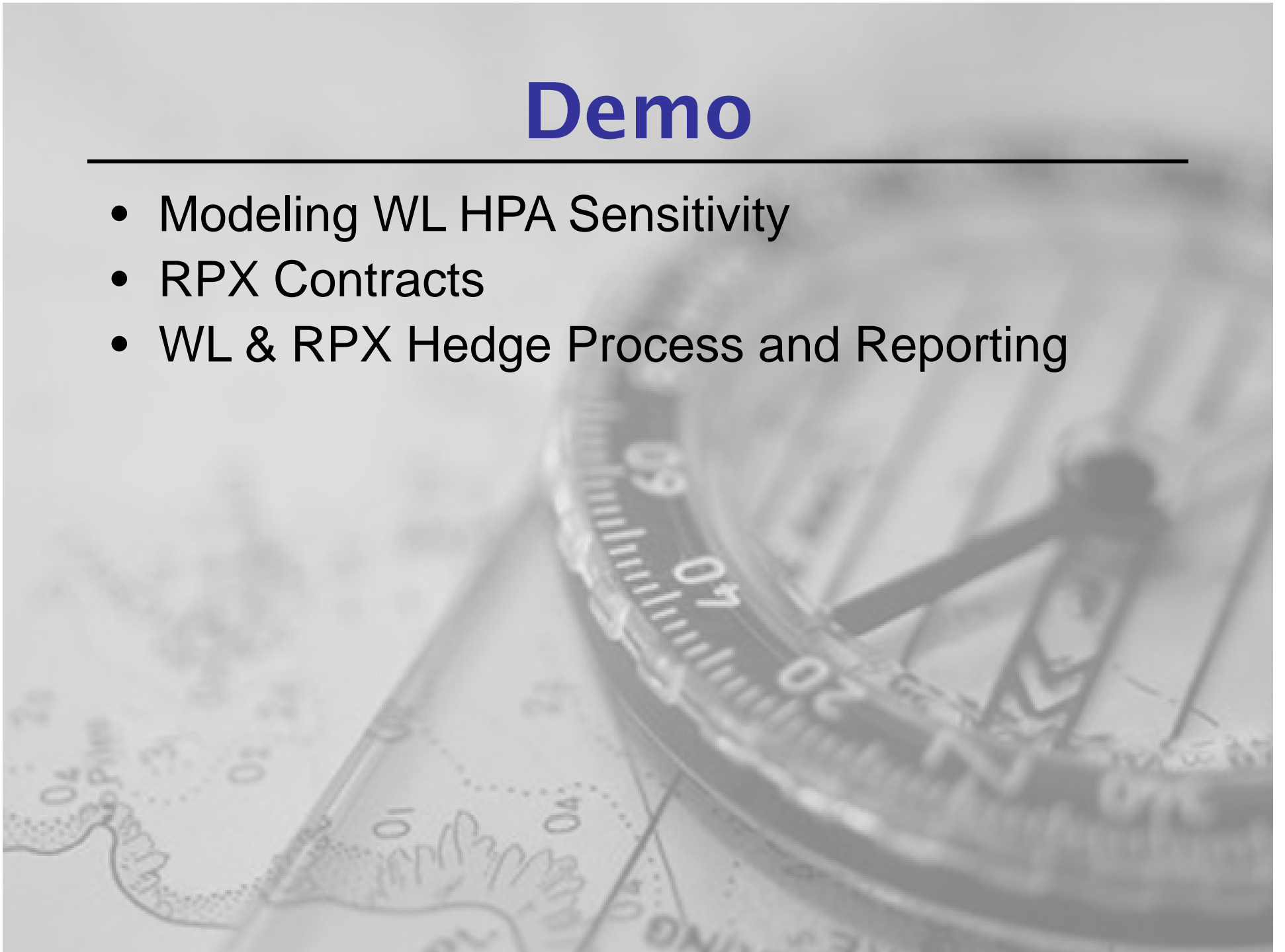
- Cash Flow Models (NPV Valuation)
- Loan Data to Support Cash Flow Generation
- Model Assumptions:
 - Prepayment (Voluntary and Default)
 - Discount Assumptions
 - Default/Delinquencies
 - Loss Severity Assumptions
 - HPA Forecasts
- Generate Cash Flows Including Future LTV and Impact on Future LTV on Models

Hedge Dynamics

- Identify & Quantify Risk
- Identify Available Hedge Instruments
- Identify Practical Hedge Properties:
 - Liquidity, Basis & Counterparty Risks
 - MTM & Hedge Reporting
- Employ Risk Profile to Drive Hedge Notionals
- HPA Considerations:
 - State and Intra-MSA Zips HPA Correlations
 - Implied HPA from Forwards

Demo

- Modeling WL HPA Sensitivity
- RPX Contracts
- WL & RPX Hedge Process and Reporting



Q&A

