



Financial Analytics & Structured Transactions

S T R U C T U R E D   R E P U R C H A S E   A G R E E M E N T S

Team:

Stanley Brach  
Managing Director  
(212) 272-1370

Justin J. Kayse  
Associate  
(312) 732-1038

Ron M. Vanasek  
Associate  
(312) 325-6359

John A. Ramuta  
Executive Director  
(312) 732-1493

Gyorge Jucsak  
Associate  
(212) 272-5168

Material assistance and content provided by:

John Vo  
Amy Honigman

Interest Rate Products

Steve Wolf

Capital Structure Advisory  
& Solutions

THIS IS A PRODUCT OF FINANCIAL ANALYTICS & STRUCTURED TRANSACTIONS - NOT OF RESEARCH

J.P.Morgan

STRICTLY PRIVATE AND CONFIDENTIAL

This presentation was prepared exclusively for the benefit and internal use of the JPMorgan client to whom it is directly addressed and delivered (including such client's subsidiaries, the "Company") in order to assist the Company in evaluating, on a preliminary basis, the feasibility of a possible transaction or transactions and does not carry any right of publication or disclosure, in whole or in part, to any other party. This presentation is for discussion purposes only and is incomplete without reference to, and should be viewed solely in conjunction with, the oral briefing provided by JPMorgan. Neither this presentation nor any of its contents may be disclosed or used for any other purpose without the prior written consent of JPMorgan.

The information in this presentation is based upon any management forecasts supplied to us and reflects prevailing conditions and our views as of this date, all of which are accordingly subject to change. JPMorgan's opinions and estimates constitute JPMorgan's judgment and should be regarded as indicative, preliminary and for illustrative purposes only. In preparing this presentation, we have relied upon and assumed, without independent verification, the accuracy and completeness of all information available from public sources or which was provided to us by or on behalf of the Company or which was otherwise reviewed by us. In addition, our analyses are not and do not purport to be appraisals of the assets, stock, or business of the Company or any other entity. JPMorgan makes no representations as to the actual value which may be received in connection with a transaction nor the legal, tax or accounting effects of consummating a transaction. Unless expressly contemplated hereby, the information in this presentation does not take into account the effects of a possible transaction or transactions involving an actual or potential change of control, which may have significant valuation and other effects.

Notwithstanding anything herein to the contrary, the Company and each of its employees, representatives or other agents may disclose to any and all persons, without limitation of any kind, the U.S. federal and state income tax treatment and the U.S. federal and state income tax structure of the transactions contemplated hereby and all materials of any kind (including opinions or other tax analyses) that are provided to the Company relating to such tax treatment and tax structure insofar as such treatment and/or structure relates to a U.S. federal or state income tax strategy provided to the Company by JPMorgan.

JPMorgan's policies prohibit employees from offering, directly or indirectly, a favorable research rating or specific price target, or offering to change a rating or price target, to a subject company as consideration or inducement for the receipt of business or for compensation. JPMorgan also prohibits its research analysts from being compensated for involvement in investment banking transactions except to the extent that such participation is intended to benefit investors.

JPMorgan is a marketing name for investment banking businesses of JPMorgan Chase & Co. and its subsidiaries worldwide. Securities, syndicated loan arranging, financial advisory and other investment banking activities are performed by a combination of J.P. Morgan Securities Inc., J.P. Morgan plc, J.P. Morgan Securities Ltd. and the appropriately licensed subsidiaries of JPMorgan Chase & Co. in Asia-Pacific, and lending, derivatives and other commercial banking activities are performed by JPMorgan Chase Bank, N.A. JPMorgan deal team members may be employees of any of the foregoing entities.

This presentation does not constitute a commitment by any JPMorgan entity to underwrite, subscribe for or place any securities or to extend or arrange credit or to provide any other services.

# Agenda

## Structured Repurchase Agreements

Building Blocks of Structured Repo

Funding Structures

Hedging Strategies

NIM Relief

Other Thoughts

# Why Embed Derivatives in Funding?

## WHY STRUCTURED REPO

- **Fulfills funding need**
  - Source of Liquidity
  - Take advantage of curve shape (unlike CDs)
  - Ability to structure funding which you can't achieve via local depositors
- **NIM relief**
  - Work with the balance sheet
- **Interest rate risk management**
  - Fixed or floating
  - Add risk reducing "Caps" and "Floors"
- **Greater structural flexibility**
- **Loan modification with no realized gain or loss**
- **Accounting friendly**
- **Cash flow timing**

# What Derivatives can be Embedded in a Funding Vehicle

## TYPICAL EMBEDDED DERIVATIVES

- Swaps
  - Fixed or Floating
- Swaptions/Calls/Puts
  - Lower funding levels by shorting option
  - Can also go long the call to increase convexity (increases funding cost, which usually deters from executing)
- Caps/Floor (Risk Reducing)
  - Premium paid by increasing funding level
  - Value extracted by reduced funding levels if in-the-money
  - Multiple caps and/or floors can be embedded

# Agenda

## Structured Repurchase Agreements

Building Blocks of Structured Repo

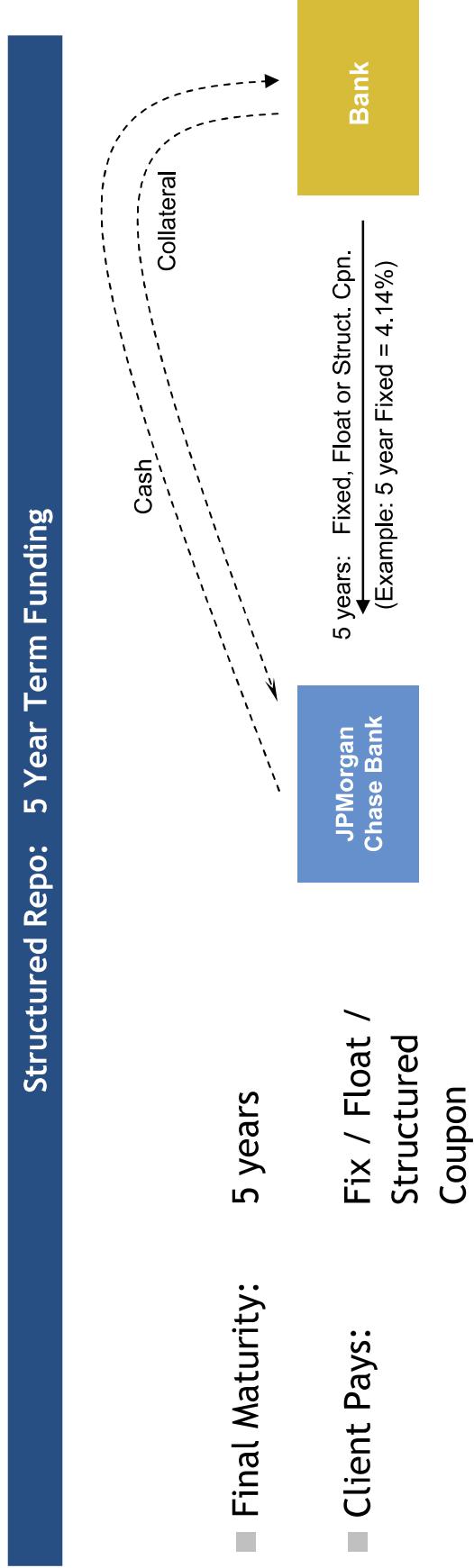
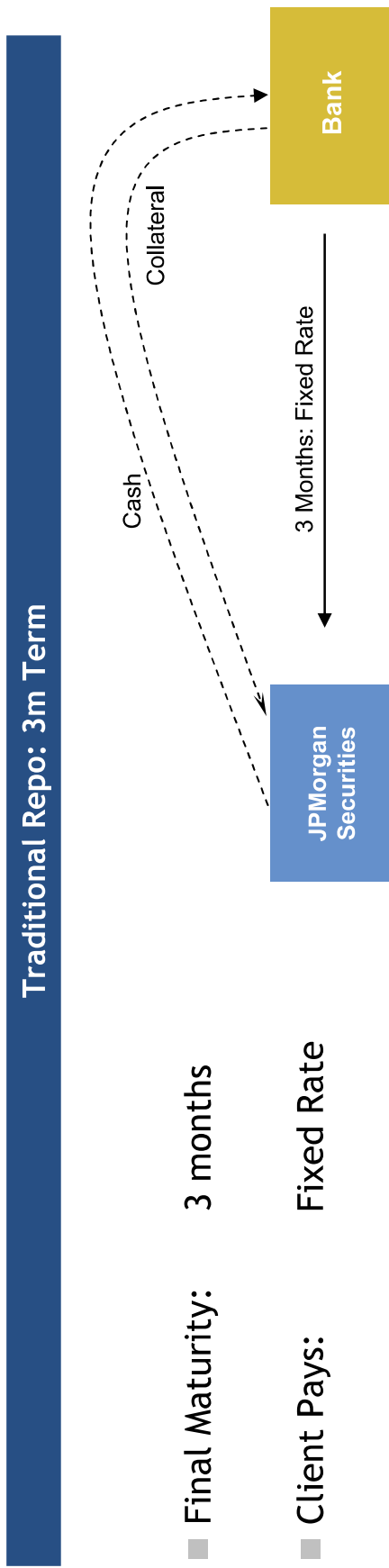
Funding Structures

Hedging Strategies

NIM Relief

Other Thoughts

# Structured Repo Mechanics: Just Like Regular Repo but with Longer Maturity

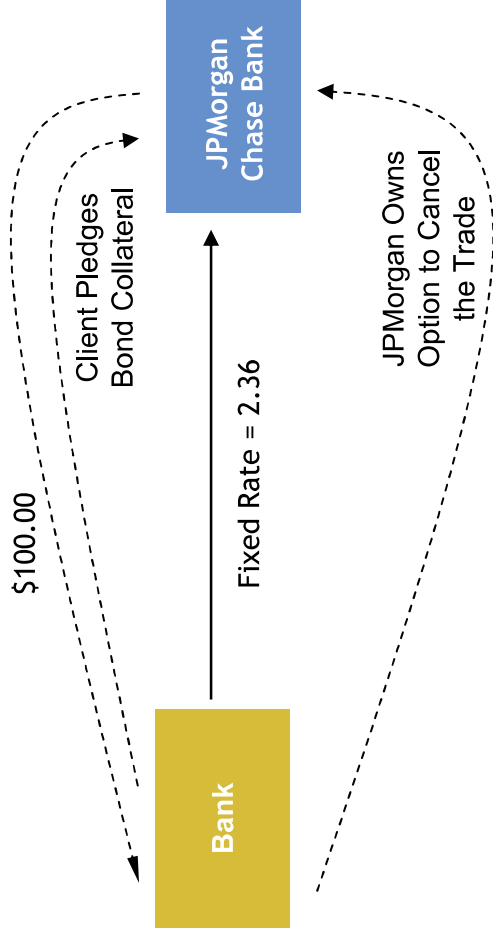


# Sample Structure: Puttable (aka FHLB's "convertible")

Reduce Funding Rate by Selling Option to Cancel the Contract

5 year NP (no put) 1 year

Maturity: 5 years  
Fixed Rate: 2.36  
Payment Convention: Qtly, Act/360  
Option: JPM owns right to cancel  
Option Start/ Frequency: 1 year / Quarterly thereafter



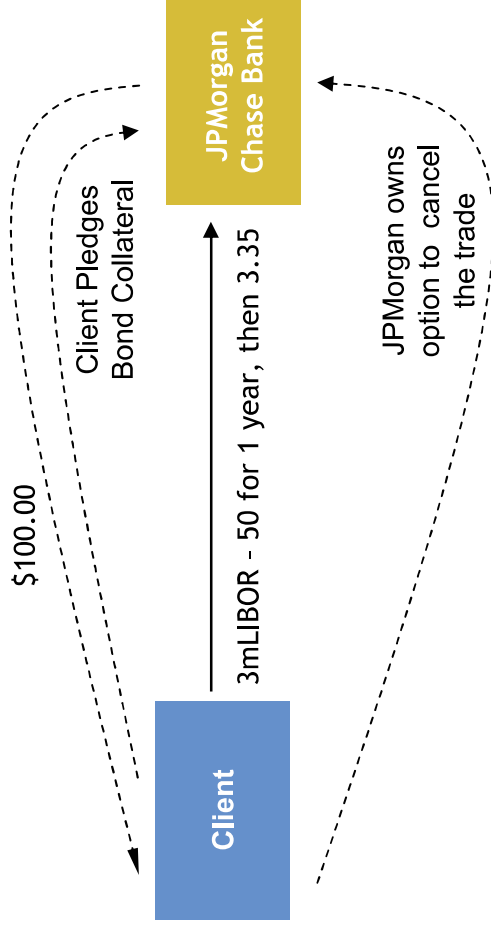


# Sample Structure: Flipper

Funding with a Floating Term followed by a Fixed Term (If not put back/cancelled)

## 5 year NP (no put) 1 year

Maturity:	5 years
Rate:	3mLIBOR - 50, then 3.35
Payment Convention:	Qtly, Act/360
Option:	JPM owns right to cancel
Option Start/ Frequency:	1 year / Quarterly thereafter



# Funding Structures

## Building Blocks of Structured Repo with Embedded Caps and/or Floors

Fixed Rate Repo						Fixed Puttable						Flipper Puttable					
Tenor						Cancellation Lockout						LIBOR Spread to Lockout					
Rate																	
2Y						3m						Lockout					
3Y						6m						1Y					
4Y						1y						2Y					
5Y						2y						3Y					
7Y						3y						5Y					
10Y						5y						7Y					
												10Y					

Embedded Long Cap Running Cost						Embedded Long Floor Running Cost					
Strike						Strike					
Tenor						Tenor					
2Y						2Y					
3Y						3Y					
4Y						4Y					
5Y						5Y					

As of: 11/7/08  
3m Rate: 2.27

### Liability Sensitive

Fixed Puttable			Flipper (L + 0) Puttable		
1 Embedded Cap Struck at 2.27			2 Embedded Caps Struck at 2.27		
2 Year Cap and Lockout			2 Year Cap and Lockout		
Rate			Tail Rate		
5Y			5Y		
7Y			7Y		
10Y			10Y		

Fixed Puttable			Flipper (L + 0) Puttable		
2 Embedded Floors Struck at 2.27			1 Embedded Floor Struck at 2.27		
2 Year Floor and Lockout			2 Year Floor and Lockout		
Rate			Tail Rate		
5Y			5Y		
7Y			7Y		
10Y			10Y		

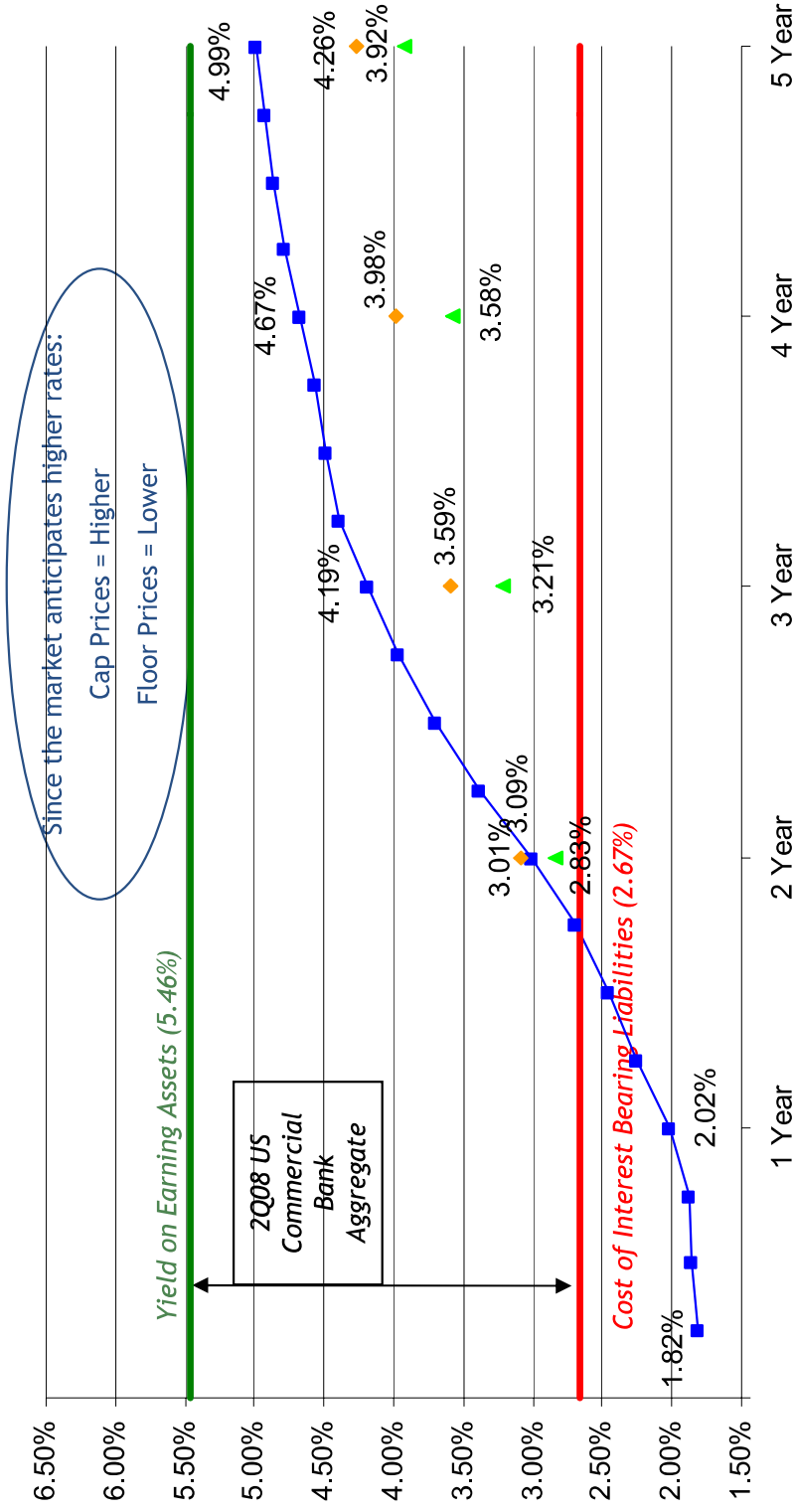
### Asset Sensitive

**Disclaimer:**  
These valuations contained herein are indicative as of the date and time noted. They are provided for information purposes only and are intended solely for your use. These valuations may not represent the actual terms on which new transactions could be entered into or the actual terms on which existing transaction could be liquidated. The information contained herein is derived from sources believed to be reliable but we do not warrant their completeness or accuracy. This valuation is not intended as an offer or solicitation for the purpose or sale of any financial instrument.

# Opportunities in Today's Market

## RATE EXPECTATIONS

### Market Expectations of 3 Month Rates Over Time



■ EDSF Curve

◆ Bullet Funding

▲ Fixed Euro Puttable Funding (10NP)

Sources: EDSF Curve, Bloomberg: SNL

As of 11/10/08

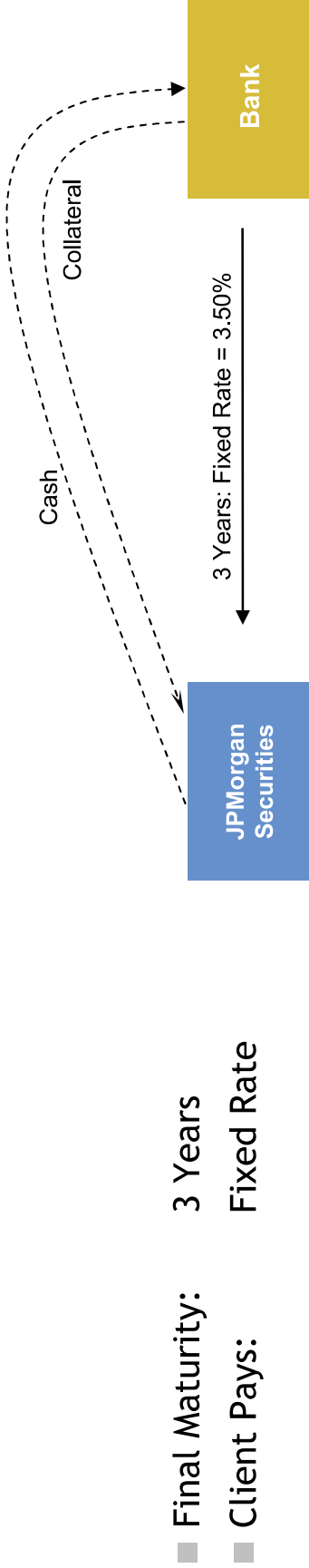
N O V E M B E R 2 0 0 8 10

J.P.Morgan

# Sample Structure: Creating a New Structure

Fixed Rate Funding with an Embedded Cap

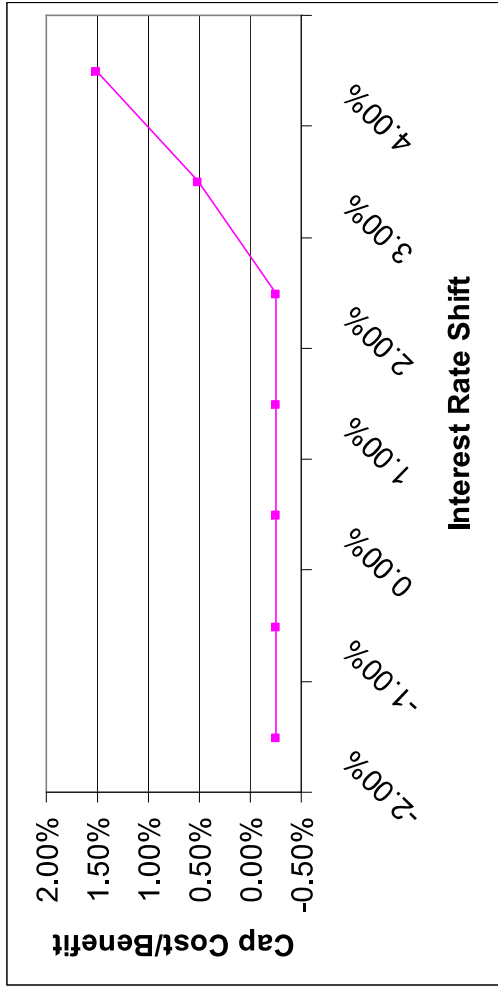
Term Structured Repo: 3yr Term



+

Embedded Cap: 3yr Term, 4.50% Strike

- Final Maturity: 3 Years
  - Strike 4.50%
  - Client Pays: 25bp/yr (Running)
  - Client Receives: LIBOR - 4.50%
- If LIBOR > 4.50%



# Sample Structure: Creating a New Structure (Cont)

Fixed Rate Funding with an Embedded Cap

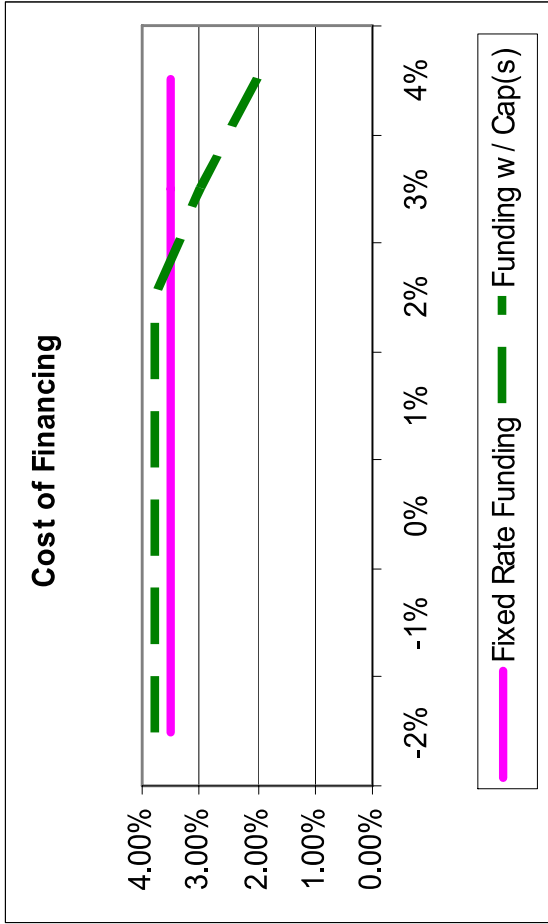
3 year Fixed Rate Funding with an Embedded Cap Struck @ 4.50%

3 year with an embedded Cap Struck @ 4.50%

Maturity: 3 years  
Unhedged Funding Rate: 3.50%  
Cap Premium: 0.25%  
Base Cost: 3.75%  
Cap Strike/Leverage: 4.50% / 1X  
Rate: Max (3.75% - Max(LIBOR - 4.50%,0), 0)

Cost of Funds - Scenario Analysis

Shock	LIBOR	Base Cost	Cap CF	Net
-2%	0.27%	3.75%	0.00%	3.75%
-1%	1.27%	3.75%	0.00%	3.75%
0%	2.27%	3.75%	0.00%	3.75%
1%	3.27%	3.75%	0.00%	3.75%
2%	4.27%	3.75%	0.00%	3.75%
3%	5.27%	3.75%	-0.77%	2.98%
4%	6.27%	3.75%	-1.77%	1.98%



# Agenda

## Structured Repurchase Agreements

Building Blocks of Structured Repo

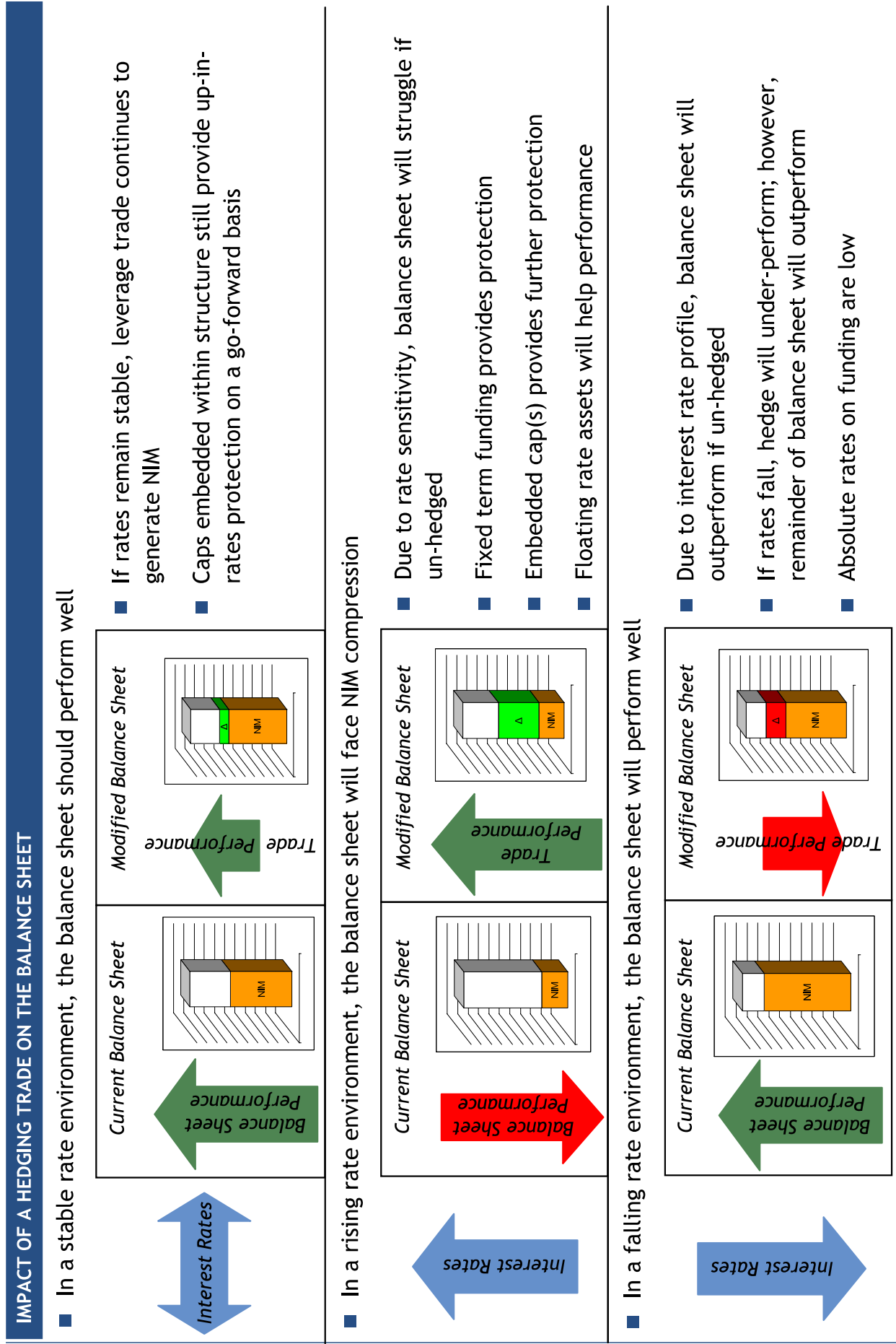
Funding Structures

Hedging Strategies

NIM Relief

Other Thoughts

# Liability Sensitive Financial Institution



# Typical Hedging Strategies

## Liability Sensitive

- ☐ Funding
- ☐ Fixed rate
- ☐ Putable (take advantage of low rates)
- ☐ Tail Remains in a lower rate environment
- ☐ Derivatives
- ☐ Caps
- ☐ Pay fixed swaps
- ☐ Assets
- ☐ Floating Rate

## Asset Sensitive

- ☐ Funding
- ☐ Floating Rate
- ☐ Derivatives
- ☐ Floors
- ☐ Receive fixed swaps
- ☐ Assets
- ☐ Longer MBS
- ☐ Fixed rate
- ☐ Callable with Lock-out
- ☐ Tail remains in a higher rate environment



# Liability Sensitive Bank - Hedging Against Rising Rates

Fixed Rate Funding with an Embedded Cap versus an Agency CMO Floater

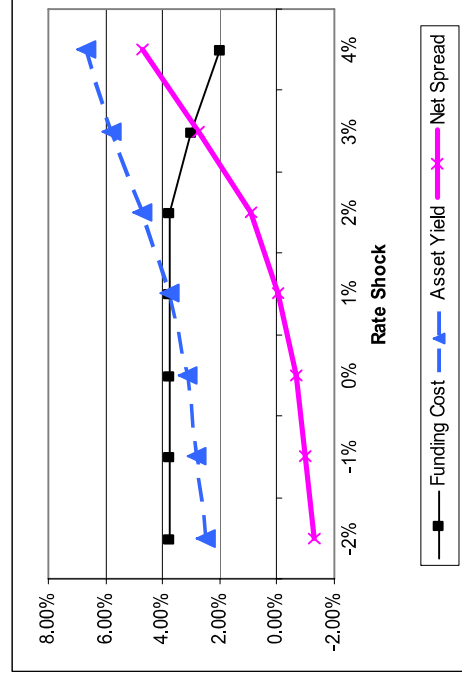
3 year Fixed Funding with an embedded Cap Struck @ 3.50%

Funding Maturity:	3 years
Unhedged Funding Rate:	3.50%
Cap Premium:	0.25%
Base Cost:	3.75%
Cap Strike/Leverage:	4.50% / 1X
Funding at Inception:	3.75% (Act/360)
Rate:	Max (3.75% - Max(LIBOR - 4.50%,0), 0)
Asset Yield (Agency CMO Floater):	1M LIBOR + 1.17% (B.E.Y.) - 7% Cap
Transaction Size:	\$25MM

Cost of Funds - Scenario Analysis

Shock	LIBOR	Base Cost	Cap CF	Funding Cost	Asset Yield	Net Spread*	Annual Income
-2%	0.27%	3.75%	0.00%	3.75%	2.50%	-1.30%	(325,521)
-1%	1.27%	3.75%	0.00%	3.75%	2.81%	-0.99%	(248,021)
0%	2.27%	3.75%	0.00%	3.75%	3.14%	-0.66%	(165,521)
1%	3.27%	3.75%	0.00%	3.75%	3.78%	-0.02%	(5,521)
2%	4.27%	3.75%	0.00%	3.75%	4.74%	0.94%	234,479
3%	5.27%	3.75%	-0.77%	2.98%	5.76%	2.74%	684,653
4%	6.27%	3.75%	-1.77%	1.98%	6.69%	4.68%	1,170,625

\* Converts funding to a bond basis



# Agenda

## Structured Repurchase Agreements

Building Blocks of Structured Repo

Funding Structures

Hedging Strategies

NIM Relief

Other Thoughts

# NIM Relief

Fixed Rate Putable Funding versus an Agency P/T

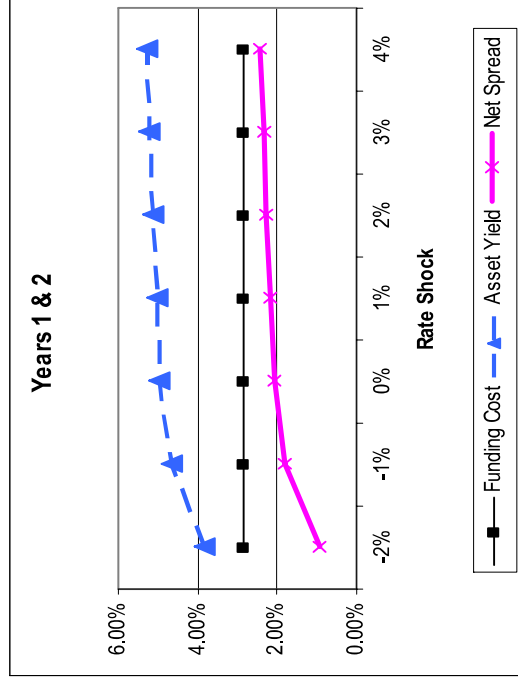
## 5 year NP 2 year Fixed Funding vs Agency P/T

Funding Maturity:	5 Years (Putable After 2 years)
Base Cost (Rate for Years 1 & 2):	2.82%
Tail Rate (Years 3 - 5):	2.82% If not put back (cancelled) - Quarterly Put
Transaction Size:	\$25MM
Asset:	FNCI 15yr 5% @99-19

### Cost of Funds - Scenario Analysis (Years 1 & 2)

<u>Shock</u>	<u>LIBOR</u>	<u>Base Cost</u>	<u>Cap CF</u>	<u>Funding Cost</u>	<u>Asset Yield</u>	<u>Net Spread*</u>	<u>Annual Income</u>
-2%	0.27%	2.82%	0.00%	2.82%	3.81%	0.95%	237,708
-1%	1.27%	2.82%	0.00%	2.82%	4.66%	1.80%	450,208
0%	2.27%	2.82%	0.00%	2.82%	4.94%	2.08%	520,208
1%	3.27%	2.82%	0.00%	2.82%	5.04%	2.18%	545,208
2%	4.27%	2.82%	0.00%	2.82%	5.12%	2.26%	565,208
3%	5.27%	2.82%	0.00%	2.82%	5.20%	2.34%	585,208
4%	6.27%	2.82%	0.00%	2.82%	5.28%	2.42%	605,208

\* Converts funding to a bond basis



# Balancing NIM Relief & Risk Mitigation

Fixed Rate Putable Funding with an embedded cap versus an Agency P/T

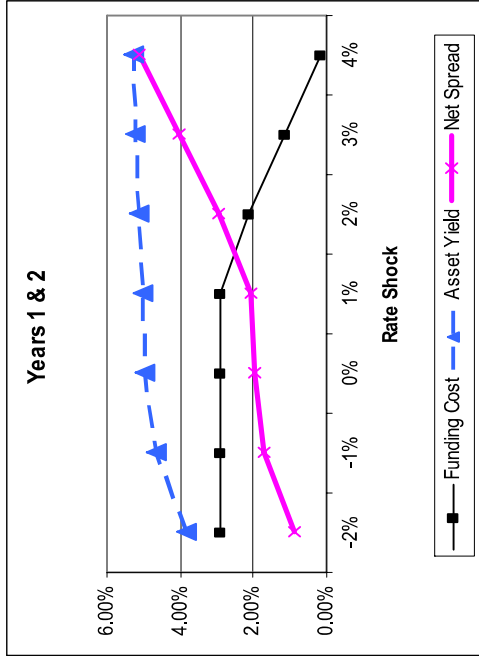
## 5 year NP 2 year (w/ 1 cap at 3.50%) Fixed Funding vs Agency P/T

Funding Maturity:	5 Years (Putable After 2 years)
Unhedged Rate for Years 1 & 2:	2.82%
Cap Premium:	0.09%
Cap Strike/Leverage	3.50%/1X
Rate for Years 1&2:	Max(2.91%-Max(LIBOR-3.50%,0%),0%)
Tail Rate (Years 3 - 5):	2.91% If not put back (cancelled) - Quarterly Put
Transaction Size:	\$25MM
Asset:	FNCI 15yr 5% @99-19

### Cost of Funds - Scenario Analysis (Years 1 & 2)

Shock	LIBOR	Base Cost	Cap CF	Funding Cost	Asset Yield	Net Spread*	Annual Income
-2%	0.27%	2.91%	0.00%	2.91%	3.81%	0.86%	214,896
-1%	1.27%	2.91%	0.00%	2.91%	4.66%	1.71%	427,396
0%	2.27%	2.91%	0.00%	2.91%	4.94%	1.99%	497,396
1%	3.27%	2.91%	0.00%	2.91%	5.04%	2.09%	522,396
2%	4.27%	2.91%	-0.77%	2.14%	5.12%	2.95%	737,569
3%	5.27%	2.91%	-1.77%	1.14%	5.20%	4.04%	1,011,042
4%	6.27%	2.91%	-2.77%	0.14%	5.28%	5.14%	1,284,514

\* Converts funding to a bond basis

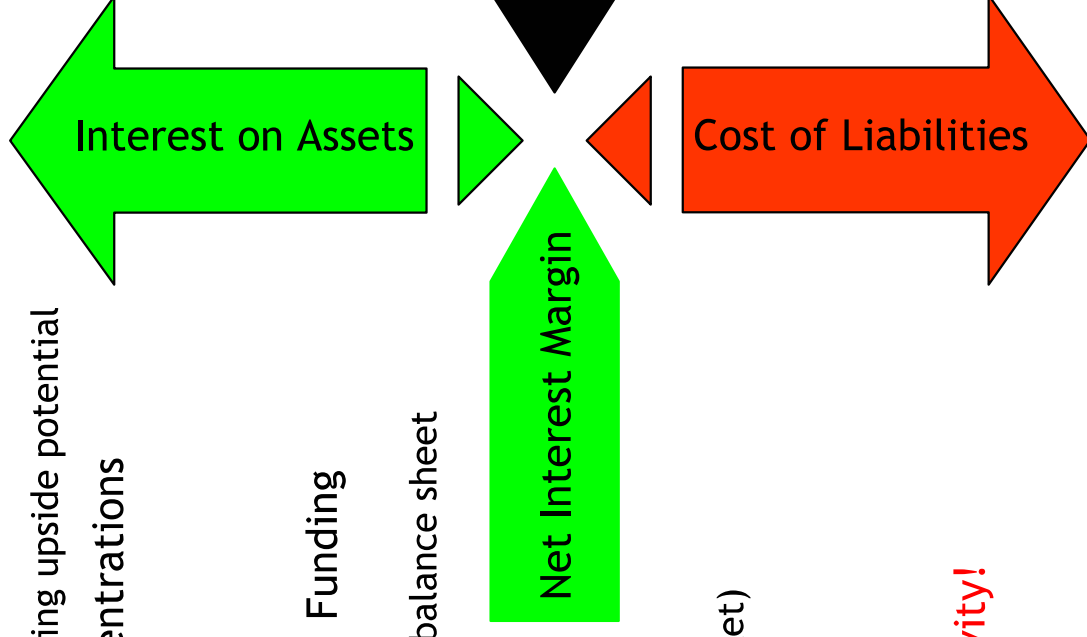


J.P.Morgan

# Balance Risk Mitigation and NIM Relief

## UNDERSTAND WHAT YOU HAVE

- Risk management
  - Hedging current A/L position
    - Offsetting downside losses while curbing upside potential
  - Managing existing Balance Sheet concentrations
    - Add fixed rate funding
    - Add floating rate assets
    - Embed caps
  - Pushing risk into the future (tail risk) - Funding
    - Absolute levels of funding are low
    - Works along with a liability sensitive balance sheet
    - Balance Sheet growth
    - Balance Sheet diversification
- NIM generation
  - Decrease cost of funding
  - Increase asset yield (Use dislocation in Market)
  - Use wholesale leverage (TARP Capital?)



**Work with the existing Balance Sheet Sensitivity!**

**J.P.Morgan**

N O V E M B E R 2 0 0 8 20

# Agenda

## Structured Repurchase Agreements

Building Blocks of Structured Repo

Funding Structures

Hedging Strategies

NIM Relief

Other Thoughts

## Other Thoughts

- Let the balance sheet drive the funding/hedging strategies
  - Use tails to offset strengths
  - Insurance versus leverage
- Funding Needs versus Balance Sheet A/L
  - Accounting/Income Friendly
  - May Dilute R.O.A, not R.O.E.
  - Embed multiple caps or floors
- Yield Curve considerations (take advantage of the low absolute rates)
- Flexibility

# Relevant FAS133 “guardrails” for avoiding bifurcation

- Banks have MANY financial instruments on their balance sheets with embedded derivatives, without having to bifurcate the derivatives under FAS133.
  - *Callable agencies, ARM’s with caps, floating rate commercial loans with floors, etc*
- Embedded derivative must be considered “clearly and closely related” to the host contract (*as per FAS133, paragraph 12*)
  - *Under the guidelines in DIG Implementation issue B19, we define the host contract in our example as a 3 year LIBOR floater*
  - *Since both the floor and the host contract are interest rate products, we believe the “clearly and closely related” condition is satisfied*
- Investor (lender) must be assured of receiving substantially all its initial investment back regardless of the impact of the derivative (as per FAS133, paragraph 13(a) )
  - *Placing a floor of 0% on the borrowing rates ensures that the lender at a minimum would always at least receive its principal back, even if the embedded floor drives the rate to 0%*
  - *There is debate over the word “substantially” - some have taken it to mean that a modest amount of lost principal might be permitted*
- Return to the investor (lender) cannot more than DOUBLE as a result of the embedded derivative (as per FAS133, paragraph 13(b)(i))
  - *Since the embedded floor/cap in funding can only REDUCE the return to the lender, there are no circumstances under which this condition would be violated*