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### Citigroup Presentation to the Board of Directors - Credit and Markets Discussion

Citigroup, Inc.

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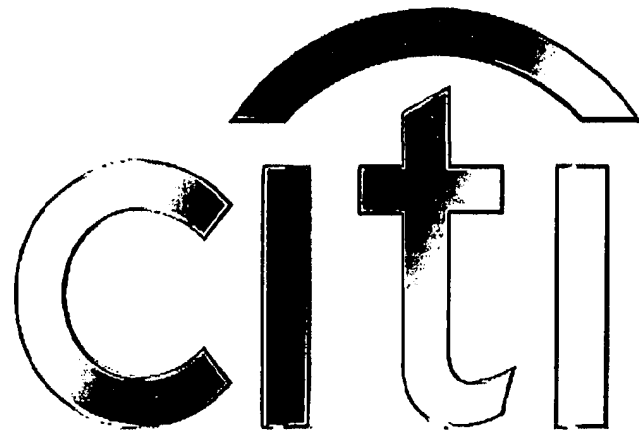
Citigroup, Inc., "Citigroup Presentation to the Board of Directors - Credit and Markets Discussion" (2007). *YPFS Documents*. 4240.  
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***Credit and Markets Discussion***

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***Presentation to the Board of Directors  
October 15<sup>th</sup>, 2007***



**CONFIDENTIAL**



# Agenda

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## **I. What happened to Citi and competitors?**

- I. Summary of where we took losses and how we compare to competitors*
- II. Implications to the balance sheet*
- III. Equity Market response and commentary*

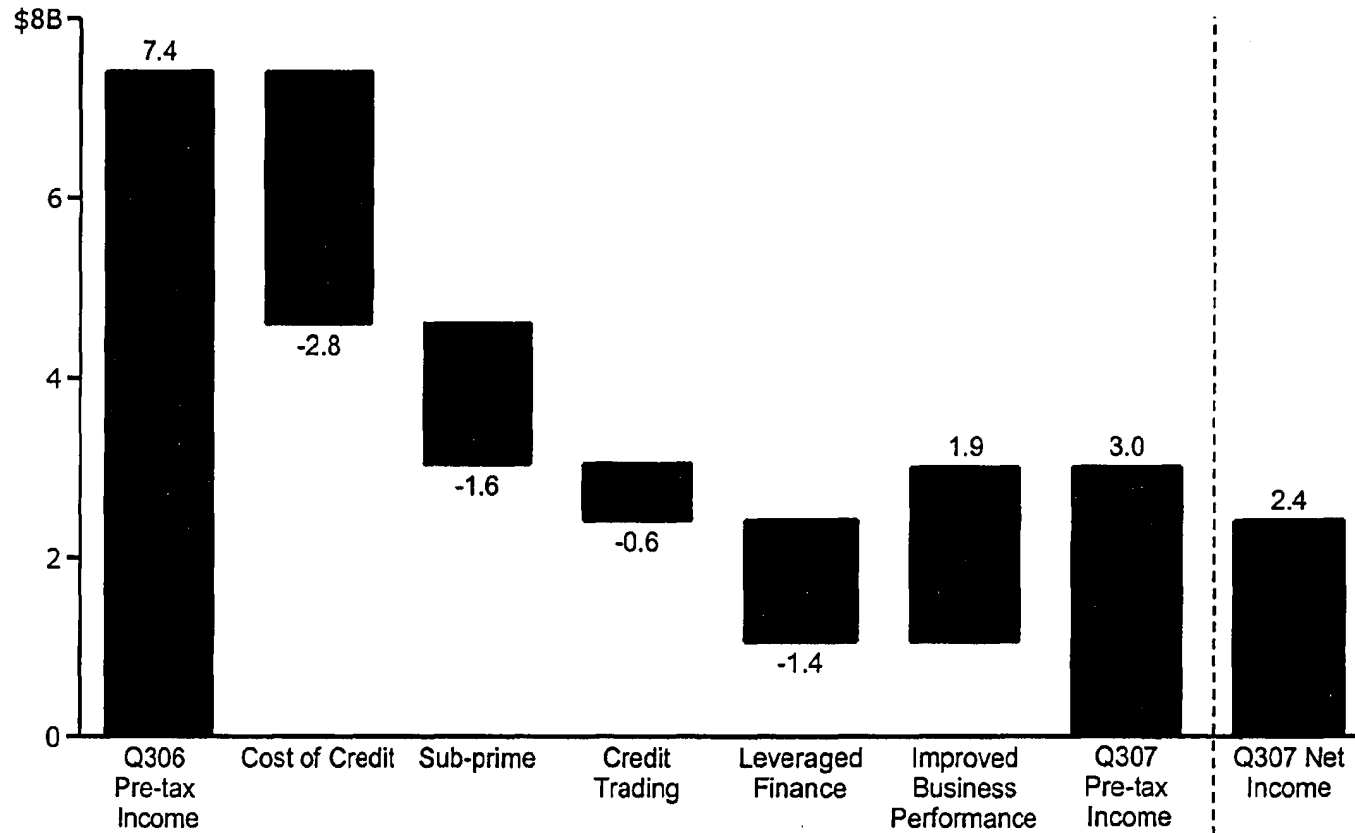
## **II. Why did this happen and what are we going to do going forward?**

- I. CMB*
- II. Risk*
- III. SIVs*



# Q307 pre-tax income impact of losses

Q307 versus Q306 pre-tax income change

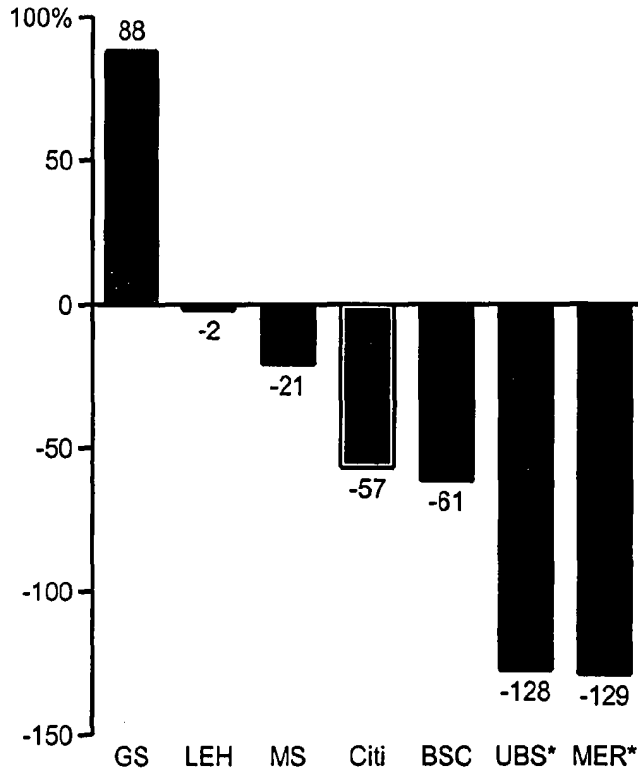


Additional losses from press release (\$M)	246	293	29	(49)	519

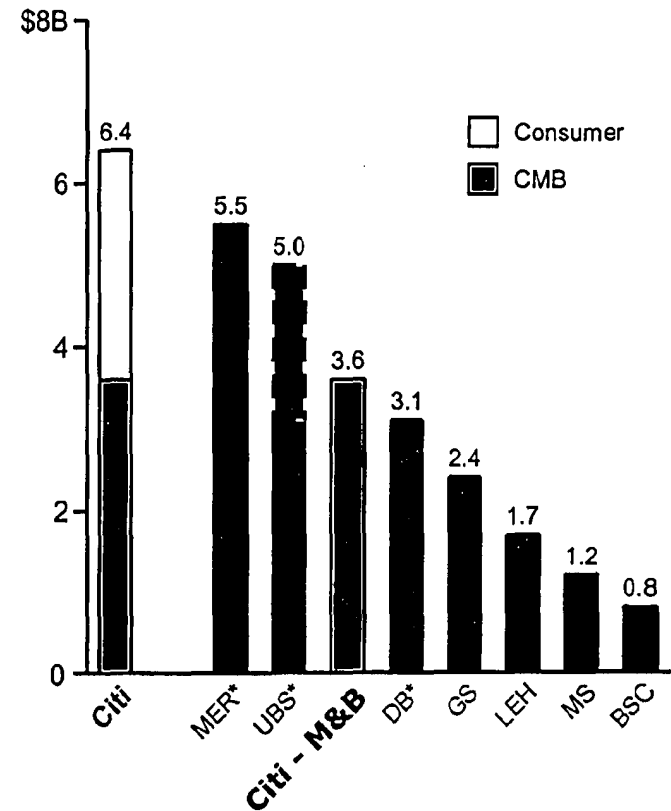


# Citi Q3 competitive performance

YoY EPS growth Q307 vs. Q306



Q307 Operating Income losses by banks to date

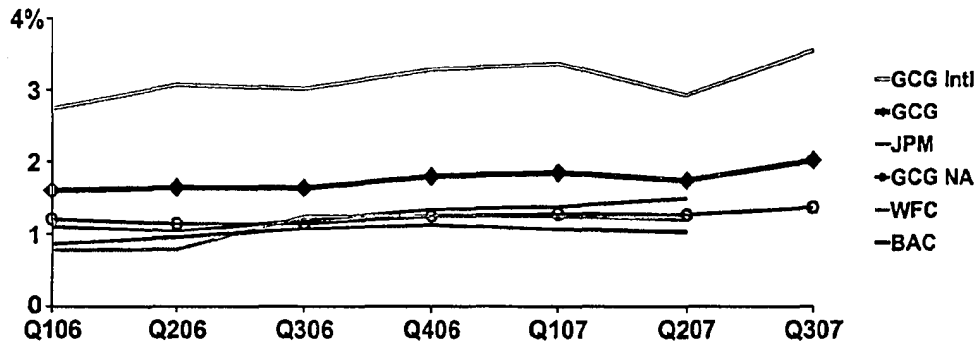


\*Note: Estimates based on pre-releases

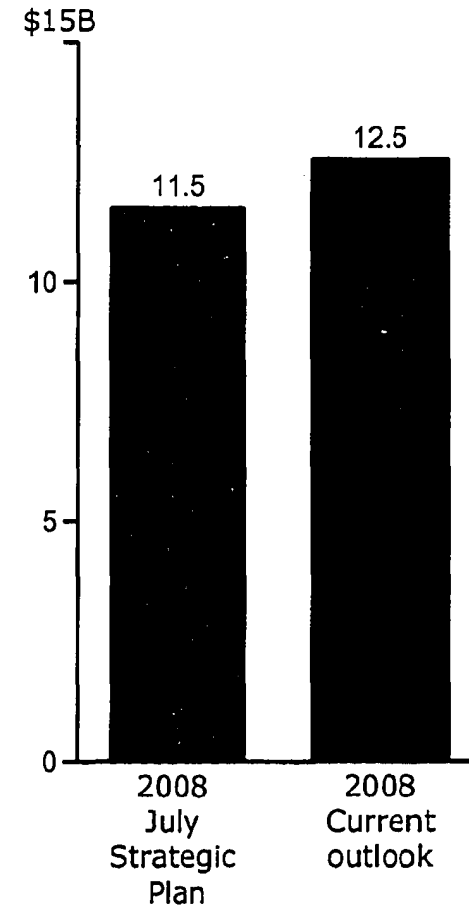
# Consumer cost of credit versus competitors



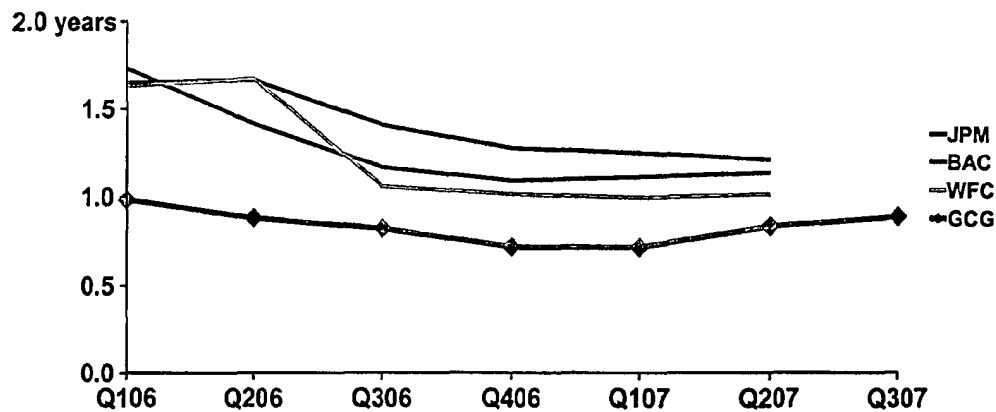
**Annualized NCLs/ Average loans (%)**



**GCG Cost of Credit**



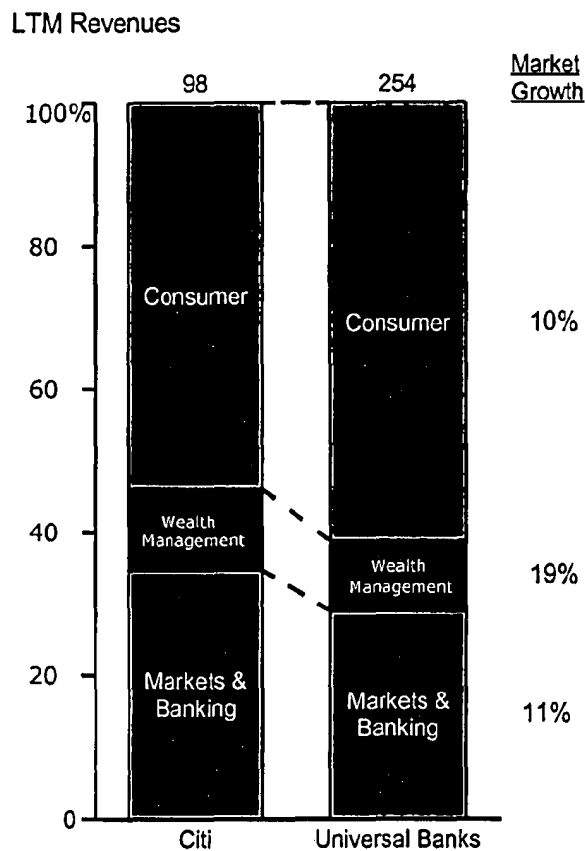
**Loan loss reserves/Annualized net credit losses**



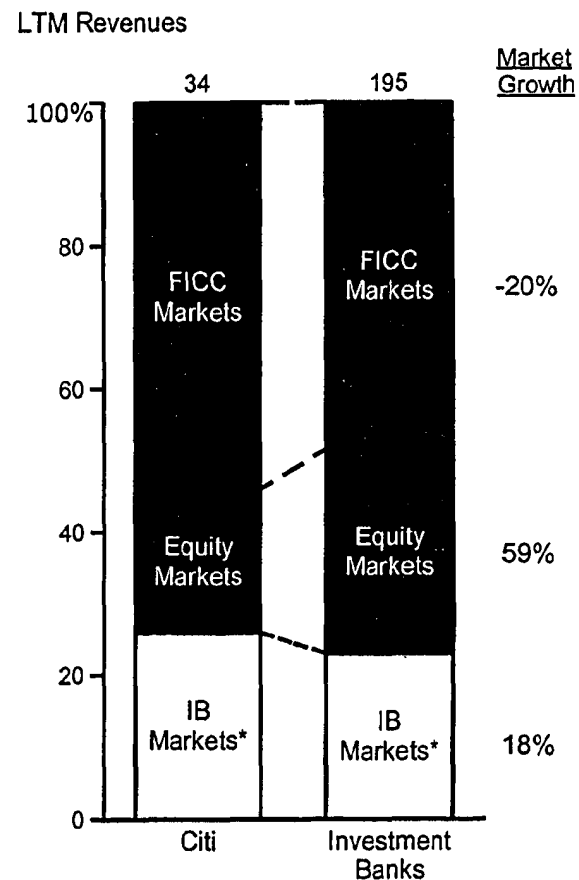
# Business mix oriented to highest impacted asset classes



**Citi overall business mix**



**CMB business mix**



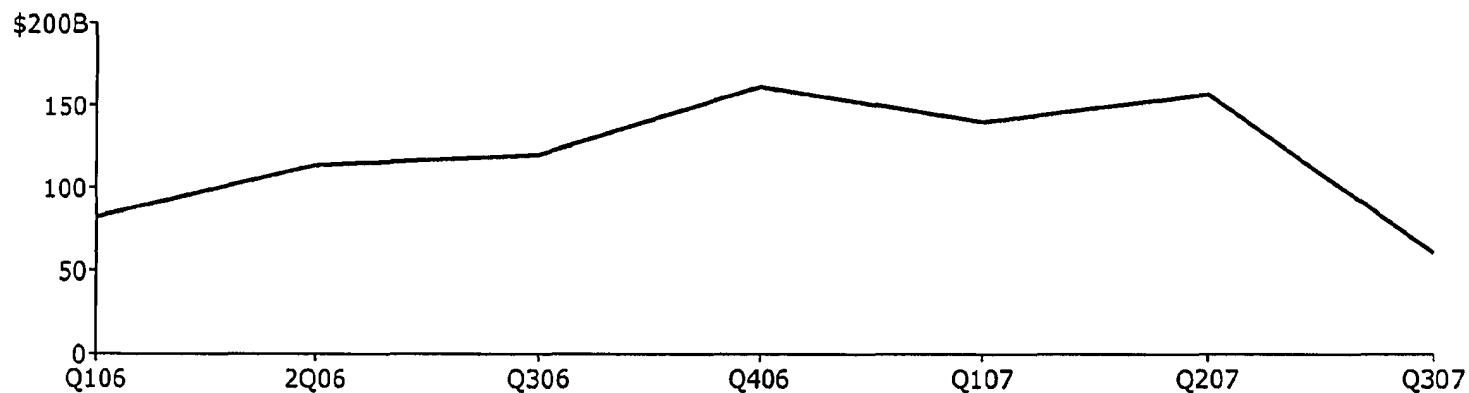
\*Includes underwriting

# Origination volumes declining significantly



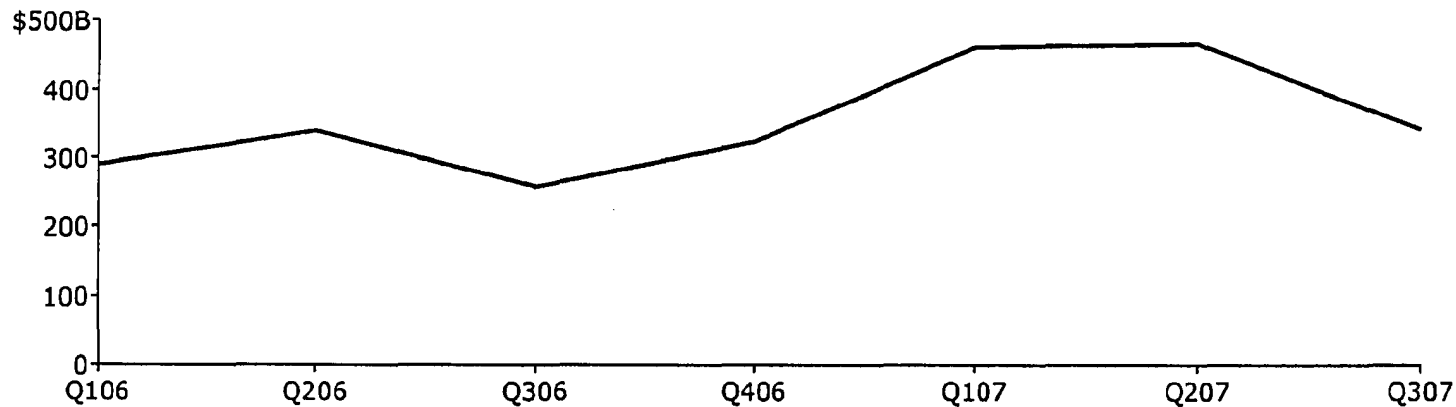
## CDO/CLOs

Market Origination Volume



## Leveraged Finance

Market Origination Volume

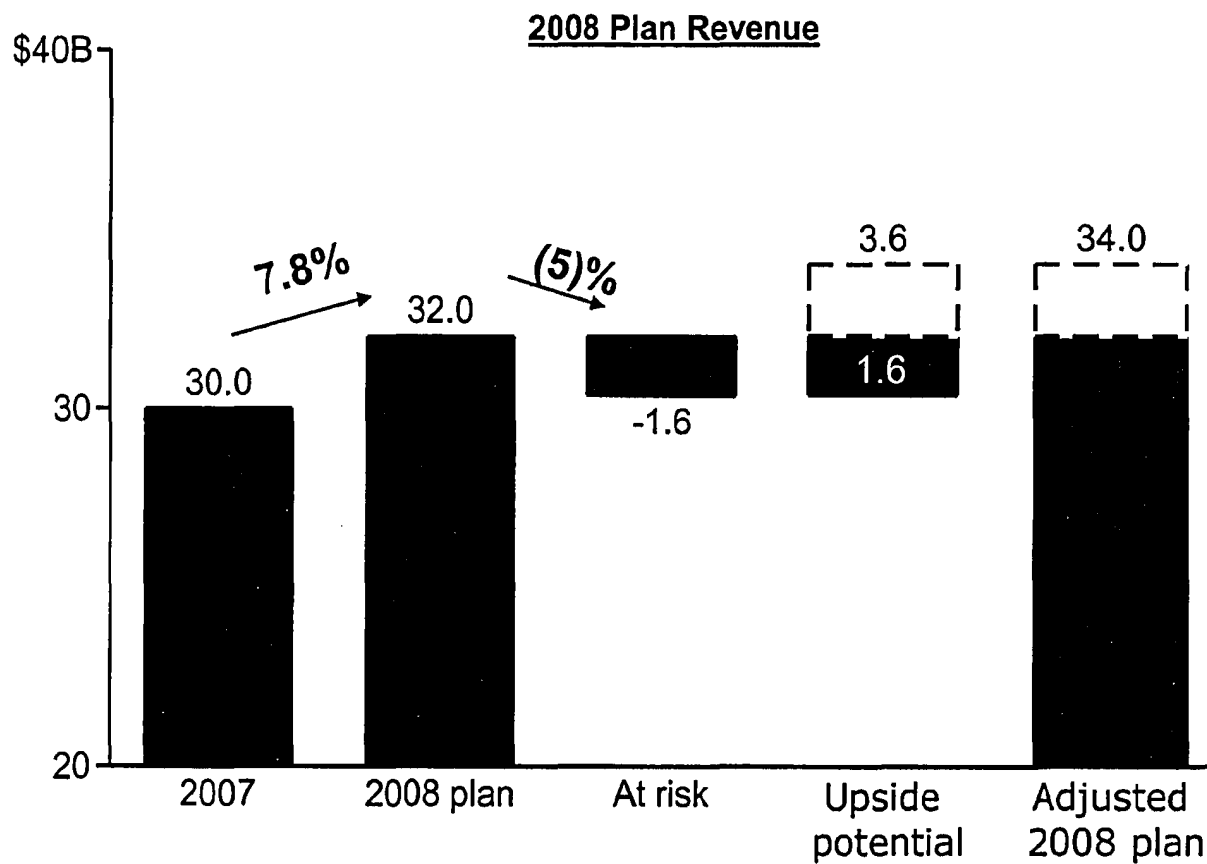


Source: League tables





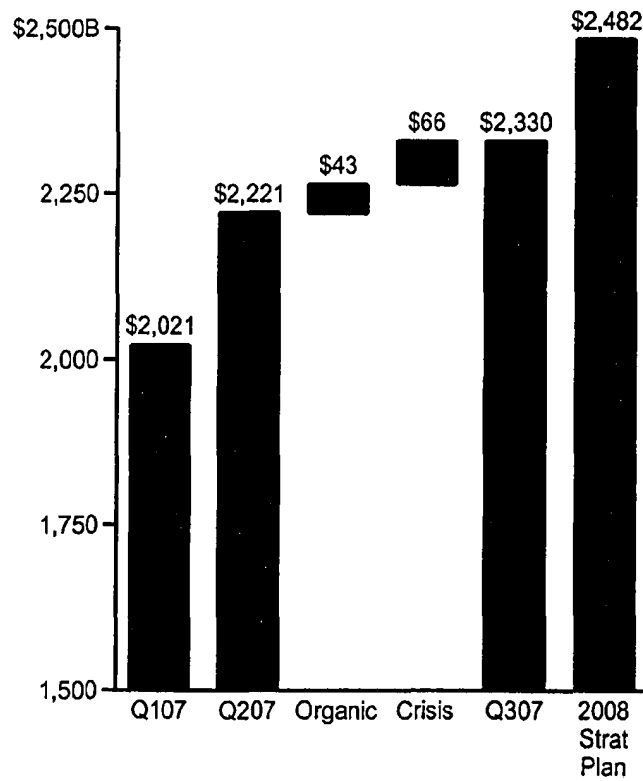
# 2008 CMB outlook



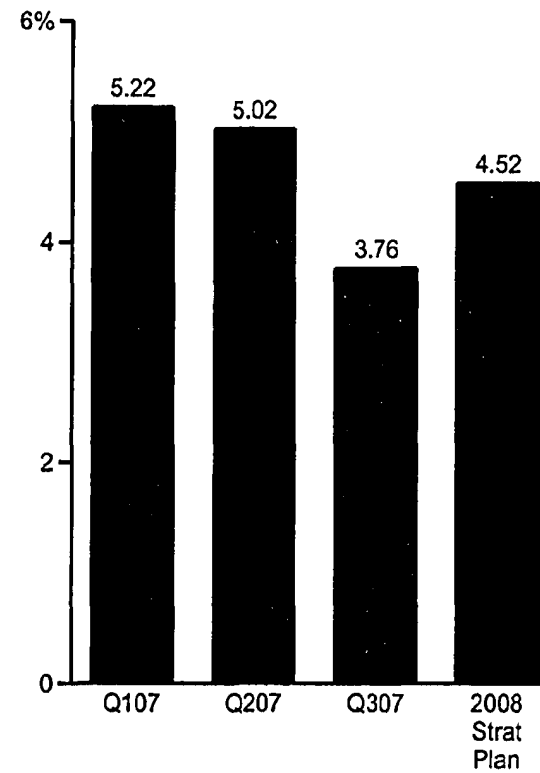
# Market crisis doubled asset growth and reduced productivity



GAAP Assets



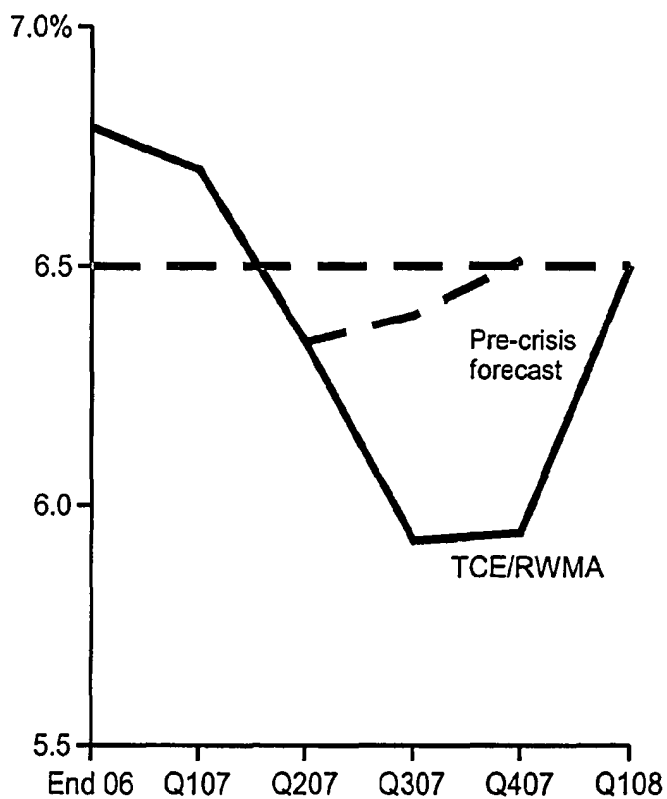
Total Revenue/GAAP Assets



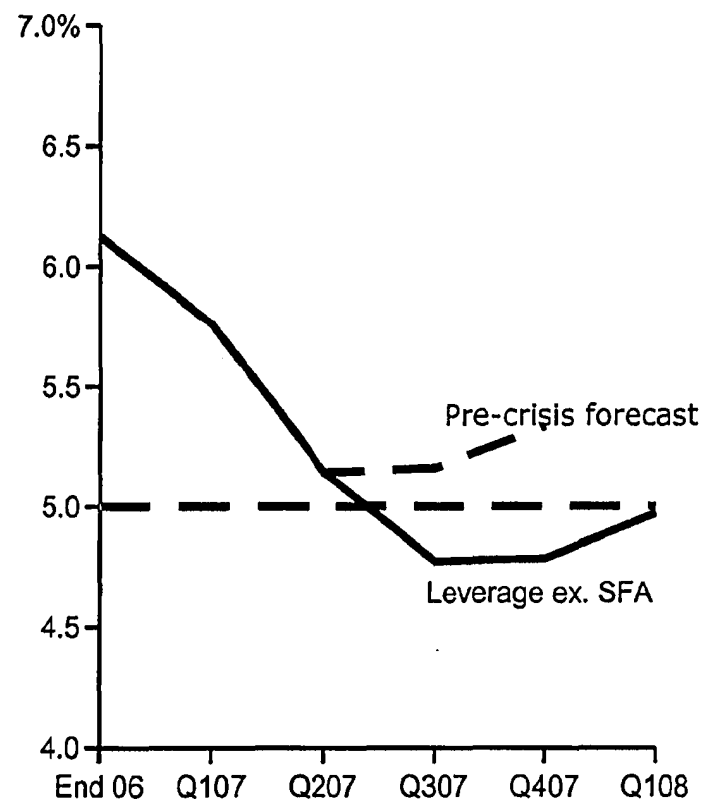


# Crisis further skewed capital adequacy

TCE/RWMA



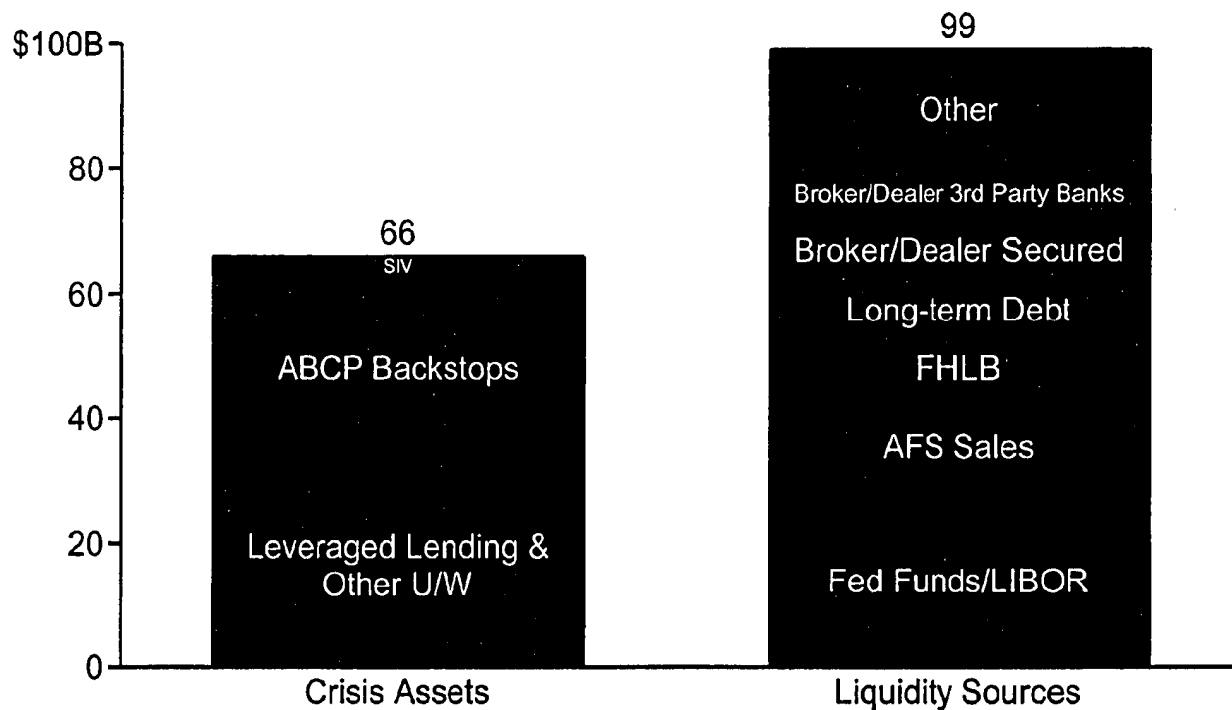
Leverage ex. SFA





# Incremental liquidity needs and sources

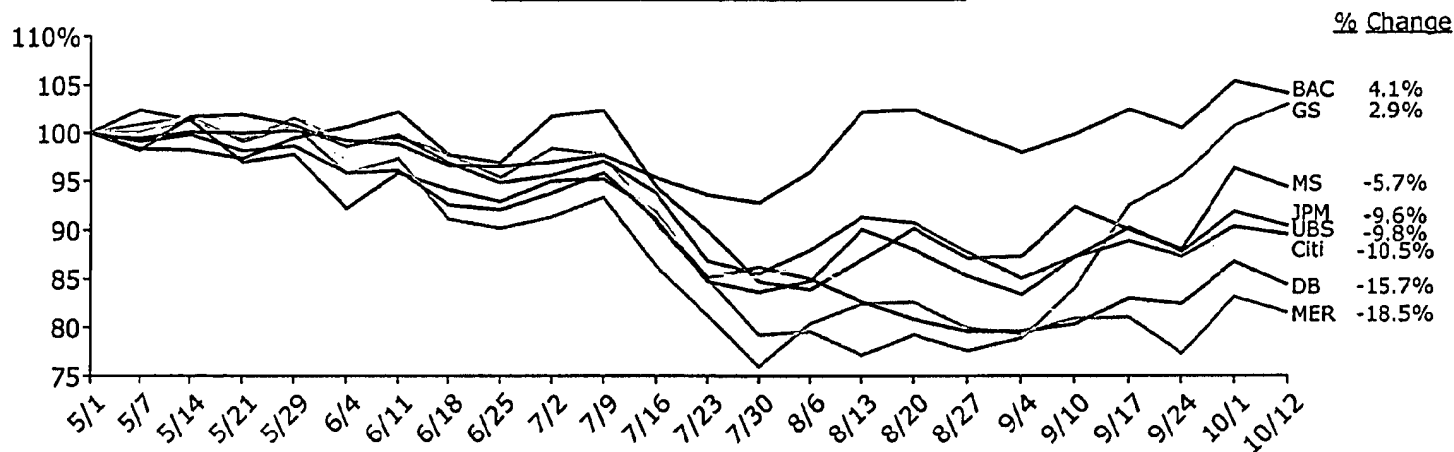
Liquidity Needs and Sources



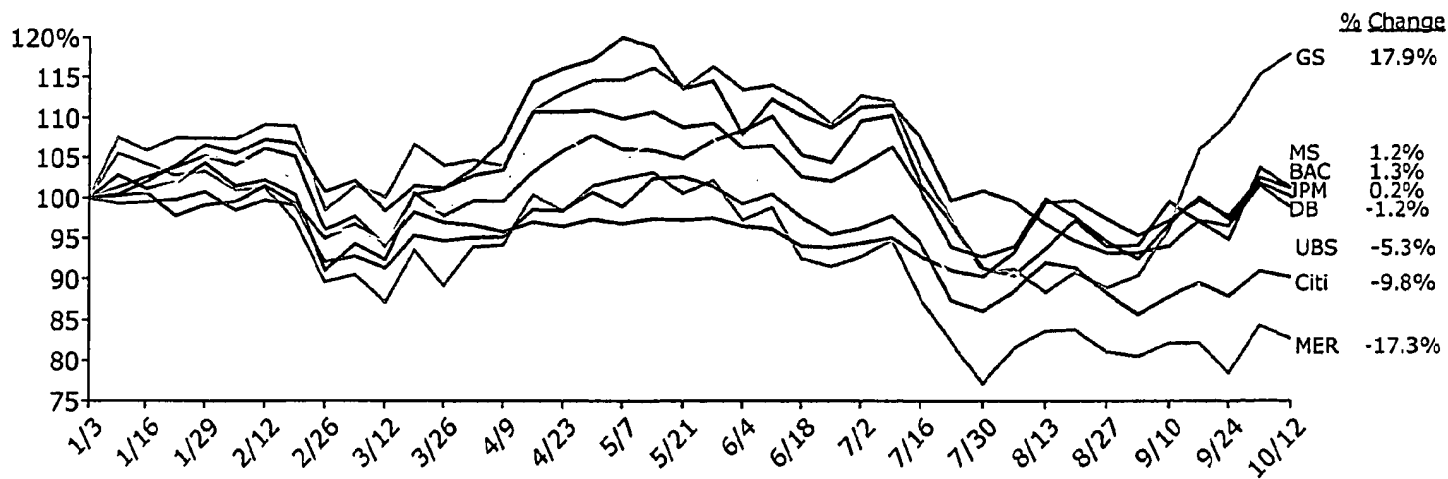


# Market reaction

**Share prices indexed to May 1, 2007**



**Share prices indexed to January 1, 2007**





## ***Buy-Side & Sell-Side reaction***

### **Responses to the four major earnings drivers**

- ▶ **Leveraged Finance write-downs**
  - Generally in-line with peers; no surprises
- ▶ **Credit Trading losses**
  - Troubling, given historical trading strength
- ▶ **Structured Credit losses**
  - Mortgage related losses expected, but were larger
  - Limited benefit from hedges somewhat surprising
- ▶ **Consumer Loan Loss Reserve build**
  - Size of builds not expected
  - Seen by many as “catch-up” due to methodology change

### **Concerns**

- ▶ **What is our sustainable earnings run-rate going forward? What was “one-time”?**
- ▶ **Is consumer credit deteriorating more than is visible? What happened?**
- ▶ **Where was the breakdown? Business management? Risk management?**
- ▶ **Does the Citi model work?**
- ▶ **What actions are being taken?**



# Agenda

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- III. *Equity Market response and commentary*

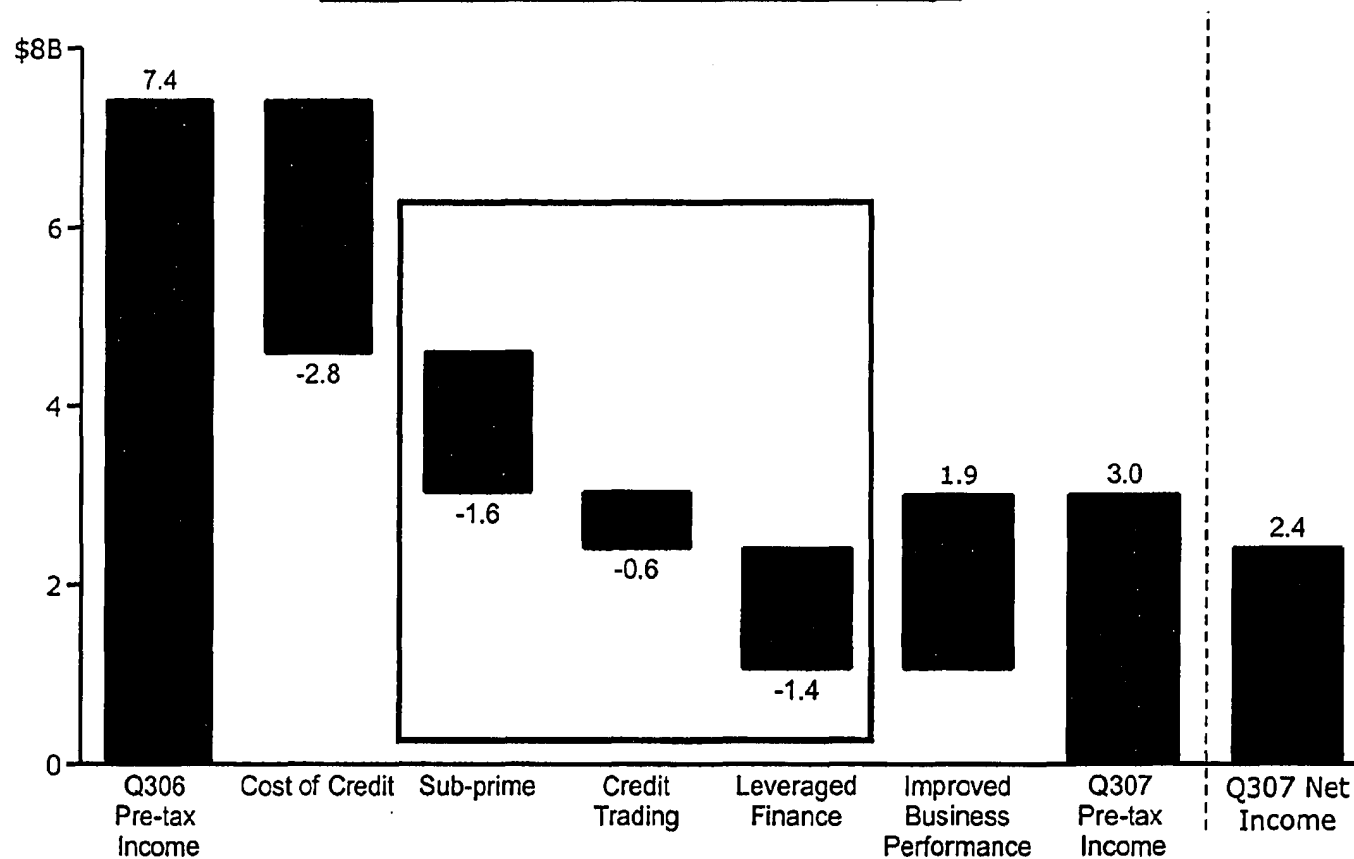
## II. Why did this happen and what are we going to do going forward?

- |               |
|---------------|
| I. <i>CMB</i> |
|---------------|
- II. *Risk*
  - III. *SIVs*



# CMB losses

Q307 versus Q306 pre-tax income change



Additional losses from press release (\$M)

246

293

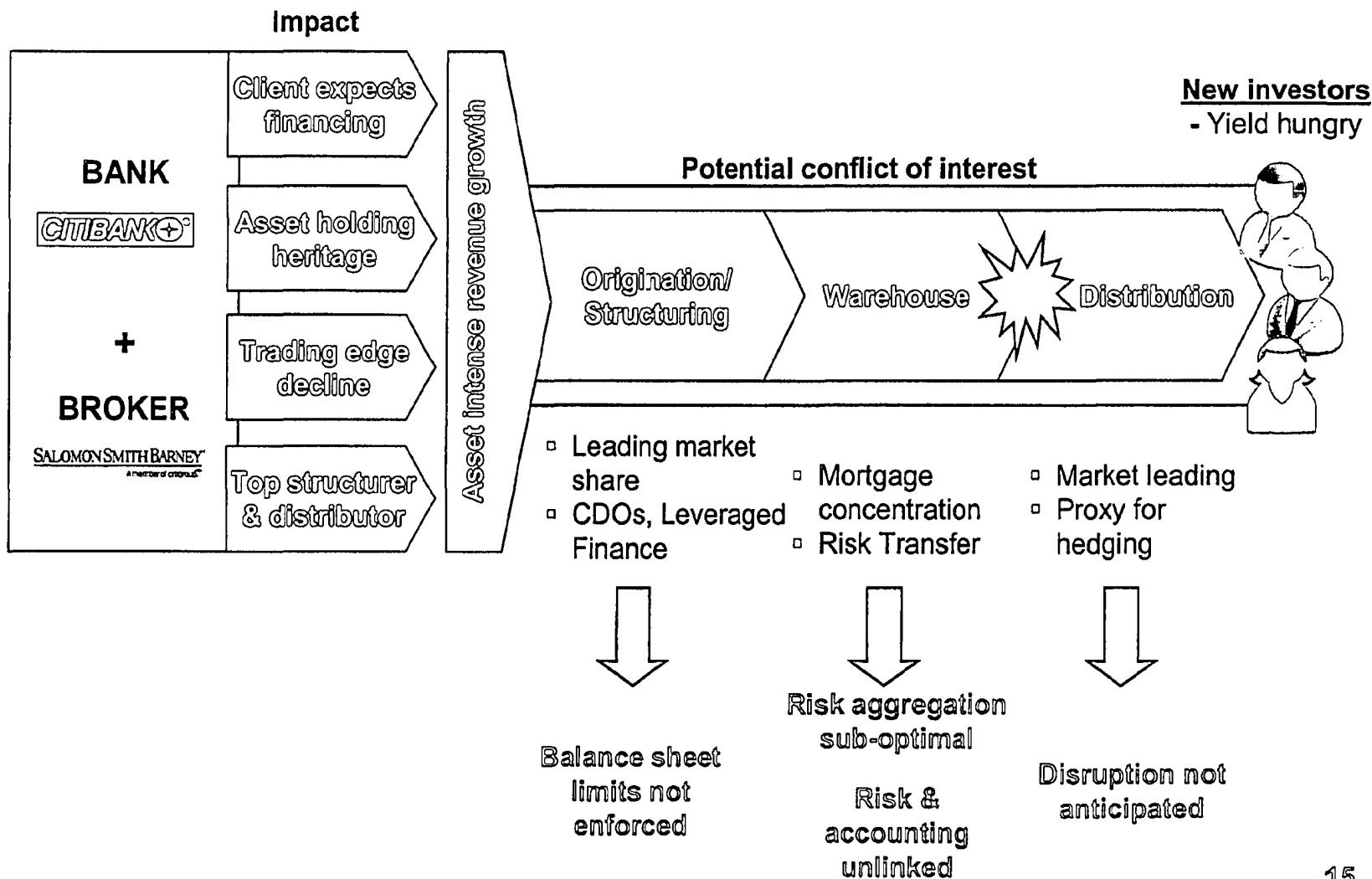
29

(49)

519



# Legacy Process





## ***Why did it happen?***

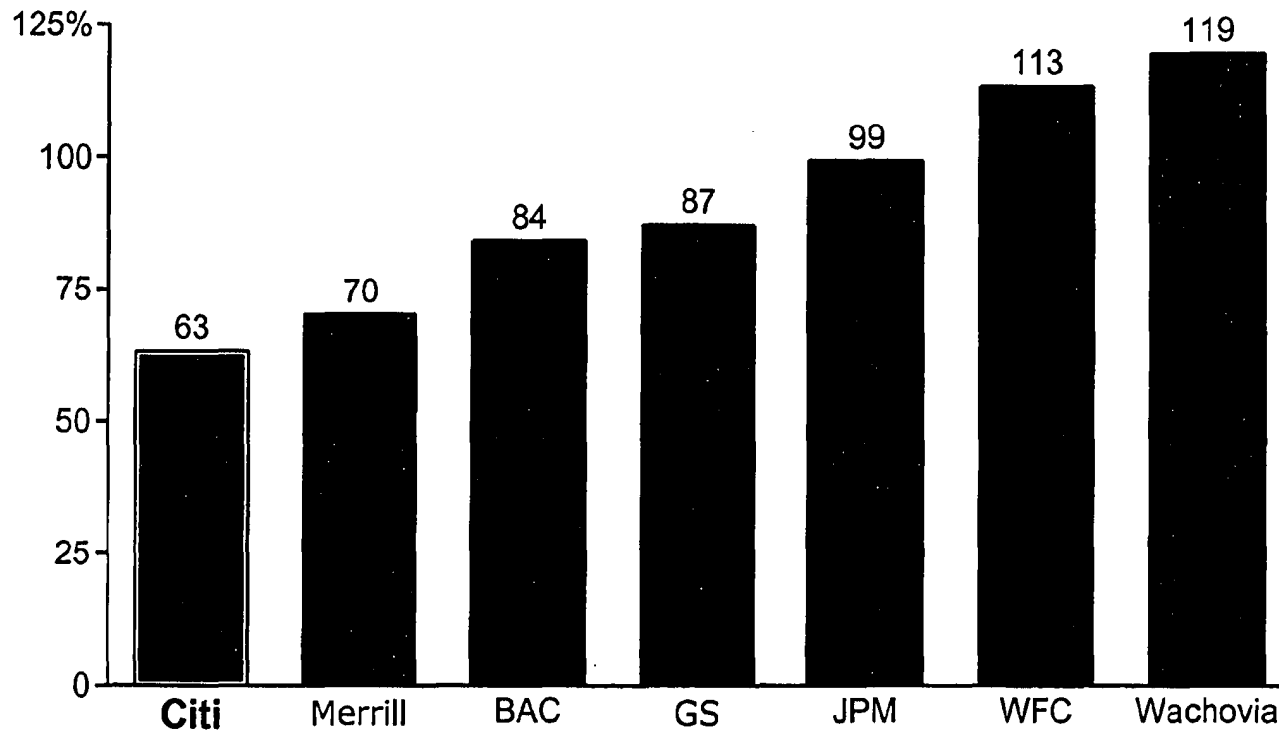
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- ▶ **CMB is balance sheet reliant**
- ▶ **Business mix not optimal**
- ▶ **Leading underwriter of CDOs/CLOs and Leveraged Finance**
- ▶ **Shift in warehousing risk in CDOs/CLOs**
- ▶ **Risk process did not anticipate distribution disruption**
- ▶ **Insufficient hedging**

# *Citi balance sheet productivity low versus competitors*

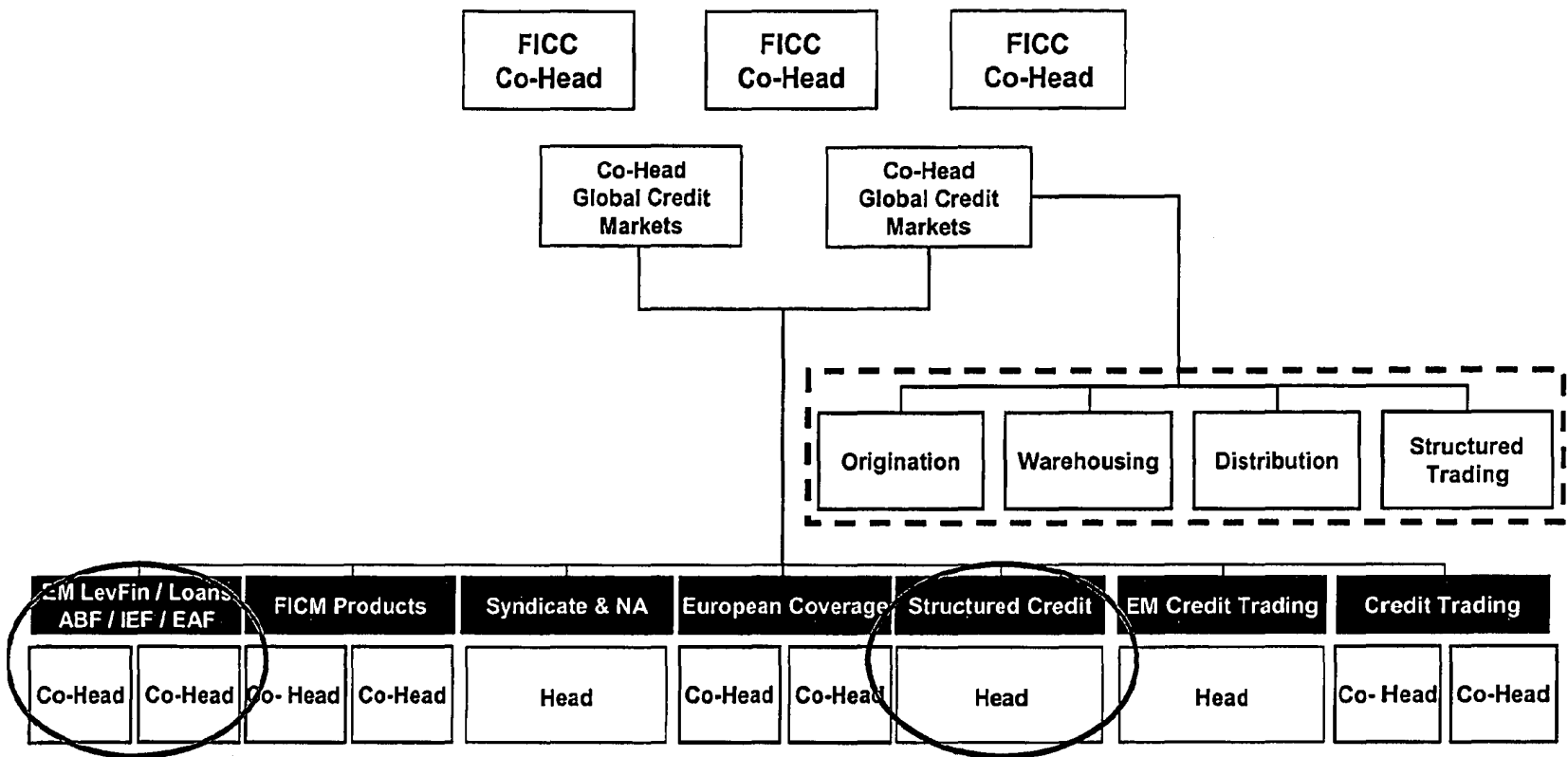


Revenue Growth vs. GAAP Asset Growth  
(2001-2006)





# Old FICC management structure



# A top underwriter of CDOs and Leveraged Finance



(\$ in Billions)

## H1'07 Global CDO Volumes

Rank	Book Runner	Proceeds	Losses*
1	Merrill Lynch	34.3	\$4.5
2	Citi	34.0	1.6
3	Barclays Capital	16.2	NA
4	Wachovia Corp	16.1	NA
5	JP Morgan	15.5	NA
6	B of A Securities LLC	14.7	NA
7	Deutsche Bank AG	14.7	2.1
8	UBS	12.6	5.0
9	Morgan Stanley	12.6	NA
10	Bear Stearns & Co Inc	10.6	0.5

\*Total non-Leveraged Finance losses

## H1'07 Global Leveraged Syndicated Loan Volumes

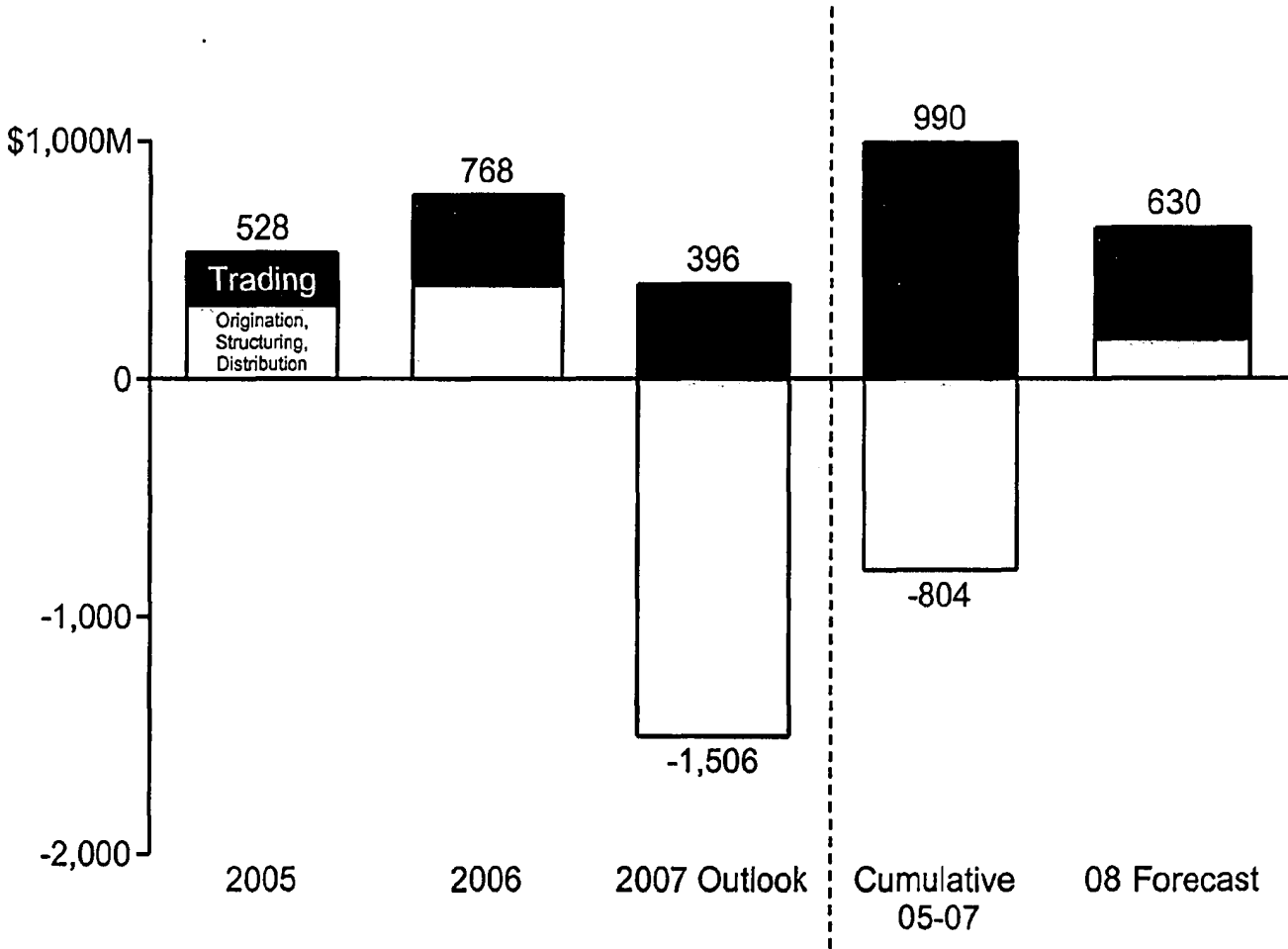
Rank	Book Runner	Proceeds	Losses*
1	JP Morgan	158.5	NA
2	B of A Securities LLC	99.2	NA
3	Citi	76.3	\$1.4
4	Deutsche Bank AG	69.0	1.0
5	Credit Suisse	56.4	NA
6	Goldman Sachs & Co	48.2	2.4
7	Lehman Brothers	33.9	1.3**
8	RBS	32.8	NA
9	Merrill Lynch	32.8	1.0
10	UBS	27.9	NA

\*Leveraged finance losses

\*\*Estimate

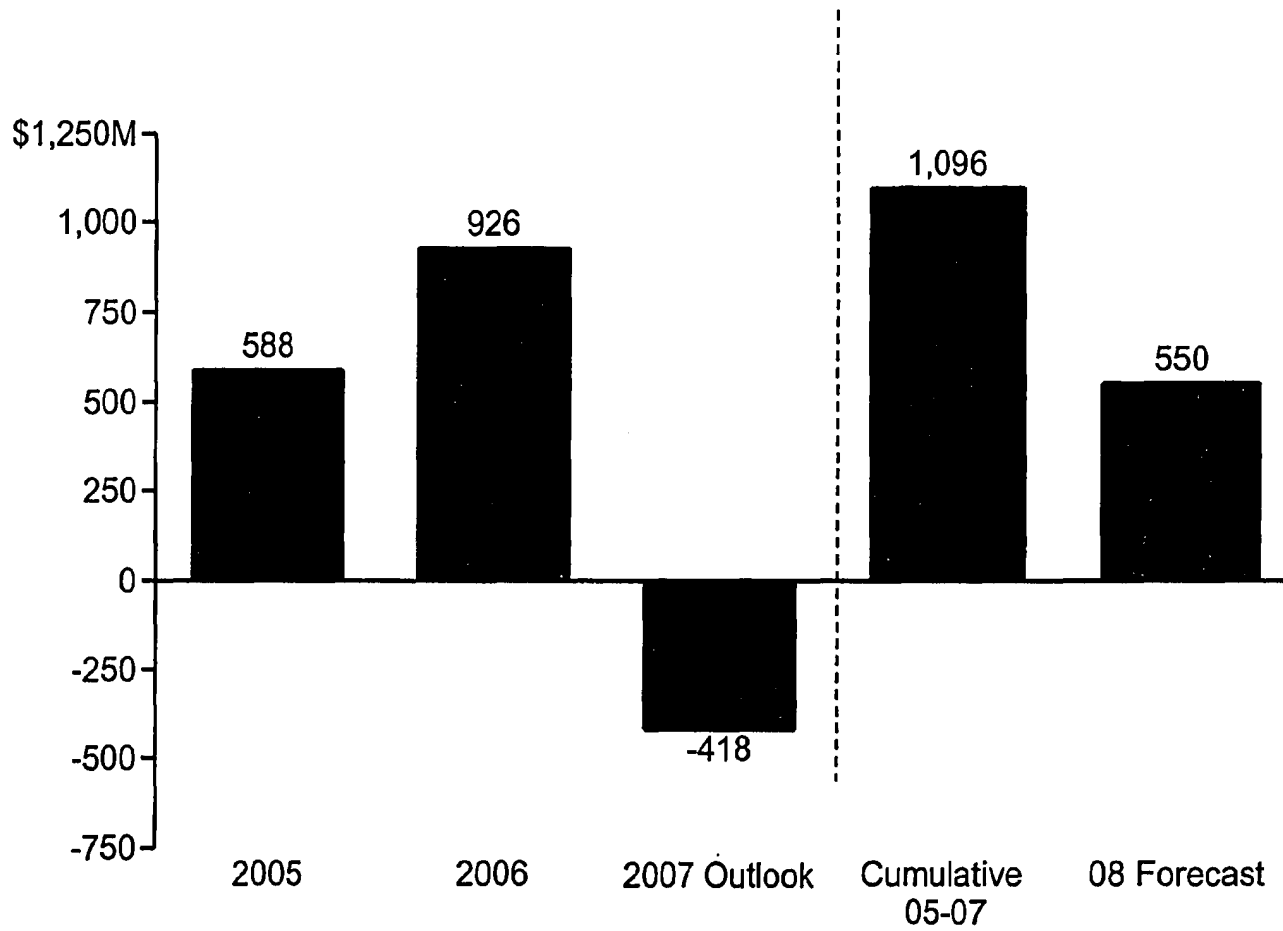


# Structured credit revenue trend





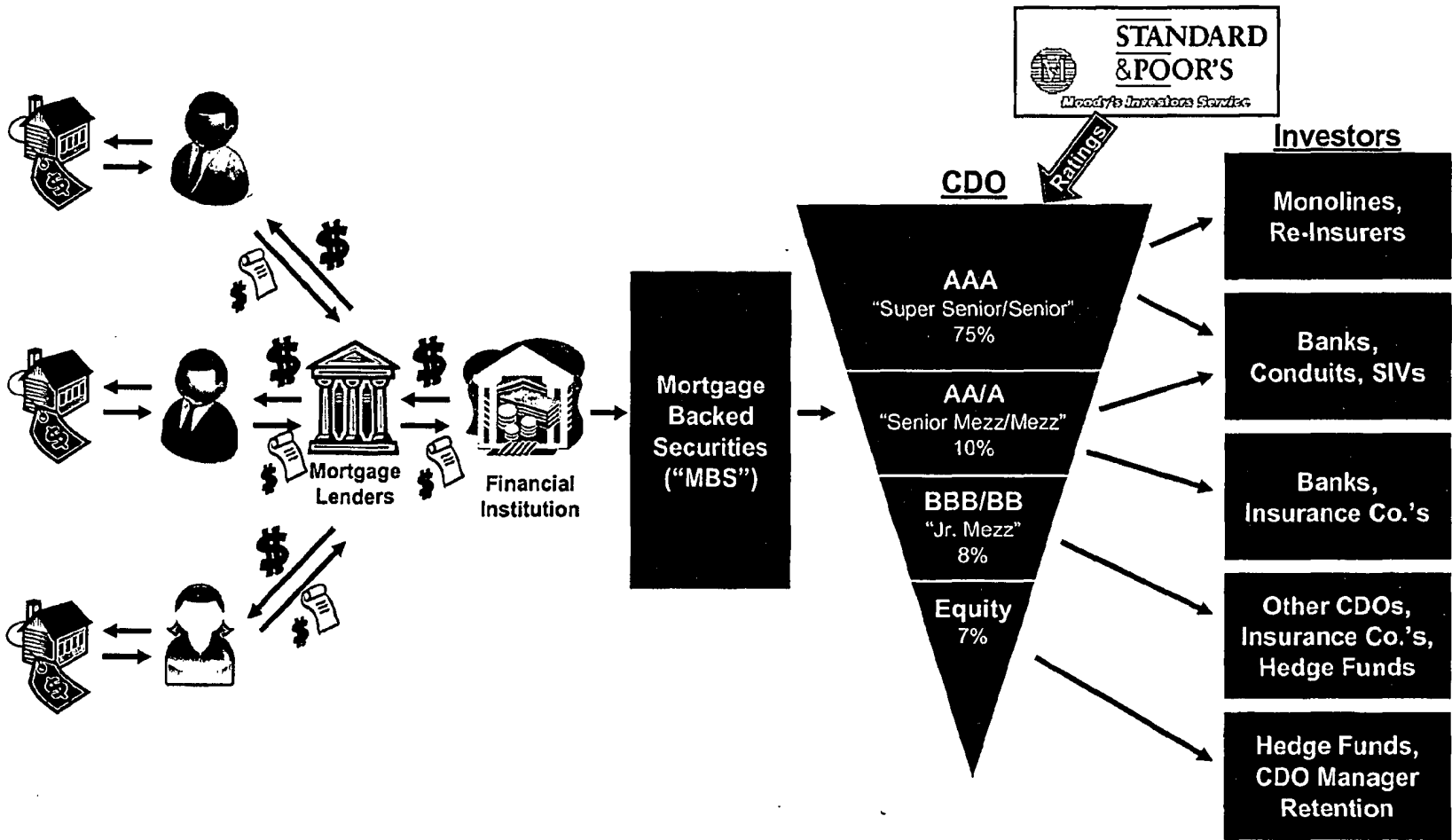
# Leveraged finance revenue trend



<b>Sponsor Revenue</b>	<b>\$795M</b>	<b>\$1,054</b>	<b>\$1,394</b>
------------------------	---------------	----------------	----------------

\*Does not include marks

# CDO market

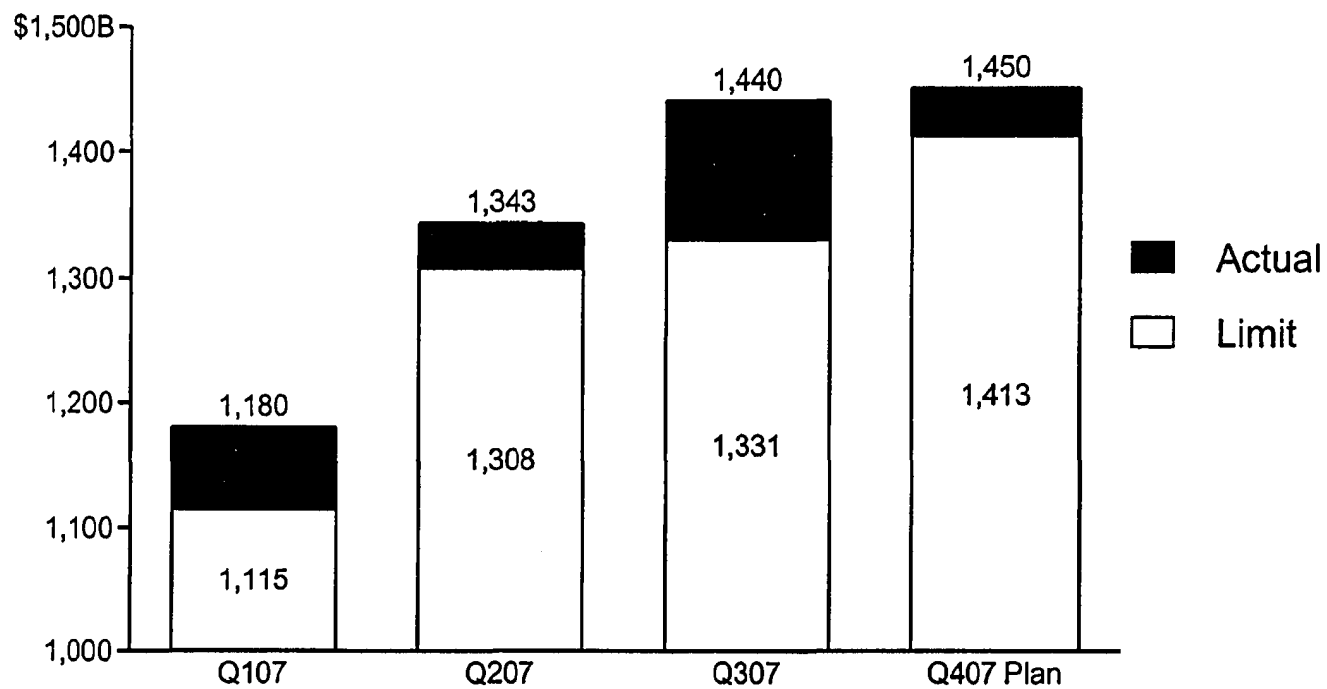




# Markets and Banking asset limits raised and exceeded



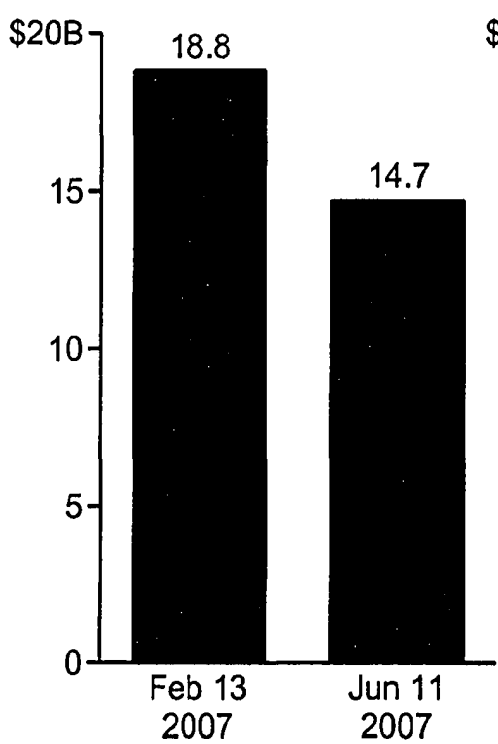
CMB GAAP Assets



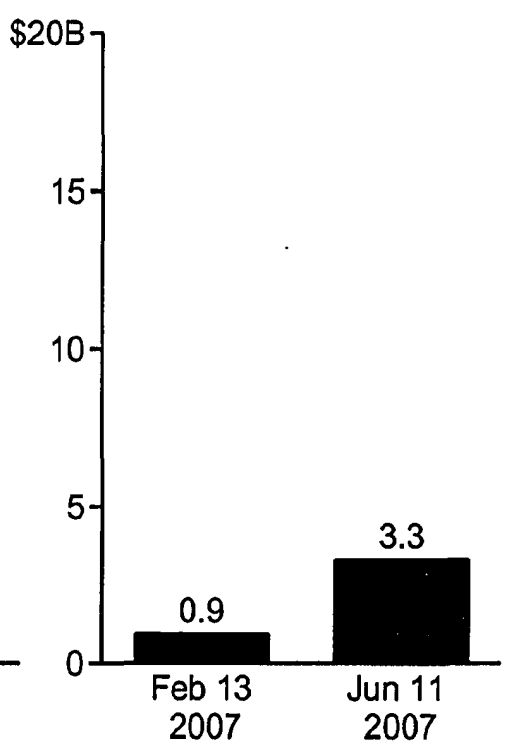
# Exposure reduced as warehouse risk shifted



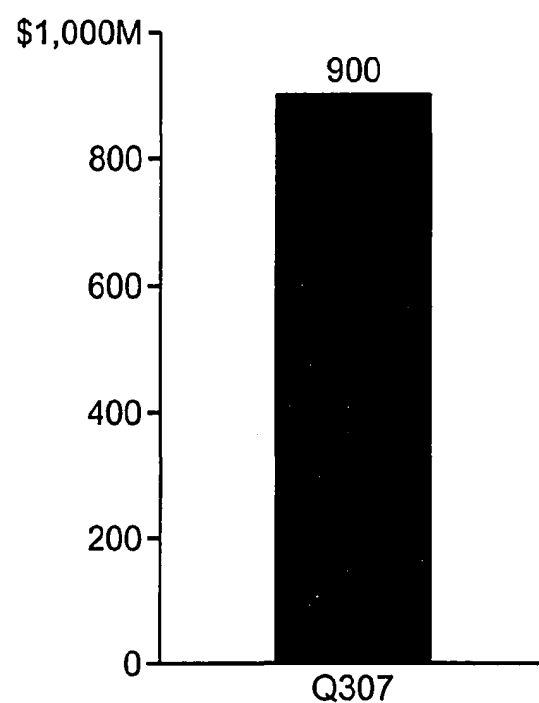
Warehouse Market Value



Hedge Market Value



Gain on Hedge





## ***Lessons learned***

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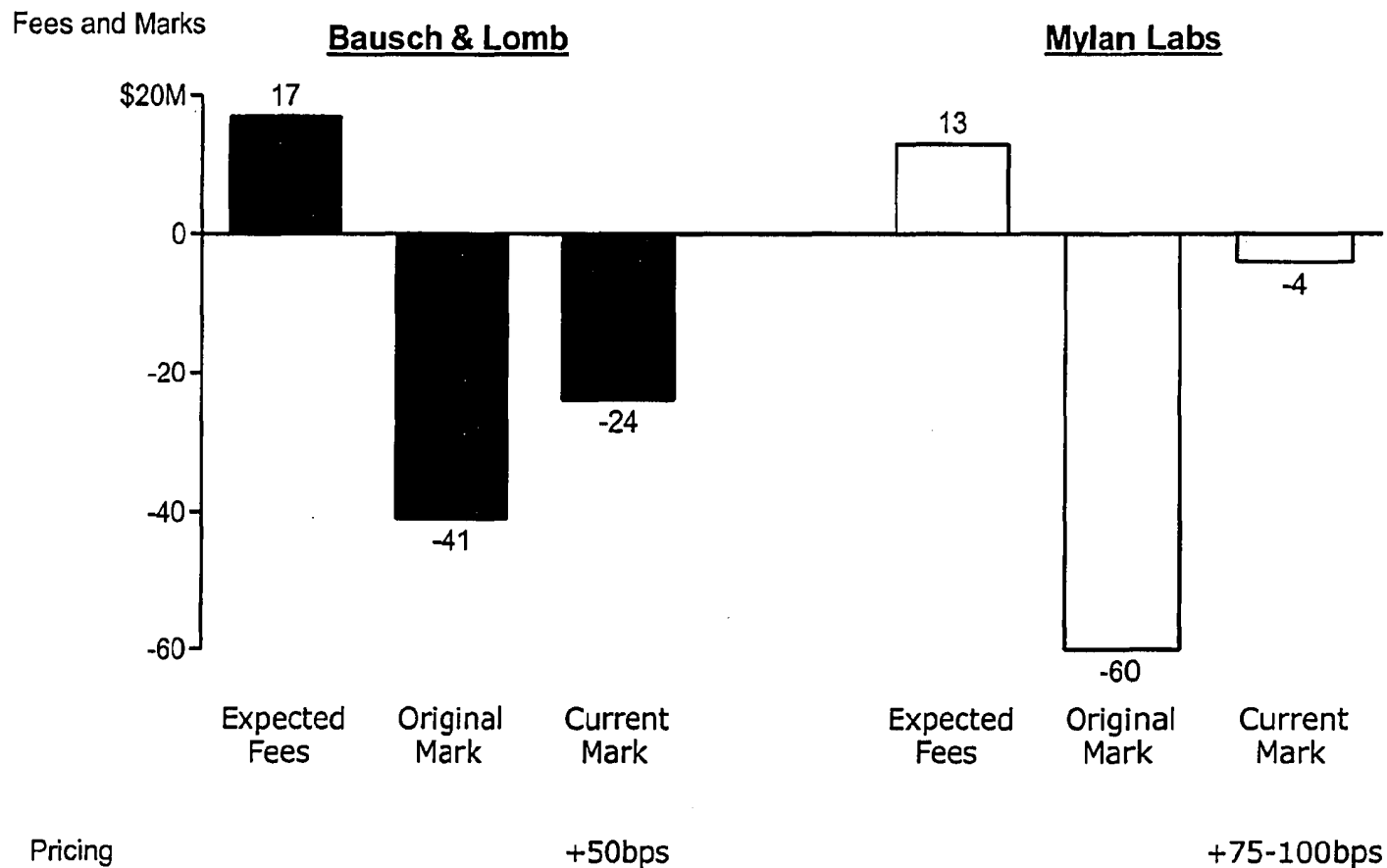
- 1. Reduce businesses' balance sheet dependency**
- 2. Strengthen checks and balances in place in integrated business**
- 3. Enforce balance sheet limits**
4. Aggregate risk more effectively across Citi
5. Enhance independent risk management practices in light of increasingly complex structures
6. Re-establish balance between management judgment and methodology in loan loss reserve process



## ***Lessons learned and actions taken***

<b>Lessons learned</b>	<b>Actions we have taken</b>	<b>Actions in progress</b>
<b>1. Reduce businesses' balance sheet dependency</b>	<ul style="list-style-type: none"><li>▶ Renegotiated terms &amp; pricing in Leveraged Finance</li><li>▶ Instituted new pricing grid for all loans</li></ul>	<ul style="list-style-type: none"><li>▶ Instituting balance sheet charge</li><li>▶ Accelerating business mix diversification</li><li>▶ Shifting Structured Credit focus to Trading</li></ul>
<b>2. Strengthen checks and balances in place in integrated businesses</b>	<ul style="list-style-type: none"><li>▶ Reorganized Credit Trading</li></ul>	<ul style="list-style-type: none"><li>▶ Finalizing review of Structured Credit</li><li>▶ Reorganizing Leveraged Finance</li></ul>
<b>3. Enforce balance sheet limits</b>		<ul style="list-style-type: none"><li>▶ Centralizing Treasury</li><li>▶ Revising liquidity plan</li></ul>

# Renegotiated terms and pricing in Leveraged Finance





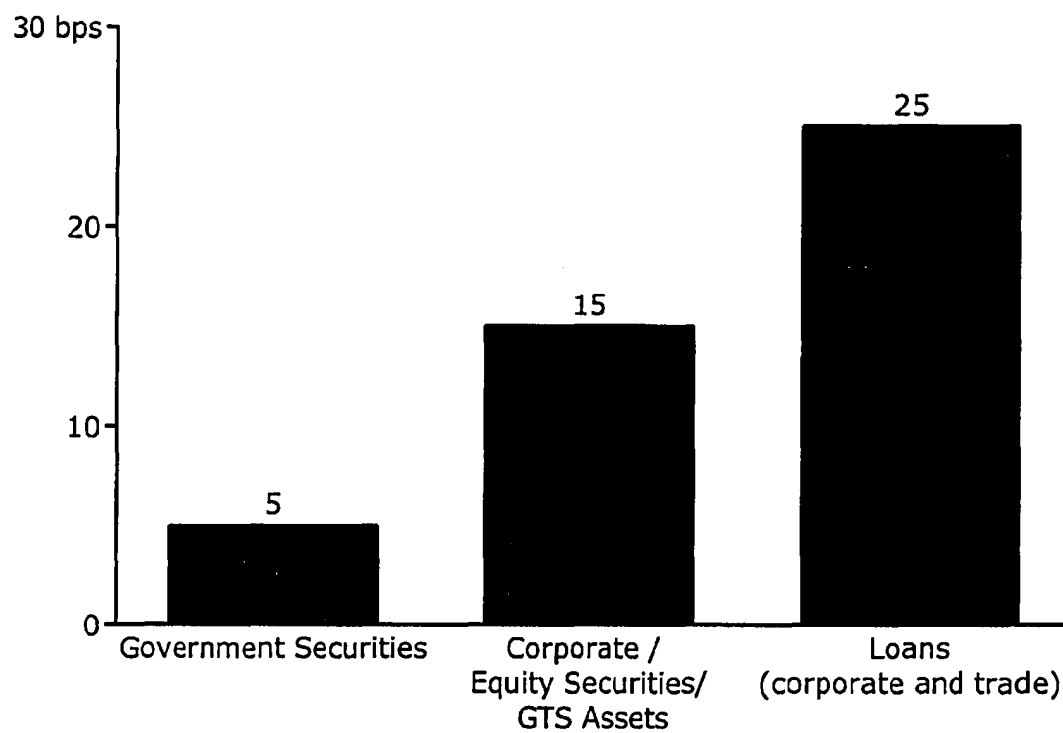
# Instituted loan pricing grids

Hong Kong Syndicated / Bilateral Pricing Grid											08 October, 2007
ORR	S&P	Moody's	364 Days or Less		Up to 3 Years		Up to 5 Years		Up to 7 Years		Notes
			0% Drawn	100% Drawn	0% Drawn	100% Drawn	0% Drawn	100% Drawn	0% Drawn	100% Drawn	
											<ul style="list-style-type: none"> <li>• Numbers shown are margin only. Need upfront fees in reality especially for syndicated loans</li> <li>• Local currency is HK\$</li> <li>• Base rate for HK\$ is HIBOR</li> <li>• No differential in margin for HK\$ and US\$</li> </ul>
			7.5-8.5	7.5-8.5	9.5-10.5	9.5-10.5	14.5-15.5	14.5-15.5	19.5-20.5	19.5-20.5	
			8-9	8-9	10-12	10-12	15-16	15-16	19-21	19-21	
			10-11	10-11	13-15	13-15	18-20	18-20	21-23	21-23	
			12-14	12-14	16-17	16-17	21-22	21-22	25-28	25-28	
			15-17	15-17	19-21	19-21	23-25	23-25	29-32	29-32	
			18-20	18-20	23-25	23-25	27-29	27-29	33-36	33-36	
			21-23	21-23	27-29	27-29	30-33	30-33	35-37	35-37	
			24-26	24-26	33-35	33-35	34-38	34-38	37-42	37-42	
6+	BB+	Ba1	50-60	50-60	65-60	65-80	80-90	80-90			
5	BB	Ba2	85-85	85-95	100-115	100-115	115-135	115-135			
5-	BB-	Ba3	110-130	110-130	125-140	125-140	145-165	145-165			
6+	B+	B1									
6	B	B2									
6-	B-	B3									
7+	CCC+	Caa1									
7	CCC	Caa2									
7-	CCC-	Caa3									

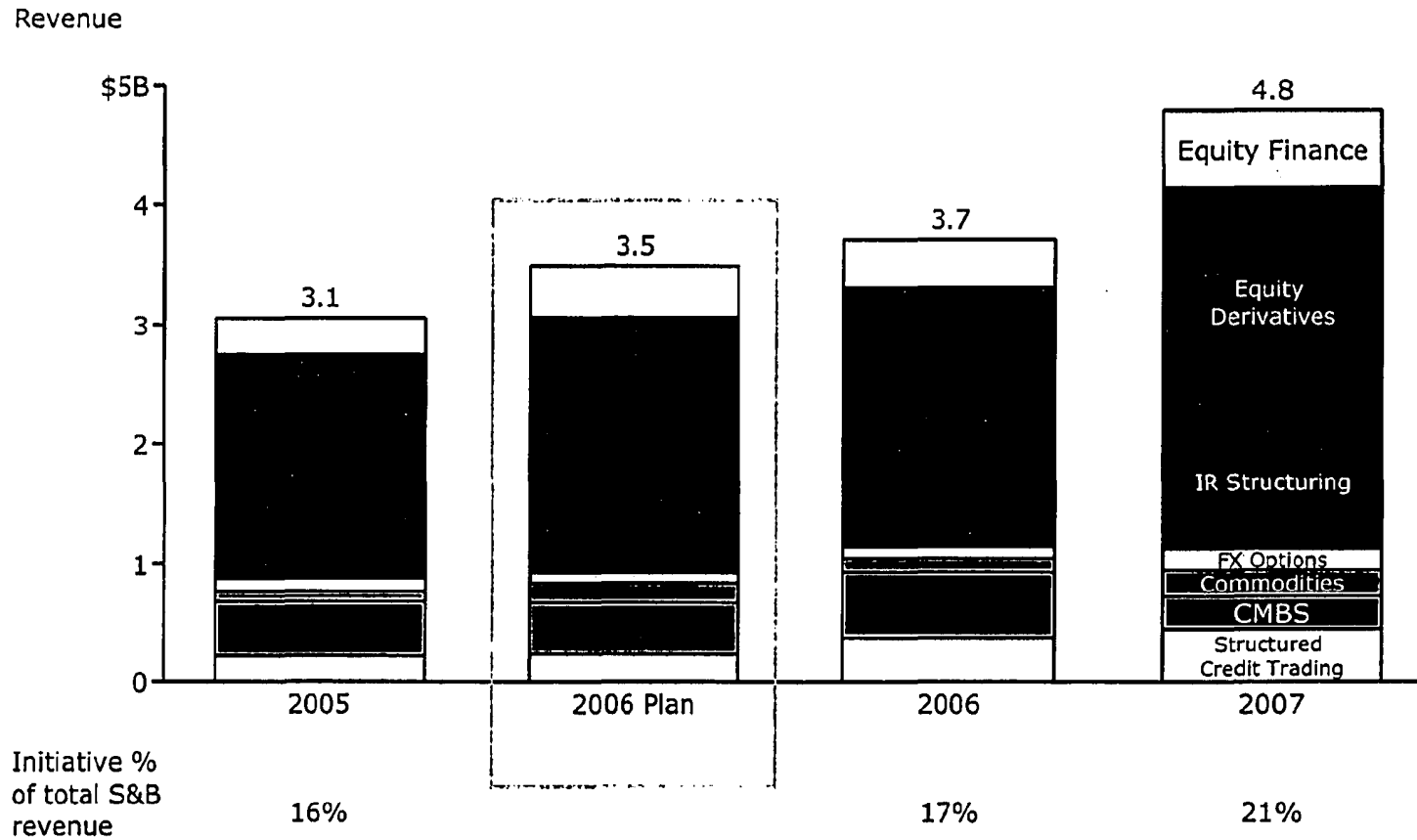


# Instituting internal balance sheet charges

Balance Sheet Charges



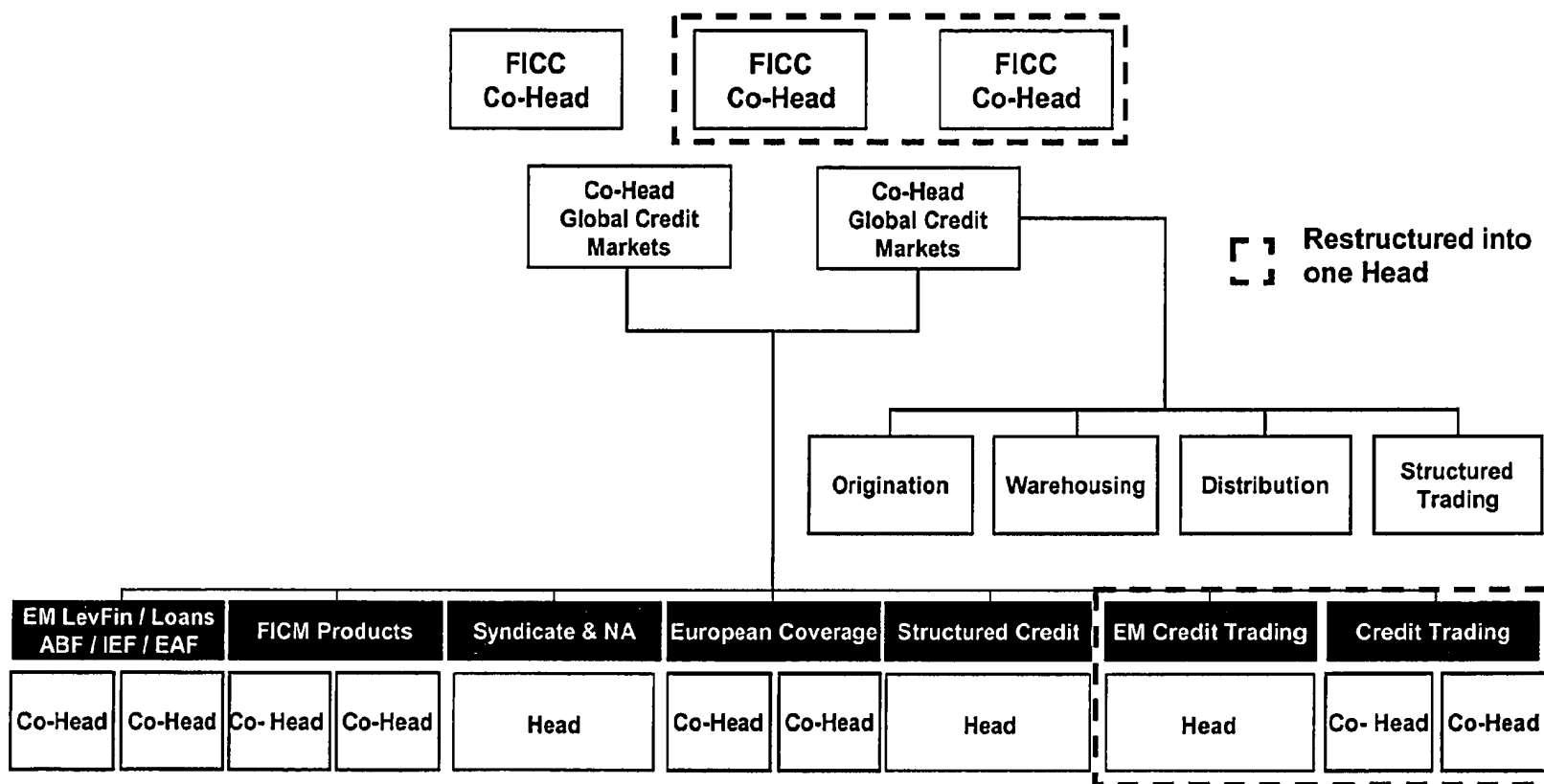
# Accelerating business mix diversification



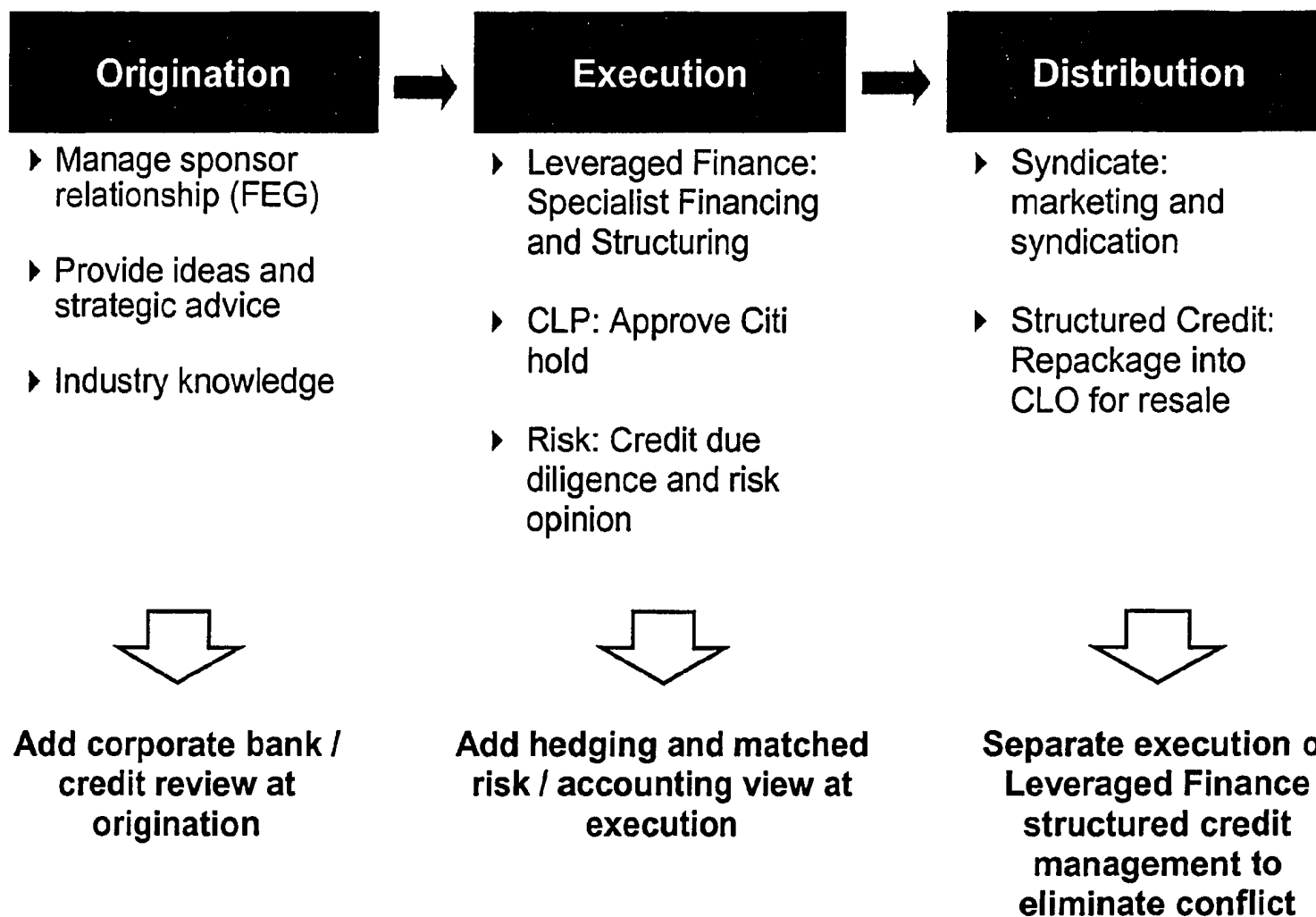




# Organization of Leveraged Finance products



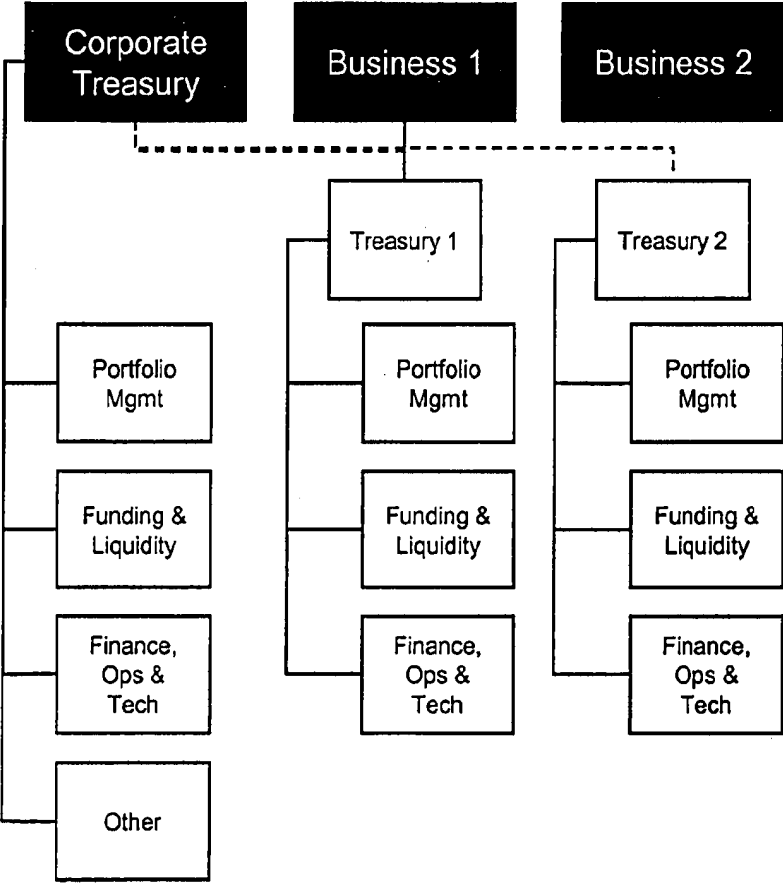
# Citi Leveraged Finance reorganization



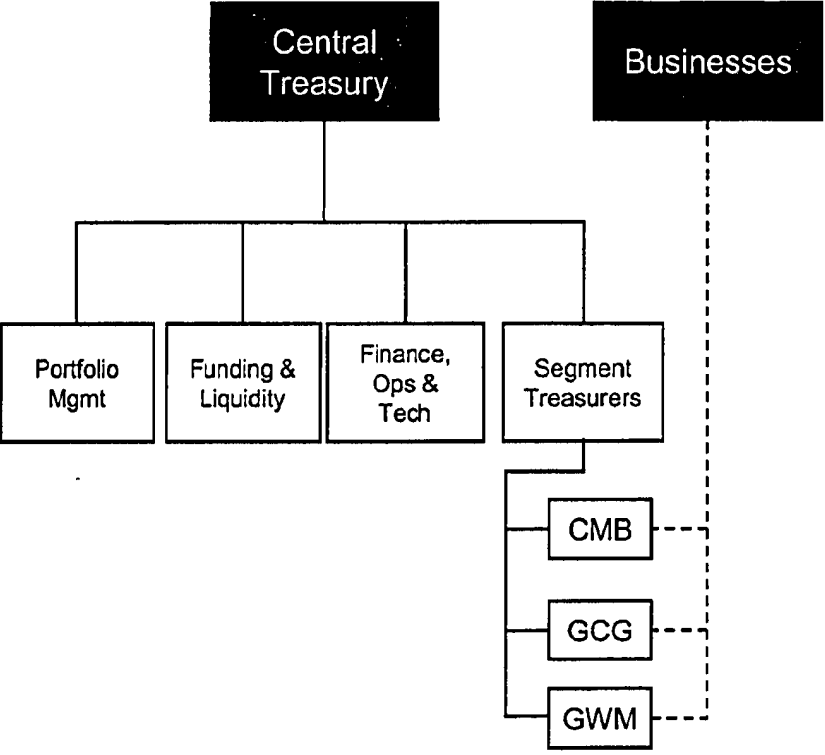


# Treasury organization

## Current



## Future





## ***Lessons learned and actions taken***

<b>Lessons learned</b>	<b>Actions we have taken</b>	<b>Actions in progress</b>
<b>1. Reduce businesses' balance sheet dependency</b>	<ul style="list-style-type: none"><li>▶ Renegotiated terms &amp; pricing in Leveraged Finance</li><li>▶ Instituted new pricing grid for all loans</li></ul>	<ul style="list-style-type: none"><li>▶ Instituting balance sheet charge</li><li>▶ Accelerating business mix diversification</li><li>▶ Shifting Structured Credit focus to Trading</li></ul>
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# Agenda

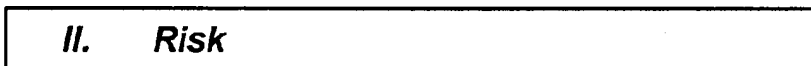
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## **I. What happened to Citi and competitors?**

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## **II. Why did this happen and what are we going to do going forward?**

- I. CMB*
- II. Risk*
- III. SIVs*





## ***Lessons learned***

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1. Reduce businesses' balance sheet dependency
2. Strengthen checks and balances in place in integrated business
3. Enforce balance sheet limits
4. **Aggregate risk more effectively across Citi**
5. **Enhance independent risk management practices in light of increasingly complex structures**
6. **Re-establish balance between management judgment and methodology in loan loss reserve process**



## **Lessons learned / Actions steps**

---

### **Lesson learned**

- ▶ Aggregate risk more effectively across Citi

### **Action steps**

**Reinstitute the ‘Windows on Risk’ concept → Establish a “Risk Threats and Issues” Process**

- ▶ Discuss significant Risk Threats and Issues at the monthly Business Heads meeting
  - Make the discussions decision- and action-oriented
- ▶ Present a summary of Risk Threats and Issues to the Citigroup Board of Directors Audit and Risk Committee
- ▶ Appoint a new Head of Risk Aggregation



## ***Lessons learned / Actions steps***

---

### **Lesson learned**

- ▶ Enhance independent risk management processes in light of increasingly complex structures.

### **Action steps**

#### **Alter the Independent Risk Management infrastructure supporting financing and liquidity offerings in trading and structuring activities**

- ▶ Appoint a senior Risk Manager to head Convergence Risk Management and lead the approval of structured financings in trading businesses
  - Review / develop, in partnership with the Business, underwriting standards
- ▶ Appoint a CMB Head of Market Risk Management; Orient the Independent Risk Management framework more by risk factor and less by trading desk
- ▶ Implement Independent Risk Management coverage (including measurement, reporting and approval) of contingent liquidity facilities





## ***Lessons learned / Actions steps***

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### **Lesson learned**

- ▶ Enhance independent risk management processes in light of increasingly complex structures.

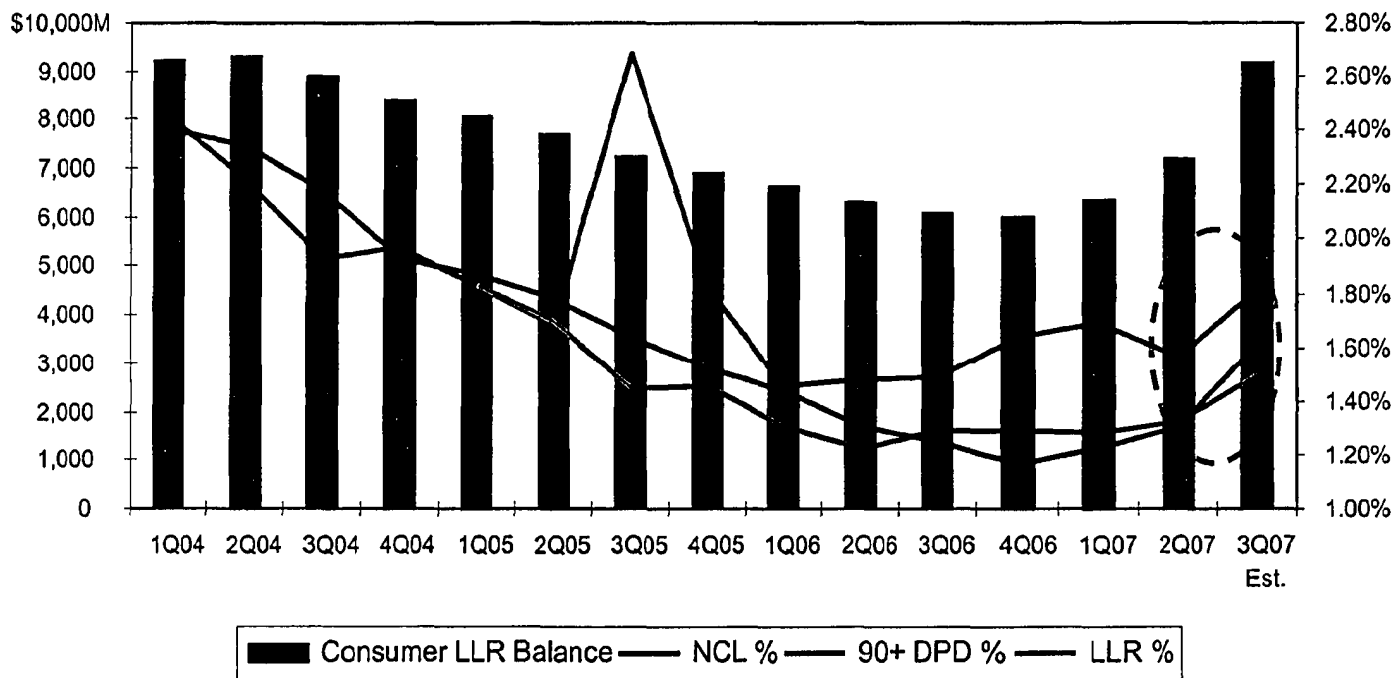
### **Action steps**

#### **Supplement Independent Risk Management measures and limits in Leveraged Finance and Credit Structuring activities**

- ▶ Move Leveraged Finance distribution exposure metrics away from 'outstandings-based' credit risk metrics to spread- and interest rate-based market risk metrics
  - Enhance stress testing of Leveraged Finance exposures; link stress testing to risk hedging and mitigation decisions
- ▶ Move credit structuring warehouse exposure (e.g., CDOs) away from spread- and interest rate-based market risk metrics to 'outstandings-based' credit risk metrics



# Total Consumer\* reserve trends



\* Disclosed 'Consumer', includes GCG & GWM.



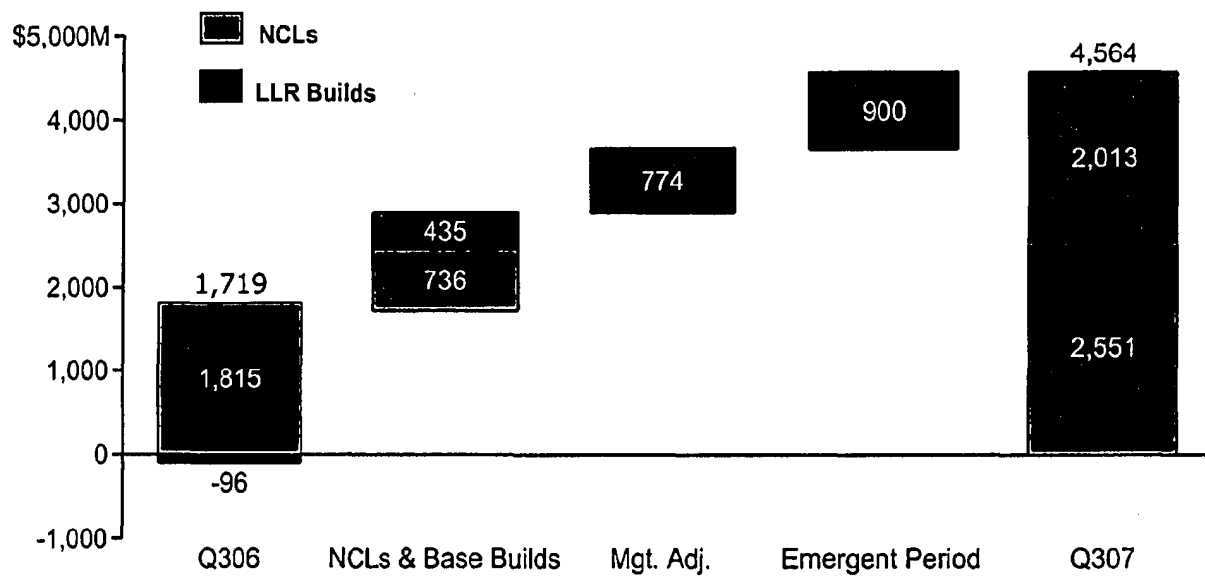
# GCG cost of credit: Q307 versus Q306

## Lesson learned

- ▶ Re-establish balance between management judgment and methodology in loan loss reserve process.

## Action steps

- ▶ 2Q07 / 3Q07 GCG reserve actions.





## Lessons learned

Lessons learned	Actions we have taken	Actions in progress
<b>4. Aggregate risk more effectively across Citi</b>		<ul style="list-style-type: none"><li>▶ Establishing a Risk Threats and Issues process</li><li>▶ Hiring a new Head of Risk Aggregation</li></ul>
<b>5. Enhance independent risk management practices in light of increasingly complex structures</b>		<ul style="list-style-type: none"><li>▶ Appointing a new Head of Convergence Risk</li><li>▶ Orienting market risk management more by risk factor</li><li>▶ Implementing risk coverage of contingent liquidity facilities</li><li>▶ Supplement Leveraged Finance and warehouse risk metrics</li></ul>
<b>6. Re-establish balance between management judgment and methodology in loan loss reserve process</b>	<ul style="list-style-type: none"><li>▶ Emergent loss builds (2Q07 &amp; 3Q07) and Management Adjustments (3Q07)</li></ul>	



# Agenda

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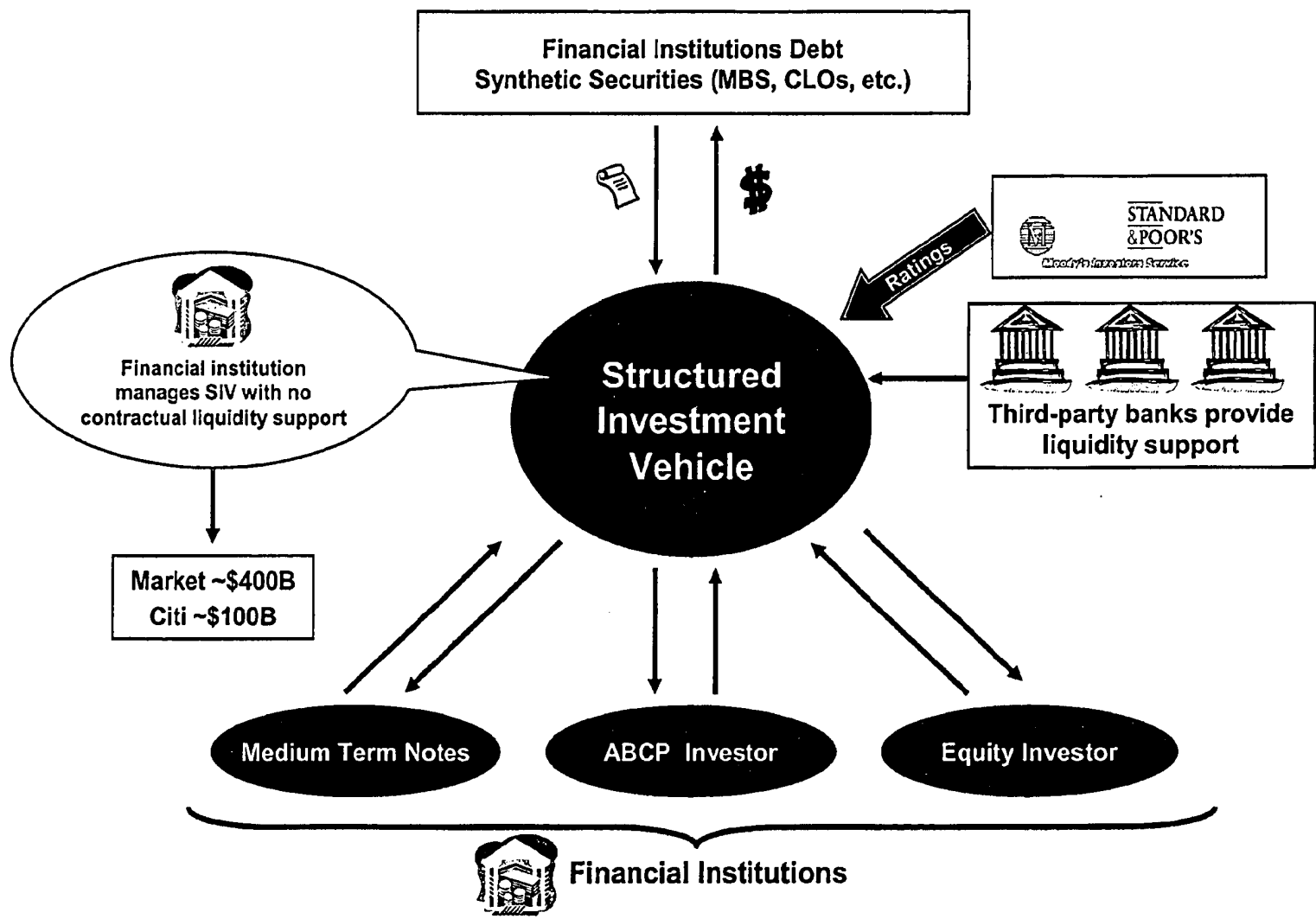
## I. What happened to Citi and Competitors?

- I. *Summary of where we took losses and how we compare to competitors*
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- III. *Equity Market response and commentary*

## ▶ Why did this happen and what are we going to do going forward?

- I. *CMB*
- II. *Risk*
- III. *SIVs*

# Structured Investment Vehicles at Citi





## ***Actions underway***

### **Short-term activities**

- ▶ **Continue to close funding gap through several funding measures, continued asset swaps and sales**
- ▶ **Fund through U.S. Treasury Solution**
- ▶ **Establish employee restructuring and retention plans**
- ▶ **Remain prepared for possible downgrade of equity investor notes**
  - Downgrade is not expected to affect senior notes
- ▶ **Work with equity investors to understand and manage risk and manage Citi relationship risk**

### **Long-term resolution**

- ▶ **Wind down vehicles in an orderly fashion**
- ▶ **Restructure vehicles capital formation**
- ▶ **Resize business**



## ***Lessons learned***

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