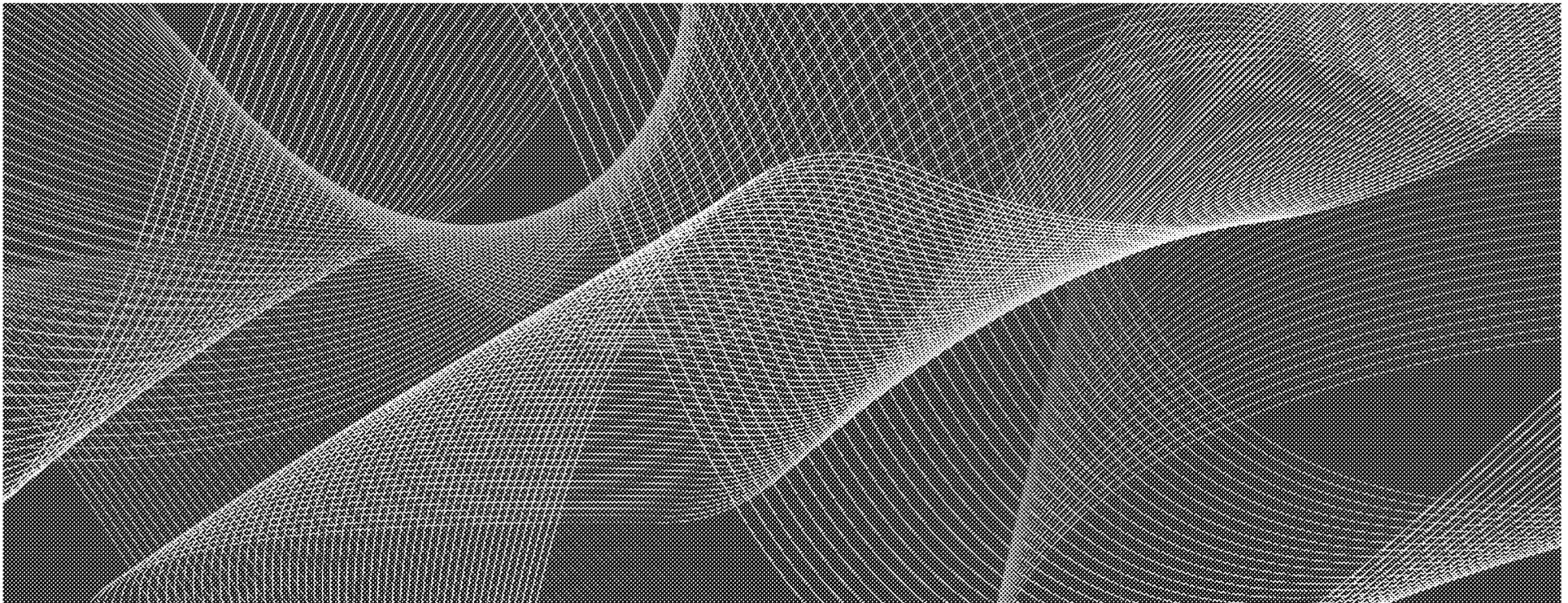


LEHMAN BROTHERS

September 11, 2008

# Funding Lehman Brothers



Confidential Presentation

# Agenda

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- ◆ Introduction To The Funding Framework
- ◆ How Balance Sheet Is Funded
- ◆ 2008 Q3 Liquidity Update
- ◆ Lessons From The Bear Stearns Liquidity Event

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# Introduction To The Funding Framework

# Overview Of The Funding Framework

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- ◆ Established in the aftermath of the liquidity event of 1998, the Lehman Brothers Funding Framework is based on a set of conservative principles guiding the funding of assets and mitigating our liquidity risk. It has been refined and augmented over the years as Lehman enters new businesses and as the liquidity risk of existing businesses changes.
- ◆ At its core are the following principles
  - Remain in a state of constant liquidity readiness
  - Do not rely on asset sales, increase in operational effectiveness or access to the unsecured debt market in a time of crisis
  - Be proactive with your key stakeholders before and during a liquidity event: regulators, creditors, trading counterparts and rating agencies
- ◆ It is structured around three dimensions
  - Liquidity pool to cover cash outflows over a 12 month horizon at the Holdings Company
  - Cash capital to cover funding of illiquid assets as well as contingent liquidity risk
  - Secured funding plan to mitigate the liquidity risk associated with short-term secured funding, including the prime broker business
- ◆ The conservativeness embedded in our Funding Framework (e.g., we fund boxed positions with cash capital, irrespective of the liquidity characteristics of the positions) is what distinguishes our Framework from that of our peers

# Cash Capital Uses

**All unsecured funding requirements in normal operating conditions require cash capital**

	<b>Examples</b>	<b>Cash Capital Principle</b>
<b>Illiquid positions</b>	<ul style="list-style-type: none"> <li>◆ Corporate and commercial whole loans</li> <li>◆ Long-term non-trading assets</li> <li>◆ Exchange margin &amp; other LT collateral</li> <li>◆ Fixed income, equity derivative and FX</li> </ul>	<ul style="list-style-type: none"> <li>◆ Funded 100% with cash capital</li> <li>◆ Determine whether a position is illiquid by looking at its fundability in a stress liquidity event</li> </ul>
<b>Secured haircuts on long inventory</b>	<ul style="list-style-type: none"> <li>◆ Reverse repo agreements and borrowed securities</li> <li>◆ Collateralized funding to counterparts</li> </ul>	<ul style="list-style-type: none"> <li>◆ Cash capital charge dependent on asset haircut</li> <li>◆ Haircuts conservatively estimated and regularly reviewed</li> <li>◆ If asset cannot be reliably funded on a secured basis in a liquidity event, the haircut assessed against the asset is 100%</li> </ul>
<b>Operational friction</b>	<ul style="list-style-type: none"> <li>◆ Inventory in the “box”</li> <li>◆ Cash at banks</li> </ul>	<ul style="list-style-type: none"> <li>◆ Unsecured financing assessed a “box” charge irrespective of liquidity characteristics</li> <li>◆ Cash at banks deemed not to be freely available to Holdings</li> </ul>
<b>Legal entity trapped</b>	<ul style="list-style-type: none"> <li>◆ Intercompany margin postings</li> <li>◆ Structural trapped liquidity</li> </ul>	<ul style="list-style-type: none"> <li>◆ Margin posted by other entities into regulated entities</li> <li>◆ Surplus cash due to regulatory capital requirements</li> </ul>
<b>Contingent liquidity</b>	<ul style="list-style-type: none"> <li>◆ CP backstops</li> <li>◆ High-yield revolvers</li> <li>◆ Secured lines of credit</li> </ul>	<ul style="list-style-type: none"> <li>◆ Prefund unfunded loans to mitigate contingent liquidity risk</li> <li>◆ Revolvers typically include covenants that prevent draws in distressed market events</li> </ul>
<b>“Match funding”</b>	<ul style="list-style-type: none"> <li>◆ Integrated transaction on asset and liability side</li> </ul>	<ul style="list-style-type: none"> <li>◆ Asset and liability have self-funding and self-liquidating characteristics</li> <li>◆ Structures reviewed on an individual basis</li> </ul>

# Cash Capital Sources

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	<b>Examples</b>	<b>Cash Capital Principle</b>
<b>Equity and long term debt</b>	<ul style="list-style-type: none"> <li>◆ Equity</li> <li>◆ Preferred and trust preferred</li> <li>◆ Long term debt with remaining term &gt; 1yr</li> </ul>	<ul style="list-style-type: none"> <li>◆ Manage debt refinancing risk by setting strict limits on the amount of long-term debt maturing within any quarterly (7.5%), half-year (12.0%) and full-year (20.0%) intervals. If debt limits are exceeded, do not recognize excess as reliable liquidity</li> <li>◆ Source diversity by limiting individual aggregate holdings to 5% of Lehman Brothers' total debt outstanding</li> </ul>
<b>Cash capital structures</b>	<ul style="list-style-type: none"> <li>◆ Evergreen structures</li> <li>◆ Non-extendible structures</li> <li>◆ Structured notes</li> </ul>	<ul style="list-style-type: none"> <li>◆ Extendible secured and unsecured structures with terms &gt; 1yr</li> <li>◆ Structures with completely reliable funding with remaining terms &gt;1 yr</li> </ul>
<b>Restricted entity cash capital</b>	<ul style="list-style-type: none"> <li>◆ Certificates of deposit</li> <li>◆ Schuldschein</li> </ul>	<ul style="list-style-type: none"> <li>◆ Liabilities with insurance wrap</li> </ul>
<b>Committed facilities</b>	<ul style="list-style-type: none"> <li>◆ Revolving credit facilities</li> </ul>	<ul style="list-style-type: none"> <li>◆ \$2.0 billion U.S. and \$2.5 billion European syndicated facilities</li> <li>◆ Routinely drawn and repaid for working capital purposes</li> <li>◆ Average utilization is 33-50%</li> <li>◆ Included as a source only when drawn</li> </ul>

 No reliance on hot money such as customer free credits or short term debt as a cash capital source

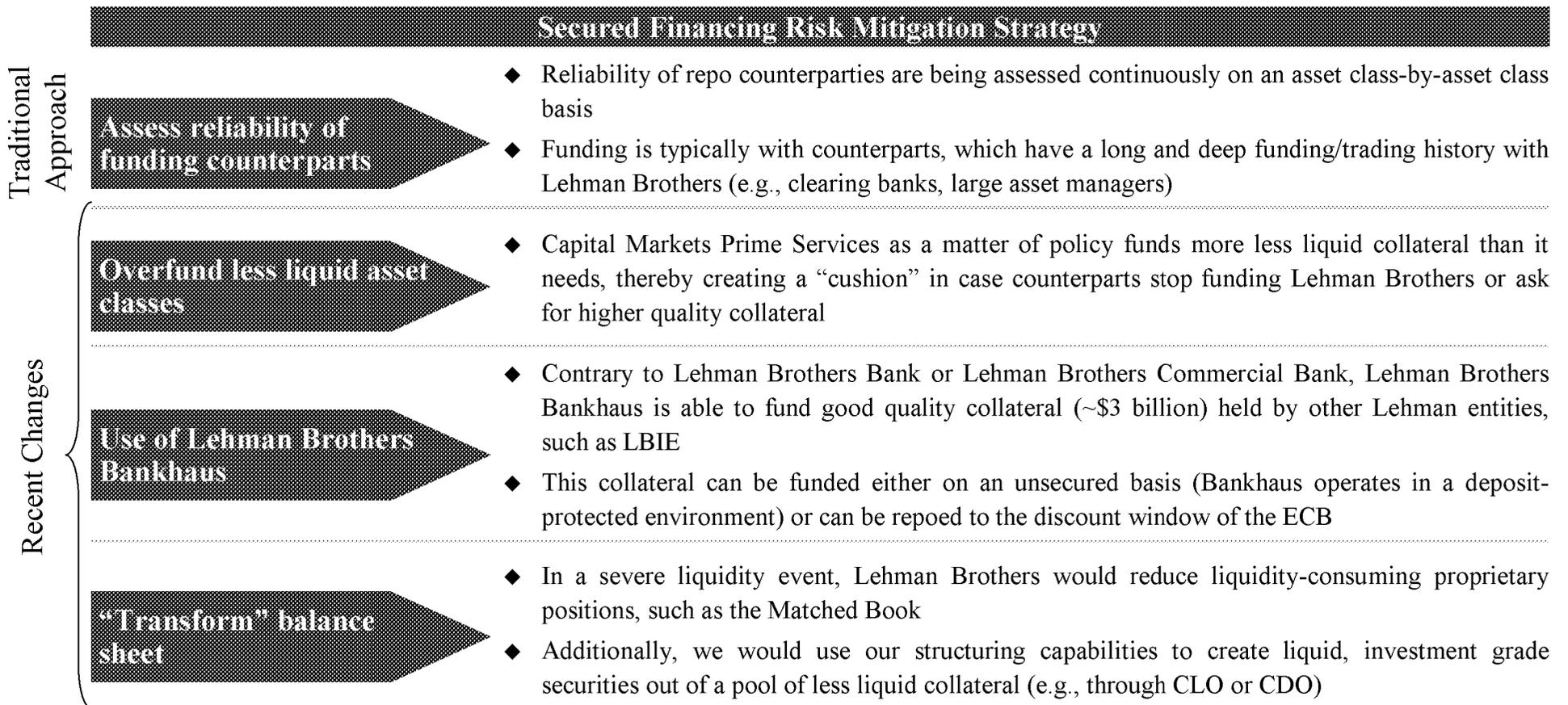
# Contingent Liquidity Risk

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- ◆ The Funding Framework is designed to set rules in order to protect the Firm in a stress liquidity environment. In a stress environment, whether Lehman-specific or market-wide, we plan for an increase in cash capital requirements due to
  - Unfunded loan commitments that get drawn due to a contraction in the market liquidity or due to a series of credit events impacting Lehman's banking clients
  - One-notch downgrade of Lehman's credit ratings
  
- ◆ The committed portfolio is very diversified across clients and industries, which is an effective liquidity risk mitigant
  
- ◆ To further mitigate the risk, the majority of loan commitments are booked in the bank entities
  - Best suited to handle commitment risk because of access to the insurance-protected deposit markets, the Central Bank and, in the case of the U.S. bank entities, FHLB borrowing windows
  - Additionally, the liquidity risk is prefunded with cash capital based on a quantitative assessment of the draw, which takes into account client ratings and industries
  
- ◆ A downgrade of Lehman's ratings would mechanically result in an increase in cash capital requirements – primarily due to additional cash collateralization of our derivatives receivables
  - The increase in funding requirements due to a one-notch downgrade is also funded with cash capital

# Managing Secured Liquidity Risk

- ◆ Short term secured financing represents the largest source of secured funding for the Firm. Consequently, one key objective is to ensure that these funding sources are maintained in adverse market environments
  - Do not want to put Lehman Brothers in a position where a lack of liquidity results in an impairment of the franchise
- ◆ Manage secured liquidity using a four-pronged risk mitigation strategy, which conservatively assumes: (a) no reliance on Holdings’ liquidity; (b) no reliance on customer collateral or free credits



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## How Balance Sheet Is Funded

## Funding 2008 Q3 Balance Sheet

	As of 8/31/08	Repo	Cash Capital	Banks <sup>(1)</sup>	Holdings' Liquidity Pool <sup>(2)</sup>	Other Funding Sources
Cash and Cash equivalents	8		2	2	4	
Government & Agencies	42	37	1	4		
Commercial Paper & Other Money Mkt Instruments	5	3	1	1		
Mortgage and Asset-Backed Securities						
Commercial Mortgages	24	2	9	13		
Residential Mortgages	17	2	3	12		
Other Asset Backed Securities	5	3	1	1		
FAS 140 Gross Up	9					9 <sup>(3)</sup>
Total Mortgage and Asset-Backed Securities	55	7	13	26		9
Real Estate Held For Sale	19		9			10 <sup>(4)</sup>
Corporate Debt and Other	42	6	25	7	4	
Corporate equities	43	14	21	3		5
Derivatives and other contractual agreements	46		33	1		12 <sup>(6)</sup>
Inventory Sub-total	252	67	103	42	4	36
Receivables	37		12			25 <sup>(7)</sup>
Property, equipment and leasehold improvements	4		4			
Other assets	9		7	3		
<b>TOTAL NET ASSETS</b>	<b>309</b>	<b>67</b>	<b>127</b>	<b>46</b>	<b>8</b>	<b>61</b>
Cash and securities segregated	12				-	12 <sup>(8)</sup>
Collateralized Lendings (Reverse repos & borrows)	273	93	3	1	34 <sup>(9)</sup>	142 <sup>(10)</sup>
Identified intangible assets and goodwill	4		4			
<b>TOTAL ASSETS</b>	<b>598</b>	<b>160</b>	<b>134</b>	<b>47</b>	<b>42</b>	<b>215</b>

1. Includes \$6 billion of cash capital (equity) provided by Holdings

2. Includes \$15 billion of cash capital surplus

3. Non-recourse financing on consolidated securitizations (securities sold to investors)

4. Non-recourse financing on consolidated real estate positions (third party financing)

5. Self-funded trades funded with short-term debt

6. Derivative payables (classified as short inventory)

7. Customer and other payables

8. Client cash (included in customer payables)

9. Primarily Government and Agency securities

10. Primarily Firm's short positions and FAS 140 Gross up (collateral swap)

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## 2008 Q3 Liquidity Update

# Overview

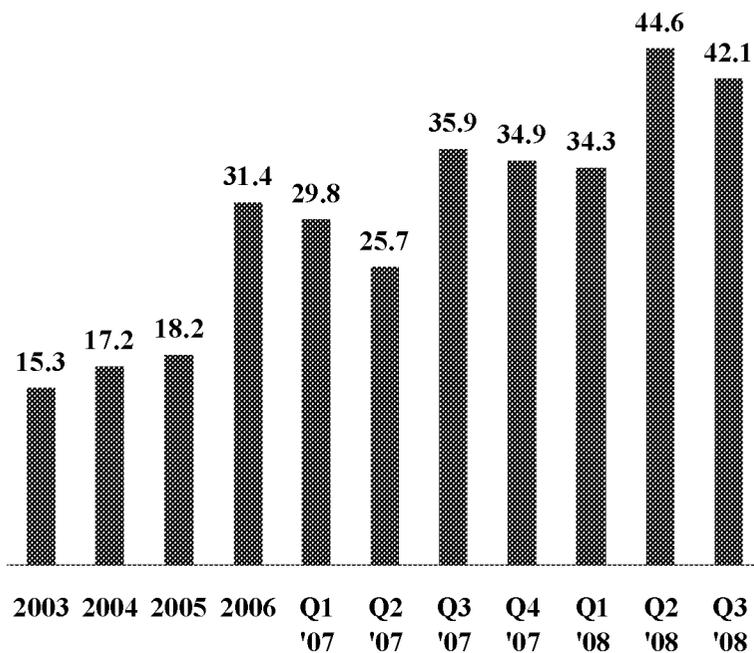
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- ◆ Despite a challenging market environment, Lehman Brothers was able to maintain the status quo broadly in terms of liquidity – primarily as a result of deleveraging its balance sheet (which was done for risk reasons)
- ◆ Holdings' liquidity pool, adjusted for the reduction in our CP program, essentially unchanged
- ◆ Cash capital surplus at Holdings projected to be unchanged
- ◆ Strength of the repo book as measured by average tenor and overfunding remained unchanged
- ◆ Lehman bank entities have been able to raise deposits thanks to their insurance protection. We expect to grow LBCB rapidly now that the “de novo” period has expired
- ◆ Looking forward, we face limited long-term debt refinancing risk: only \$19 billion of long-term debt is rolling into current portion over the next twelve months

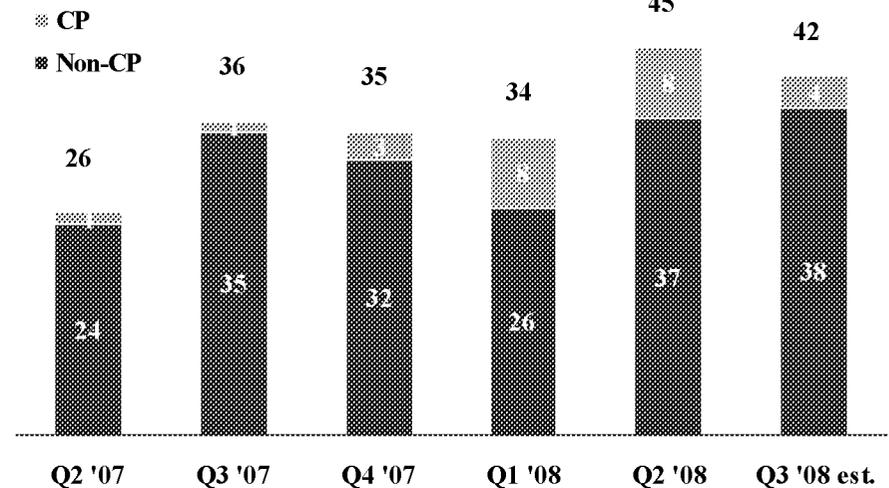
# Liquidity Pool

- ◆ We ended 2008 Q3 with a \$42 billion liquidity pool, down 6% sequentially and up 17% year over year.
- ◆ Adjusted for the size of our commercial paper program, liquidity pool was up \$1 billion sequentially and \$3 billion year over year.

Liquidity Pool (\$ Billions)



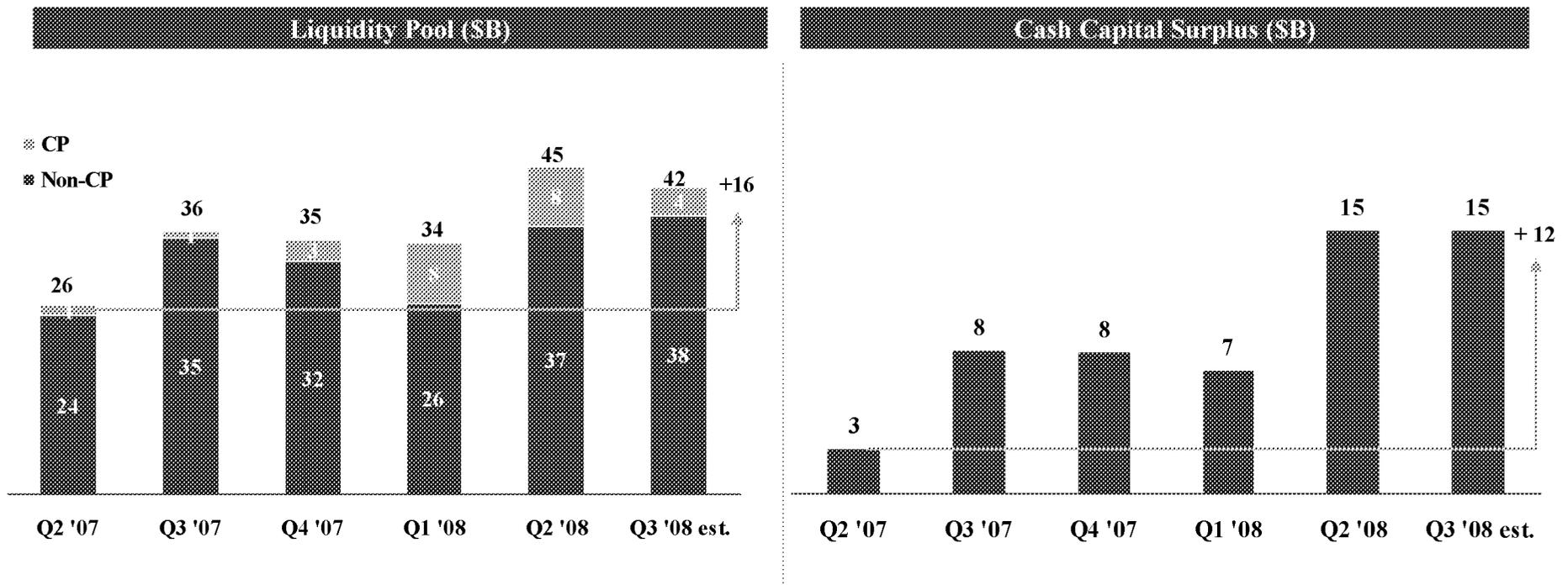
Liquidity Pool And CP (\$ Billions)



# Liquidity Pool and Cash Capital Surplus

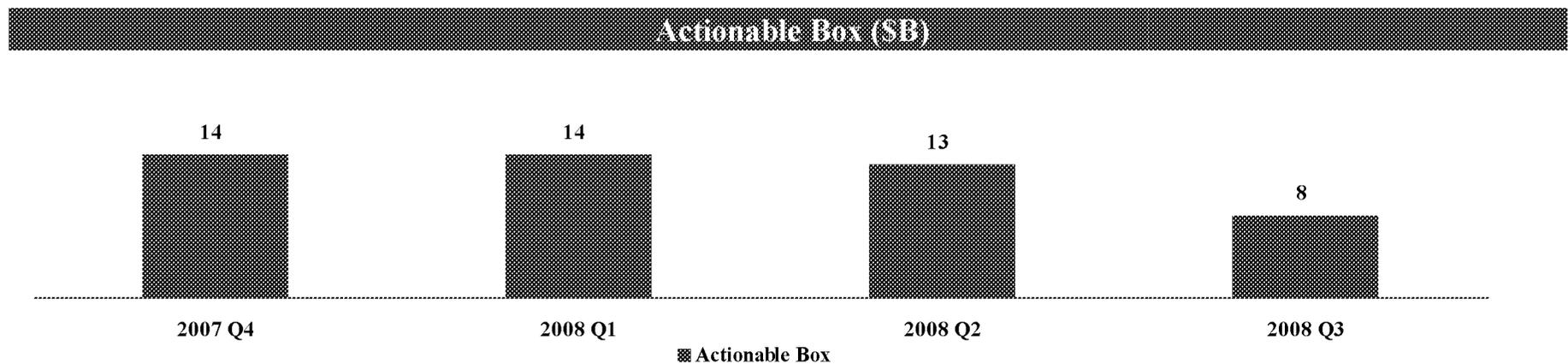
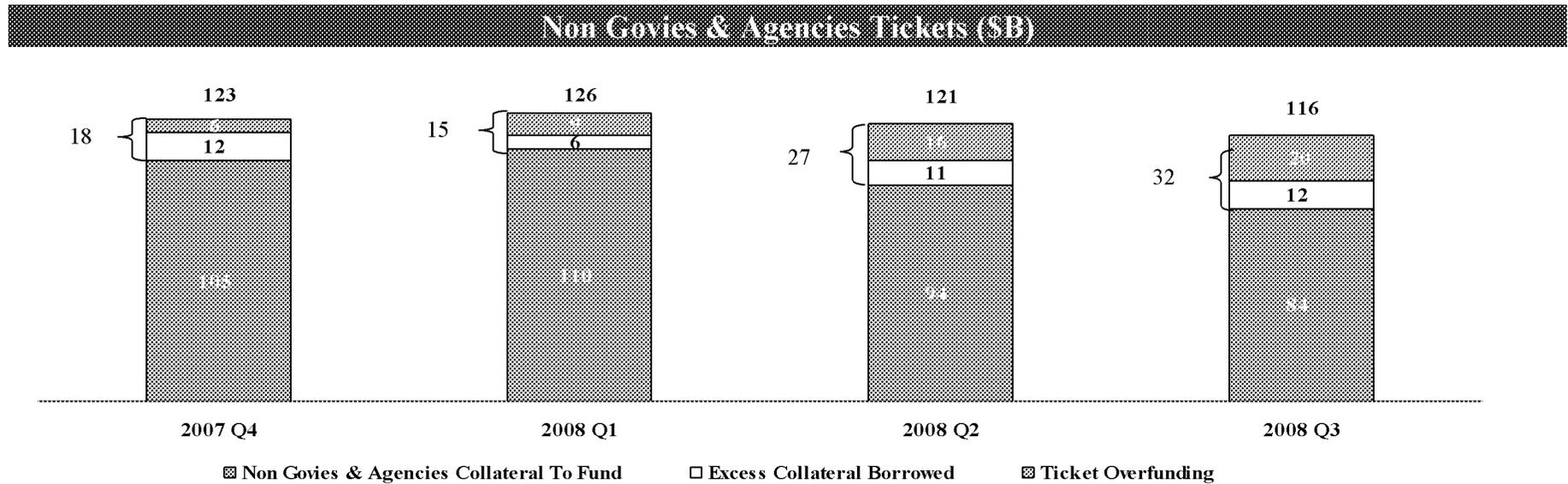
## We have a \$42B liquidity pool and \$15B cash capital surplus at Holdings

- ◆ Since Q3 '07 when the funding environment became more challenging, we have grown our liquidity pool by \$16 billion and our cash capital surplus by \$12 billion
  - Our liquidity pool at the end of Q3 stood at \$42 billion, roughly unchanged after adjusting for the reduction in our commercial paper outstanding. The ratio of liquidity pool to unsecured debt projected to mature within the twelve months stands at 157%.
  - Cash capital surplus stood at \$15 billion at the end of Q3 '08 – unchanged sequentially



# Reduction in Funding Requirements

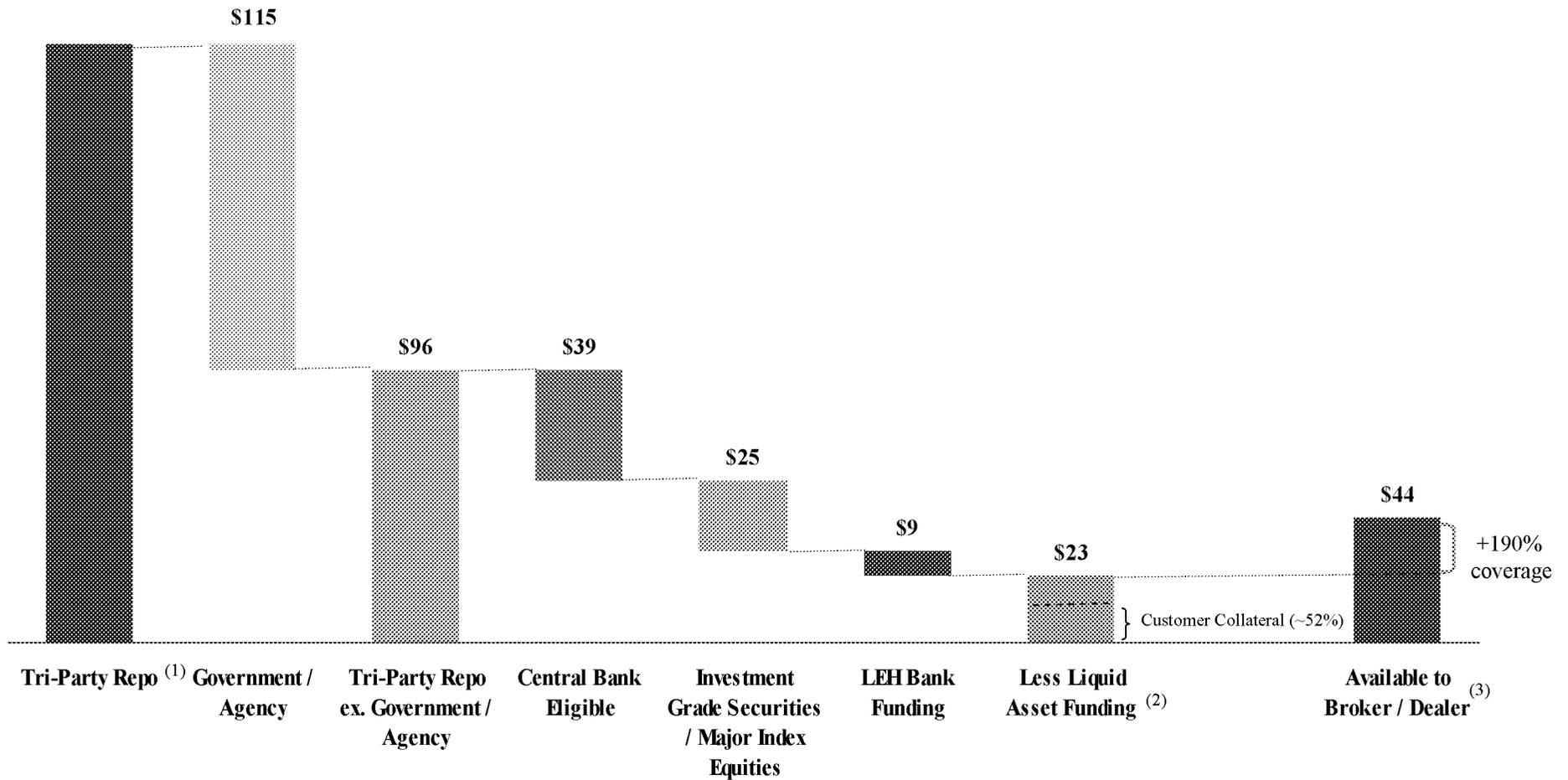
Deleveraging of balance sheet during Q3 drove reduction in secured funding requirements. Overfunding increased by \$5bn to \$32 billion.



# Liquidity Risk Of Secured Funding

Liquidity risk of our secured funding continues to be well contained.

Tri-Party Repo Book Collateral - August 31, 2008 (\$B)



Q2 '08:	\$188B	\$83B	\$105B	\$40B	\$25B	\$8B	\$32B	\$50B (+150% coverage)
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1. Gross exposure  
 2. Average tenor of repos funding less liquid assets stood at 41 days as of August 29, 2008. 28% of the \$23B is >1 month duration  
 3. Includes Holdings' Liquidity Pool (\$42.1B), LBI's (\$0.9B), LBJ's (\$0.1B), and Bankhaus's (\$1.2B). Excludes \$1B of customer free credits in LBIE

# Strength Of Secured Funding

Secured funding has remained very resilient during Q3 with significant overfunding of our tri-party repo book and term funding for non-central bank eligible collateral of greater than one month.

## Non-Traditional <sup>1</sup> Repo Book Metrics

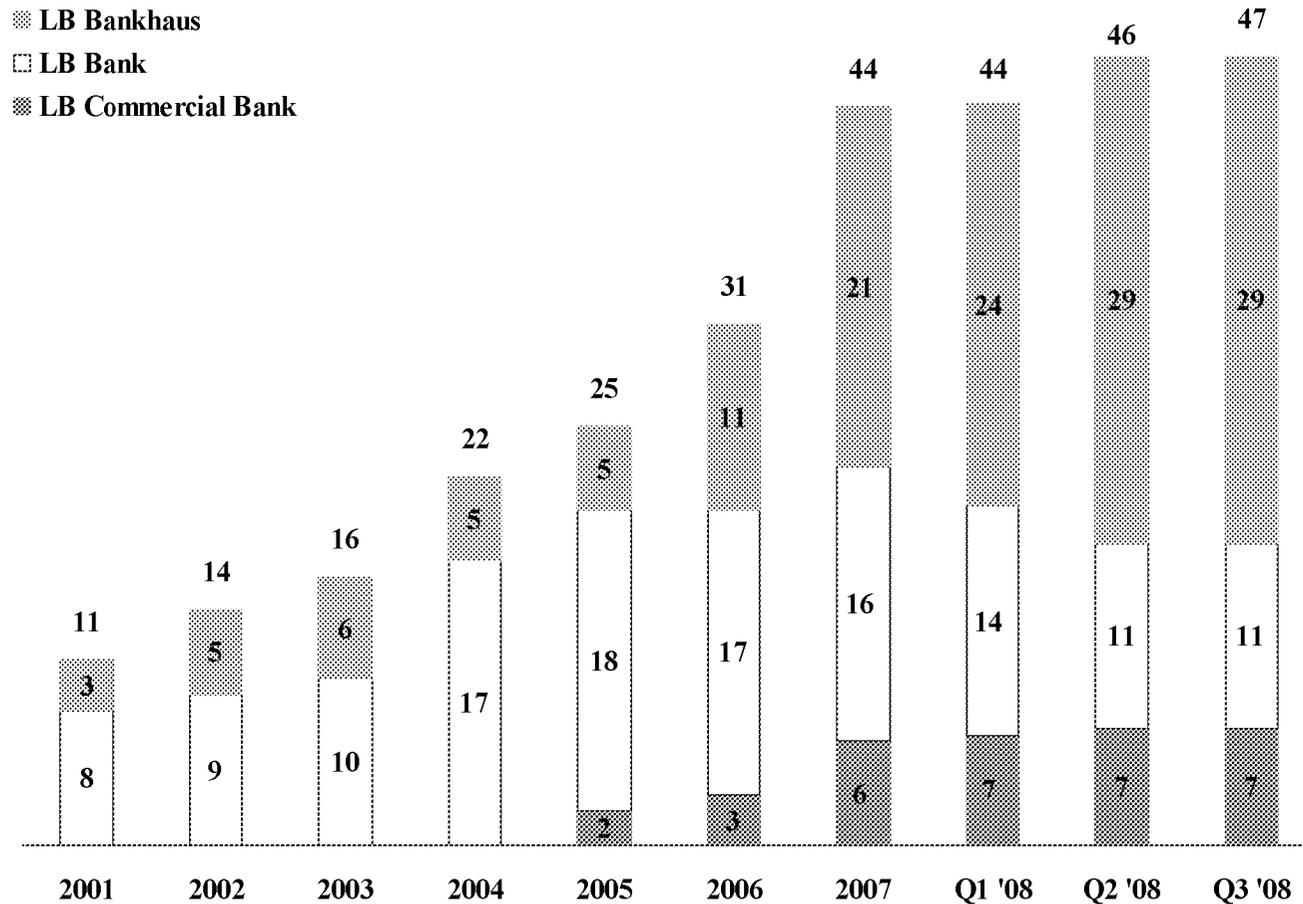
<b>Triparty Repo Book</b>	<b>Q407</b>	<b>Q108</b>	<b>Q208</b>	<b>Q308</b>	<b>Q3 vs Q2 Change</b>
Total Overfunding (\$B)	\$18	\$15	\$27	\$32	18%
Tickets	\$6	\$9	\$16	\$20	26%
Excess Collateral	\$12	\$6	\$11	\$12	9%
Average tenor (days)	27	22	35	33	-2
Central bank eligible	-	-	30	25	-5
Non Central bank eligible	-	-	38	38	0
% Overnight	52%	56%	42%	46%	4%
% <=1 week	13%	18%	12%	8%	-4%
% > 1 week	<u>35%</u>	<u>25%</u>	<u>46%</u>	<u>46%</u>	0%
% > 1 month	100%	100%	100%	100%	-1%

1. Non-traditional repo book excludes Governments, Treasuries, Government/MBS Agencies

# Assets Funded In Bank Entities

We project rapid growth of assets funded in Lehman Brothers Commercial Bank (Utah-based Industrial Bank) in Q4 after the expiration of its “de novo” period. Bank funding has proved to be very resilient in this market environment.

Lehman Banking Entities – Total Assets (\$Billions)



# Long-Term Debt Maturity Schedule

- ◆ We finish the quarter with a projected \$115 billion of long-term debt with an average life of 8 years.
  - Current portion of long-term debt (\$21.9 bn) included in our short-term debt disclosure
- ◆ We manage the debt refinancing risk by setting strict limits on the amount of long-term debt maturing within any quarterly (7.5%), half-year (12.0%) and full-year (20.0%) intervals
  - As of August 31, these limits are \$8.6 billion, \$13.8 billion and \$22.9 billion, respectively
  - If we were to operate above these levels, we would not include the excess amount as a source of cash capital
- ◆ We completed our 2008 refinancing plan at the end of Q2 and we do not need to issue more long-term debt for the rest of the year (although we may do so for opportunistic reasons)
- ◆ \$19 billion of long-term debt is projected to roll into current portion in the next twelve months

## Long-Term Debt Maturity Schedule (\$ Bn)

	<u>Qtr</u>	<u>Total</u>	
11/30/2009	2009 Q4	5,849	} \$19.20 bn
2/28/2010	2010 Q1	3,304	
5/31/2010	2010 Q2	6,402	
8/31/2010	2010 Q3	3,645	
11/30/2010	2010 Q4	2,058	
2/28/2011	2011 Q1	3,056	
5/31/2011	2011 Q2	6,249	
8/31/2011	2011 Q3	3,192	
11/30/2011	2011 Q4	1,459	
2/29/2012	2012 Q1	4,657	
5/31/2012	2012 Q2	3,519	
8/31/2012	2012 Q3	5,767	
11/30/2012	2012 Q4	3,312	
2/28/2013	2013 Q1	5,136	
5/31/2013	2013 Q2	1,852	
8/31/2013	2013 Q3	2,617	
11/30/2013	2013 Q4	1,091	
2/28/2014	2014 Q1	4,189	
5/31/2014	2014 Q2	1,498	
8/31/2014	2014 Q3	1,439	
<b>Total</b>		70,290	
<b>Mature after 2014Q3</b>		44,349	
<b>Grand Total</b>		114,639	

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## **Lessons From The Bear Stearns Liquidity Event**

# Lehman Brothers Is Different From Bear Stearns

- ◆ Lehman Brothers had stronger liquidity metrics at the end of Q2 '08 than Bear Stearns at the end of Q1 '08
  - 30% greater balance sheet but 3 times its equity, post the \$6 billion June '08 capital raise
  - Bear Stearns' short-term debt stood at 1.5x its liquidity pool vs. 0.8x for Lehman Brothers
- ◆ Bear Stearns had very few unencumbered assets
  - Half of BSC STD was secured, which might have exacerbated the liquidity crisis in view of the exceptionally low amounts of unencumbered assets
- ◆ Bear Stearns was very reliant on customer free credit balances; if it lost these, it would need to quickly create substantial secured funding capacity for equities at a time when lenders would be likely to pull away
- ◆ Bear Stearns had almost no margin for error in terms of liquidity management. A reduction in short-term debt or in customer free credit balances would leave it in a precarious liquidity position

## Key Liquidity Metrics (\$ Billions)

	2008 Q1 Bear Stearns	2008 Q2 Lehman Brothers	LEH / BSC
Net balance sheet	254	328	1.3x
Tangible equity <sup>(1)</sup>	11	33	3.0x
Net leverage <sup>(1)</sup>	22.6x	9.9x	0.4x
Liquidity pool	17	45	2.6x
STD excluding current portion	16	14	0.9x
Current portion of LTD <sup>(2)</sup>	10	21	2.1x
Total short-term debt	26	35	1.4x
Short-term debt / Liquidity pool	1.5x	0.8x	0.5x
Unencumbered assets (unregulated chain)	5	61	13.5x
Total unencumbered assets	14	148	10.3x
Free credit balances	43	8	0.2x

1. Tangible equity and net leverage for LEH are proforma for the June 2008 \$6 billion capital raise

2. BSC current portion of LTD was not reported for 2008 Q1. Data is estimated based on 2007 Q4 data

# Liquidity Event Of Week Of March 17 (I) – Broker Dealers

- ◆ During the week of March 17, Lehman Brothers was under significant funding pressure, which we were able to mitigate through a series of actions
  - Secured Funding
    - We started the week with \$13 billion of repo overfunding in harder to fund asset classes
    - We also funded an additional \$4.5 billion of collateral through Bankhaus where we have been building excess capacity since the summer of 2007
  - Prime Broker
    - We absorbed the loss in prime broker cash balances by relying on the LBIE “excess” liquidity pool (which, because it was “trapped,” was not included in the LBHI liquidity pool) and by recalculating the lock up on a daily basis
    - LBI experienced a very modest (\$75 million) loss of liquidity in prime broker cash balances that week.
- ◆ As a result, the loss of liquidity experienced by the broker dealers was absorbed within the broker dealers and did not require the use of the Holding Company liquidity pool

## Key Liquidity Inflows/Outflows During Week Of March 17 (\$ Billions)

	Secured Funding			Prime Broker (LBIE)		
	Decreases	Increases/ Upgrades	Balance	Decreases	Increases	Balance
17-Mar	(8.7)	3.2	(5.5)	(5.0)	0.8	(4.2)
18-Mar	(3.8)	-	(3.8)	(2.7)	2.8	0.1
19-Mar	(3.0)	5.1	2.1	(1.2)	1.5	0.3
20-Mar	-	-	-	(1.2)	1.1	(0.1)
21-Mar	Market Closed (Good Friday)					
<b>Total</b>	<b>(15.5)</b>	<b>8.3</b>	<b>(7.2)</b>	<b>(10.1)</b>	<b>6.2</b>	<b>(3.8)</b>
Mitigation strategy						
Overfunding repo book	2.7			LBIE excess liquidity pool	3.8	
Bankhaus funding	4.5					
Total	7.2					
"Dry powder" : Overfunding repo book	~10					

# Liquidity Event Of Week Of March 17 (II) – Holdings

- ◆ Holdings also faced funding pressure – primarily due to the reduction of its commercial paper program and, to a lesser extent, the posting of derivative margins
- ◆ We mitigated this loss of liquidity by:
  - Increasing operational effectiveness: we executed on a plan developed over the weekend to reduce the amount of trapped cash in LBI and increase funding in Bankhaus. These actions generated approximately \$3 billion on March 17
  - Launching the Freedom CLO and executing a previously planned European securitization
  - Drawing on our European committed facility. We draw on our committed facilities 33-50% of the time to avoid any signaling effect

## Key Liquidity Inflows/Outflows During Week Of March 17 (\$ Billions)

	Commercial Paper				Derivatives	Operational	Other	LBHI Liquidity Pool			Other Details
	Maturities	Issued	Balance	O/S (EOD)	in/(out)flows	effectiveness		SOD	EOD	Change	
17-Mar	(6.2)	2.2	(4.0)	7.9	(0.0)	3.0	0.0	31.1	30.1	(1.0)	
18-Mar	(3.2)	3.7	0.5	8.4	(1.2)	(0.4)	(0.1)	30.1	28.9	(1.2)	
19-Mar	(3.5)	3.3	(0.2)	8.2	0.9	-	0.7	28.9	30.3	1.4	European mortgage securitization
20-Mar	(3.1)	3.4	0.3	8.5	(1.0)	-	3.1	30.3	32.7	2.4	Draw on committed facility, Freedom
21-Mar					Market Closed (Good Friday)						
<b>Total</b>	<b>(16.0)</b>	<b>12.6</b>	<b>(3.4)</b>		<b>(1.3)</b>	<b>2.6</b>	<b>3.7</b>	<b>31.1</b>	<b>32.7</b>	<b>1.6</b>	