

# Liquidity Exchange Facility

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January 10, 2011

## Context

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- Designed to address suggestion in Treasury White Paper – *Financial Regulatory Reform: A New Foundation (2009)*
- Industry acceptance conditioned on:
  - No floating NAV requirement (implicit or explicit)
  - Reasonable cost factoring in current yield environment
  - Facility being a factor when regulators consider bank liquidity and capital requirements for banks that sponsor money market funds

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# Overview of Structure

# Liquidity Facility — Purpose

- An industry-sponsored solution to enhance liquidity for all prime MMFs during times of unusual market stress
  - Available to - and required participation by - all Rule 2a-7 prime MMFs
  - In the event of a secondary market liquidity stress, the LF buys securities from MMFs at amortized cost (to avoid affecting fund NAV)

# Liquidity Facility — Purpose

- Liquidity pooling characteristic of the facility provides a source of liquidity beyond Rule 2a-7 requirements
  - Serves as backup: fees and access policies would encourage funds to use available market liquidity before utilizing the LF
  - Not a credit support: facility will employ strict investment guidelines on the assets it will accept including credit quality, duration and issuer concentrations
  - Support market: alternative to forced selling, which reduces effects of money market fund liquidity needs on money markets

# Liquidity Facility — Purpose

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- Provides additional liquidity to the industry in a financial market crisis by borrowing from the discount window
  - LF will be a state-chartered member bank or trust company eligible to access the discount window in the ordinary course under Regulation A

# How the LF Provides Liquidity

## Normal Mode

- Commitment fee and time deposit proceeds invested in short duration Treasury and agency securities
- Returns paid to third party investors on time deposits

## Liquidity Mode

- Funds unable to meet redemptions exchange high quality, short-term CP/similar assets for cash
- LF management minimizes credit risk by selecting securities
- Fund pays access fee

## Window Access

- Same as Liquidity Mode, except securities exchanged at discount window for cash
- Access based on normal discount window policies

# Liquidity Facility Capitalization

Equity		Debt
Initial equity	Retained earnings	LF time deposits
<ul style="list-style-type: none"> <li>• From fund sponsors</li> <li>• Approximately \$350 million; minimum contribution of \$250,000</li> <li>• Contribution roughly in proportion to current prime MMF AUM, up to 4.9% to avoid sponsor being deemed to “control” under banking regulations</li> <li>• Will have process to manage evolving ownerships (periodic true-ups to reflect changes in AUM)</li> </ul>	<ul style="list-style-type: none"> <li>• From the prime funds, derived from ongoing ‘commitment fees’ of 3 bps charged on fund AUM</li> <li>• Builds equity of LF to achieve and maintain desired leverage ratio* in liquidity/discount window mode</li> <li>• Accrues for benefit of current and future MMF shareholders, <u>not</u> equity holders/sponsors</li> <li>• Board will have ability to increase fee as yields increase</li> </ul>	<ul style="list-style-type: none"> <li>• Purchased by third parties</li> <li>• Market rate expected to approximately equal 3-month bank CD rate</li> <li>• Issuance at year 3 and capped at 1.3% MMF AUM to ensure sufficient interest coverage</li> <li>• Laddered issuances</li> <li>• Will be 2a-7 eligible securities</li> </ul>

\* Target leverage ratio = 5%



# Initial Equity per Complex, Assuming a 4.9% Equity Cap

Equity contributions are allocated by current prime MMF assets share and a balanced minimum contribution. Ownership capped at 4.9% of \$350M in equity capital to prevent any issue of BHC 'controlling ownership' of LF

Fund complex	# of complexes	Total prime AUM (\$B)	Prime market share	LF equity share	Average LF equity as bps of AUM	Average LF equity (\$M)
A		312.5	18.9%	4.9%	0.55	17.15
B		146.6	8.9%	4.9%	1.17	17.15
C		118.8	7.2%	4.9%	1.44	17.15
D		116.9	7.1%	4.9%	1.47	17.15
E		110.5	6.7%	4.9%	1.55	17.15
F		109.0	6.6%	4.9%	1.57	17.15
G		91.5	5.6%	4.9%	1.87	17.15
H		80.3	4.9%	4.9%	2.14	17.15
I		45.0	2.7%	4.7%	3.68	16.56
J		40.9	2.5%	4.3%	3.68	15.06
<b>All other fund complexes by AUM</b>						
> \$10B	16	341.1	20.7%	35.8%	3.68	8.36
\$3-10B	16	78.5	4.8%	8.2%	3.68	1.80
\$1-3B	27	40.7	2.5%	4.4%	3.76	0.67
< \$1B	41	16.9	1.0%	3.3%	6.85	0.26

Note: Minimum equity contributions by complex AUM: > \$10B = \$2M; \$3-10B = \$1M; \$1-3B = \$500K; < \$1B = \$250K; Figures are calculated based upon total prime money market funds AUM of \$1,650 billion as of 08/31/10.

Source: ICI data as of 08/31/10

# Bank Details

## Charter

- LF will be a New York state-chartered member bank or trust company eligible to access the discount window in the normal course under Regulation A

## Insurance status

- LF will issue time deposits that are eligible for FDIC insurance and will seek an exemption from the New York State Banking Department to allow it to be uninsured
- LF is not required to be FDIC insured to access discount window

## Membership in Federal Reserve

- LF will be a member of the Federal Reserve
- As a member, LF will be required to purchase stock from the Federal Reserve Bank of New York equal to 6% of LF's paid-up capital stock and surplus, paying one-half of the subscription (3%) at the time LF becomes a member

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# Industry Economics

# Prime MMF Assets are Down and Fee Waivers are Up

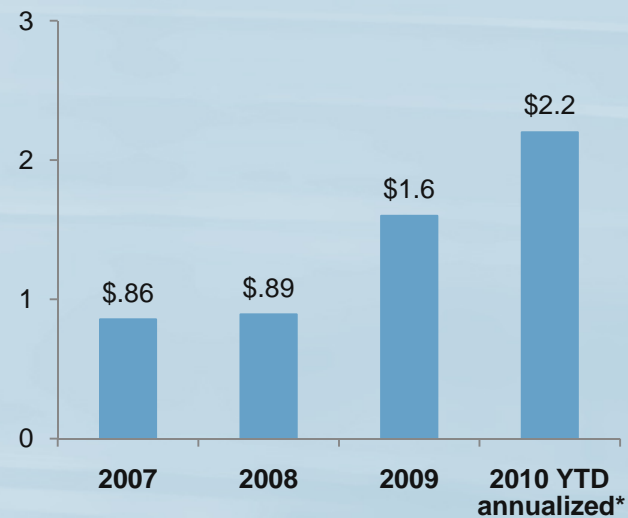
Prime money market fund assets have declined 20%

Sponsors of prime MMFs have substantially increased fee waivers

Prime MMF Industry AUM, trillions of dollars (end of August)



Fees waived, billions of dollars



% of prime MMF share classes waiving fees

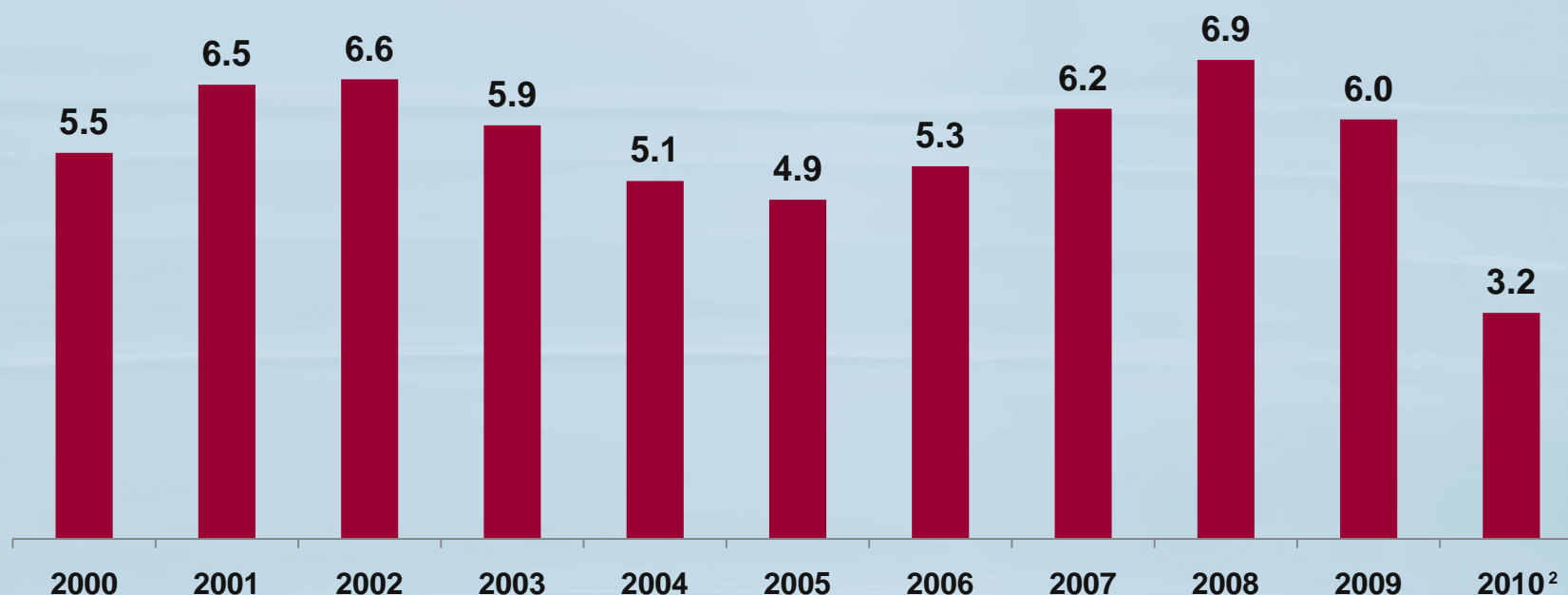
2007	64%	2008	58%	2009	89%	2010	90%
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Sources: ICI, iMoneyNet

\* Reflects fees waived through October 2010, annualized

# Net Prime Money Market Fund Fees are at Their Lowest Level in a Decade<sup>1</sup>

*Billions of dollars*



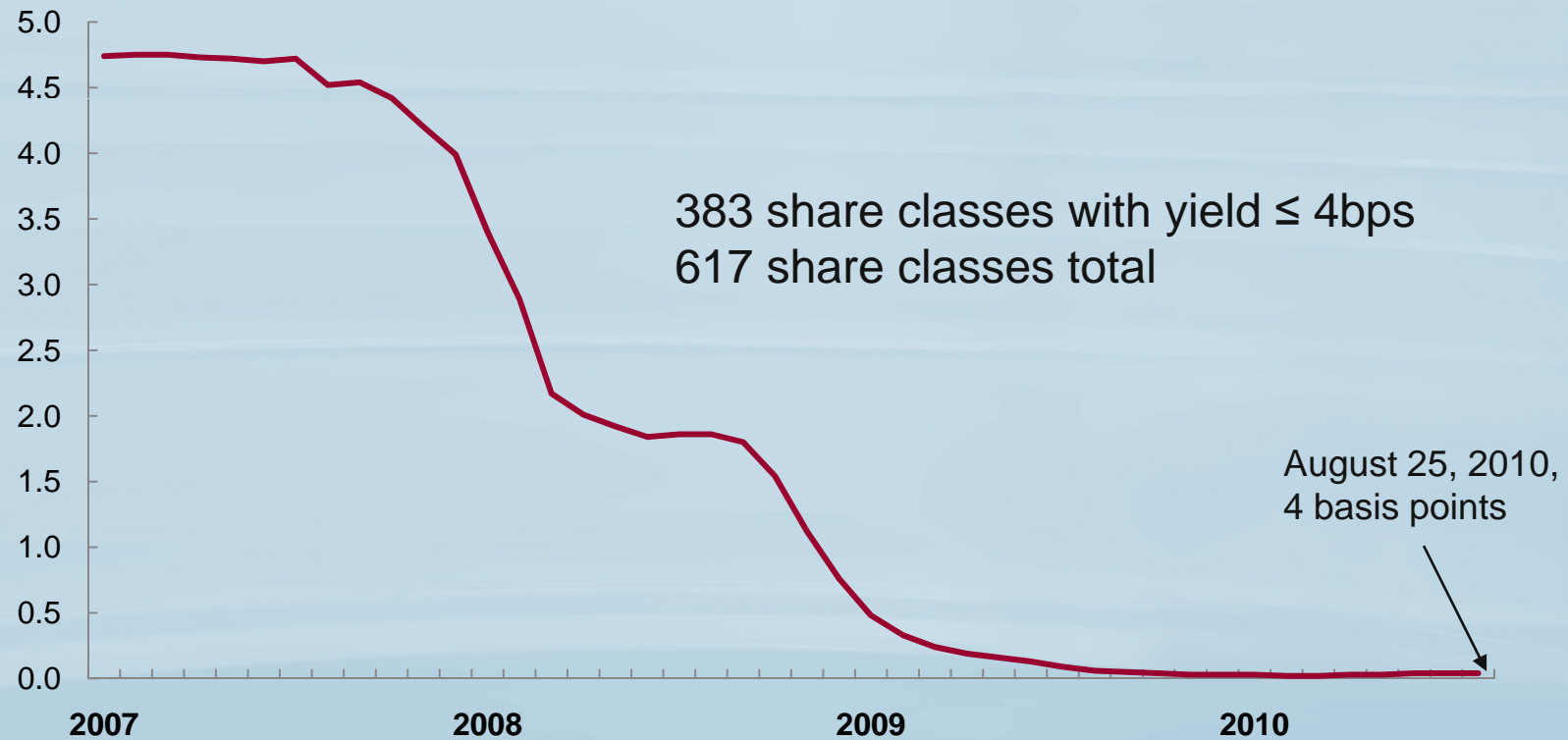
<sup>1</sup>Total fees and expenses paid are calculated by multiplying the net expense ratio of a fund share class by share class assets, accumulated over each year. Fees and expenses paid include 12b-1 fees, administrative fees, transfer agent fees, advisory fees, and miscellaneous other expenses and are net of waivers.

<sup>2</sup>Data through October 2010.

Sources: Investment Company Institute and iMoneyNet

# Average Prime Money Market Fund Yield\*

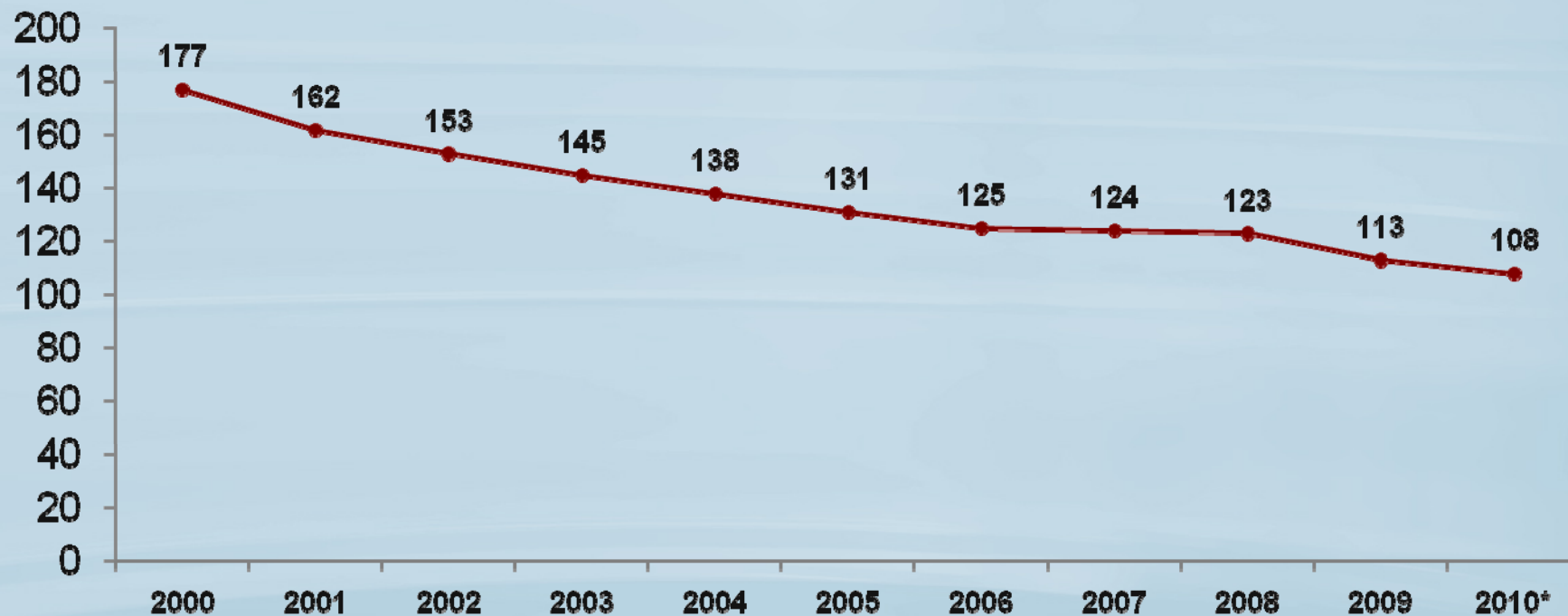
Percent, 2007 – 2010



\* Simple average  
Source: iMoneyNet.com

# Fund Sponsors Continue to Exit the Prime Money Market Fund Business

## Prime MMF Sponsors



\* As of 8/31/2010

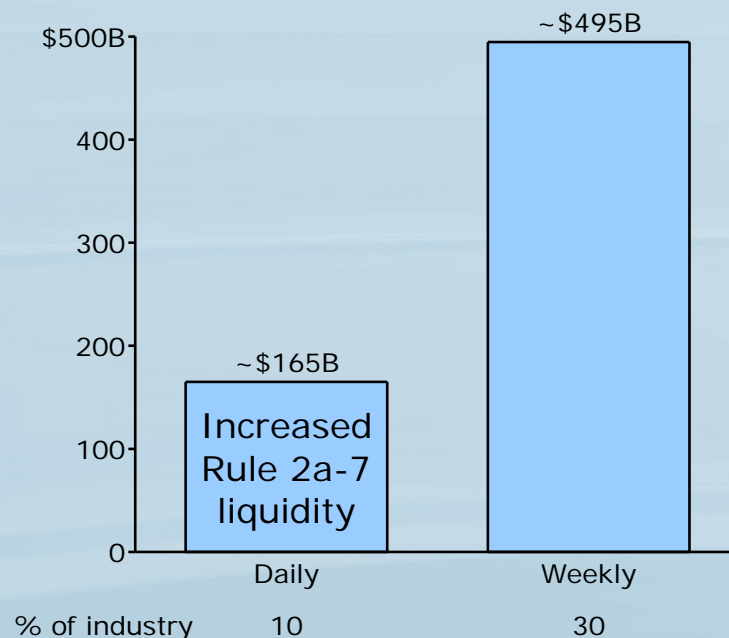
Sources: Investment Company Institute

# New SEC Rules Provide Greater Protections Against Potential Redemption Pressure

## New minimum liquidity requirements

## Other key changes

Rule 2a-7 liquidity



- Shorter average maturity limits and new limits on lower quality (2<sup>nd</sup> tier) securities
- Required “know your investor” and stress testing ensure that portfolio management is better matched to potentials risks
- New ability to suspend redemptions if a fund is about to break \$1 NAV to allow orderly portfolio liquidation
- Expanded ability of affiliates to purchase distressed assets from funds to protect from losses
- More information available to regulators and investors

Source: ICI data for total prime money market funds AUM of \$1.650B as of 8/31/10; figures based on new SEC rules for 10% daily and 30% weekly liquidity requirements

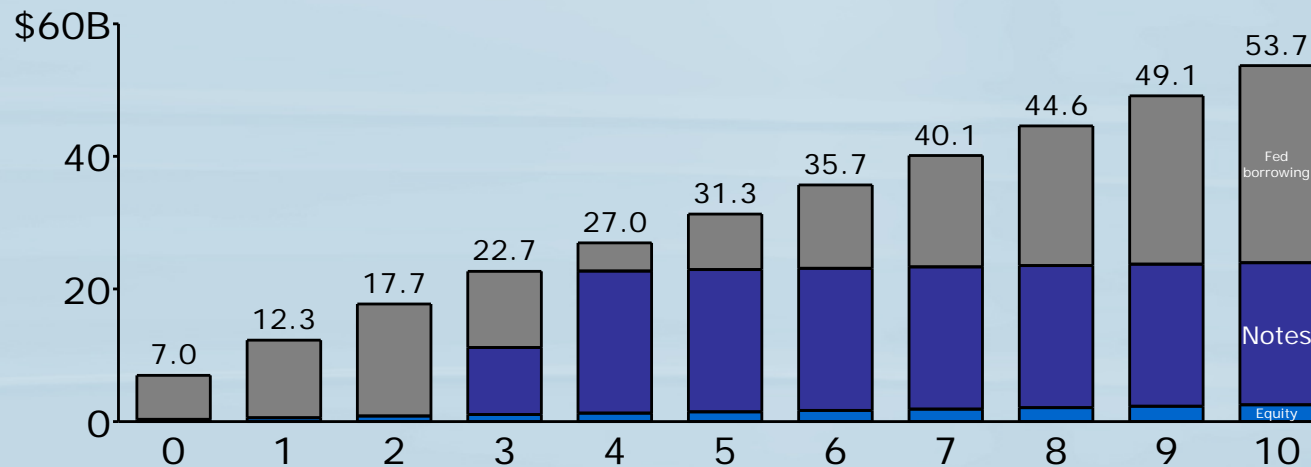


# Capacity

- Under current design, the early-year capacity of the LF will be limited, restricted by the ability of sponsors to provide initial capital and capital accumulation from commitment fees
  - As designed, the \$350M in equity from sponsors would allow for \$7 billion in starting capacity (assumes 5% leverage)
  - As yields improve, Board could raise commitment fee allowing capacity to increase more rapidly than as modeled here
  - At the time of issuance of time deposits (in year 3), capacity increases to approximately \$23 billion

# LF Capacity Increases Quickly as (After-Tax) Commitment Fees Accumulate

LF exchange capacity, year end



Source of funds (\$B)

Year

Fed borrowing	6.65	11.70	16.91	11.50	4.26	8.39	12.57	16.79	21.06	25.37	29.72	} Liquidity mode only
Notes	0.00	0.00	0.00	10.10	21.44	21.44	21.44	21.44	21.44	21.44	21.44	
Equity	0.35	0.62	0.89	1.14	1.35	1.57	1.79	2.01	2.24	2.46	2.69	
Net change in equity		0.27	0.27	0.25	0.22	0.22	0.22	0.22	0.22	0.23	0.23	

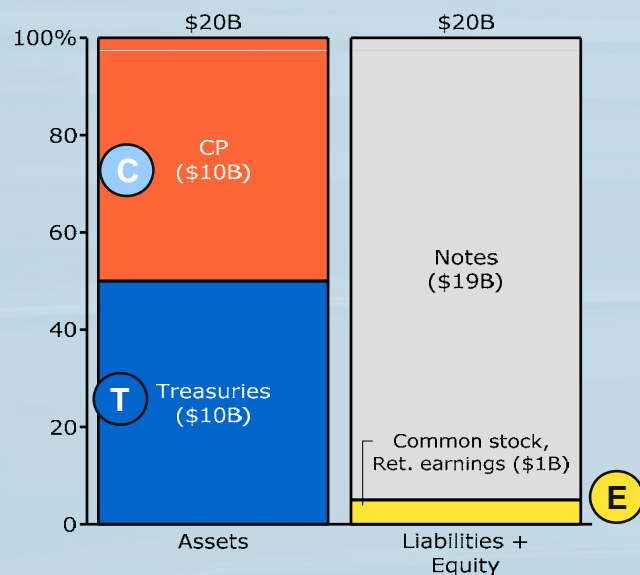
Note: Assumes 3 bps commitment fee, \$1.65T in industry assets, cost of notes is 50 bps above normal mode assets yield.

Source: LF financial model

# Tier 1 Leverage Ratio is Expected to be Binding Capitalization Constraint

**ILLUSTRATIVE**

**Balance sheet (Illustrative):  
The LF entering Liquidity Mode  
(50% capacity)**



**All three capital ratios must be above minimums to be “well-capitalized”  
(assumes 20% risk-weighting, show at ‘full capacity’)**

Ratio	Calculation	LF at full capacity for \$1B equity	Well-capitalized minimum
Tier 1 Leverage =	$\frac{\text{E } \$1B}{\text{T} + \text{C}} = \frac{\$1B}{\$0B + \$20B} = 5\%$	=5%	>=5%
Tier 1+2 Risk-weighted capital =	$\frac{\text{E } \$1B}{0\% * \text{T} + 20\% * \text{C}} = \frac{\$1B}{0\% * \$10B + 20\% * \$20B} = 25\%$	=25%	>=10%
Tier 1 Risk-weighted capital =	$\frac{\text{E } \$1B}{0\% * \text{T} + 20\% * \text{C}} = \frac{\$1B}{0\% * \$10B + 20\% * \$20B} = 25\%$	=25%	>=6%

Note: Excludes from assets non-security assets of the LF and excludes LF holdings in Federal Reserve Bank Stock (approx 6% of equity capital).

Source: Federal Reserve, FDIC

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# Risk Management and Controls

# Risk Management is Accomplished through Stringent Asset Policies

## Credit risk

- LF will only accept first-tier securities that are not on credit watch
- LF commercial credit portfolio will be well diversified due to issuer concentration limit
- LF will conduct independent credit analysis to maintain a non-public list of acceptable issuers whose securities the LF will purchase from MMFs
- LF retains the ultimate credit decision when lifting out securities from funds seeking liquidity; funds are provided no guarantee the LF will accept any given security

## Liquidity risk

- Duration and WAM of the CP portfolio that the LF will hold is limited
- LF time deposits' duration and issuance is closely matched to the CP portfolio to minimize liquidity risk; it is further minimized by the LF's ability to access the discount window
- Normal mode asset investments are matched to LF time deposits' liabilities

## Interest rate risk

- LF will only hold very short-duration securities and will closely match asset and liability durations to minimize price and interest rate risks

## Operational, Compliance, and Reputational risks

- LF will utilize banking industry best practices for risk management, compliance and operational risk auditing
- The charter scope for the liabilities, assets and processes of the bank are highly constrained relative to a typical large commercial bank – increasing ease and effectiveness of oversight by bank management, the Board, and regulators

# LF Portfolio Policies

	Normal operations	Liquidity operations
<b>Permissible assets</b>	<ul style="list-style-type: none"> <li>• <b>Type:</b> US Treasury and agency bills</li> <li>• <b>Duration:</b> 75% of portfolio will have maturity of 90 days or less; 25% of portfolio will have maturity between 91 and maximum of 180 days               <ul style="list-style-type: none"> <li>▪ Maximum WAM of 90 days</li> <li>▪ LF ALCO policy will be to minimize duration gap between LF time deposits and investments, while maintaining significant short duration asset liquidity</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Type:</b> CP, ABCP, bank notes, banker's acceptance</li> <li>• <b>Duration:</b> No less than 75% of accepted securities will have maturity of 45 days or less; up to 25% of accepted securities may have maturity up to 60 days               <ul style="list-style-type: none"> <li>▪ Maximum WAM of 49 days</li> </ul> </li> <li>• <b>Minimum credit quality:</b> first-tier rating; not on credit watch; LF personnel will also conduct independent credit analysis</li> <li>• <b>Scope:</b> LF has discretion to accept any security that meets its duration and quality requirements</li> </ul>
<b>Asset concentration limits</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• Up to approximately 2% of LF assets may be securities of single issuer</li> <li>• LF Board may, at its discretion, increase issuer concentration cap</li> </ul>
<b>Means of acquiring assets</b>	<ul style="list-style-type: none"> <li>• Can purchase Treasuries and agencies on open market</li> </ul>	<ul style="list-style-type: none"> <li>• Member fund sells securities to the LF, from which access fee is deducted</li> <li>• Sale takes place at amortized cost</li> </ul>

# Concentration Limits Balance LF Asset Quality and Ability to Assist Funds

## Portfolio concentration limits

- To achieve default risk diversification, the LF will seek to avoid a single issuer concentration greater than approximately 2% of LF assets
- LF Board may, at its discretion, raise that issuer concentration cap
- These concentration limits do not apply to LF Treasury and agency securities holdings

## Rationale

- Issuer limits ensure sufficient equity capitalization to absorb potential defaults on issuers
- Issuer concentration is more conservative than Rule 2a-7 limits for money market funds and will require the LF to be well-diversified across issuers



# Access Policies

## Access requirements

- MMF cannot have broken the buck, nor break the buck as the result of liquidity exchange with the LF
- Fund has demonstrated a liquidity need as evidenced by significant redemption requests
- Fund must possess securities that the LF will buy and present its whole portfolio for review

## Fee

- Funds accessing the LF shall pay the greater of a) an annualized fee of 25 basis points and b) the current Fed window secondary discount rate less the amortized cost yield to maturity from the proceeds of sale of securities to the LF
  - We assume that in times of severe liquidity need, the discount window rate would be accommodative and the 25 bps fee would be in effect for liquidity exchanges, but
  - Given the need for the LF to borrow at the discount window to fulfill its mission and the inability of the LF to afford a situation in which the CP yield is lower than cost of borrowing at discount window, the second condition is required
  - LF Board retains right to alter access fee amount due to changing market conditions



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# Stress Testing

# LF Faces Four Potential Draws on Capital; Unlikely They Would Exceed 5% of Assets in a Worst-Case Scenario

	Credit	FMV-AC differential	Interest rate	Fed window penalty rate
<b>Description:</b>	<ul style="list-style-type: none"> <li>Default losses on CP and/or CDs</li> </ul>	<ul style="list-style-type: none"> <li>Temporary loss due to difference in fair market value (FMV) of purchased securities and funds' amortized cost (AC)</li> </ul>	<ul style="list-style-type: none"> <li>Realized losses given rise of interest rates (when entering and/or during liquidity mode)</li> </ul>	<ul style="list-style-type: none"> <li>Difference between Fed penalty rate and yield earned on CP</li> </ul>
<b>Mitigants:</b>	<ul style="list-style-type: none"> <li>Asset policies:               <ul style="list-style-type: none"> <li>tight concentration limit for single issuer</li> <li>first-tier rating, not on credit watch</li> <li>Independent credit analysis and discretion on which CP to accept</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>LF designed to purchase at AC, but CP with &gt;1% differential unlikely to pass LF's credit hurdles. Implies issuer credit problems</li> </ul>	<ul style="list-style-type: none"> <li>Short durations (90 days WAM in normal; 49 in liquidity mode)</li> </ul>	<ul style="list-style-type: none"> <li>Access fee (greater of 25 bps annualized and Fed discount rate, less CP yield spread)</li> </ul>
<b>Worst case impact on capital (as % of assets):</b>	~2-3%	~1% (reverses in <60 days)	~0.9%	With access fee scaled (as currently planned): none  If access fee not scaled: <0.1%
<b>Key assumptions:</b>	2-3 defaults with 50% recovery	Would imply CP yields increase 800bps or >2X historic highs	Would require largest increase in Treasury yields seen in the last 30 years (~350bps)	Assumes largest spread between penalty and CP rates ever seen

# Default History for CP Issuers and Recovery Rates

<u>Defaulted Issuers - Corporates</u>	<u>A1/P1 *</u>	<u>Sector</u>	<u>Default date</u>	<u>Recovery</u>
Manville Corp	Y	Corp	08/26/1982	100%
Wang Laboratories Inc	N	Corp	08/16/1989	100%
UNI Storebrand	N	Corp	08/25/1992	100%
Columbia Gas System	N	Corp	06/20/1991	100%
Metallgesellschaft	N	Corp	01/07/1994	100%
Gruppo Simec	N	Corp	03/15/1995	100%
Gruppo Situr	N	Corp	03/15/1995	100%
Southern California Edison	Y	Corp	01/16/2001	100%
Pacific Gas & Electric Company	Y	Corp	01/17/2001	100%

## **Average Recovery Rate**

<u>Defaulted Issuers – Financials</u>		<u>Sector</u>	<u>Default date</u>	<u>Recovery</u>
Wang Credit Corp	N	Fin	08/16/1989	100%
Colorado-Ute Financial Services Corp	Y	Fin	08/17/1989	99%
Lomas Financial Corp	N	Fin	09/01/1989	75%
Equitable Lomas Leasing Corp	N	Fin	09/12/1989	100%
Metallgesellschaft Finance BV	N	Fin	01/07/1994	100%
Kapital Haus	N	Fin	03/14/1995	100%
Mercury Finance Co.	N	Fin	01/31/1997	75%
Thornburg Mortgage	N	Fin	04/14/2008	100%
Lehman Brothers	Y	Fin	09/15/2008	15%

## **Average Recovery Rate**

<u>Defaulted Issuers – Non-Bank Liquidity</u>		<u>Sector</u>	<u>Default date</u>	<u>Recovery</u>
KKR Atlantic	Y	ABS – Non Bank	03/31/2008	30%
KKR Pacific	Y	ABS – Non Bank	03/31/2008	30%

## **Average Recovery Rate**

<u>Defaulted Issuers – Market-Value Liquidity</u>		<u>Sector</u>	<u>Default date</u>	<u>Recovery</u>
Cheyne	Y	ABS - SIV	10/19/2007	45%
Rhinebridge	**	ABS - SIV	10/19/2007	55%
Ottimo	Y	ABS - SIV	11/09/2007	25%
Golden Key	Y	ABS - SIV	11/27/2007	40%
Mainsail	**	ABS - SIV	11/27/2007	16%
Axon	Y	ABS - SIV	11/27/2007	30%
Victoria Finance	**	ABS - SIV	01/14/2008	21%
Orion Finance	Y	ABS - SIV	01/16/2008	40%
Whistlejacket	Y	ABS - SIV	02/15/2008	71%
White Pine	**	ABS - SIV	02/15/2008	71%

## **Average Recovery Rate`**

**41%**

<u>Sector</u>	<u>Avg Recovery</u>	<u>%CP Market 2010</u>
Corp	100%	12%
Fin	85%	50%
ABS - All	56%	38%

\*Credit rating prior to default; \*\*SIV was rated AAA prior to default

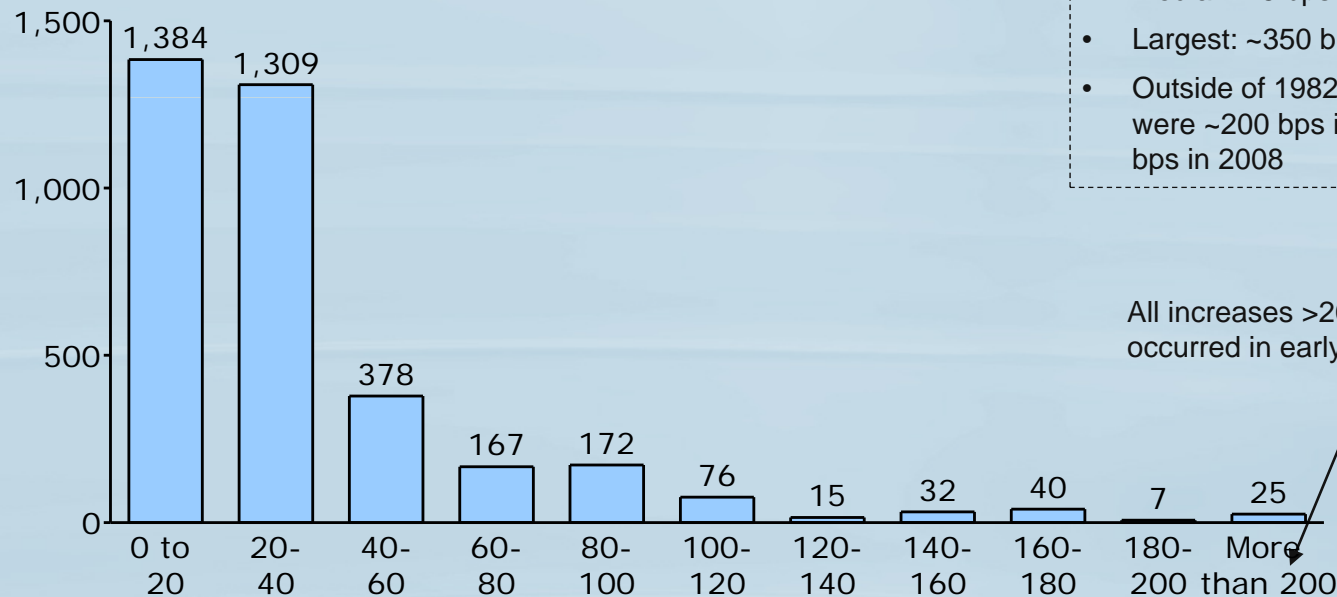
Source: Invesco analysis; S&P; Moody's

# 90% of all CP Yield Increases Within a Month Have Been Less Than 100 bps

# of occurrences\*  
since Jan. 1, 1982

**Rate increase statistics:**

- Median: 25 bps
- Largest: ~350 bps (1982)
- Outside of 1982, largest increases were ~200 bps in 1986 and ~170 bps in 2008



All increases >200 bps occurred in early 1982

Share of occurrences\* 18.8% 17.7% 5.1% 2.3% 2.3% 1.0% 0.2% 0.4% 0.5% 0.1% 0.3%

**Maximum 30-day CP yield increases (bps)**

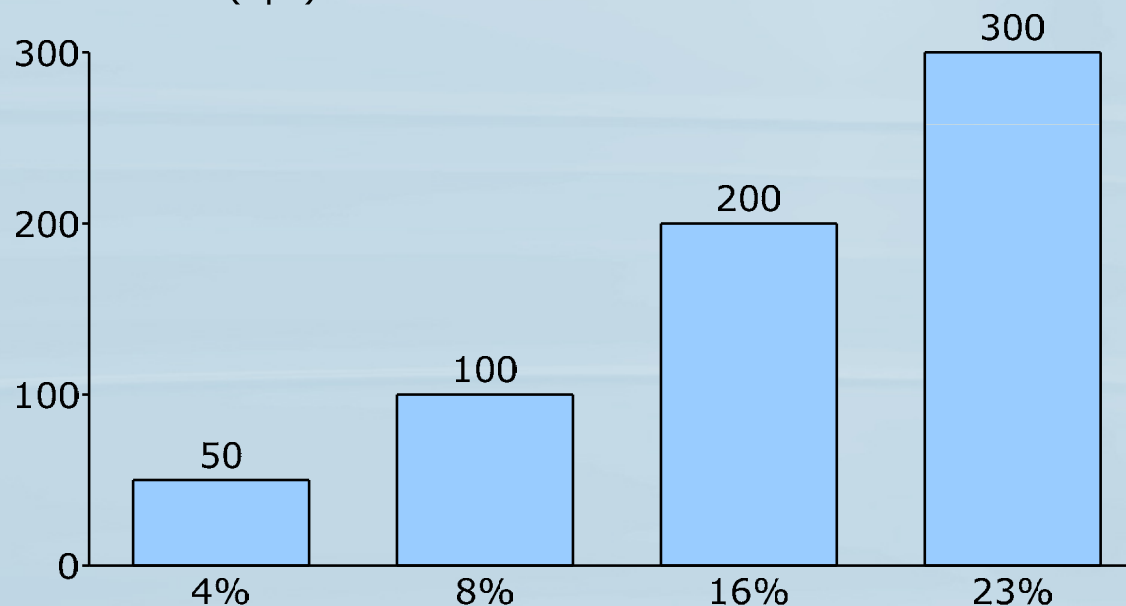
\* Occurrence defined as (overlapping) month-long change in quoted rate for every trading day in the period. There were 7378 occurrences in total, 3773 occurrences in which rates declined are not illustrated.

Note: 30-day prime commercial paper quoted Jan. 1982 – Dec. 1996; 30-day AA financial commercial paper quoted Jan. 1997 – May 2010

Source: Federal Reserve

# CP Yields Would Need to Increase by More than 2X Historical Highs to Drive a 1% FMV-AC Differential

FMV-AC differential (bps)



Increase in CP yield following purchase

## Key assumptions

*To be conservative, the following was assumed:*

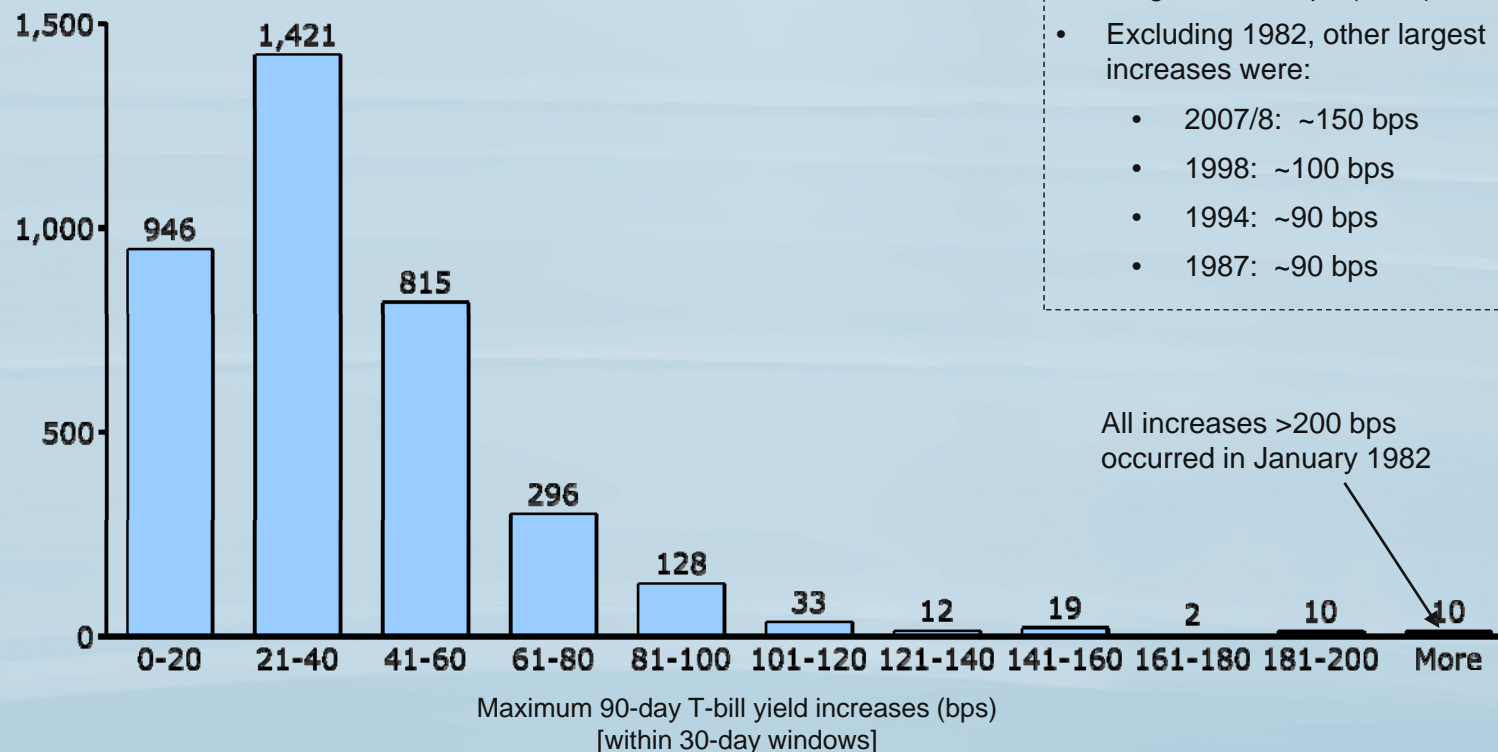
- Portfolio WAM: 49 days (maximum allowed)
- Rate increase occurs all in one day (vs. over the course of a week or month, as is typical)

Note: 30-day prime commercial paper quoted Jan. 1982 – Dec. 1996; 30-day AA financial commercial paper quoted Jan. 1997 – May 2010

Source: Federal Reserve

# Treasury Bill Yields Have Rarely Increased More Than 200 bps Over a Month

# of occurrences  
since Jan. 1, 1982



**Rate increase statistics:**

- Largest: ~350 bps (1982)
- Excluding 1982, other largest increases were:
  - 2007/8: ~150 bps
  - 1998: ~100 bps
  - 1994: ~90 bps
  - 1987: ~90 bps

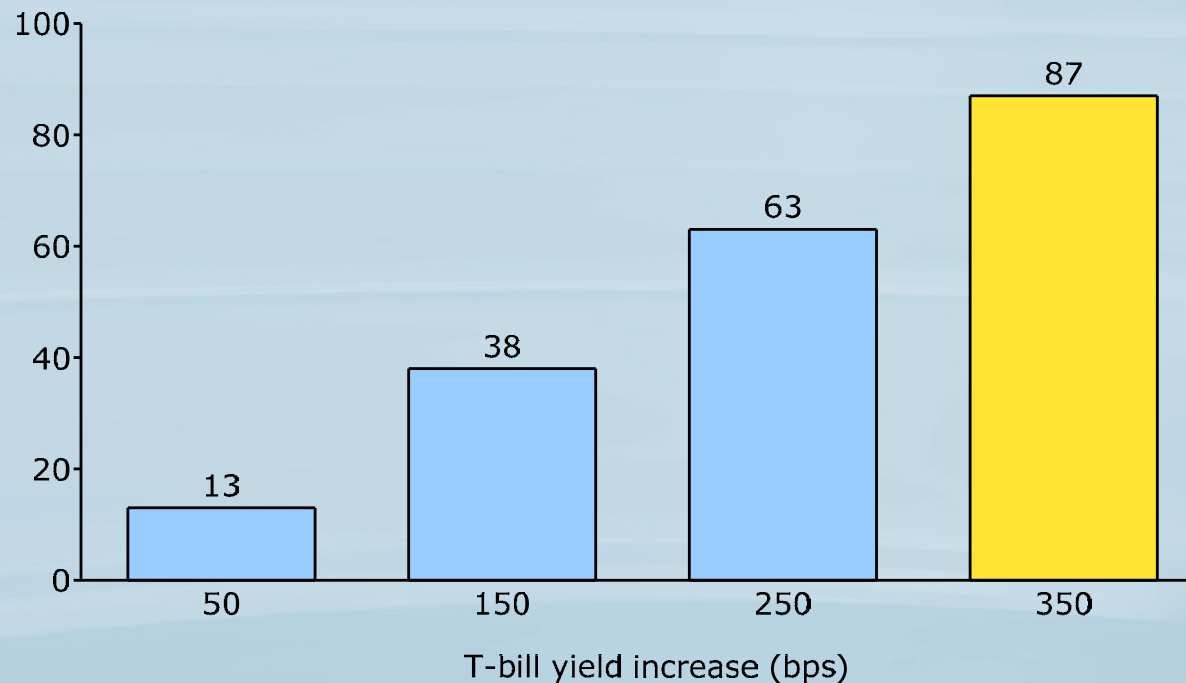
All increases >200 bps  
occurred in January 1982

\* Occurrence defined as (overlapping) month long change in quoted rate for every trading day in the period. There were 7378 occurrences in total; 3686 decreasing occurrences not shown.

Source: Federal Reserve; 90-day constant maturity Treasuries, Jan. 1982 – May 2010

# Even With the Largest Historical Treasury Bill Increase of 350 bps, Capital Ratio Would Decline by Only 0.35%

Impact to capital of an increase in T-bill yields (bps)



## Key assumptions

*To be conservative, the following was assumed:*

- Maximum allowed WAM of 49 days
- Portfolio includes the maximum allowable 60-day CP:
  - 25% 60-day
  - 75% 30-day
- Rate increase occurs all in one day (vs. over the course of a week or month, as is typical)

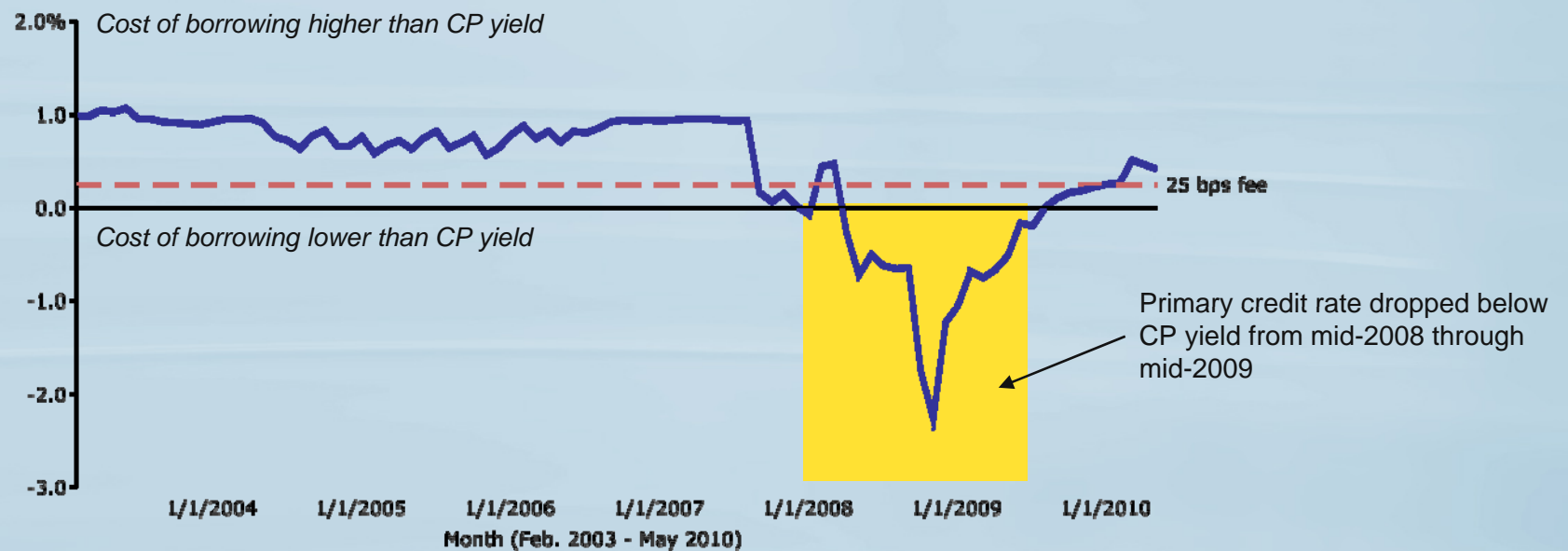
Source: Federal Reserve

Note: 30-day prime commercial paper quoted Jan. 1982 – Dec. 1996; 30-day AA financial commercial paper quoted Jan. 1997 – May 2010



# Spread Between Discount Window Rates and CP Yields Have Reached 100 bps...

Spread between primary credit rate and CP yield\*



Under current design, access fee is greater of 25bps or the spread between rates

\*Calculated as primary credit rate minus CP dealer-placed top 90 yield

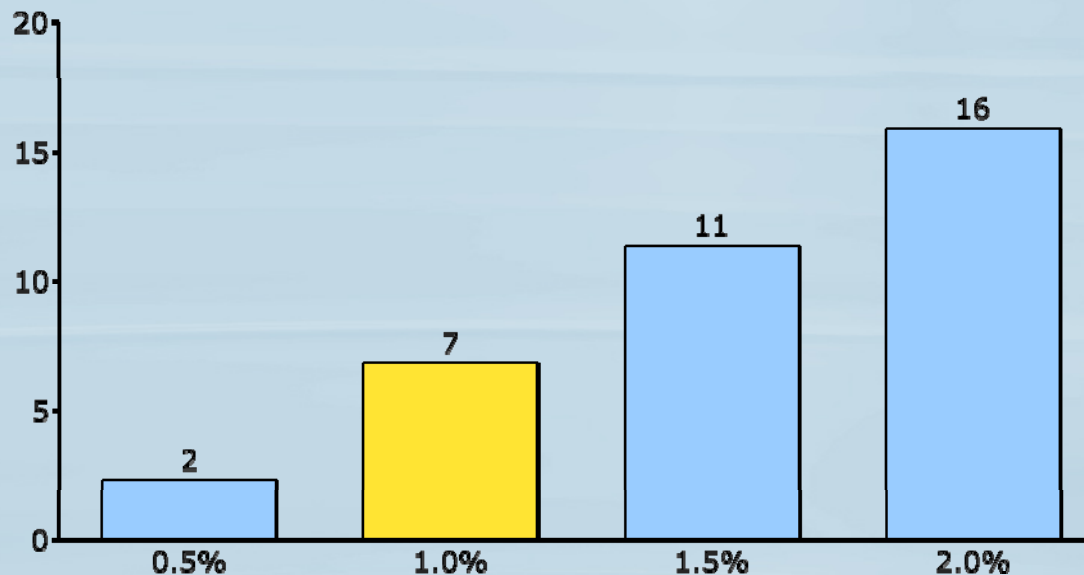
Notes: Penalty rate methodology changed on 1/6/03 (raised from .75% to 2.25%); set to 1% above funds rate to encourage interbank borrowing

Source: Federal Reserve; Bloomberg



# ...But Even Without Scaling Access Fees, Impact to LF Capital Ratios is Unlikely to Exceed 0.1%

Impact to capital (bps)



Spread between primary credit rate and CP yield\*

## Key assumptions

- Access fee: 25 bps
- WAM: 49 days
- 2/3 of assets funded at the primary credit rate
- Spread: 100 bps

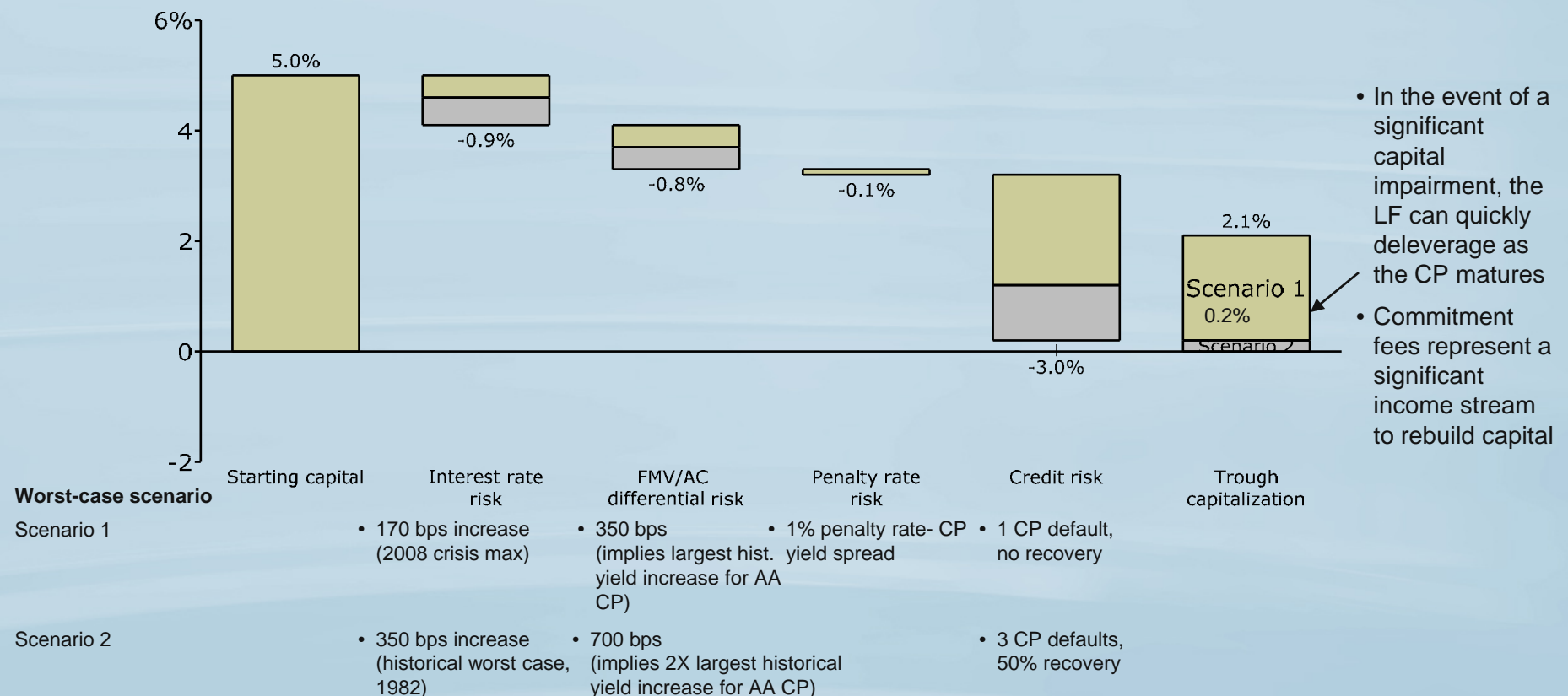
## Sample calculation:

- $(100 \text{ spread} - 25 \text{ bps fee}) \times (49/360 \text{ days}) \times (2/3 \text{ loan \% of assets}) = 7 \text{ bps}$

\*Calculated as primary credit rate minus CP dealer-placed top 90 yield  
Source: Federal Reserve; Bloomberg

# ...Combining Worst Case Historical Scenarios Impairs Capital, but Given Short Maturities LF Can Deleverage Quickly Without Selling Assets

Capital needed (as % of total assets)



Source: LF financial model

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# Governance

# LF Will be Directed by a 15 Person Board of Directors\*

## Board composition

- 2 LF employees: Chairman/CEO and COO
- 5 independent directors
- 8 directors from member funds, with representation from large, medium and smaller funds
- Envisioned to have audit, investment, and compensation committees

## Board duties/ activities

- Act on behalf of shareholders (i.e., member funds)
- Oversee activities of LF, review performance
- Oversee compliance with regulatory requirements
- Select, evaluate, approve appropriate compensation
- Review and approve contracts with third-party service providers
- Review policies (commitment fee, LF time deposits) and amend if necessary
- Rule on issues brought by bank management
- Decide on specific exceptions to LF policies

\* A recommendation, final Board size & composition will be subject to regulatory approval

# Normal and Liquidity Mode Activities, by Business Capabilities

## Normal mode activities

- Oversee activities; rule on issues brought by bank management
- Approve contracts with third party service providers
- Manage and trade Treasury/agency portfolio as well as testing of LF (light trading of prime securities)
- Perform credit analysis to establish ranking of approved investments to be accepted by LF
- Manage relationship with potential outsource providers (e.g., provider of custodial services)
- Issue LF time deposits, manage true-up process, and pay interest on time deposits
- Provide ALM; work with MMF to ensure portfolio is managed to liquidity needs (manage interest rate and liquidity risk)
- Collect commitment fee
- Manage corporate/back office functions of LF (e.g., payroll, accounting, reporting)
- Interface with regulatory agencies
- Collect and analyze data from funds
- Monitor trends in AUM levels; understand issuer and industry concentration levels

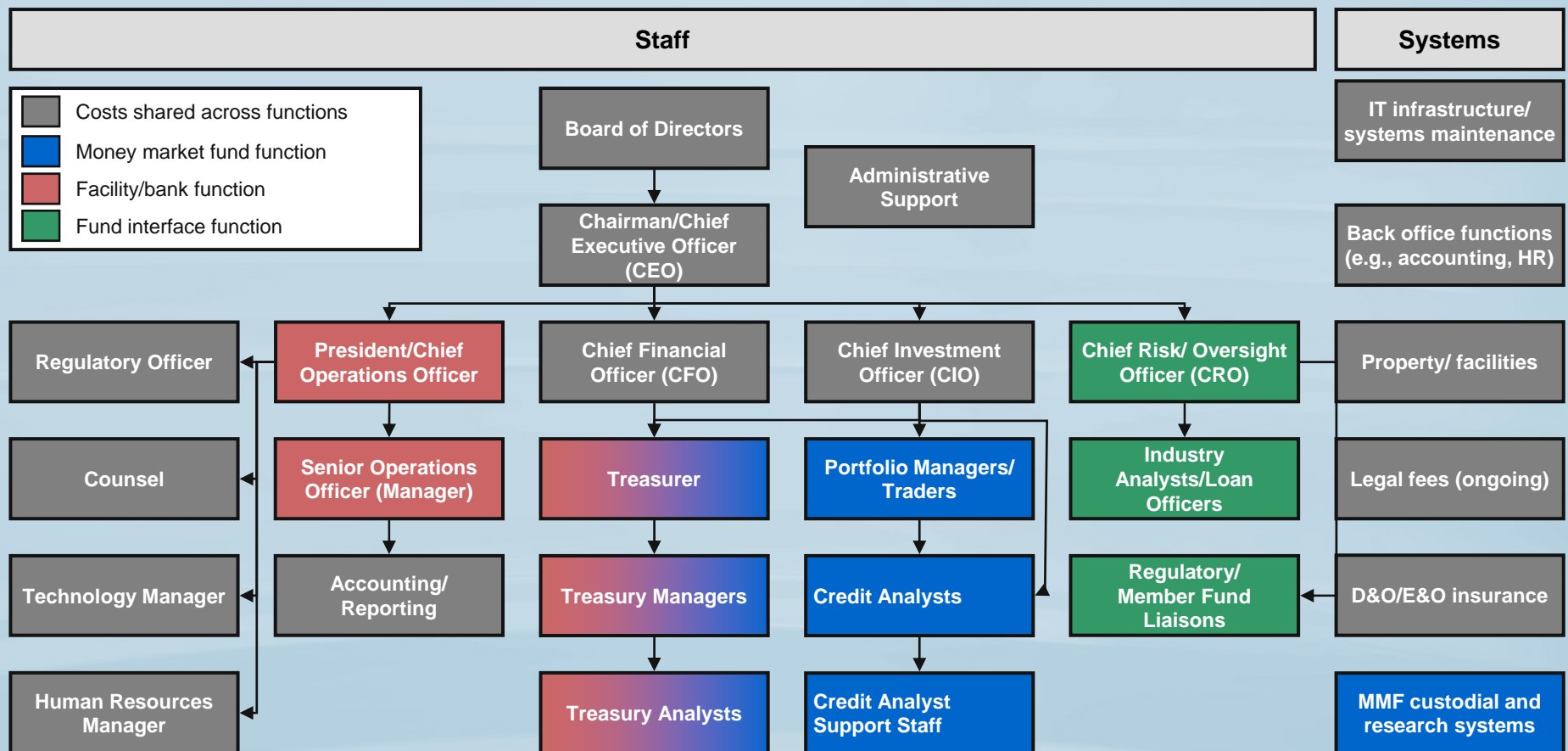


## Liquidity mode activities

- Decide on exceptions to access/other policies of LF
- Manage and trade received prime securities
- Collect access fee from funds utilizing LF
- Manage interface with Federal Reserve to access discount window
- Determine exceptions/issues to raise to Board
- Control and enforce policies for access to the LF
- Receive and process requests for liquidity from MMFs
- Decide which investments to accept from member funds; enforce issuer/industry concentration rules
- Liaise with member funds making requests to LF and explain process
- Manage process of issuing money to member funds
- Liaise with Board when exceptions are requested
- Report to funds on portfolio info

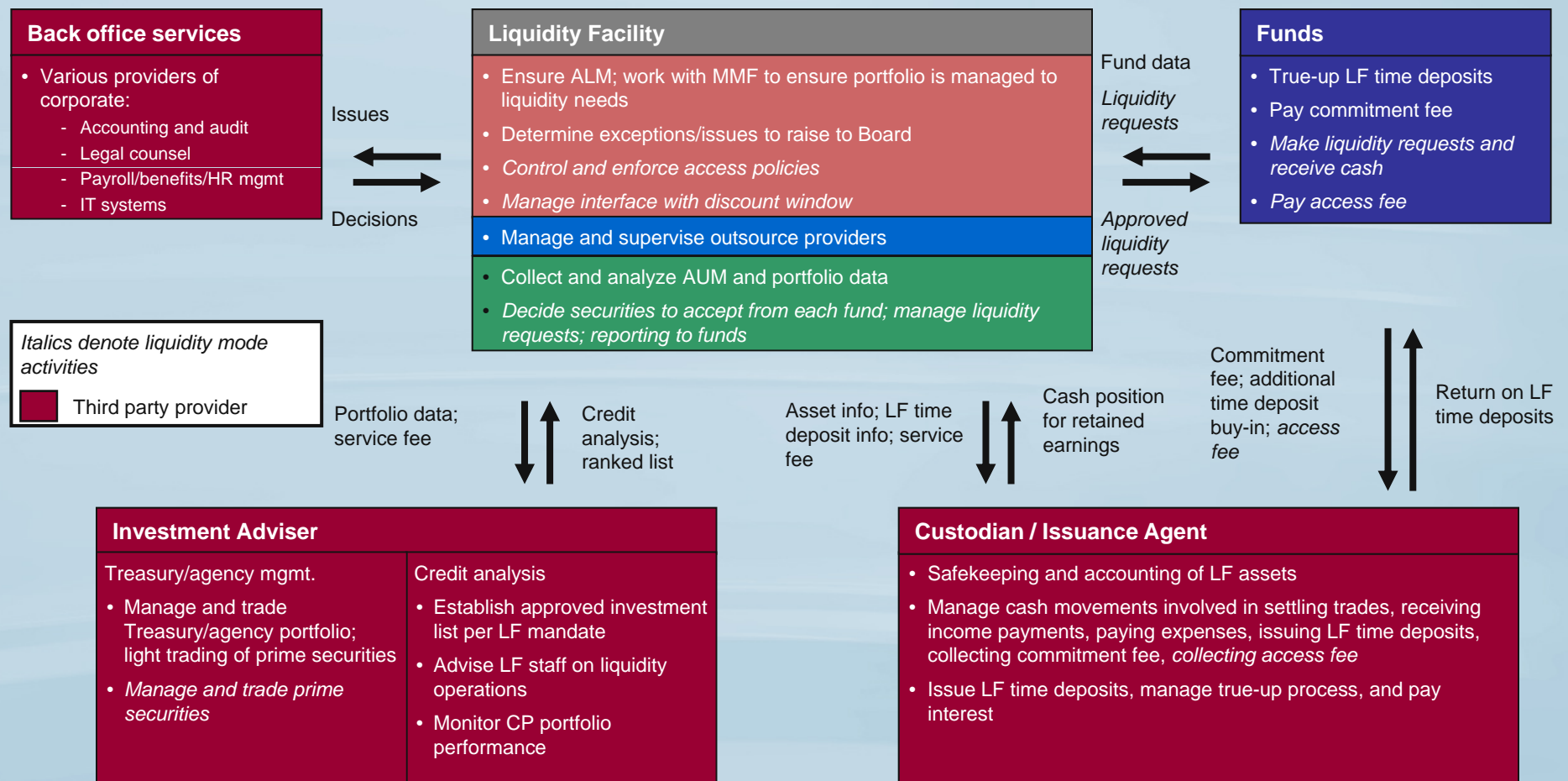
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|--|---|
|  Board of Directors     |  Money management function |
|  Facility/bank function |  Fund interface function   |

# LF Organizational and Infrastructure Needs by Business Capability



Note: Some roles may be outsourced; personnel may take multiple roles

# LF May Have Outsourced Relationships with Third-Party Providers





# Governance: Key Decisions and Roles (1/3)

R = Recommend  
A = Agree  
I = Input  
D = Decide

ASSET POLICIES		LF Investment Manager(s)	LF Management	Board of Directors	Shareholders / Sponsors	Member Funds	Custodian	Regulators
1.1	Change the investments that may be held by the bank in normal mode	I	R	D		To be notified	I	To be notified
1.2	Add a new category of securities to the approved list	R	A	D		To be notified	I	To be notified
1.3	Define the approved list	R	D	I				
1.4	Extend the duration of securities accepted by the LF beyond initial charter	I	R	A	D	To be notified		To be notified
1.5	Change allowable issuer concentration levels	I	R	A	D			To be notified
1.6	Change provider(s) of asset mgmt services		R	A	D	To be notified		
1.7	Establish allowable procedures for determining FMV <sup>1</sup>	I*	R*	D*		*	*	To be notified
1.8	Decide on 'fair market value' of a security that lacks a recent quote <sup>1</sup>	*	D*	*		*	R*	

<sup>1</sup>Indicates that accounting treatment is TBD. Often in an investment context, the custodian would provide the independent 'mark' on daily price (valuation service).



# Governance: Key Decisions and Roles (2/3)

EXCHANGE POLICIES <sup>2</sup>		LF Investment Manager(s)	LF Management	Board of Directors	Shareholders / sponsors	Member Funds	Custodian	Regulators
2.1	Extend liquidity up to specified percentage of a fund's assets	I	D	To be notified		To be notified		To be notified
2.2	Extend liquidity beyond specified percentage	I	R	D		To be notified		To be notified
2.7	Transact with a fund that does not meet stated access policies		R	D				
2.8	Refuse to transact with a fund that does not meet stated access policies		D	To be notified				
2.9	Refuse to transact with a fund below specified threshold that meets stated access policies		R	D				

# Governance: Key Decisions and Roles (3/3)

		LF Investment Manager(s)	LF Management	Board of Directors	Shareholders / sponsors	Member Funds	Custodian	Regulators
<b>FEES</b>								
3.1	Access: Waive or reduce fees to a given fund	I	R	D				
3.2	Access: Raise or lower fees for all funds	I	R	A	D			
3.3	Commitment: Raise beyond 3 bps		R	D				To be notified
<b>FEES/BUDGET</b>								
4.1	Approve annual expense budget		R	D				
4.2	Approve mgmt compensation			D				
4.3	Approve contracts with annual value > \$1M		R	D				
<b>CAPITALIZATION</b>								
5.1	Change the 4.9% equity cap or \$250K equity minimum		R	A	D			To be notified
5.2	Revise the time deposit note issuance process		R	D	To be notified			To be notified
5.3	Waive 'true-up' requirements (e.g., for orderly MMF liquidation)		R	D				
5.5	Change timing of equity true-ups		R	D	To be notified			
<b>BOARD OF DIRECTORS</b>								
6.1	Elect / re-elect members				D			To be notified
6.2	Change the size of the board				D			To be notified

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# Modeling

# LF Financial Model Assumptions

## Financial statements

### Fees

Commitment fee	3 bps
Access fee (annual)	25 bps

### Taxes

Tax rate	40%
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### Expenses

Technology	\$20M
Staff	\$18M
Infrastructure/other	\$10M
Startup costs	\$10M

### Discount Window

Collateral margin	3%
Discount rate	2.5%

\* As of 8/31/10

## Market and stress tests

### Market

Total prime MMF AUM	\$1.650B*
Fund weekly liquidity (2a-7 requirements)	30%

### Commercial paper

Yield	2.7%
Weighted average maturity	49 days
Market value loss	1%

### Treasuries

Yield	1.7%
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### Capitalization

LF time deposits max. % AUM	1.3%, beginning in year 3
LF target leverage ratio	5%
Initial equity stake	\$350M
Capital risk-weighting of commercial paper	20%

# LF Key Design Levers and Rationale

	Lever	Suggested level	Rationale
Impact LF capacity	Initial equity contribution	\$350M	<ul style="list-style-type: none"> <li>Should not create a significant barrier to entry and is not punitive to smaller funds</li> <li>Raising the initial contribution has little impact on long-term LF capacity or leverage ratios</li> </ul>
	Time deposits as % of AUM	Up to 1.3%, beginning in year 3	<ul style="list-style-type: none"> <li>Delayed issuance will allow sufficient capital to accumulate to ensure timely payment of time deposit obligations</li> </ul>
	Commitment fee	3 bps	<ul style="list-style-type: none"> <li>Allows the LF to build equity (and therefore capacity) at a reasonable rate</li> <li>Can be increased as yields increase, allowing capacity to grow faster</li> </ul>
	Target leverage ratio	5%	<ul style="list-style-type: none"> <li>Recognizes that the LF holds a low-risk portfolio of assets</li> <li>Maximizes LF capacity while maintaining compatibility with current banking regulatory capital control levels</li> </ul>
Impact fund management	WAM and duration of CP portfolio	49 days	<ul style="list-style-type: none"> <li>Long enough to cover a large share of MMF assets without drawing on the securities marked for near-term liquidity needs</li> <li>Short enough to limit LF exposure to credit, rate, and liquidity risks</li> <li>Shorter WAM limits FMV/AC* divergence</li> </ul>
	WAM and duration of Treasury bills	90 days	<ul style="list-style-type: none"> <li>Allows duration matching to the 90 day time deposits</li> <li>Short enough to limit LF exposure to interest rate risk, while still allowing LF management flexibility to manage across full spectrum of potential T-bill terms</li> </ul>

\* FMV/AC divergence is the current discount between the fair market value (FMV) of an exchanged security and the amortized cost (AC) price at which the security was exchanged

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# Regulatory Issues

# LF Must be Mandatory for All Prime MMFs

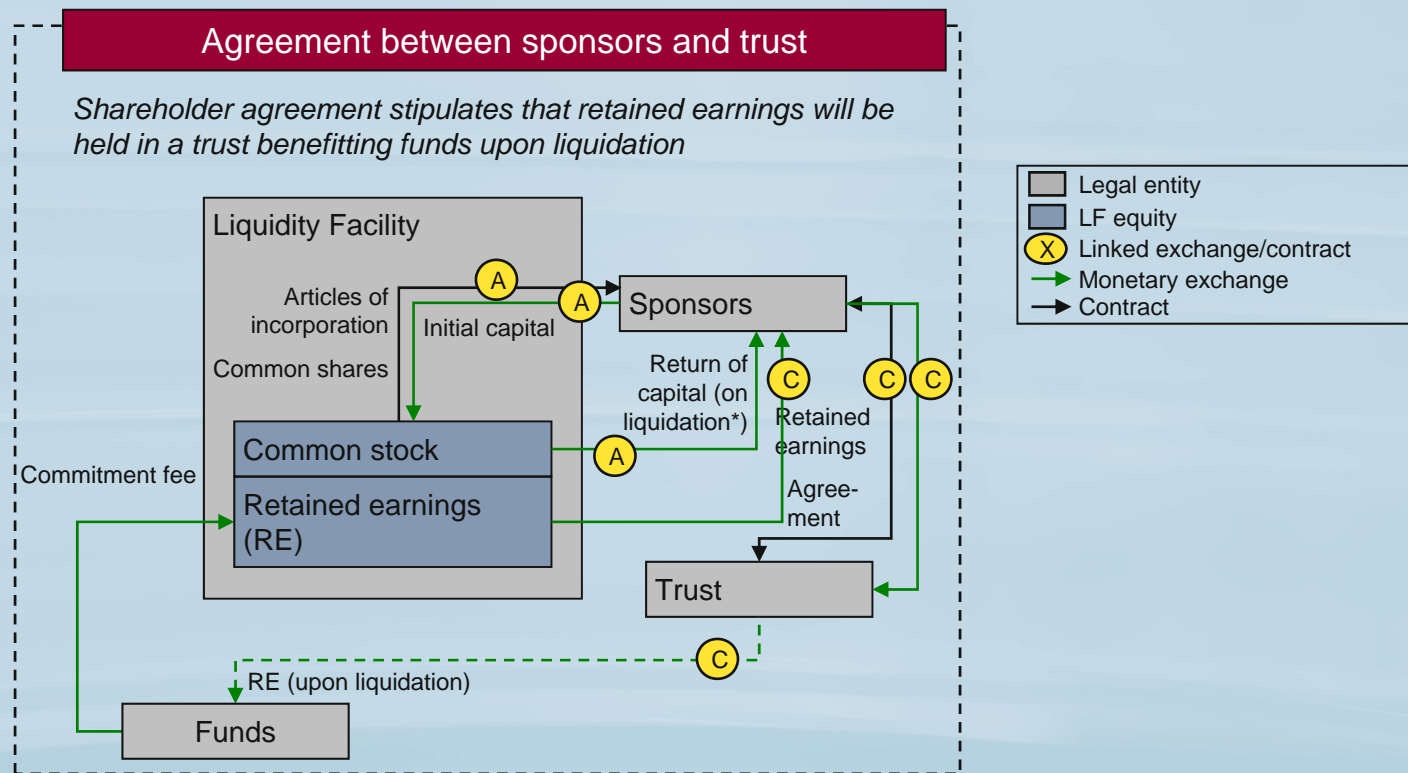
	Mandatory participation required
Description:	<ul style="list-style-type: none"> <li>• Mandatory participation of all prime MMFs in LF is required through regulatory or other means (or funds could choose between participating in LF or adopting alternative such as floating NAV or converting to government MMF)</li> </ul>
Pros:	<ul style="list-style-type: none"> <li>• Industry-wide solution; no “free rider” issues</li> <li>• Better supports short-term market values in times of market stress</li> <li>• LF capacity grows faster</li> <li>• Similar to SIPC and FINRA membership requirements</li> </ul>
Cons:	<ul style="list-style-type: none"> <li>• Less flexibility for funds</li> <li>• May be viewed by some as expensive</li> </ul>



# Potential Issues for SEC

<b>Mandatory participation and fund policies</b>	<ul style="list-style-type: none"> <li>• In order to ensure fairness among funds, raise necessary capital, and prevent free-riders, SEC will need to directly or indirectly make participation in the LF mandatory</li> <li>• As Chairman indicated, participation in LF by prime funds could be condition to continued use of amortized cost</li> </ul>
<b>Joint transactions</b>	<ul style="list-style-type: none"> <li>• Section 17(d) restricts “joint transactions” between a fund and its adviser where the fund participates on a different or less advantageous basis           <ul style="list-style-type: none"> <li>▪ LF will be capitalized by both funds (through commitment fees) and their advisers (through equity)</li> <li>▪ “Joint transaction” issues may arise and relief may be necessary</li> </ul> </li> </ul>
<b>Retained Earnings Solution</b>	<ul style="list-style-type: none"> <li>• Goal is for retained earning to accrue to benefit of MMFs</li> <li>• Confirmation that proposed retained earnings solution acceptable (see next page)</li> </ul>

# Potential Structure to Ensure that Retained Earnings Accrue to Benefit of the Funds



\* Or upon relinquishment of shares upon exit from money market industry (or during equity true-up process)