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Directors Risk Policy Committee Meeting

Tri-Party Repo Update

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July 15, 2008

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Agenda

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U.S. Fixed Income Tri-Party Repo Update

Overview/Current State/Issues

- U.S. FI TPR is an overnight (primarily) investment vehicle utilized by broker dealers and lenders whereby lenders provide cash to borrowers who collateralize the cash loan with securities. JPM plays the role of collateral agent in between the lender and the borrower.
- JPM serves as collateral agent for $867 billion in TPR daily (at June 30, 2008). When the repo is unwound in the morning, JPM assumes a secured intraday risk position.
- As a result of the credit crunch, the safety and soundness of this product from a dealer, investor and bank perspective has come under intense internal and external (primarily the FRB) scrutiny.
- A number of work streams have been initiated to improve the operations, technology, and risk management of this product.

Initiatives in Flight

- Initiated a project to build out operational capabilities to support term repos which when implemented, could appreciably reduce JPM's daily exposure.
- Launched a project to enhance the reporting capabilities of BDAS so that tri-party transactions can be fed directly to corporate credit systems to calculate, track, and report intraday credit exposure.
- Completing the Security Database project that will begin phased rollout in the 4Q08 and will deliver greater price comparison capabilities, more granular asset breakdowns, and enhanced MIS.
- Rolling out the "CRED" screen to all dealers so that they can manage their NFE on a real-time basis.
- Beta testing Web Reporting of TPR information with Fidelity that will provide greater transparency into cash & securities positions. Critical for managing term repos.
- Implementing Profile Wizard which allows for greater detail in TPR deal set-up and includes a workflow sign-off that will force dealers/investors to concur with the accuracy of a deal

Key Accomplishments to Date in US FI TPR

- Obtained intraday margin to lower JPM's exposure to price and liquidation risk.
- Changed pricing methodologies to improve CMO pricing, continuing to work with existing/prospective pricing vendors to further improve pricing process.
- Implemented a more conservative approach to split rated securities.
- Introduced "Best Practices" document (see page 2). Dialogue is on-going with the key industry players (FRB, DTC, dealers, investors).
- Completed a margin gap analysis of the four largest programs (LB, UBS, CS, ML). Held a high level discussion with LB on how to address this gap.
- Expanded CUSIP root blocking capabilities to better manage dealer self priced securities and other "red flag" type assets.

Target End State

- All term repo trades kept locked up with no cash or securities movements (save secured securities substitutions).
- Adoption of "Best Practices"; regulatory oversight of dealer financing mix (with mitigants against over reliance on over night TPR funding, particularly when collateral includes less liquid asset classes).
- Full reporting of credit exposure in JPM corporate credit systems.
- Ideal level of asset class breakdown in system (ex. ABS into ABS-M, ABS-credit cards, etc.).
- Full suite of pricing vendors tied into firm-wide Global Market Reference Data (GMRD) and Central Price Capture (CPC) efforts with auto-compare capabilities that will source most conservative price across vendors.
- Same day pricing and credit rating changes, two day stale pricing, punitive margins and pricing on fail financing.

“Best Practices” Points for Discussion Proposed to the Fed

LIMITS

- Aggregate dealer repo financing limits should be set by regulators as part of dealer leverage restrictions.

MARGIN

- Margin should be proportional to the risk of the collateral.
- Margin should be applied to collateral types at a level granular enough to distinguish their risk, taking into account the price volatility and liquidity of each security.

COLLATERAL ELIGIBILITY

- Collateral eligibility should be based on careful analysis conducted by both tri-party investors and clearing banks of the quality and liquidity of securities being pledged to them by dealers.
- Concentration limits and diversification standards should be set.

COLLATERAL VALUATION

- Collateral valuation should be transparent and reliable.
- Clearing banks and investors should be satisfied with the reliability of the pricing collateral sources, whether based on bids/quotes from market participants, pricing models, or sourced by vendors or by multiple or single dealers.
- Securities that are not traded should not be assigned any collateral value.

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U.S. Tri-Party Repo Update

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Overview/Current State/Issues

- Tri-Party Repo (TPR) is a financing vehicle used by Broker Dealers and Lenders whereby Lenders provide cash to Broker Dealers who collateralize the cash loan with securities. Most tri-party repos mature overnight. JPM plays the role of collateral agent in between the lender and the borrower.
- JPM serves as the Clearing Bank for approx. $400 billion in TPR daily (as of Nov 2009), down from close to $1 trillion in early 2008. When the repos are unwound in the morning, JPM assumes a secured intraday credit risk position for the full amount of the daily unwind.
- Sensitive to the significant credit, market and operational risks of this business, the JPM US Broker Dealer group undertook a comprehensive restructuring exercise to redesign the operating, technology and risk management model.
- The Fed has also expressed concern over the systemic risks of the TPR model. JPM is actively involved in the Fed sponsored Tri-Party Repo Task Force.

Key Accomplishments to Date

- Eliminated unsecured intraday credit limits.
- Remediated legal agreements to ensure consistent and comprehensive lien rights and default protections.
- Developed robust client default procedures.
- Established dynamic intraday margining for all clients (TPR and Clearance – DTC securities only).
- Changed pricing methodology to ensure proper valuation of securities held as collateral.
- Increased Clearance Loan pricing to charge properly for the credit risk, reducing significantly the volume of Fail Financing.
- Provided a comprehensive set of recommendations to the Fed to address systemic risks and improve the overall stability of the TPR Market.

Initiatives in Flight

- Developing Dynamic Collateral Substitution capabilities to allow Term and non maturing Open/Rolling Overnight trades to remain locked, significantly reducing the volume of intraday daily credit exposure faced by JPM.
- Reviewing opportunities to refine margining to make it more granular and specific to the risk of each security, taking into account ratings and maturity.
- Completing the Security Database project that will begin phased rollout in 1Q2010 and will deliver greater price comparison capabilities, more granular and accurate security classification, and enhanced MIS.
- Enhancing dynamic intraday margining capabilities to include Fed securities,
- Implementing Profile Wizard to support greater detail in TPR deal set-up including a workflow sign-off that will force Dealers/Lenders to concur with the accuracy of a deal.
- Engaging market participants to ensure consistent understanding of TPR risk remediation initiatives and improve dialogue.
- Developing Global Collateral Engine to provide dealers with visibility and access to a global long box to better manage liquidity and collateral.

Target End State

- Migration to Repo Maturation Model, where cash and securities are returned upon maturation (no unwind, no secured financing by Clearing Bank)
- Expansion of maturation process to use 'windows' of time for new financing rather than current single point in time for tri-party repo roll overs.
- Introduction of Late Day and Early Lock-Up repos to provide flexibility to shape and distribute intraday cashflows.
- Industry guidelines for collateral eligibility and margin, effectively redefining which asset classes are eligible for use in TPR.
- Standard portfolio reporting for use by the Fed to monitor overall market, including volumes, collateral, and risk.
- Pre-defined liquidation arrangements with all market participants, including the role of a central liquidation agent.
- Clear understanding and acceptance of BAU and Default risk by all participants.
- Clearing Bank provides only discretionary secured financing.

Key Concepts for the Future TPR Market Model

- Improvements to the BAU operating model are essential:
  - release of cash and securities should only occur at maturity;
  - standards for pricing, collateral and margins should be adopted throughout the cycle.
- Asset valuations (both current market value and liquidation value) must be available and accurate.
- Proper planning for the event of a dealer default is critical; understanding alignment of risks and approach to liquidation of collateral is essential.
- Clearing Bank should shift from "Lender of Last Resort" to provider of discretionary secured financing for liquidity purposes.
- Focus on value and liquidity of collateral in addition to the credit worthiness of borrowers is fundamental to reducing systemic risks.
- Changes to the TPR market model should be accompanied by regulatory changes to manage broker-dealer liquidity, funding concentration and leverage.
- Simply changing the structure used to clear tri-party repos - replacing clearing banks by a central counterparty - without addressing the points above does not allow a reduction in systemic risks.

U.S. Tri-Party Repo Update: Current Metrics

TPR Collateral as of 4 Nov [1]

Dealer	TPR Collateral (US$mm)					Margin (US$mm)				
	Total (USD)	Fed Elig	DTC Elig	vs Dec 2007 Peak (USD)	% Change	Investor Margin (USD)	%	Incremental DIM Margin (USD)	%	Total (USD)
Bear Stearns	-	0%	0%	88,185	(100%)	-	-	-	-	-
Cantor Fitzgerald	-	0%	0%	2,210	(100%)	-	-	-	-	-
CIBC World Mkts	234	100%	0%	200	17%	5	2%	6	3%	11
Citigroup / Salomon	-	0%	0%	6,086	(100%)	-	-	-	-	-
Credit Suisse	102,949	97%	3%	91,755	12%	2,086	2%	4,444	4%	6,530
Dresdner Sec.	333	100%	0%	8,380	(96%)	7	2%	8	3%	15
G.X. Clarke	255	100%	0%	300	(15%)	5	2%	8	3%	13
HSBC Bank	101	100%	0%	-	n/a	7	8%	4	4%	11
HSBC Securities	26,977	91%	9%	29,691	(9%)	623	2%	943	4%	1,566
ING BC	31,491	94%	6%	22,684	39%	656	2%	1,308	4%	1,964
JPMSI	70,638	85%	15%	57,399	23%	1,714	3%	4,244	6%	5,958
Lehman	-	0%	0%	240,877	(100%)	-	-	-		-
Merrill Lynch	7,648	88%	12%	152,697	(95%)	193	3%	594	8%	787
MF Global	7,009	100%	0%	2,701	160%	-	0%	304	4%	304
Morgan Stanley	34	0%	100%	75	(55%)	9	34%	6	25%	15
RABO Bank Int'l	-	0%	0%	42	(100%)	-	-	-	-	-
Raymond James	-	0%	0%	375	(100%)	-	-	-	-	-
RBS Greenwich	58,324	75%	25%	71,252	(18%)	1,652	3%	4,386	8%	6,038
UBS	75,142	91%	9%	138,784	(46%)	1,303	2%	3,164	4%	4,467
Grand Total	$381,136	89%	11%	$913,693		$8,260		$19,419		$27,679

Note: Fed / DTC collateral split has changed significantly from 60/40 split averaged in 2008, pre-Lehman default.

TPR	Week Ending 10/29 - Average Daily Balances				Week Ending 10/22 - Average Daily Balances				Week Ending 10/15 - Average Daily Balances			
	Coll Balance (US$ mm)	% of Total Coll	Margin (US$ mm)	Margin %	Coll Balance (US$ mm)	% of Total Coll	Margin (US$ mm)	Margin %	Coll Balance (US$ mm)	% of Total Coll	Margin (US$ mm)	Margin %
Fed	353,620	90.2%	14,136	4.2%	367,860	90.6%	14,494	4.1%	366,614	90.6%	14,502	4.1%
DTC	38,468	9.8%	5,832	17.9%	38,150	9.4%	5,651	17.4%	38,115	9.4%	5,691	17.6%
Total	392,088	100.0%	19,968	5.4%	406,010	100.0%	20,145	5.2%	404,729	100.0%	20,194	5.3%

Top 5 Lenders (USD mm)

Investor	Total	Credit Suisse	UBS	JPMSI	ING BC	RBS Greenwich	HSBC Securities	Merrill Lynch
Fidelity Investments	47,052	8,152	9,794	7,617	10,684	3,269	6,821	714
JPMorgan Investment Management	44,732	16,863	12,088	3,059	5,604	4,087	3,032	-
Federated Investments	34,513	11,774	3,329	5,414	4,543	7,399	510	1,545
Goldman Sachs Asset Management	32,291	10,534	6,302	7,666	2,243	3,057	1,522	968
State Street Global Advisors	23,019	2,788	6,857	4,402	3,060	3,354	823	1,734