Liquidity Working Group

PRESENTATION TO THE FINANCIAL RESEARCH ADVISORY COMMITTEE

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Overview

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Background

The working group was formed in the fall of 2015 by the Research Subcommittee and has since held several extensive discussions over conference calls.

The purpose of the working group is to explore the topic of market liquidity and examine the potential systemic risks associated with illiquidity.

The working group is composed of members from the Research Subcommittee and the Financial Services & Risk Management Subcommittee:

Research

- Andrew Lo
- Kim Schoenholtz
- Chester Spatt
- Lynn Stout
- Nancy Wallace

FSRM

- Ben Golub
- Prakash Shimpi

Definition of Liquidity

The challenge of producing a common definition of liquidity was discussed, but a fair degree of consensus was achieved. Examples of precise language included:

- *"An asset is liquid if: (1) you can trade it quickly; (2) you can trade large amounts of it; and (3) you don't move the price a lot when you do trade large amounts quickly"*

- *"An asset is liquid if it can be traded without moving the price. The speed and quantity over which it can be traded without moving the price are also considerations in assessing the level of liquidity."*

Prioritization Exercise

Given the immense scope of markets and institutions that are impacted by liquidity risk, the working group conducted a brainstorming and prioritization exercise in order to identify initial areas to focus its attention

Potential priorities that were discussed during an initial call could be considered to fall under one of two categories:

- Potential systemic risks relating to market liquidity
- Potential analytical approaches for evaluating market liquidity risks

The proposed priorities were *not* intended as an exhaustive list, nor were they intended to be taken as official recommendations for the OFR. Instead, the purpose of the exercise was to help the group facilitate further productive discussion and examination of market liquidity

Some Potential Systemic Risks Relating to Market Liquidity

- Potential of cybersecurity events to cause systemic illiquidity
- Impact for financial stability of margin rules on the TBA market and margin requirements in CCPs
- Changes in market plumbing that will occur if the GSEs are phased out, and the potential liquidity backstop that might be required during that transition
- Rapid growth in ETFs, and potential contagion effects that might arise from both traditional and synthetically created ETFs
- Build-up of leverage in the corporate sector and possible maturity mismatch risks that may arise
- Flash crashes and the impact of algorithmic trading on liquidity
- Potential for illiquidity resulting from breakdown of reinsurance markets
- Market impacts from the sale of business units by SIFIs (such as MetLife's intention to sell its retail life and annuity business or AIG's decision to sell its broker-dealer and mortgage insurance subsidiaries)

Some Potential Analytical Approaches

- The importance of network analysis in developing a theoretical framework for risk transmission and determining whether market liquidity events would result in contagion across markets and sectors
- The potential for aggregate analysis of which groups and types of entities are liquidity takers versus providers to provide insights into systemic risks
- Correlation analysis between asset classes to identify shifts in interdependencies

Criteria for Evaluating Liquidity Topics

Liquidity topics were evaluated by working group members, and their feedback on each topic was rated along three questions:

1) Is there a **systemic** issue?

2) How **likely** is it that the potential systemic issue could arise?

3) How closely does the particular issue **align** with the OFR's mission?

Based on the responses from the working group, the issues were ranked according to each question

In the case of liquidity topics that describe methodology rather than systemic risks, these questions were reinterpreted as asking how effective OFR could be in applying this methodology in a relevant way

			Rank (1=most important)		
Liquidity Topic	**Abbreviation**		**Systemic**	**Likelihood**	**Alignment**
Potential of cybersecurity events to cause systemic illiquidity	Cyber		1	2	10
Importance of network analysis in developing a theoretical framework for risk transmission and determining whether market liquidity events would result in contagion across markets and sectors	Networks		1	5	2
Rapid growth in ETFs, and potential contagion effects that might arise from both traditional and synthetically created ETFs	ETF		3	1	5
Changes in market plumbing that will occur if the GSEs are phased out, and the potential liquidity backstop that might be required during that transition	GSE		3	3	2
Impact for financial stability of margin rules on the TBA market and margin requirements in CCPs	TBA-CCP		3	7	1
Build-up of leverage in the corporate sector and possible maturity mismatch risks that may arise	Leverage		6	5	7
Flash crashes and the impact of algorithmic trading on liquidity	Flash Crash		7	3	4
Potential for aggregate analysis of which groups and types of entities are liquidity takers versus providers to provide insights into systemic risks	Aggregates		7	7	7
Potential for illiquidity resulting from breakdown of reinsurance markets	Insurance		9	10	7
Correlation analysis between asset classes to identify shifts in interdependencies	Correlations		10	7	5
Market impacts from the sale of business units by SIFIs (such as MetLife's intention to sell its retail life and annuity business or AIG's decision to sell its broker-dealer and mortgage insurance subsidiaries)	SIFI		11	11	11

Following the prioritization exercise, working group members took action and pursued further discussion on the following topics:

- ETFs
- GSEs
- Cyber

Discussion of Liquidity and Systemic Risk in ETFs

Illiquidity and Systemic Risk in ETFs

The working group held a conference call to focus on potential liquidity issues related to ETFs, which were identified in the prioritization exercise as one of the top concerns

Some questions & suggestions raised by the working group:

a) Formation of some sort of data inventory—whether by vendor or study
b) Sources of fragility in ETFs
c) Mutual funds vs. ETFs
d) Whether systemic issues with domestic or unleveraged ETFs
e) Pricing bounds for ETFs
f) How liquidity backstops (Authorized Participants & bank credit lines) work
g) Areas where runs might arise
h) Incentives for and impediments against shorting ETFs

* This list is the result of the Working Group's brainstorming exercise and not intended to be conclusive or exhaustive.