TRANSPARENCY OF STRUCTURED FINANCE PRODUCTS

Consultation Report

TECHNICAL COMMITTEE
OF THE
INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSIONS

September 2009

Foreword

The International Organisation of Securities Commissions (IOSCO) Technical Committee (TC) has published for public comment this consultation report on *Transparency of Structured Finance Products*. The Report sets out a number of factors to be considered by market authorities when considering enhancing post-trade transparency of structured finance products in their respective jurisdictions. The Report will be finalised after consideration of comments received from the public.

How to Submit Comments

Comments may be submitted by one of the three following methods **on or before 13 November 2009.** To help us process and review your comments more efficiently, please use only one method.

1. E-mail

- Send comments to Mr. Greg Tanzer at SFP-Transparency@iosco.org.
- **The subject line of your message must indicate "Transparency of Structured Finance Products."**
- Please do not submit any attachments as HTML, GIF, TIFF, PIF, ZIP or EXE files.

OR

2. Facsimile Transmission

Send a fax for the attention of Mr. Greg Tanzer, using the following fax number:
+34 (91) 555 93 68.

OR

3. Post

Send your comment letter to:

Mr. Greg Tanzer
Secretary General
IOSCO General Secretariat
C/ Oquendo 12
28006 Madrid
Spain

Your comment letter should indicate prominently that it is a "Public Comment on Transparency of Structured Finance Products."

Important: All comments may be made available publicly, unless anonymity is specifically requested. Comments will be converted to PDF format and posted on the IOSCO website. Personal identifying information will not be edited prior to publication.

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1. Executive Summary

In light of the crisis in financial markets, the Technical Committee (TC) of the International Organization of Securities Commissions (IOSCO) mandated its Standing Committee on the Regulation of Secondary Markets (TCSC2) to examine the viability of a secondary market reporting system for structured finance products (SFPs), with a particular focus on the nature of the market and its participants as well as on the potential benefits and drawbacks of such a regime. In undertaking this task, TCSC2 solicited information from a variety of sources from the financial services industry across several jurisdictions.

Views from market participants varied considerably. In general, buy-side participants are supportive of increased post-trade transparency for SFPs. They expressed the view that increased transparency would assist them in valuing these products, and in general lead to an improvement in price discovery and liquidity.

In contrast, sell-side participants raised concerns. One of their primary concerns is that the non-standardised, complex and illiquid nature of structured finance products would make meaningful price comparability difficult or impossible. In their view, publishing details of distressed sales might even result in an increase in volatility, a loss of confidentiality and a further downturn of the market. They also raised concerns about the perceived high cost of implementing such a post-trade transparency regime.

The TC recognises that there are divergent views about the merits of requiring enhanced post-trade transparency for SFPs, but nevertheless believes that greater information on traded prices could be a valuable source of information for market participants. The TC therefore recommends that member jurisdictions consider enhancing post-trade transparency in their respective jurisdictions.

In the TC's view, it is appropriate for post-trade transparency regimes to be tailored to take into account the unique nature of the market and participants in each jurisdiction, and that each member jurisdiction is best placed to judge the appropriate time, scope and manner for enhancing post-trade transparency. In general, however, the TC believes that enhanced post-trade transparency should be provided in the most cost-effective way reasonably possible, but should at the same time seek to avoid a negative impact on efficiency and liquidity of markets. Moreover, it may be appropriate in some jurisdictions to introduce post-trade transparency via a *step-by-step* or *phased-in* approach.

In light of the above, the TC believes that, amongst other things, it would be appropriate for member jurisdictions to consider the following factors when seeking to develop a post-trade transparency regime for SFPs:

- The degree of liquidity or secondary market trading for a particular SFP;
- The initial and outstanding amount of the issue;
- Whether the SFP was publicly offered or offered via private placement;
- Whether there is a broad investor base for the particular instrument;

- The degree of standardisation of a particular SFP;
- Costs of implementation of a post-trade transparency regime or costs of extending any existing post-trade transparency system to SFPs;
- Any appropriate time delays in publishing trade information;
- Whether to require the dissemination of trade-by-trade or aggregate trade information; and
- Thresholds with respect to the disclosure of trade volumes and further measures to help ensure anonymity of the market participants.

2. Objectives and Scope of this Report

Mandate

In its *Report on the Subprime Crisis*,[1] published in May 2008, the TC found, *inter alia*, that the recent market turmoil had particularly affected the market in SFPs. In addition, in the Report of the Financial Stability Board (FSB)[2] on *Enhancing Market and Institutional Resilience*,[3] published in April 2008, the FSB recommended that securities market regulators work with market participants to study in 2008 the possible scope of a comprehensive system for a post-trade transparency reporting system (price and volume) for credit instruments traded in secondary markets.

Following the publication of the FSB report, the TC mandated TCSC2 to examine, including pre-consultation with the financial services industry, the viability of a secondary market transparency system for different types of SFPs, focusing in particular on whether the nature of SFPs lends itself to such transparency and the costs/benefits such a system might entail.

One of IOSCO's 30 principles of securities regulation (set out in IOSCO's *Objectives and Principles of Securities Regulation*) states that regulation should promote transparency of trading. It further states that ensuring timely access to relevant information is key to the regulation of secondary trading as it allows investors to better look after their own interests and reduces the risk of market manipulation. TCSC2 accordingly considered the application of this principle to the secondary market for trading in SFPs.

For the purposes of this Report, TCSC2 defined SFPs as financial instruments that are:

- based on a pooling of assets usually sold to a special purpose vehicle,.
- the assets can be either cash instruments or credit derivatives; but the credit risk of the asset pool is de-linked from the special purpose vehicle;[4] and
- there is also credit or maturity tranching of the liabilities backed by the asset pool.[5]

For the purpose of this report, SFPs include residential and commercial mortgage-backed securities (RMBS & CMBS),[6] asset-backed securities (ABS),[7] collateralised debt obligations (CDO),[8] collateralized loan obligations (CLO),[9] and asset-backed commercial papers (ABCP).

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1 *Report on the Subprime Crisis* – Final Report, Report of the Technical Committee of IOSCO, May 2008, available at http://www.iosco.org/library/pubdocs/pdf/IOSCOPD273.pdf.

2 The FSB was previously known as the Financial Stability Forum (FSF).

3 *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, Financial Stability Forum, 7 April 2008, available at http://www.fsforum.org/publications/r_0804.pdf.

3 *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, Financial Stability Forum, 7 April 2008, available at http://www.fsforum.org/publications/r_0804.pdf.

4 A defining feature common to many special purpose vehicles is that of bankruptcy remoteness, whereby a special purpose vehicle's assets are isolated from any creditors of its sponsoring firm should the latter go into bankruptcy.

5 Excluded are covered bonds, as their liabilities are not tranched, as well as certificates and other derivatives products, since they are linked to an underlying asset but not backed by a pool of assets.

The debate about the need for additional transparency for SFPs encompasses many dimensions, including transparency of the underlying assets, transparency of the structure of the product, firm-specific information about exposure to a specific product or asset class, trading transparency, and general information about the market. For the purposes of this Report, TCSC2 focuses solely on post-trade transparency for SFPs. However, TCSC2 recognises that other issues relating to transparency are important and may deserve attention in other fora.

Development of this Consultation Report

TCSC2's work in preparing this Report was informed by a range of meetings and presentations by industry representatives (including market data vendors). In addition, TCSC2 conducted a survey of industry participants and market authorities[10] to:

a) Identify the types of SFPs that TCS2 should focus on for the purpose of this project;

b) Identify the general regulatory approaches taken by TCSC2 members with regard to post-trade transparency of different SFPs in the secondary market;

c) Obtain information from the industry, especially any self-regulatory initiatives in this regard;

d) Seek the views of the industry and TCSC2 members on the key issues/challenges and costs/benefits arising from potential trade transparency for SFPs, focusing in particular on whether the nature of SFPs lends itself to such transparency; and

e) Obtain information from active market participants on the degree of secondary trading, both pre- and post-crisis, for SFPs.

TCSC2 received a total of 63 responses to the survey from industry and 17 responses from market authorities. Of the 63 responses from industry, 56 were from financial institutions (buy side and sell side), 5 from stock exchanges or market associations and 2 from market data vendors. TCSC2 also obtained clarification on a range of issues at an IOSCO TCSC2 Industry Roundtable held on 13 May 2009. Participants included representatives from European trade associations, industry representatives (from the buy-side and from the sell-side) and data vendors. TCSC2 also received a written submission from a trade association.

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6 For example: agency RMBS (which are MBS issued by government-sponsored entities (GSEs) such as Fannie Mae and Freddie Mac or certain government agencies in the United States). Loans eligible for GSE-issued MBS are also referred to as "conforming"; prime RMBS; sub-prime RMBS (including UK non-conforming RMBS).

7 For example: credit card ABS, auto-loan ABS, student-loan ABS.

8 For example: cash CDOs, synthetic CDOs.

9 For example: cash leveraged loan CLOs, synthetic leveraged loan CLOs.

10 The term 'market authority' refers to the authority in a jurisdiction that has statutory or regulatory powers with respect to markets. Markets should be understood in the widest sense, including facilities and services relevant to debt securities. In addition to traditional stock exchanges, secondary markets should be understood to include various forms of off-exchange trading. The relevant market authority may be a regulatory body and/or a self-regulatory organization.

Industry views expressed in this Report stem from the responses to the survey carried out by TCSC2,[11] the IOSCO TCSC2 industry roundtable, and industry presentations provided during TCSC2 meetings. As this was not a scientifically conducted survey or consultation process, those views should not necessarily be interpreted as representing the general view of all market participants.

Other relevant international work

In addition to TCSC2, which focuses on secondary market regulation, other TC Standing Committees and Task Forces are considering matters related to SFPs including issuer transparency, investor due diligence, fair market valuation, firm risk management and prudential supervision, and credit rating agencies. For example in February 2009, IOSCO established a new standing committee on credit rating agencies (CRAs), which is expected to address a number of issues relating to the ratings process.[12]

Moreover, the TC set up a Task Force in late 2008 on *Unregulated Financial Markets and Products*. This Task Force examined two systemically important market areas, the securitisation process and the market for credit default swaps (CDS), and considered the appropriate regulatory action to improve transparency, efficiency, and market quality. The Task Force issued a Consultation Report in May 2009, containing interim recommendations.

In June 2009, IOSCO published a consultative report entitled *Disclosure Principles for Public Offerings and Listings of Asset-Backed Securities,*[13] setting out disclosure principles applicable to listings and public offerings of asset-backed securities, defined for the purposes of that report as securities that are primarily serviced by the cash flows of a discrete pool of receivables or other financial assets that by their terms convert into cash within a finite period of time.

In July 2009, the TC published a report on *Good Practices in Relation to Investment Managers´ Due Diligence When Investing in Structured Finance Instruments*.[14] That paper sets out five key points that firms should consider when assessing their due diligence policies and procedures with regard to the potential purchase of SFPs. Furthermore, the paper sets out three key steps which should generally be included in a due diligence process along with some good practices to be considered at each step. Finally, it deals with questions relating to the use of third parties in the due diligence process, including credit rating agencies.

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11 IOSCO Questionnaire for Industry Participants: Transparency of structured finance products in the secondary market.

12 *The Role of Credit Rating Agencies in Structured Finance Markets* – Final Report, Report of the Technical Committee of IOSCO, May 2008, available at http://www.iosco.org/library/pubdocs/pdf/IOSCOPD270.pdf ; see also *Stocktaking on the use of Credit Ratings*, Report of the Joint Forum, June 2009, available at http://www.bis.org/publ/joint22.pdf?noframes=1.

13 *Disclosure Principles for Public Offerings and Listings of Asset-Backed Securities* – Consultation Report, Report of the Technical Committee of IOSCO, available at http://www.iosco.org/library/pubdocs/pdf/IOSCOPD296.pdf.

14 *Good Practices in Relation to Investment Managers' Due Diligence When Investing in Structured Finance Instruments* – Final Report, Report of the Technical Committee of IOSCO, July 2009, available at http://www.iosco.org/library/pubdocs/pdf/IOSCOPD300.pdf.

TCSC2 will continue to monitor work undertaken by the other Standing Committees and Task Forces and any implications they may have for the completion of TCSC2's mandate on post-trade transparency of SFPs.

A number of groups have undertaken similar analysis to assess whether there is a need to enhance post-trade transparency of securitised markets. The work of these groups is ongoing. TCSC2 will monitor relevant developments for the work of this mandate.

For example, the Committee of European Securities Regulators (CESR) issued a report on the *Transparency of Corporate Bond, Structured Finance Product and Credit Derivatives Markets*[15] in July 2009 to address the recommendations of the FSB. CESR notes that, although insufficient post-trade transparency may not have been a key reason behind the recent market turmoil and that additional post-trade transparency would not be able to solve the different problems experienced in these markets as a singular measure, it is of the opinion that post-trade information does play a role in these markets. CESR also notes that the appropriate level of transparency should be calibrated taking into account the instruments, their trading methods and the market participants active in these markets.

In its recommendations CESR calls for a harmonised European post-trade transparency regime for all ABS and CDOs which are commonly considered to be standardised and that in terms of implementation a phased approach should be adopted. The European Commission has been informed.

TCSC2 notes that several international industry groups – the Securities Industry and Financial Markets Association (SIFMA), European Securitisation Forum (ESF), American Securitization Forum (ASF) and Australian Securitisation Forum (ASF) – have set up a Joint Global Initiative in an attempt to help restore confidence in the securitisation and structured credit markets. The Joint Global Initiative made several recommendations for improving key market practices including independent third-party sources of valuation, reporting and disclosure practices for RMBS and enhancing transparency into the credit rating agency process. It also made recommendations for proactively guarding against future crises through education programs and the establishment of a Global Securitisation Markets Group to report publicly on the market.

[15] *Transparency of Corporate Bond, Structured Finance Product and Credit Derivatives Markets*, Report of the Committee of European Securities Regulators, 10 July 2009, available at http://www.cesr-eu.org/popup2.php?id=5798.

3. Background information about the SFP market

3.1 Nature of the market

Where trading takes place

Trading for SFPs is nearly exclusively transacted on an OTC basis. While in many jurisdictions SFPs are also admitted to trading on a regulated or organised market,[16] trading rarely takes place on these markets.[17] In nearly all jurisdictions the predominant method of trading is still via traditional voice broking. However, a few jurisdictions reported that some SFPs are traded on electronic trading platforms,[18] although this does not account for a significant market share.

Public offering v Private placement

In the United States the offer and sale of many SFP related securities are registered with the SEC, sold in public offerings and publicly traded OTC. They are neither admitted to trading nor traded on exchanges. In addition, virtually all of the CDOs in the United States are offered and sold in exempt transactions without registration with the SEC and are instead privately placed.

In Europe, pre-crisis SFPs tended to be admitted to trading on regulated markets but traded OTC. The Irish Stock Exchange plays a key role in the listing of EU-originated deals, listing approximately 65-70% of all EU deals within the period 2001 to 2008. The Irish Stock Exchange also lists a significant number of US-originated deals, many of which are issued by Cayman and Delaware incorporated vehicles. Over 50% of such listings over the past three years have been for RMBS, with CMBS and CDOs collectively accounting for a further 30%. The majority of issuance in Europe is Euro-denominated and issued by SPVs mostly incorporated in Ireland or the Netherlands

In the ABCP market, products are nearly exclusively offered by private placement. Whilst in some jurisdictions it is technically possible to admit ABCP to trading on a regulated market, in practice this is not the case as the shorter maturity of the product can make it financially prohibitive (exchange fees, legal fees, etc.) to admit the instrument to trading.

In Australia, based on estimates at the beginning of 2009, the bulk of SFPs are RMBS (about 75% of the total) and CDOs (7%), with CMBS and auto-loan ABS accounting for most of the remainder. Almost all the CDOs and RMBS issued in Australia are issued via private offerings and traded OTC, although a proportion of the RMBS are listed on the Australian Stock Exchange to satisfy the eligibility requirements of investment mandates of institutional fund managers.

Whether an SFP is admitted to trading or not can have implications for both on-going and initial disclosure as well as reporting requirements. There are generally no reporting requirements if an SFP

16 For example, United Kingdom, Germany, Brazil, Switzerland, Australia, and Hong Kong.

17 For example United Kingdom, Germany, and Australia.

18 For example the electronic trading platform established by Bursa Malaysia.

is not admitted to trading on a regulated market. Moreover, private placements are not subject to the same regulatory requirements as public offerings of SFPs and so are generally not accompanied by the same degree of disclosure where they are not admitted to trading on a regulated market.

Level of market activity

Respondents report that both primary issuance and secondary market trading of SFPs has declined significantly since the onset of the credit crisis. The primary issuance market in Europe remained closed end of 2008 in the sense that over 95% of all issuance in Europe in 2008 retained only for repo purposes, notably with the Bank of England and the European Central Bank.[19] In the United States, primary issuance has restarted to a limited extent due to the Federal Reserve's TALF program.[20] Industry representatives consulted by TCSC2 indicated that new issuances in the first months of the TALF program often were oversubscribed, and expressed cautious optimism that the program would expand. Primary issuance in Australia has also slowed significantly in 2008 and the market remains dislocated, with the bulk of RMBS issued since the start of 2009 being purchased by the Federal Government's Australian Office of Financial Management.[21]

In terms of primary issuance by collateral type, the mortgage-backed securities (MBS) sector remains dominant. In 2008, over 83% of all primary issuance in the United States was for agency MBS and in Europe issuance in RMBS accounted for 82% of all issuance in 2008.[22] In Australia, RMBS accounted for an estimated 89% of all issuance in 2008.[23]

There were only moderate levels of secondary market trading of SFPs before the onset of the credit crisis. SFPs are complex products with tailored cash flows that may not suit the needs of many investors.[24] Prudent investors with good risk management systems would be expected to conduct significant due diligence before purchasing, so that they can understand the features of the product (e.g., collateral composition, payout structure, credit enhancements, etc.). The expected need to conduct due diligence could be a significant factor in explaining the observed low level of secondary market trading (i.e., this might lead to a lower number of investors who are capable or willing to conduct the necessary due diligence). Moreover, having committed resources to perform the due diligence, purchasers are reluctant to sell into the secondary market, particularly in the near term. Thus, purchasers of SFPs frequently adopt a "buy and hold" strategy, even more so than purchasers of other debt instruments.

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19 ESF Securitisation data report Q4 2008.

20 The Term Asset-Backed Securities Loan Facility (TALF) is a credit facility administered by the Federal Reserve Bank of New York. Under the facility, the Federal Reserve will make up to $200 billion in one-year, non-recourse loans to investors that will be secured by eligible collateral. The eligible collateral consists of newly issued, non-synthetic, investment-grade securities backed by auto loans, student loans, credit card loans, or small business loans that are guaranteed by the U.S. Small Business Administration.

21 Reserve Bank of Australia Statement of Monetary Policy (May 2009).

22 ESF Securitisation data report (Q4 2008).

23 Australian Securitisation News (Q1 2009).

24 This is particularly the case for the ABCP market, which is regarded to have minimal secondary market trading.

Secondary market trading in SFPs appears to have declined significantly since the onset of the credit crisis. Anecdotal evidence from the survey undertaken by TCSC2 has sought to compare trading volumes from pre- and post-crisis.

The most notable conclusion that can be drawn from the survey is that aggregated traded volumes have retreated significantly for all sectors. In the mortgage-backed sector, declines have averaged 45% for RMBS (both prime and sub-prime) with similar declines seen for CMBS. The picture is more mixed for the ABS sector, with average declines of 45% seen for credit-card ABS, whereas auto-loan ABS volume levels have slumped by 85%. However, student-loan ABS have increased on average by 33%. In general, declines in traded volume have been the greatest for the synthetic CDO and CLO sectors.

This picture is reinforced by information gathered from the UK Financial Services Authority transaction reports[25] for SFPs, which indicates that during the period 1 December 2008 to 29 May 2009, only 35% of the European population of SFPs[26] traded. In terms of trading frequency, 23.5% of those securities which did trade traded only once during this period and only 7% of securities traded at least once per week during this time.

Some attendees at the industry roundtable noted a brief spike in trading activity in the first quarter of 2009. In their view, this appears to have been driven by forced selling to meet liquidity needs. The trading subsequently decreased as the market stabilised to some extent. Respondents observe that, although there are some potential buyers in the market currently, most holders of SFPs are reluctant to sell. Respondents noted that this could be ascribed to a general belief that the hold-to-maturity value of many SFPs exceeds the value that could be obtained in the current secondary market. Selling into the current market would *crystallize* losses and could potentially erode the sellers' capital position.

Active market participants

The industry survey explicitly asked for information regarding the key participants active in the various SFP markets, both at the buyer and seller level. Responses to the questionnaire indicated that the breakdown of participants varies across sector. This breakdown has changed pre- and post-crisis.

In terms of active sellers, banks and funds (especially money markets funds/fund managers) seem to have dominated the SFP market pre-crisis. Some respondents thought that, post-crisis, the breakdown by seller type remained broadly the same.

Mixed views emerge regarding active buyers across the various sectors, but some respondents suggest that, before the crisis, banks and funds (especially money markets funds/fund managers) dominated the SFP market while post-crisis banks seem to have retreated from purchasing SFPs. Fund managers are now seen to account for greater market share, with hedge funds increasing their level of participation for some markets – such as the prime RMBS and CLOs markets.

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25 This includes transaction reports from FSA-authorised firms as well as transactions reports for non-FSA-authorised firms trading in a security which has been admitted to trading on a regulated market.

26 This represents 4357 securities (issued in a European jurisdiction) representing all sectors and all ratings.

For the ABCP market, key buyers were seen to be money market funds, banks, insurance companies, and dealers, with a prevalence of dealers and money market funds post-crisis. On the sell side, banks and large business enterprises and money market funds are seen as most active.

Wholesale v retail participation

The survey did not solicit information regarding the level of retail participation in the SFP market; and data are not readily available to quantify the extent of retail participation. However, the method of trading (i.e., primarily OTC), the complexity of the products, and the large average trading size strongly suggest that the SFP market is predominantly an inter-dealer market dominated by wholesale participants. However, some jurisdictions[27] do have some retail participants in this market, whether via direct investment in SFPs or indirectly (e.g., via funds).

Degree of product standardisation

SFPs tend to be highly complex products. Whilst there may be some degree of sector homogeneity, at the product level there is scope for greater differentiation. This is due to a variety of reasons including the way the product is structured, the composition of the collateral which backs the structure, performance features and the payment of cash flows. For example, some SFPs - such as synthetic CDOs, which are based on pooling of synthetic assets - may be characterised by a higher degree of complexity and tend to be bespoke.

The responses received to the industry survey do not provide a uniform view on the perceived level of product standardisation by asset class, which in itself serves to highlight a reduced level of product standardisation when compared to other assets which are traded on an OTC basis. Furthermore the perceived level of product standardisation can differ on a geographical basis within the same sector (e.g., UK prime RMBS v US prime RMBS).

Moreover, some respondents noted that, in Europe (in contrast to the United States) the perceived level of product standardisation is lower due to a large number of comparatively small markets impacted by their geographical location, e.g. by unique national laws and practices.

In terms of a consensus view, securities that are backed by credit cards, auto loans, and student loans are generally perceived to have a higher degree of standardisation. Varying views emerged with regards to mortgage-backed securities, with some viewing prime RMBS as having a relatively high degree of standardisation while others thought not. In contrast, sub-prime RMBS and CMBS were thought to have a lower degree of standardisation.

The CDO market and the CLO market are perceived to have a much lower degree of standardisation, with some products in these sectors seen as complex and bespoke.

[27] For example Italy and Spain, Canada, Brazil, Hong Kong, and Mexico.

The perceived level of product standardisation also varies by tranche, with the AAA tranche(s) perceived to be more standardised than the mezzanine or equity tranche(s).[28]

A more uniform view emerged regarding the degree of standardisation for ABCP, with this market generally perceived to have a higher degree of standardisation compared to some other types of SFP.

The degree of product standardisation also seems to correlate with its liquidity. More standardised SFPs, especially those backed by more homogenous collateral, generally are more liquid than SFPs that are bespoke, of lower credit quality or backed by heterogeneous collateral.

3.2 Little or No Post-Trade Transparency Currently

The vast majority of SFPs are not subject to any post-trade transparency regime.[29] In almost all TCSC2 jurisdictions, SFPs are mainly traded OTC and, with a few exceptions,[30] post-trade information with respect to those OTC trades is not publicly disseminated. Most jurisdictions indicated that they do have post-trade transparency requirements at exchange level if an SFP is listed and traded on an exchange. In addition, some jurisdictions indicated that post-trade transparency requirements would also exist for SFPs admitted to and traded on an Multilateral Trading Facilities (MTF), Alternative Trading Systems (ATS), or Electronic Trading Platforms (ETP).[31] However, few SFPs do in fact trade on those markets, so few SFPs are subject to those markets' post-trade transparency regimes. There do not appear to be any initiatives by data vendors in TCSC2 jurisdictions to provide post-trade information to the public regarding secondary market trading of SFPs. In the United States, however, the U.S. Department of the Treasury has specifically called for TRACE[32] to be expanded to include asset-backed securities.[33] However, at the time of writing this report, it is unclear if or when the Financial Industry Regulatory Authority (FINRA) might act upon that recommendation.

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28 Ratings are of course a major issue for many SFPs as they can have an impact on both pricing and liquidity. This paper, however, does not address the issue of ratings or the role of credit rating agencies in general as this issue has been addressed in other fora.

29 However, a large majority of TCSC2 jurisdictions (Brazil, France, Germany, Italy, Malaysia, Mexico, Spain, Switzerland, and the United Kingdom) reported that transactions in SFPs that are admitted to trading on a regulated market must be reported for regulatory purposes to the regulatory authority whether or not such transactions were carried out on the regulated market. In such cases, the information is used by market authorities to help maintain fair and orderly markets and to detect and deter insider trading, market manipulation, and other forms of fraudulent or abusive activity.

30 In Malaysia, all trades in SFPs that are exchange-listed must be reported to the exchange, even if trades are executed OTC. In Australia and Hong Kong, only members of the exchange are required to report information. In Italy, intermediaries concluding transactions outside regulated markets, MTFs and systems operated by systematic internalisers are asked to make public post-trade information on SFPs admitted to trading on Italian regulated markets.

31 Italy and Switzerland.

32 The Trade Reporting and Compliance Engine (TRACE) is a vehicle that facilitates the mandatory reporting of OTC secondary market transactions in eligible fixed income securities. TRACE was developed by the Financial Industry Regulatory Authority (FINRA), a US self-regulatory organisation. All broker-dealers who are FINRA member firms have an obligation to report transactions in corporate bonds to TRACE under an SEC approved set of rules. TRACE became operational on July 1, 2002.

33 *See* U.S. Department of the Treasury, *Financial Regulatory Reform: A New Foundation*, http://www.financialstability.gov/docs/regs/FinalReport_web.pdf, at 45.

3.3 Existing pricing mechanisms

The price information used by industry participants for price discovery and valuation of SFPs is generally provided from a variety of sources. There is a generic valuation process applicable for SFPs which involves identification of the most recent market quote and comparing that quote to the investor's view of intrinsic value, taking into account risk and interest rate environment.

Industry responses to the TCSC2 survey provided some insight into the sources of pricing information used for SFPs. There are basically three different types of prices used by market participants:

i) Dealer quotes;

ii) Consensus-based prices; and

iii) Model-based prices.

Most participants will use a combination of all three of these sources in addition to internal valuation processes[34] to form their pricing of SFPs.

Industry participants also noted that they use prices at primary issuance for price discovery, particularly for student-loan ABS, RMBS and CMBS. However, the market turmoil and the retreat of market liquidity since mid-2007 have led to a decrease of issuance of new SFPs. Therefore, the usefulness of this as a source of price information may have been reduced.

Dealer Quotes

As noted before, trading of SFPs is nearly exclusively transacted on an OTC basis. As with other debt markets, price information is mainly provided by dealers. Dealer quotes are by far the most prevalent source of price information across all SFPs, with most respondents using this as their main source of price information.

Consensus-based prices

Consensus pricing services are offered in a number of jurisdictions by third-party data vendors and are used by financial institutions on a global basis. This source of pricing information is viewed by respondents as a valuable source of pricing data.

The data vendor receives end-of-day pricing contributions from a wide range of dealers. These prices are then subjected to a number of cleansing algorithms to remove stale data and outliers, with the final published price generally being an average of the remaining pricing contributions.

In the United States, consensus pricing is also available on a number of benchmark deals based on dealer contributions.

[34] Factors relevant in scope of such internal valuation processes include: Assets in the portfolio, true sale or synthetic structure, seniority of the tranche (junior, mezzanine, super senior), interest payments, ratings, recovery rate, default probability, credit spreads, cash flow profile, currency risks, CDS indices.

Model-based prices

Pricing of SFPs that trade less frequently is driven more by model-based prices. Model-based pricing uses cash flow models, other inputs, and generic assumptions to derive a theoretical price. Generic assumptions may be gleaned from research reports or analyst insights for particular asset classes. T his source of pricing information is particularly relevant for SFPs which trade infrequently.

The retreat of market liquidity since mid-2007 has led to an increased reliance on this type of pricing information.

4. Enhancing post-trade transparency

Industry responses to the TCSC2 survey provide some insight into the potential benefits and drawbacks of post-trade transparency. TCSC2 acknowledges, however, that it did not select potential respondents in a scientific manner and thus should not be viewed as representative of all market participants. Moreover, the respondents who provided answers were self-selected, further limiting the ability to view them as neutrally representative. Thus, caution should be exercised when viewing the results of the survey as they may not apply to all market participants. Given these limitations, it is nevertheless clear that at least some market participants, particularly on the buy-side, see benefits in post-trade transparency for SFPs generally. Of the sell-side respondents, nearly all opposed post-trade transparency for SFPs.

4.1 Potential benefits of post-trade transparency

Survey respondents identified a number of potential benefits associated with a post-trade transparency regime for SFPs.

Improved price discovery and reduction of information asymmetries

Some respondents argued that post-trade transparency would reduce information asymmetries, in that publicized prices would be equally available to all market participants.

One of the main benefits identified was the scope for improvement to the price-discovery process. Reduced information asymmetries could enable investors to have a better informed view of the market, potentially leading to more accurate pricing and appropriate spread levels. This in turn was seen as possibly having a beneficial effect on market liquidity. Some respondents were of the view that an improved price-discovery process would be of more use in developed SFPs markets.

Valuation of products and portfolios

A large number of respondents argued that dissemination of post-trade information would help with portfolio valuation. It was felt that making information on traded prices and volumes publicly available could contribute to more accurate portfolio valuations and in turn support better risk management practices amongst market practitioners.

Confidence in the market

As a result of these potential benefits, increased market confidence was also identified as a beneficial consequence of a post-trade transparency regime. Of the respondents that viewed post-trade transparency favourably, some believed that a post-trade transparency regime for SFPs could boost liquidity and help stimulate the market for SFPs. However, the majority of those who generally viewed post-trade transparency favourably thought that mandating such transparency at this time

would have little or no impact on the secondary market for SFPs. Few respondents believed that the absence of post-trade transparency contributed to the financial crisis.

Involvement of retail investors

Eventually increased price and market transparency was considered a potential means to tap a new retail investor base. Some respondents noted, however, that the involvement of retail investors in markets for highly complex products such as SFPs was at the same time seen as a potential drawback of a post-trade transparency regime.

4.2 Potential drawbacks of post-trade transparency

Survey respondents identified a number of potential drawbacks associated with a post-trade transparency regime for SFPs. These are discussed in turn below, although it should be noted there is some overlap between these concerns.

Inappropriateness given customised non-standardised nature of SFPs

Unlike equities and other classes of debt instruments, SFPs involve a large number of customised issues, many of which trade very infrequently. Standardisation of SFPs is difficult because of the range of issuers, the different kinds of underlying assets and the variety of different tranches created on individual pools. As a result, some respondents believe the benefits of a mandatory post-trade transparency regime are limited because it is not always possible to compare *like for like* (i.e. seemingly similar) transactions across a secondary market. That is, where SFPs in a secondary market are largely non-standard, similarities across products that can be used for comparison will be few. It was also noted that the implementation of a mandatory post-trade transparency regime would be a significant operational challenge because the number of potentially reportable issues could be overwhelming.

Loss of confidentiality of positions and investment strategies

Some respondents believed that, due to the relatively small number of active participants in most SFP markets, post-trade transparency could result in participants' position and/or investment strategy becoming identifiable.

For example, a specific ABS tranche will often be relevant only to a handful of market participants, particularly in the case of lower quality tranches. Thus if a trade in one of these SFPs is publicised, others involved in the deal can more readily identify both the buyer and the seller. Consequently, liquidity could be further reduced if dealers become unwilling to commit capital if their trades are publicised.

One respondent raised a related concern that mandatory post-trade transparency means other firms can view and take advantage of another firm's market making work by using the latter's published pricing as a starting point. This can reduce the original market maker's incentive to do fundamental research by reducing that market maker's upside potential.

Inappropriateness given illiquidity of SFP markets

A number of respondents are of the opinion that post-trade transparency is more suited to liquid instruments with large and diverse pools of investors. However, most SFPs are illiquid as most issues are held only by a small number of investors on a buy-and-hold basis. Where the SFP markets are illiquid (or become illiquid) – with few investors, low volumes, and infrequent trading – post-trade transparency may not in the view of some respondents provide clear and consistent information that is needed for price discovery. Furthermore, if anonymity is not preserved, competitive positions in price negotiations might change in their view to the disadvantage of weaker market participants who would then withdraw from the market.

As noted above, if post-trade transparency results in a loss of confidentiality, this may have an adverse effect on liquidity. Some respondents thought there was risk of market abuse and manipulation in the pricing of illiquid SFPs. Some respondents from the sell-side also argued that mandating post-trade transparency at this time might have the opposite effect of what is intended, by further reducing liquidity and confidence in an already distressed market.

One respondent suggested that indices such as ABX and CMBX, which are published daily, could be used to address the heterogeneous nature and illiquidity of SFPs. These indices could be used as proxies by investors to do a relative value pricing analysis on their own securities as long as the underlying or the components of the index are consistent with the SFP to be priced.

Market distortion from transparency of distressed sales

Another commonly identified drawback was the scope for *fire-sales* or distressed sales to distort SFP markets by setting the price especially when markets are illiquid. The publication of such distressed prices can in turn further depress prices, by drawing the market towards distressed prices, and lead to an increase in volatility. A few respondents noted that the majority of investors would be following a buy-and-hold strategy; however, publication of distressed sales prices of similar securities could create mark-to-market volatility (i.e., incorrect valuation of portfolios, inaccurate analysis of the risks involved resulting in a decision to trade out of these positions, etc.).

One respondent noted that it is difficult to determine whether a trade is distressed. To identify distressed trades, it is necessary to consider these trades in the broader context of other trades for related and comparable securities.

Costs of implementation

The most commonly raised drawback was the perceived high costs of implementing such a post-trade transparency regime. It was noted that post-trade transparency could potentially consume a large amount of resources for the development of systems and compliance monitoring. A number of respondents noted that a post-trade transparency regime would not provide sufficient benefits to outweigh the costs of establishing it. A concern was raised that, if brokers and sponsors of the deal are to be required to provide additional and/or regular information at an individual client level, higher fees would have to be charged to clients.

More information about the underlying assets is needed first

Some respondents stated that post-trade transparency would be less useful if it were not accompanied by more information about the underlying assets. Additional information about the deal structure, the quality and performance of the underlying assets, and the general availability and timeliness of such information was often cited as desirable. Increased transparency in these areas can complement post-trade transparency by enhancing the interpretation of post-trade information and help restore investor confidence in more accurate valuations of assets. Standardisation of investor reports was also considered to be helpful.

5. Evaluating benefits and drawbacks

TCSC2 recognises that there are divergent views about the merits of introducing post-trade transparency for SFPs. For example, post-trade transparency generally might provide useful information about the overall direction of the market. Many respondents, however, have noted that in a crisis situation, trades in SFPs might be distressed sales and may not reflect true market conditions. These divergent views reflect, to a certain extent, the difficulties in assessing the correct balance between the potential benefits and potential drawbacks of any transparency regime.

In evaluating the potential benefits and drawbacks of a mandated post-trade reporting system, TCSC2 has considered existing IOSCO principles.[35] In particular, Principle 27 states that "regulation should promote transparency of trading." In the Commentary accompanying the Principles for the Secondary Market, it is stated that:

i). *Regulation appropriate to a particular secondary market will depend upon the nature of the market and its participants*;

ii) *The level of regulation will depend upon the proposed market characteristics, including the structure of the market, the sophistication of market users and the types of products traded; and*

iii) *Post trade reporting and publication – information on completed transactions should be provided on the same basis to all participants. Full documentation and audit trail must be available.*

Transparency in general promotes several important policy aims. Transparency enhances investor protection by making it easier for investors to monitor the quality of executions that they receive from their intermediaries.

Transparency also can help to promote market efficiency. Inefficiencies can arise in the pricing of securities when market participants are unaware of others' trading activity. This is particularly the case in dealer-dominated markets where pre-trade quotation information, if it can be obtained at all, can be obtained only from a small number of dealers, and dealers have more post-trade information than any buy-side clients that they trade with. Post-trade transparency can reduce information asymmetries between dealers and buy-side clients. If trade prices are publicly known, buy-side market participants will be more likely to question if they are not obtaining prices similar to those at which executions have occurred in the past.

Post-trade transparency could be of some use in assisting in the valuation of SFPs. In the equity markets, for example, last-sale prices are frequently used as the basis for valuations. However, exclusive reliance on last-sale prices presupposes a liquid market where any particularly sale can be taken as reasonably representative of the market. This may not be the case with SFPs, as secondary market sales may be extremely infrequent for many tranches of SFPs or because particular sales occur

[35] *IOSCO Objectives and Principles of Securities Regulation*, Report of IOSCO, February 2008, available at https://www.iosco.org/library/pubdocs/pdf/IOSCOPD265.pdf.

in highly individual circumstances. However, some post-trade information coupled with models-based pricing might be more accurate than models-based pricing alone. Judgment must be exercised to avoid inappropriate reliance on last-sale prices in SFPs for valuation purposes.[36]

Industry participants have pointed out the need for greater standardisation of performance reports on the underlying assets which are being securitised. Whilst transparency of the underlying assets is not within the scope of this mandate[37], TCSC2 acknowledges that greater standardisation of reporting and transparency of the underlying assets would contribute significantly to enhancing transparency of securitised markets.[38] TCSC2 encourages existing industry initiatives aimed at bringing greater standardisation and transparency of the underlying assets.

TCSC2 examined the potential costs of post-trade transparency in SFPs. These potential costs can broadly be placed into two categories:

1. Operational costs i.e., those associated with developing and maintaining the systems and internal controls to support a post-trade transparency regime; and
2. Potential costs arising from altered market structure i.e., liquidity suffering if post-trade transparency caused liquidity providers to reduce their activity in the market.

With respect to operational costs, TCSC2 notes that building a system for collecting and disseminating trade information from scratch could be very costly. For example, development of the TRACE system in the United States cost several millions of dollars industry-wide. However, where post-trade transparency regimes are already established for certain kinds of products, such regimes could possibly be extended to SFPs in order to minimize such costs. Thus, extending TRACE to include SFPs would likely not entail the same degree of costs as the initial start-up. In developing a separate trade reporting system for municipal bonds, U.S. regulators minimized the operational costs by using clearing information as the basis for the transparency regime.

To assess the possible market structure costs associated with post-trade transparency in the SFP market (or some subset thereof), TCSC2 also took into consideration how the introduction of mandatory post-trade transparency through TRACE has affected the market in corporate bonds in the United States. TCSC2 acknowledges that there are divergent views in relation to TRACE's overall

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36 On 2nd April, the Financial Accounting Standards Board changes fair-value, or mark-to-mark accounting and allowed companies to use significant judgment in gauging prices of some investments on their books, including mortgage-backed securities. The International Accounting Standards Board set out a detailed six-month timetable for publishing a proposal to replace its existing financial instruments standard (IAS39).

37 As noted at the beginning of this report, IOSCO has examined this issue separately. *See Disclosure Principles for Public Offerings and Listings of Asset-Backed Securities* – Consultation Report, Report of the Technical Committee of IOSCO, June 2009, available at http://www.iosco.org/library/pubdocs/pdf/IOSCOPD296.pdf.

38 The IOSCO Task Force on Unregulated Financial Markets and Products is currently examining ways to introduce greater transparency and oversight in unregulated financial markets and products and improve investor confidence in, and the quality of, these markets. A Final Report will be released in September 2009 which will make recommendations about regulatory approaches to be considered by national regulators and then implemented as appropriate with respect to securitisation and credit default swap markets.

effect. Nonetheless, TCSC2 is of the view that experiences with TRACE could shed some light on potential effects of enhanced post-trade transparency in general.

As part of TRACE's establishment, independent economists were commissioned to test the effects of transparency on corporate bond liquidity. In their empirical study, Goldstein, Hotchkiss and Sirri (2006)[39] found that increased post-trade transparency has a neutral or positive effect on market liquidity. Further academic studies[40] suggest that trade execution costs for institutional transactions in corporate bonds reduced after the introduction of transaction reporting for corporate bonds through TRACE.[41] Other studies[42] have found evidence of a *liquidity externality*, whereby the improved market quality in securities where there are reported prices improves market quality in similar securities that either have no reports or are not subject to the transparency regime.

However, some doubt remains about the effects of TRACE. For example, SIFMA has argued that the academic studies conducted to date examine only transaction costs, but not volume or other measures of liquidity. Maxwell and Bessembinder (2008)[43] report complaints, from both dealer firms and some of those firms' buy-side customers, that trading is more difficult because dealers are more reluctant now to commit capital to the market.

It is also unclear to what extent TRACE experience is one to one transferable to SFPs.[44] As discussed earlier in this Report, there are significant differences between corporate bonds and SFPs, in terms of the structure of the market, degree of standardisation and investor behaviour. It should also be noted that empirical studies of the impact of TRACE were carried out in a much different market environment.

Two other factors could be taken into consideration that could help to limit the operational costs of introducing a post-trade transparency in SFPs.

A first factor in limiting the operational costs of a post-trade transparency regime for SFPs is the involvement of private sector data vendors. A post-trade transparency regime need not be operated as a public utility on a not-for-profit basis. Market participants that effect trades in SFPs possess

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39 Michael A. Goldstein, Edith S. Hotchkiss, and Erik R. Sirri, "Transparency and Liquidity: A Controlled Experiment on Corporate Bonds," *Journal of Financial Studies* (2006).

40 Hendrik Bessembinder, William Maxwell, and Kumar Venkataraman, "Market transparency, liquidity externalities, and institutional trading costs in corporate bonds," *Journal of Financial Economics* (2006); Amy K. Edwards, Lawrence E. Harris, and Michael S. Piwowar, "Corporate Bond Market Transaction Costs and Transparency," *Journal of Finance* (June 2007); Amy K. Edwards and M. Nimalendran, "Corporate Bond Market Transparency: Liquidity Concentration, Information Efficiency, and Competition" (May 2007).

41 These studies do not take into account the initial cost of establishing TRACE or the ongoing cost of operating TRACE.

42 Hendrik Bessembinder, William Maxwell, and Kumar Venkataraman, "Market transparency, liquidity externalities, and institutional trading costs in corporate bonds," *Journal of Financial Economics* (2006).

43 William F. Maxwell and Hendrik Bessembinder, "Transparency and the Corporate Bond Market," *Journal of Economic Perspectives* (2008).

44 As noted above, the United States Department of Treasury has recommended that TRACE be expanded to include asset-backed securities.

valuable information about those trades. Such market participants should not necessarily be required to disclose that information for free. TCSC2 believes that a for-profit transparency regime can be consistent with the market benefits that post-trade transparency may provide. Under such a regime, jurisdictions should ensure, however, that post-trade data could be obtained by the public on terms that are fair and reasonable and not unreasonably discriminatory.

Secondly, a post-trade transparency regime need not include, particularly in its earliest stages, every tranche of SFPs. Indeed, given the sheer number of tranches, a system that attempts to include them all in the reporting regime from the start could prove difficult. Jurisdictions might conclude, therefore, that it is more practical to undertake a transparency regime for SFPs with only a limited number of products for which transparency is deemed the most beneficial.[45]

While dealer participation in the market might be expected to lessen when dealers do not have clear informational advantages over buy-side investors, a phased-in approach might show whether and to which extent the alleged drawbacks and benefits prove true. Moreover, market authorities should consider whether the reduction of informational asymmetries between the buy-side and the sell-side might encourage greater buy-side participation, and thereby offset any potential reduction in sell-side participation.

[45] TCSC2 notes that, in the United States, a post-trade transparency regime for corporate bonds that predated TRACE was limited to 50 non-investment-grade debt securities.

6. Proposed Approach

TCSC2 is of the view that, in accordance with Principle 27 of the IOSCO principles, there could be benefits in enhancing post-trade transparency for SFPs. TCSC2 thus recommends that member jurisdictions consider enhancing post-trade transparency in their respective jurisdictions.

TCSC2 recognises that any post-trade transparency system should be tailored to take into account the unique characteristics of the SFP market in a particular jurisdiction. SFP markets are more developed in certain IOSCO jurisdictions than in others. In particular the degree of liquidity and standardisation can even differ on a geographical basis within the same sector.

In seeking to develop an appropriate post-trade transparency regime for SFPs, member jurisdictions may wish to consider the following factors:

- The degree of liquidity or secondary market trading for a particular SFP.
- The initial and outstanding amount of the issue;
- Whether the SFP was publicly offered or offered via private placement;
- Whether there is a broad investor base for the particular instrument;
- The degree of standardisation. Factors such as the structure of the product and the homogeneity of underlying assets could be considered in determining the degree of standardisation; and
- The extent to which existing post-trade transparency systems could be extended to SFPs at reasonable cost.

With respect to the kind of information that usefully could be disseminated, IOSCO jurisdictions may wish to consider:

- Publication of trade-by-trade transparency information or publication of aggregate trade information (such as high, low, and average prices) on a periodic basis.
- Measures to ensure anonymity of the market participants;
- Reasonable delays before trading information is disseminated; and
- Publication of trade information without disclosing data relating to the volume of the transaction, possibly depending on a certain threshold.

TCSC2 acknowledges that some member jurisdictions may find it helpful to consider other factors in determining whether and how to enhance post-trade transparency. This could include consideration of the availability and quality of information about the underlying assets of SFPs through indices.[46]

TCSC2 recognises that member jurisdictions have implemented different models for the publication of post-trade transparency for asset classes other than SFPs. Different models have their own merits and costs and each could serve to enhance post-trade transparency for SFPs. It is important that any transparency regime be delivered in a cost-effective way. Each member jurisdiction is best placed to determine itself what constitutes an effective way of implementing a post-trade transparency regime for SFPs.

Furthermore, individual member jurisdictions are best placed to judge the appropriate time and manner for enhancing post-trade transparency for SFPs in their respective jurisdictions. Thus, a jurisdiction may wish to consider phasing in post-trade transparency in stages, whether in terms of the number of products subject to the regime or the kinds of information disseminated, or both.

[46] An example is the introduction by Markit of its ABX indices, which track subprime RMBS prices, and the fact that market participants could write CDS based on the ABX indices. The CDS market allowed market participants to express an aggregate view of the creditworthiness of US RMBS bonds and their underlying assets.

7. Conclusions

The financial crisis has brought to light a multitude of issues, some of which are specific to the SFP market and others which are not. In undertaking its work to consider a post-trade transparency regime for SFPs, TCSC2 has solicited information from a variety of sources across several jurisdictions.

Whilst a lack of post-trade information is not widely regarded as being a direct cause of the difficulties experienced by the SFP market, the absence of accurate information – both in terms of an efficient price formation process and for accurate valuations – has come to light. Currently, a mandated post-trade transparency regime for SFPs does not exist in any member jurisdiction, although some pricing information on SFPs is available from a number of sources. Whilst there are divergent views on the possible benefits and drawbacks of a post-trade transparency regime, TCSC2 believes that greater information on traded prices of SFPs could be a valuable source of information for market participants. TCSC2 therefore encourages each member jurisdiction actively to consider enhancing post-trade transparency in its jurisdiction.

In reaching its view, TCSC2 is mindful of IOSCO Principle 27 and the need for promoting transparency in the secondary markets. TCSC2 acknowledges, however, the complexity of the SFP market and therefore the importance of each jurisdiction to consider what level of information might be appropriate to disclose, bearing in mind the characteristics of the market in question and its participants.