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INSTITUTE OF  
INTERNATIONAL  
FINANCE

August 29, 2014

Basel Committee on Banking Supervision  
Bank for International Settlements  
Centralbahnplatz 2  
CH-4002 Basel  
Switzerland

Ms. Carolyn Wilkins  
BCBS Working Group on Liquidity  
Senior Deputy Governor of the Bank of Canada  
Bank of Canada

**Re: Comment on the Net Stable Funding Ratio consultative document  
Additional Information on the Treatment of Equities**

Dear Ms. Wilkins:

The Global Financial Markets Association and the Institute of International Finance, (the “Associations”), along with other trade associations, submitted a comment letter<sup>1</sup> to the Basel Committee on Banking Supervision (“BCBS”) on April 11 in response to the BCBS’s consultative document on the revised Net Stable Funding Ratio (“Revised NSFR”).<sup>2</sup> We continue to strongly support the comments raised in our prior letter, including the equities-related comments, and none of the points outlined in this letter should be construed to supersede or override any of our original requested alternative treatments for equities or non-equities instruments. In this context, we are submitting this supplemental comment letter to emphasize our serious concerns with the treatment of equities under the Revised NSFR, and the impact such treatment will have on the market and market participants. Although our original comment letter raised many of these concerns, additional analysis since the submission of our original comment letter demonstrates that the Revised NSFR, if adopted in its current form, would significantly increase transaction costs across equity markets for all participants. For example, our analysis shows that the cost of stock borrow transactions would increase 4-5 times over current levels.

The Associations support the policy goals underlying the Revised NSFR, which include limiting banks’ overreliance on short-term wholesale funding, encouraging better assessment of

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<sup>1</sup> The Associations’ prior comment letter is available at: <http://www.bis.org/publ/bcbs271/crovbafa.pdf>. The Associations continue to support the other comments made in the April 11 letter.

<sup>2</sup> BCBS, *Basel III: The Net Stable Funding Ratio* (January 2014), available at: <http://www.bis.org/publ/bcbs271.pdf>.

funding risk across all on- and off-balance sheet items, and promoting funding stability.<sup>3</sup> Our comments in this letter recommend an approach for balancing these important policy goals with the equally important objective of avoiding unnecessary disruptions to healthy and vibrant equity markets and assuring the availability of services provided by banking organizations to end-users for their efficient and cost-effective access to such markets. As discussed below, such balancing can be achieved without significant compromise of the Committee's prudential goals because many of the activities in question do not entail short-term funding of longer-term exposures.

In particular, as described in greater detail below, this letter makes three substantive recommendations:

- First, with respect to stock borrow transactions in which a bank provides cash against a borrowed security to facilitate client and firm short activities, the Revised NSFR should assign a 0 percent Required Stable Funding (“**RSF**”) factor rather than classify such stock borrows as “loans.”
- Second, the Revised NSFR should recognize a limited class of linked transactions, defined by strict criteria, in which the RSF factor is deemed to equal the Available Stable Funding (“**ASF**”) factor in light of the low funding and liquidity risks of these transactions and the significant role they play in equity markets and the larger economy.
- Finally, the RSF factor for unencumbered exchange-traded equities should be lowered to:
  - 15 percent, in the case of exchange-traded common equity shares that qualify as Level 2B assets, as opposed to the 50 percent factor proposed in the Revised NSFR; and
  - 50 percent, in the case of non-Level 2B exchange-traded equities, as opposed to the 85 percent factor proposed in the Revised NSFR.

These recommendations, and the attached research presented in **Annex A**, reflect our current understanding of the Revised NSFR and the best approach for achieving the BCBS's underlying policy goals.

In addition, the Associations strongly encourage the BCBS to conduct, before finalizing the framework, a Quantitative Impact Study (“**QIS**”), accompanied by additional research, of the potential impacts on global equity markets of the equities provisions of the Revised NSFR. This important empirical step would help avoid overly conservative calibrations that might weaken economic growth and job creation.

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<sup>3</sup> See Revised NSFR, ¶ 1.

Before setting forth our recommendations in detail, the letter provides important context for their consideration by describing banks' key role in equities markets and the substantially negative market effects of an overly conservative calibration of the final NSFR.

**A. Banking Organizations' Role in Equities Markets and the Impact of an Overly Conservative NSFR**

Banking organizations play critical roles in the global economy, including as lenders, wealth management advisors, and asset custodians. In equity markets, banking organizations, acting through broker-dealer or depository institution subsidiaries, likewise perform a number of critical functions that support the liquidity of equity securities and the basic functioning of equity markets.

In particular, banking organizations support equity markets by:

- underwriting new equity issuances, including block trades to accelerate capital raises and reduce underwriting risk for issuers;
- market-making in secondary equity markets;
- facilitating investor market access through equity swaps;
- providing investment and hedging solutions to clients;
- providing financing to investors against equity securities as collateral; and
- acting as a market intermediary in collateral-sourcing transactions.

While acting as collateral intermediaries, secured lenders, or market access facilitators, banking organizations, including global systemically important banks, hold significant balance sheet equity positions to support their client-facing activities and to mitigate their market risk and credit risk. Imposing severely restrictive funding requirements on banking organizations' underlying equity positions would correspondingly restrict their ability to continue engaging in these activities. Moreover, imposing restrictive funding requirements on the equity-related activities described in greater detail below would not accomplish the objective of the Revised NSFR to "reduce funding risk over a longer time horizon"<sup>4</sup> because the activities in question do not require significant funding resources. In short, the fundamental concern is that the Revised NSFR would significantly and unnecessarily increase the capital and funding costs for equities activities, without furthering the prudential goals of the Revised NSFR.

In particular, adopting an excessively conservative approach in setting the appropriate RSF factors for equity activities could have a severely adverse impact on equity markets. This is critically important, because equity markets play a key role in the modern global economy. Retail investors, pensions, mutual funds, and other market participants invest in equities to benefit from the long-term growth of companies, which allows the general public to share in broad-based wealth creation. Companies depend on equity markets at each stage of their

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<sup>4</sup> See Revised NSFR, ¶ 5.

development, both by raising capital through initial public offerings and by maintaining a healthy investor base in the secondary market. Individuals depend on these markets as investors, as pension beneficiaries, and as employees and customers of dynamic companies that raise capital in equity markets to grow.

Because of these dependencies, an overly conservative regulatory regime that unnecessarily weakens equities' liquidity, imposes new transaction costs, impedes normal course risk management strategies, or impairs market access will necessarily have ripple effects across all segments of the global economy, including on investors, pensioners, employees, and consumers. Moreover, in the long-run, these negative effects might increase systemic risk, including heightened fire-sale risk where equity markets become less deep and liquid.

Finally, in calibrating the appropriate degree of conservatism in any final NSFR, the BCBS should take into account the effects of recent and highly related enhancements of prudential regulation that establish robust requirements for capital, funding, and liquidity at banking organizations. The BCBS and national regulations have made numerous significant enhancements to the prudential framework in recent years with other related reforms at an advanced stage: the Basel III capital framework, including the recent revisions to the Basel III leverage ratio; the Liquidity Coverage Ratio (“**LCR**”); margin requirements for uncleared derivatives; the Fundamental Review of the Trading Book; proposed revisions to the securitization framework; and ongoing Financial Stability Board work on shadow banking, among other BCBS projects and various national-level initiatives.

We believe that taking a holistic view of regulation is important in light of the NSFR's potential effects on equity markets, particularly given the vital role of these markets in the modern global economy and the extensive existing regulation of such markets.

## **B. Equity Market Effects of an Overly Conservative NSFR**

Banking organizations and other market participants have been analyzing the Revised NSFR's potential impact on equity markets since its release in January, including through a market impact study that Oliver Wyman was retained to prepare (the “**Industry Analysis**”). The summary results of the Industry Analysis are attached as Annex A to this letter.

The Industry Analysis supports the conclusion that, in its current form, the Revised NSFR would have significant negative effects on equity markets that go well beyond the funding and liquidity risks of banks' equity activities, putting at risk healthy, well regulated, stable markets that support investor wealth creation, capital formation in the non-financial economy, prudent risk management within banking organizations, and broader economic growth and job creation.<sup>5</sup> In particular, we are concerned that the RSF calibrations in the Revised NSFR are not

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<sup>5</sup> As discussed elsewhere in these comments, these significant negative effects are disproportionate to the prudential funding risks to banks of the transactions addressed.

supported by sufficient empirical data, and that the BCBS should conduct a QIS to carefully examine the issues identified in the Industry Analysis before finalizing the NSFR.

We respectfully request that BCBS review in detail each of the issues presented in the Industry Analysis. As described in this analysis, global equity markets, particularly main index equities, have market profiles comparable to high-quality sovereign debt in terms of maturity, transparency, and relative stability—these features of global equity markets support many of the proposals described in greater detail below for modifying the Revised NSFR. The overly conservative calibration of RSF factors, as applied to equities in the Revised NSFR, would also lead to significant market impacts, including:

- Increased costs (4-5 times greater than current market levels) for stock borrows and reverse repurchase agreements that facilitate normal course shorting activity, *e.g.*, shorting activities related to risk management;
- Substantial impairment of the equity swaps market (as well as the futures, forwards, and options markets, as discussed below), hampering the effectiveness of such markets in cross-border capital investments; and
- Increased costs for investors in equity indices with \$7 trillion of market value (including retail investors, pension funds, and the broader asset management community), resulting in a significant drag on financial performance for these important sectors.

These results identified in the Industry Analysis would result from the overly conservative RSF factors applied to equity activities under the Revised NSFR, including the treatment of securities lending, equity swaps, and index rebalances.

### *1. Stock Borrows*

The Revised NSFR would impose an RSF factor of 50 percent on stock borrows due to the classification of such positions as loans. As described in Part C.1, below, however, banking organizations commonly engage in such transactions for the purpose of covering short positions.<sup>6</sup>

As a result of the treatment of such activities under the Revised NSFR, the Industry Analysis projects that the cost of covering a short position would be 4-5 times greater than the current market cost. As a result of the anticipated increase in costs under the Revised NSFR, some short market participants could withdraw from the market, while others may raise costs and change the way business is conducted.<sup>7</sup> This would lead to damaging market effects: (i) a lack

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<sup>6</sup> *See, e.g.*, 12 C.F.R. § 220.10(a) (providing that “a creditor may borrow or lend securities for the purpose of making delivery of the securities in the case of short sales, failure to receive securities required to be delivered, or other similar situations . . .”).

<sup>7</sup> Contraction of securities lending would deprive end-users and beneficial owners (including mutual funds, pension funds, and others) of the revenue associated with lending securities; loss of such revenue would result in increased net costs, which would likely be passed on to investors and beneficiaries.

of short participants would lead to increased settlement risk, price inefficiency, and reduced liquidity; (ii) imposing higher costs to execute short positions would lead to significantly poorer returns for investment vehicles that rely on short positions (index or otherwise), increase hedging costs for all market participants, and potentially result in higher leverage at banks due to banks having to hold unnecessarily higher amounts of funding as a result of the proposed requirements.<sup>8</sup>

## 2. *Equity Swaps*

Equity Swaps provide yield enhancement and market access (where direct market access to investors is not feasible), and thus serve an important role in equity markets. Under the Revised NSFR, equity positions held as hedges against equity swaps would attract RSF factors of 50 or 85 percent, with no parallel recognition of the funding provided by the equity swap itself, which would attract an RSF factor of 0 percent provided the equity swap was short term.

The treatment of such equity hedge positions under the Revised NSFR would lead to, among other things: higher cost of execution for end clients; retraction of banking organizations from the market; and decreased ability to use the stable hedging strategy that can be provided by equity positions. The broader market consequences of the treatment of equity hedges of equity swaps would be to limit the availability of equity swaps as a means to access markets, target investment strategies, and manage operational costs. These effects would be acute in developing countries, which have greater friction in capital flows. The possibility that, as a result of the proposal, banks would be required to hold cash well in excess of actual funding needs would also potentially have effects both on banking organizations' leverage and on short-term funding markets.<sup>9</sup>

## 3. *Index rebalances*

Finally, the treatment of equities under the Revised NSFR would force banking organizations acting as securities dealers through their bank or broker-dealer subsidiaries to fund short, single-day equity positions at long-term rates. When equity indices are rebalanced (for example, due to changes in the composition of the index or changes in the values of listed shares in the index), investors tracking such indices, such as mutual funds and ETFs, must rebalance their respective portfolios. Banking organizations, through their bank or broker-dealer subsidiaries, provide liquidity to markets around such rebalances, including by building a short-term equity inventory of shares listed in the applicable index in anticipation of the rebalance.

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<sup>8</sup> In other words, under the Revised NSFR, if a bank executed a stock borrow transaction together with a client short transaction, the bank would receive the proceeds from the sale but would also be required under the proposal to raise 50% long term funding against the stock borrow. But because the stock borrow would already be funded through the short sale proceeds, the bank would have excess cash as a result of the proposal.

<sup>9</sup> See note 8, above.

Under the Revised NSFR, the short-term equity positions underlying such positions would attract some combination of 50 percent and 85 percent RSF factors (depending on whether the equities in question constituted High-Quality Liquid Assets (“**HQLA**”)). Due to the high RSF factors applicable to such short-term, dealer activities, banking organizations would be forced to either reflect higher costs in higher bid/offer spreads charged to investors (particularly index tracker funds, which rely heavily on banking organizations to conduct such rebalances), or reduce their support for index rebalances and thereby expose investors to greater price volatility on such rebalances. Conservatively, according to the Industry Analysis, based on a study of 2012 volumes and volatility in only three major indices, the impact to investor returns resulting from price volatility around the rebalance would equate to losses of \$1.2 billion.

### *Conclusion of the Industry Analysis*

The approach adopted in the Revised NSFR with respect to equities would have substantially negative effects that would not be limited to banking organizations and their affiliated broker-dealers. As indicated by the Industry Analysis, many banking organizations may simply choose to exit the market as a result of the overly conservative treatment of equities activities under the Revised NSFR, and this would impair liquidity in, and potentially destabilize, equity markets more generally.

While the Industry Analysis documents some of the likely results of the Revised NSFR on equity markets, the full extent of such market effects may lead to broader negative consequences than those described in this letter. At the very least, the resulting increase in equity market transaction costs, coupled with reduced liquidity, market transparency, and optionality in equity markets, would have significant consequences for investors by impacting returns, investments strategies, investment options, and the ability to safeguard and protect client assets and returns.

### **C. Recommendations**

In light of these conclusions, the Associations reiterate and reemphasize the following three recommendations.

#### ***1. Zero percent RSF factor for stock borrow transactions that facilitate short activities***

As discussed in the Associations’ April 11 letter,<sup>10</sup> the Associations believe that a limited set of modifications to the Revised NSFR related to balance sheet assets and secured lending

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<sup>10</sup> See Letter of the Associations, *Detailed Discussion II: SFTs (including Margin Lending)*, at 49-62. In the April 11 letter, the Associations discussed improving the complementary relationship between the NSFR and the LCR, and proposed specific revisions to the Revised NSFR framework that would consider three “principles,” including collateral quality, counterparty identity, and linked transactions, in assigning ASF and RSF factors to specific assets or transaction categories.

transactions would more accurately capture the funding requirements underlying banking organizations' activities. We continue to strongly support these proposed modifications with respect to the NSFR's application to banking organizations' financing activities.

Separate from these financing activities, however, banking organizations also regularly engage in stock borrow transactions and reverse stock repurchase transactions: in many cases, banking organizations engage in these transactions in order to obtain securities for short sales, *not* to finance their activities. Instead, these stock borrow and reverse stock repurchase transactions allow banking organizations to (1) facilitate client short positions (by re-lending borrowed securities to clients), and (2) engage in prudent hedging activities and market making.

In the context of a client-initiated short sale, the banking organization may borrow the security from a third party on a secured basis (typically collateralized with cash or other securities), and lend the same security to its customer (also in exchange for cash). These transactions typically have an open-ended maturity date. Upon termination of the trade, the banking organization receives the security from the client (and returns the client's cash), and in turn returns the security to the third party (and receives cash from the third party). Such activities do not entail short-term secured lending to fund the banking organization's inventory assets, but rather enable the client-initiated short sale to occur. In addition, closing out stock borrowings has a neutral to positive effect on markets (given that the closure of shorts is an asset purchase) and so does not pose substantial market-stability or systemic-risk issues.

Similarly, a banking organization may borrow a security to sell it short for its own account in connection with a hedge of a transaction undertaken for another client (*e.g.*, when a client enters into an equity swap with the bank linked to the price of a particular company), or in connection with the organization's market-making activities. In connection with a transaction undertaken for another client, a banking organization may hedge its market risk exposure to the company underlying the derivative by selling short the company's securities in a cash-collateralized stock borrow transaction.

In the LCR context, where both the securities borrowing transaction and a corresponding short position are "capable of being maintained" during a 30-day period, both the stock borrow and related short are excluded from a firm's LCR calculation.<sup>11</sup> This treatment reflects the economic reality that the banking organization is likely to roll over the reverse repurchase agreement or stock borrowing transaction to cover the short position, and the corresponding transactions therefore will not impact net liquidity.

By contrast, in the Revised NSFR, stock borrowing transactions receive punitive and asymmetrical ASF and RSF treatment when a banking organization borrows securities from non-banks. Short-dated stock borrowing transactions that involve equities included in a major index

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<sup>11</sup> See BCBS, *Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools*, ¶ 146 (January 2013), available at <http://www.bis.org/publ/bcbs238.pdf>.



typically receive an ASF factor of 0 percent, for example, on the stock loan to the non-bank financial client or the short-sale of securities by the banking organization for its own account. At the same time, the corresponding stock borrowing transaction with the third party is subject to a 50 percent RSF factor. This mismatch in the applicable ASF and RSF factors for stock lending transactions would apply under the Revised NSFR even where the banking organization establishes risk management arrangements to ensure that it could unwind the client-facing and third party-facing transactions simultaneously, virtually eliminating the possibility of funding gaps.

Such a result fails to advance the BCBS's underlying policy goal in the Revised NSFR of encouraging banking organizations to finance more of their activities through capital and longer-term debt. In such stock borrowing transactions, the organization's own assets are not involved; rather, the Revised NSFR would force the organization to factor in the punitive RSF assumptions for stock borrowing transactions into its client-facing transactions, as well as its market-making and hedging activities. While there may be a valid reason to build conservative biases into the NSFR for funding transactions, the Associations believe that there is no valid reason to impose a regulatory liquidity drag on a banking organization's shorting strategies, which are already highly regulated and protected by mutually reinforcing credit, liquidity, market, and operational risk safeguards.

Therefore, where a banking organization borrows a security from a non-bank to cover a firm or client short position, the NSFR should assign a zero percent RSF factor to the borrow transaction, rather than an RSF factor applicable to "loans." This treatment would permit the organization to recognize equal and offsetting ASF and RSF factors, or allow both transactions to be excluded from the NSFR in the same manner as they are currently excluded from the LCR. Such a modification to the Revised NSFR would be straightforward to implement, as the relevant transactions include only certain types of stock borrows and reverse stock repurchase agreements—not all securities financing transactions—and banking organizations engaged in these activities are capable of separately tracking and reporting such positions.

**2. *Recognize equivalent ASF/RSF factors for linked transactions subject to strict criteria***

The uniform standards in the Revised NSFR fail to take into account the context under which an asset is held, in particular where equities are held in connection with a "linked" transaction and meet certain qualifying criteria (as described in greater detail in the examples below). The linkages described in these examples—including the associated liquidity, credit, market, and operational risk considerations—support the recognition of exceptions to the ASF and RSF factors so as not to impose excessively conservative funding requirements on such activities. Indeed, failure to provide accommodation for such transactions would increase the equity market risks identified in Part B, above. The following three types of recommendations highlight common linked-transactions for which an exception from the standard treatment for unencumbered equities would be appropriate.

- Example 1: *Trading-Book-Listed Equities Held as Market Risk Hedges to Derivatives*. Often, a banking organization holds equities as a market risk hedge to a client-initiated derivatives transactions. Such activities do not require significant funding support. Where the linkage between such positions can be established, as described in the examples below, it would be fully appropriate to modify the applicable RSF factors for such positions under the Revised NSFR.
  - *Example 1a: Trading-Book Assets Held as Hedges in Swaps*. Swaps are often used as synthetic short-term secured funding structures. Under the Revised NSFR, the securities held as hedges against such swaps are typically assigned an RSF factor of between 50 and 85 percent—even though the applicable swap agreements ensure the pass-through of the economics involved to the client. Securities held as a hedge against synthetic secured funding structures should instead be eligible for modified treatment under the Revised NSFR. Hedges eligible for this treatment should include only those for which (1) the hedge asset (ISIN/CUSIP) is referenced by the derivative contract, (2) there is a matched hedge notional value or quantity, and (3) there is regularly settled variation margin. Such eligible hedging positions would receive an RSF factor based on (a) the residual maturity of the linked transaction, (b) the counterparty, and (c) the RSF factor applicable to the underlying hedge.
  - *Example 1b: Trading-Book Assets Held as Hedges Against Client-Facing Derivatives*. With respect to market-making in the futures/forwards and options contexts:

For futures/forwards, a banking organization will purchase the underlying equities or the constituent equities of the underlying index in order to hedge the market risk associated with its future/forward position. This hedge is typically highly liquid, as it is often against a major market index. The exchange of variation margin on the underlying contract insulates the banking organization from price volatility on the security it holds as a hedge.

For options, a banking organization will hold a portfolio of equities against a portfolio of client-initiated options transactions — commonly referred to as a “delta hedge.” This hedging portfolio is continually rebalanced to ensure the effectiveness of the hedge, including against changes in market value to the underlying exposure to the equity market through the options positions. As with future/forward hedging, options hedging involves the exchange of variation margin, which insulates the bank from funding risks associated with price volatility.

The Revised NSFR should permit organizations to recognize equal and offsetting ASF and RSF factors for market-making activities and corresponding hedges in the context of futures/forwards and options, provided that the underlying positions

and risk mitigation positions correspond, and are equivalent in value, during the life of the applicable transactions and upon unwind. The suitable linkage could be established by identifying: (1) trading organization and operation practices ensuring that the organization minimizes exposure difference between the derivative positions and their hedges; (2) regulatory requirements that (i) impose control of such an organization and operation practices by independent functions, and (ii) restrict an institution's ability to maintain one of the intrinsically linked positions in isolation; and (3) safeguards against price volatility of the hedge, such as regularly settled variation margin, exchange-for-physical markets (allowing banking organizations to collapse their futures and cash hedge positions with no price risk on the exit), and synthetic markets where liquidity is strong.

- *Example 2: Certain Liability-Driven Transactions.* Banking organizations engage in many liability-driven transactions for which they must hold collateral, typically HQLA. Such liability driven transactions, such as secured deposits, differ significantly from transactions in which the organization seeks funding to finance securities inventory. In these liability-driven transactions, the liability is generally very stable, and when the liability is satisfied and the collateral is no longer required, the financial institution simply unwinds the reverse repurchase agreement. As a result of the linkage between the liability and the reverse repurchase agreement, such transactions do not impose funding obligations on the banking organization.

The appropriate treatment for such linked transactions under the Revised NSFR should be to either (1) exclude assets associated with liability-driven transactions from the calculation of the RSF, or (2) assign the relevant reverse repurchase agreement transaction a 0 percent RSF factor, and the corresponding liability a 0 percent ASF factor. Imposing a punitive 50 percent RSF factor on the assets underlying such liabilities would create a strong disincentive for banking organizations to offer liability-driven products, and, for example, would potentially limit the ability of public-sector entities that commonly rely on one form of such liabilities, secured deposits, to provide critical public services, meet payroll, and meet their daily financial obligations.<sup>12</sup>

- *Example 3: Customer Account Segregated Assets.* Financial institutions often hold segregated assets on behalf of customers, pursuant to regulatory requirements;<sup>13</sup> for example, bank-affiliated broker-dealers permit clients to maintain cash in their brokerage accounts to meet future settlement requirements, collateral calls, etc. Segregated customer assets are reflected on a bank's balance sheet as a "payable to customer" liability and a low-risk, liquid security asset.

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<sup>12</sup> See Letter from Associations to the BCBS, at 70-71, available at <http://www.bis.org/publ/bcbs271/crovbafa.pdf>.

<sup>13</sup> See, e.g., SEC rule 15c3-3; pending segregation requirements under the E.U. EMIR directive; and similar rules in Canada, Australia, Singapore, and elsewhere.

These linked positions do not increase funding-related risks to the banking organization, and yet the Revised NSFR would assign an ASF factor of 0 percent to the payable, and an RSF factor greater than 0 percent to the security<sup>14</sup>—thus requiring the organization to fund such activities with other liabilities or equity.

So as not to penalize and discourage the use of such accounts, given that they do not increase funding requirements for banking organizations, customer account segregated assets should be assigned a 0 percent RSF factor under the Revised NSFR.<sup>15</sup>

### **3. *Reduced RSF Factor for unencumbered exchange-traded equity securities***

Under the Revised NSFR, unencumbered exchange-traded equities on a bank's balance sheet would be assigned an RSF factor of 50 percent for exchange-traded common equity shares not issued by financial institutions or their affiliates, and 85 percent for unencumbered securities that are not in default but do not qualify as HQLA under the LCR (including exchange-traded equities).<sup>16</sup>

The Associations believe that the RSF factors prescribed by the Revised NSFR for unencumbered exchange-traded equity securities fail to reflect the liquidity value of such securities, which exhibit several important features that support lower RSF factors.<sup>17</sup> For example, such securities:

- Can be reasonably monetized under stressed conditions;
- Exhibit exceptionally strong characteristics of transparency, market structure, and depth in stressed liquidity conditions;
- Meet the most critical of the liquid asset attributes specified for many of Level 1 and Level 2A assets, which require either a 5 percent or 15 percent stable funding;<sup>18</sup>
- Demonstrate resilience through sustained and vibrant secured funding markets, as evident throughout the 2008/2009 stressed conditions;

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<sup>14</sup> Revised NSFR, ¶ 22(b).

<sup>15</sup> Assigning a 0% RSF to such securities positions also would be easily administrable. Banks often explicitly identify such positions on their balance sheets.

<sup>16</sup> Revised NSFR, ¶¶ 32(a); 34(b).

<sup>17</sup> See Revised NSFR, ¶ 13(d) (noting that the NSFR “assumes that unencumbered, high-quality assets that can be securitized or traded, and thus can be readily used as collateral to secure additional funding or sold in the market, do not need to be wholly financed with stable funding.”).

<sup>18</sup> Revised NSFR, ¶¶ 30, 31.

- Continue to grow as an asset class through varied, highly liquid, and independent structures and markets; and
- Are supported by several sources of secured funding, including, for example: non-cash collateral stock borrow, collateral upgrades, equity repo, total return swaps, futures, and listed options.

The features of exchange-traded equities, plus the industry's own empirical analysis and experience, justify significantly lower RSF factors than those specified in the Revised NSFR. Equities composing main indices of major markets should receive an RSF factor of 15 percent, while all other major market exchange-traded equities should receive an RSF factor of 50 percent.<sup>19</sup> These proposed factors would still be objectively very conservative based on banking organizations' experience with such securities. In addition, where a bank holds equities through an ETF that permits the physical exchange for the underlying equity on demand, the bank should look through the ETF to determine the appropriate RSF factor.<sup>20</sup>

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<sup>19</sup> All other equities should continue to receive an RSF factor of 85%.

<sup>20</sup> These RSF factors should also apply to the proposal in the April 11 response titled "Detailed Discussion II: SFTs (including Margin Lending)", specifically the Recommendation in sections 2.A.1., 2.A.2 and 2.A.3.

## Conclusion

A Revised NSFR that includes an overly conservative calibration could have severe consequences for the equity markets, which in turn could cause significantly adverse effects on the real economy. By unnecessarily increasing the funding cost for banking organizations' equity market intermediation activities, the Revised NSFR would also potentially force such activities into the largely unregulated shadow banking system, increasing systemic risk. More globally, we are concerned that an NSFR calibrated too conservatively for these activities would severely hinder the general capacity of banks to finance their clients and thus support growth.

The Associations therefore urge the BCBS to amend the Revised NSFR to more accurately calibrate the RSF (and, where applicable, the ASF) for equities, as discussed above,<sup>21</sup> as well as to conduct a QIS researching the potential impacts of the Revised NSFR on global equity markets. If it is concluded that the revisions proposed in this letter cannot be adopted in the short time before the issuance of the final Revised NSFR, the Associations recommend that the equities portions of the final standard remain open to further revision based on the results of the QIS.

Very truly yours,



David Strongin  
Executive Director  
*Global Financial Markets Association*



David Schraa  
Regulatory Counsel  
*The Institute of International Finance*

cc: William Coen, Secretary General, BCBS

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<sup>21</sup> The Associations have submitted this letter and the attached empirical analysis to the BCBS to highlight the severe, unintended consequences that the Revised NSFR would cause to the real economy, absent further refinement of the RSF and ASF factors applicable to equity positions, as described above. The Associations continue to support the substantive issues raised in the April 11, 2014 letter on the Revised NSFR.

# Impact of NSFR on Equities markets Considerations for implementation

August 2014



# Scope and objectives of this survey

## Context on the net stable funding ratio

- In January 2014, the BCBS proposed revisions to the Net Stable Funding Ratio (NSFR) included in the Basel III reforms
- The NSFR is designed to ensure that banks maintain a stable funding profile for their on- and off-balance sheet activities
- The NSFR is simple, adopting a consistent “one size fits all” approach for calculating required stable funding for assets on (or off) the balance sheet
- This approach is especially problematic for the Equities markets, where dealer’s temporarily hold positions in long-dated securities to support short-dated, liquid transactions, including
  - Stock lending
  - Index tracking products
  - Accelerated equity offerings
- The NSFR ignores this distinction, applying  $\geq 50\%$  RSF factors to all positions in Equities securities<sup>1</sup>
- We believe this will prove to be highly disruptive to the global Equities markets and the investors, issuers, and economies supported by these activities

## Context for this study

- Oliver Wyman was commissioned to study the potential market impact of the proposed revisions to the NSFR by several institutions impacted by the rule
- The Oliver Wyman analysis focuses on
  - Profiling 5 activities affected by the rule
  - Identifying the probable impact of the rule
  - And finally identifying areas for more rigorous quantitative analysis
- Arguments related to the liquidity of equities securities were addressed separately in an earlier submission from the IIF<sup>2</sup>
- While this work was sponsored by various industry participants, the analysis and conclusions here are solely our own

<sup>1</sup> Actual RSF (required stable funding as % of asset value) determined by classification of underlying assets; RSF non-financial, exchange-traded equities securities is 50%

<sup>2</sup> Inclusion of Equities in the Liquidity Coverage Ratio, IIF Working Group on Liquidity, July 2, 2012

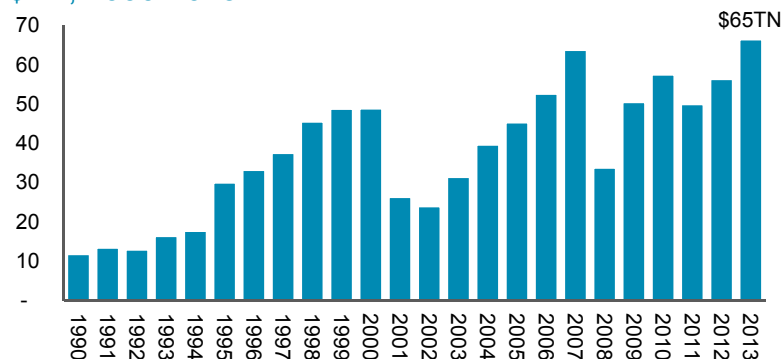


# 1 | Introduction

# The global Equities market is a powerful source of wealth creation, capital formation, and economic growth

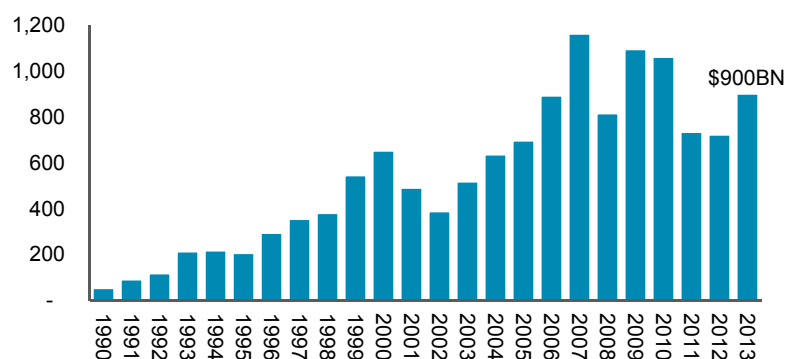
## Global Equities Market Capitalization

\$TN, 1990-2013<sup>1</sup>



## Global Equity Capital Markets Origination

\$BN, 1990-2013<sup>2</sup>



## Value of the global Equities market

- The global Equities market is a powerful source of wealth creation, capital formation, and economic growth
  - **Wealth creation:** \$65TN highly liquid store and source of wealth for investors
  - **Capital formation:** \$900BN in new capital was raised via equity listings in 2013
  - **Economic growth:** “GDP grows faster in economies with liquid stock markets” (Levine)<sup>3</sup>
- The strength of the Equities markets is dependent on the efficiency of trading systems (i.e. the ease with which investors can buy or sell shares)
- Empirical research suggests that the ability to trade easily promotes investment, efficient allocation of capital, and long-term economic growth<sup>3</sup>
- The NSFR, as proposed, presents a significant risk to the efficiency of trading systems - imposing long-term funding costs on transactions that are well funded and short-term in nature
- The potential impact on investors, businesses, and the broader economy is substantial

1 World Federation of Exchanges data

2 IPO, Secondary, and Convertible offerings, Dealogic data

3 Ross Levine, Stock Markets: A Spur to Economic Growth, Finance & Development (1996)

# The market has evolved to meet the diverse needs of issuers, investors, and the broader economy through the most efficient available channels

## Needs served by the Equities market

<b>Participant</b>	<b>Participant needs</b>	<b>Activities serving these needs and likely to be impaired by NSFR</b>
<b>All participants</b> Intermediaries, Investors, Issuers	<ul style="list-style-type: none"><li>• Liquidity</li><li>• Market Efficiency</li><li>• Financial Stability &amp; Growth</li></ul>	<ul style="list-style-type: none"><li>• Securities Lending</li><li>• Market Making</li></ul>
<b>Investors</b> e.g. Pension Funds	<ul style="list-style-type: none"><li>• Access to markets and products</li><li>• Financing</li><li>• Total Returns</li><li>• Risk Management</li></ul>	<ul style="list-style-type: none"><li>• Equity Swaps</li><li>• Index Rebalances</li><li>• OTC Options</li></ul>
<b>Issuers</b> e.g. Corporates	<ul style="list-style-type: none"><li>• Capital</li><li>• Financing</li><li>• Risk Management</li></ul>	<ul style="list-style-type: none"><li>• Equity Underwriting</li><li>• OTC Options</li></ul>

## This analysis considers the potential impact of the NSFR (in its current form) on 5 dealer activities that serve investors, issuers, and the broader economy

Dealer activity	Service model challenged by NSFR
<b>1 Securities Lending</b>	<ul style="list-style-type: none"><li>• <b>Facilitation of stock borrowing and lending:</b> Dealers connect (and stand between) borrowers and lenders in the equity securities lending market<ul style="list-style-type: none"><li>– Providing liquidity to investors executing long-short strategies</li><li>– Improving returns for investors with capacity to lend securities</li><li>– Supporting broad market liquidity and efficient market prices</li></ul></li></ul>
<b>2 Equity Swaps</b>	<ul style="list-style-type: none"><li>• <b>Facilitation of efficient market access:</b> Dealers provide access to custom index investment strategies (e.g. S&amp;P 500 excluding “vice” stocks), reducing tracking error and operational costs for investors; dealers hedge exposure with reference assets</li></ul>
<b>3 Index Rebalances</b>	<ul style="list-style-type: none"><li>• <b>Liquidity provision around market events:</b> Dealers build inventory in anticipation of index rebalances, reducing market impact (exposure to losses from extreme price volatility around the event) for investors, mainly index tracking funds</li></ul>
<b>4 Equity Underwriting</b>	<ul style="list-style-type: none"><li>• <b>Capital provision via equity underwriting:</b> Dealers provide corporate issuers with access to capital through the equity underwriting process - a key vehicle is the purchase of blocks of newly issued shares directly from issuers, selling the inventory position into the market over time, to accelerate the underwriting process and reduce underwriting risk</li></ul>
<b>5 OTC Options</b>	<ul style="list-style-type: none"><li>• <b>Risk management via options:</b> Dealers sell OTC options to corporate clients to manage the risk of equity price volatility around key actions, including employee stock option vesting and share buybacks; dealers hedge exposure with equity shares</li></ul>

*These activities represent a subset of the facilitation, financing, and risk management services (including traditional stock sales and trading) that would be impacted by the NSFR, as proposed in January 2014*

# The proposed NSFR would have far reaching impacts, on both the provision of these activities and the wider markets

Dealer activity	Summary impact of proposed NSFR on product provision and the market
1 <b>Securities Lending</b>	<ul style="list-style-type: none"> <li>• Dealers required to fund short-term, self-funded securities lending transactions at long-term rates               <ul style="list-style-type: none"> <li>– Higher cost of funding passed on to investors (e.g. embedded in cost of short carry) <u>or</u></li> <li>– Dealers reduce facilitation of securities lending transactions in the market</li> </ul> </li> <li>• Increased cost of carry reduces investor returns employing these strategies by nearly 1% per annum (95 bps)</li> <li>• Reduced liquidity in the market exposes investors to increased settlement risk and less efficient pricing</li> </ul>
2 <b>Equity Swaps</b>	<ul style="list-style-type: none"> <li>• Dealers required to fund securities held as hedges on equity swaps at long-term rates               <ul style="list-style-type: none"> <li>– Higher cost of funding passed on to investors (e.g. embedded in cost of financing) <u>or</u></li> <li>– Dealers reduce facilitation of equity swaps transactions in the market <u>or</u></li> <li>– Dealers seek alternative forms of hedging - with limited options available within highly regulated markets</li> </ul> </li> <li>• Constrains critical tool for investors to access markets, target investment strategies, and manage operational costs</li> <li>• Potential knock-on effects for (especially) developing economies, due to constraints on capital flows</li> </ul>
3 <b>Index Rebalances</b>	<ul style="list-style-type: none"> <li>• Dealers required to fund inventory built to support single day liquidity at long-term rates               <ul style="list-style-type: none"> <li>– Higher cost of funding embedded in bid-offer spread charged to investors <u>or</u></li> <li>– Dealers reduce support for index rebalances, exposing investors to greater price volatility at the rebalance</li> </ul> </li> <li>• Conservative estimate, based on 2012 study of volumes and volatility in 3 major indices, placed the potential impact of absorbing pricing volatility at \$1.2BN in lost returns to investors</li> </ul>
4 <b>Equity Underwriting</b>	<ul style="list-style-type: none"> <li>• Dealers required to fund inventory held to support underwriting transactions at long-term rates               <ul style="list-style-type: none"> <li>– Higher projected cost of funding on the hold embedded in underwriting fees <u>or</u></li> <li>– Dealer support for block underwriting declines or dries up</li> </ul> </li> <li>• Corporate issues pay substantially higher underwriting fees or discounts: at historical pricing, total underwriting costs for US issuers would have been \$1.4BN higher in 2013 (\$3.5BN total)</li> <li>• Potential knock-on effects for capital raising, impacting investment, employment, and economic growth</li> </ul>
5 <b>OTC Options</b>	<ul style="list-style-type: none"> <li>• Dealers required to fund 50-85% of the OTC options book at long-term rates               <ul style="list-style-type: none"> <li>– Higher funding costs embedded in option fees <u>or</u></li> <li>– Dealer participation in OTC options declines or dries up</li> </ul> </li> <li>• Options pricing would become less efficient, increasing costs of hedging, impairing risk-return optimization</li> <li>• Capital raising by corporates becomes more risky and ultimately declines in volume</li> </ul>

## 2.1 | Securities Lending

# 1 Securities Lending

## Description

- The securities lending transaction is initiated with a short sell order from an investor, seeking to lock in returns or limit downside risk from a long position
- To execute the “short leg” of the transaction, the investor must borrow the security to cover the short
- Dealers execute the short sell order, then source the security required to cover the short from inventory or the securities lending market
- Dealers “stand between” the two legs of the transaction, to manage counterparty and settlement risk on behalf of the security borrower and lender

## Users

- Market making desks facilitating client transactions
- Investors seeking to lock in returns, limit downside risk, etc.

## Impact of proposed NSFR on product provision

- Dealers required to fund short-term (predominantly overnight) inventory at long-term rates
- Higher financing costs embedded in costs of short carry or dealers pull back from short facilitation

## Market size

- Total balance of securities on loan at year end 2013
  - All securities ~ \$1TN
  - Equity securities ~ \$760BN
- Total “lendable assets” at year end 2013
  - All securities ~ \$14.8TN
  - Equity securities ~ \$9.7TN

## Benefits to the market

- Providing liquidity to investors executing long-short strategies
- Improving returns for investors with capacity to lend
- Supporting broad market liquidity, specifically more efficient market prices and lower transaction costs for all investors

## Impact of proposed NSFR on the market

- Higher cost of short carry (up to 5x current levels)
- Lower returns for investors using long-short strategies
- Lower returns for investors with capacity to lend
- Increased settlement risk
- Less efficient market pricing and reduced liquidity

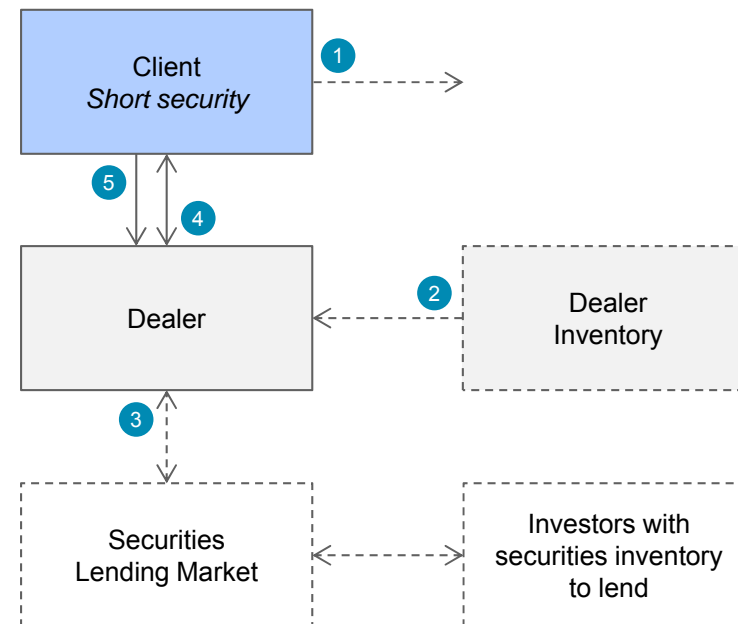
# 1 Securities Lending

## Transaction profile

- In a typical securities lending transaction, a dealer brings together a stock borrower and lender(s) to facilitate an investor's long-short investment
- Long-short strategies aim to lock in returns or limit downside risk by buying one security (or basket of securities) and selling another<sup>1</sup>
- To execute the "short leg" of the transaction, the investor borrows the security (via the dealer) from
  - Dealer inventory
  - Securities lending market
- Dealers play a critical role in this transaction by bringing together investors who must borrow securities to execute their strategy and lenders who have the securities to lend in inventory
- The "borrow costs" are passed on to the lenders, dealers earn margin by facilitating both legs of the transaction and managing any operational requirements (e.g. dividends)

<sup>1</sup> This is one of many strategies that use short selling to create a target exposure

## Illustration



- 1 Client sells short a security
- 2 Dealer sources security from inventory or ...
- 3 Dealer borrows security from client with long position in the securities lending market, paying borrow fee on to lenders
- 4 Dealer lends security to client, who posts initial margin and pays borrow fee on security
- 5 Client "delivers" security to dealer at termination of the short, at discretion of client with short position or securities lender

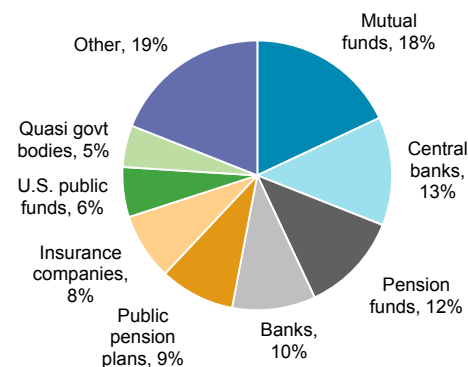


# 1 Securities Lending

## Value of transaction to market

- The equities securities lending market is large, highly liquid, and provides significant value to investors and the market
  - Over \$750BN in equity securities on loan at year end 2013
  - Overwhelming majority of transactions are overnight, and can be unwound rapidly
  - The supply of securities available to lend is more than 10x the loans outstanding, providing the liquidity to unwind
- The value provided to the investors and the market takes many forms, including
  - Liquidity for investors executing long-short strategies
  - Improved returns for investors with capacity to lend
  - Support for broad market liquidity » more efficient market prices and lower transaction costs for all investors
- There is strong evidence that the sec lending market (and short facilitation) enhances market liquidity in substantial ways<sup>2</sup>
- Our estimates suggest potential for ~ 95 bps impact on the cost of stock lending, which would be partially or wholly passed on to investors

## Securities lending market participants Securities lending by participant type, 2013<sup>3</sup>



Worked illustration

## Impact of NSFR on Sec Lending<sup>4</sup>

### Current state

Global equities borrows outstanding	~\$760BN
Cost of short carry industry average	25bp

### Impact of NSFR

Additional LT funding required <sup>5</sup>	\$380BN
Cost impact due to debt costs <sup>6</sup>	\$11BN
Cost impact due to capital costs <sup>7</sup>	\$2BN
<b>Impact on cost of short carry</b>	<b>95bp</b>
Post-NSFR cost of short carry	120bp

1 Markit data, adjusted for bank counterparties using industry estimates

2 Beber & Pagano, *Short-Selling Bans Around the World*, The Journal of Finance, February 2013

3 Office of Financial Research, Asset Management & Financial Stability, September 2013

4 Based on industry estimates

5 Assuming RSF of 50%

6 Assuming average cost of debt of 3%

7 Assuming 5% leverage ratio and 10% RoE target

## 2.2 | Equity Swaps

## 2 Equity Swaps

### Description

- Common and efficient way for asset managers to gain exposure to assets without holding underlying cash securities
- Investors enter into a contract with dealer to receive the performance on individual/selected baskets of cash securities
- To hedge the market risk, dealer purchases the reference assets and holds these assets for the life of the generally short-dated transaction

### Users

- Broad spectrum of investors, including pension fund, mutual funds, and hedge funds
- Non-hedge fund users account for ~50% of notional outstanding, based on estimates of leading industry participants<sup>2</sup>

### Impact of proposed NSFR on product provision

- Increases the holding costs for dealers required to fund the inventory held purely for hedging purposes
- Higher funding costs embedded in fees and charges to investors or dealer support for equities swaps declines or dries up

<sup>1</sup> ISDA OTC Equity Derivatives Survey, Q4 2013

<sup>2</sup> Industry estimate from leading dealers

### Market size

- Approximately 150k equity swap contracts with a gross notional value of \$1.8TN were outstanding in 2013<sup>1</sup>
- Fundamentally global market
  - Multi-jurisdictional contracts represents 58% of total
  - Pure US contracts =18% of total
  - Pure European contracts =18% of total
  - Balance represented by Japan, Asia ex Japan, and EM

### Benefits to the market

- Several important benefits to asset managers:
  - Lower operational costs vs. holding cash positions
  - Exposure to hard-to-access markets (especially EM)
  - Ability to track passive index benchmarks in a capital-efficient way, freeing up capital to invest elsewhere
  - Ability to track customized index benchmarks, to more effectively manage liability-driven investment strategies
  - Ability to monetize the stock-loan value of cash holdings

### Impact of proposed NSFR on the market

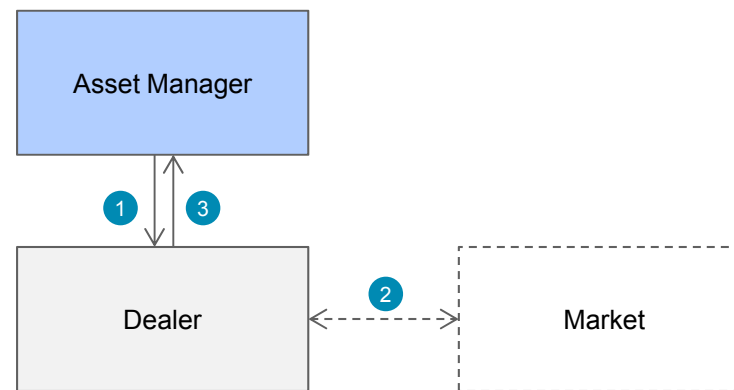
- Dealers pull back from provision of equity swaps, removing or reducing the use of critical tool for execution of investment strategies, risk management, and cost control
- Reduced investor access to EM markets through access swaps, disrupting capital flows to developing markets

## 2 Equity Swaps

### Transaction profile

- Equity swaps (or synthetics) are a common and efficient way for asset managers to gain exposure to assets without holding the underlying cash securities
- Investors enter into a contract with a dealer to receive the performance (i.e. returns) on individual or selected baskets of cash securities
- To hedge the market risk (or delta) on the transaction, the dealer purchases reference assets and holds these assets for the duration of the contract
- The client receives performance on reference assets from the dealer over the life of the transaction, with the dealer benefiting from several risk mitigants, including
  - Mark-to-market pass through of performance, with market risk borne by client
  - Unwind rights, with majority of transactions typically terminable overnight
  - Initial margin paid to dealer, typically far in excess of historically observed equity haircuts
  - Variation margin paid to dealer to account for any significant market moves, over transaction life
  - ISDA Master Agreement controls for operational risk

### Illustration



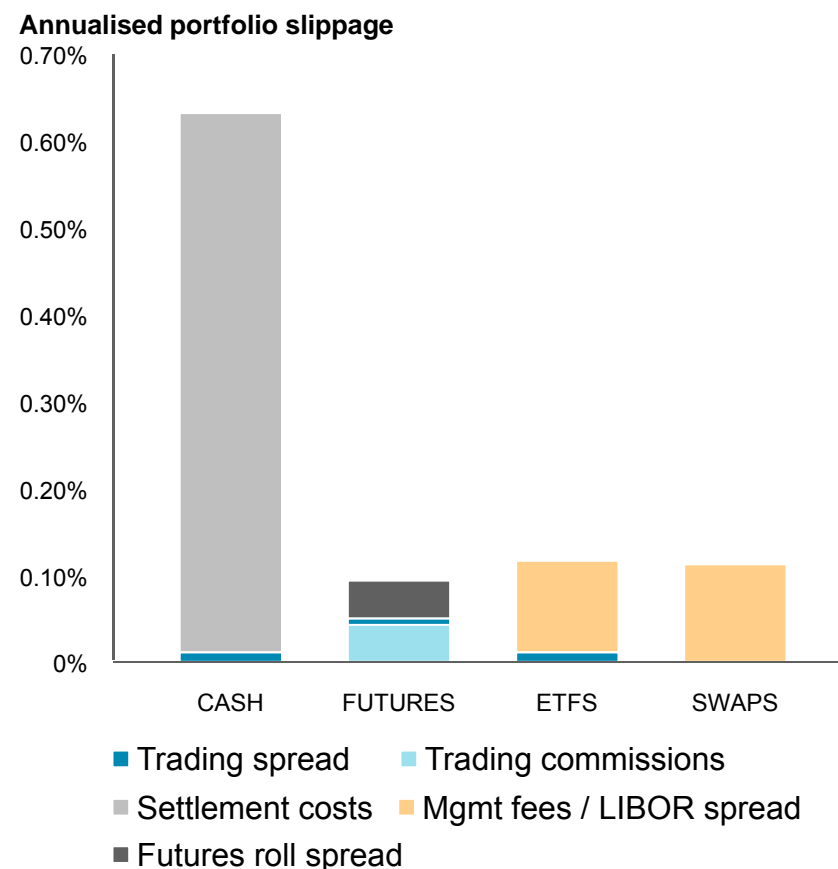
- 1 Mutual Fund enters contract with Dealer to build receive performance on reference assets, in exchange for short-term financing rate plus initial margin
- 2 Dealer finances purchase of reference assets, and holds reference assets to hedge swap
- 3 Asset Manager receives performance on reference assets from Dealer over transaction life

## 2 Equity Swaps

### Value of the transaction to the market

- Equity swaps provide substantial benefits to investors, allowing them to achieve investment objectives efficiently and ultimately improve investor returns
  - Lower operational costs versus holding cash positions, in trade execution, settlement processes and the navigation of corporate actions
  - Efficient and agile method to maintain and track passive index benchmarks
  - Ability to gain exposures synthetically via a structure and wrapper impossible to create in-house, and to construct customized portfolios, with desired risk-return profiles
  - Ability to access markets (especially EM markets) which are impossible to access through cash positions, diversifying the portfolio
  - Ability to track a core benchmark but free up capital to invest elsewhere
  - Ability to monetize the stock-loan value of cash holdings, if swapped into an equity swap structure with a dealer

### Costs to asset managers of holding swaps positions vs. cash<sup>1</sup>



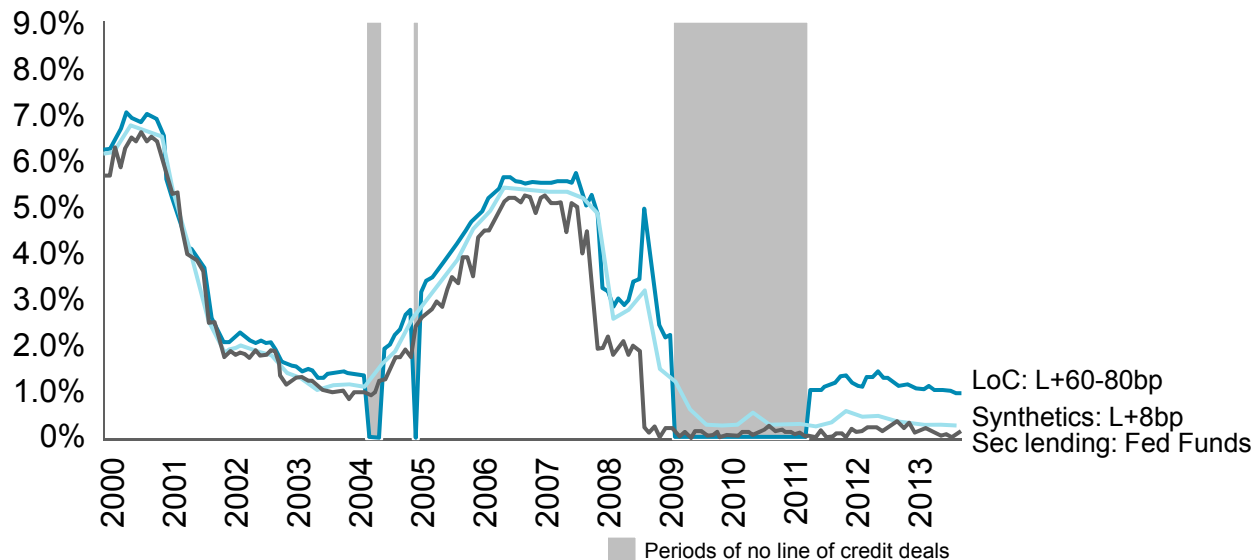
<sup>1</sup> Credit Suisse Trade Strategy Global Futures Handbook

## 2 Equity Swaps

### Case study: Calpers

- California Public Employees retirement fund: \$245BN assets, 6<sup>th</sup> largest in the world
- Securities lending and synthetic equity have capacity to support >10% of the investment base
  - Securities lending: \$25BN capacity
  - Synthetic equity: \$10BN capacity
- Calpers Investment Committee, December 2013: **“Borrowing through securities lending or synthetic equity is significantly less expensive than utilizing a line of credit”**

### Calpers equity investments funding cost by channel 2000-2013



Source: Calpers financial disclosures

➤ **Forcing retirement funds to source equities via standard LoC, in the event that the capacity of the securities lending and synthetics market is significantly reduced, could significantly impact retiree pension returns in equities**

## 2.3 | Index Rebalances

## 3 Index Rebalances

### Description

- Equity indices are frequently rebalanced, as the composition of the index changes or the values of listed shares within the index rise or fall
- Rebalances are announced periodically and require investors tracking the indices to rebalance their portfolios
- Dealers provide liquidity to investors and the market around these rebalances by
  - Entering a contract to execute the rebalance trade
  - Building inventory in anticipation of the rebalance
  - Delivering inventory on rebalance date

### Users

- Mutual funds and ETFs tracking major indices
- Households invested in index trackers; approximately 30% of US households are invested in at least one index fund<sup>1</sup>

### Impact of proposed NSFR on product provision

- Dealers required to fund short-term inventory (only held to support a single day of liquidity on a known future date) at long-term rates
- Higher funding costs embedded in bid-offer spread charges to investors or dealer support for index rebalances declines or dries up

<sup>1</sup> Investment Company Institute data

<sup>2</sup> Detailed modelling assumptions shown on page 20

### Market size

- Over \$7TN of investor assets are held in mutual funds, ETFs, and other investment vehicles tracking major indices

### Benefits to the market

- Cost efficient market access
- Reduced tracking error on investment strategies
- Reduced pricing volatility for the index (and the public companies listed in the index) around rebalances

### Impact of proposed NSFR on the market

- Liquidity effects (specifically pricing volatility) nearly impossible to predict in advance
- Conservative estimate, based on 2012 study of volumes and volatility in 3 major indices, placed the potential impact of absorbing pricing volatility at \$1.2BN in lost returns<sup>2</sup>

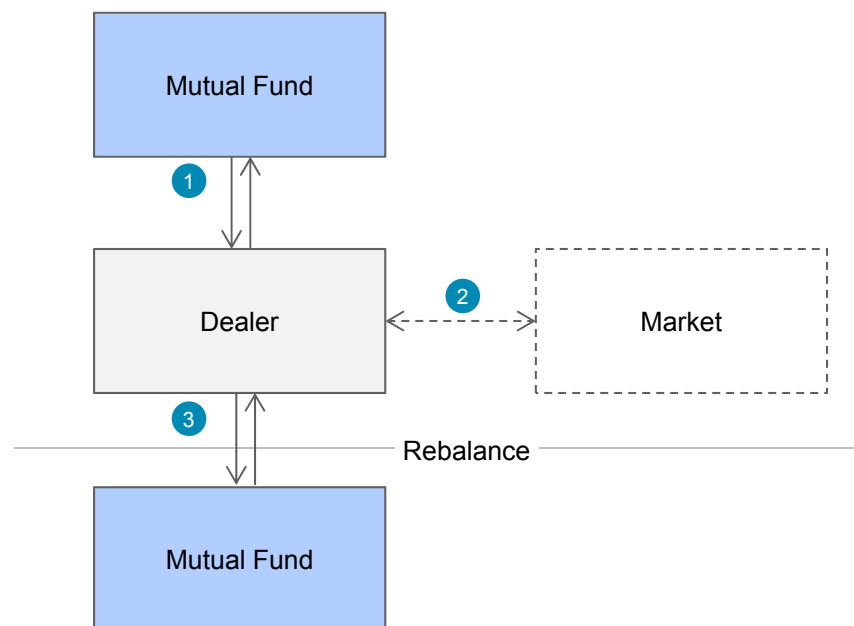


## 3 Index Rebalances

### Transaction profile

- Over \$7TN of investor assets are held in mutual funds, ETFs, and other investment vehicles tracking major indices<sup>1</sup>
- Composition of indices changes over time, as value of listed shares within the index rise or fall, new listings are added or removed from index, etc.
- These changes or “index rebalances” are announced periodically and require all funds tracking the indices to rebalance their portfolios
- Rebalance trades, especially for indices that rebalance less frequently, may have substantial impact on share prices
- The portfolio trading desks of major dealers step in to provide liquidity to fund managers
  - Enter contract to execute rebalance trade
  - Build inventory in anticipation of index rebalance over the course of several weeks / months
  - Deliver inventory to fund managers on rebalance, minimizing market impact and price volatility

### Illustration



- 1 Mutual Fund enters contract with Dealer to build inventory and execute trade in anticipation of index rebalance
- 2 Dealer builds inventory over several weeks / months to minimize market impact at the rebalance
- 3 Dealer executes “rebalance trade” for clients, delivering inventory positions built over time

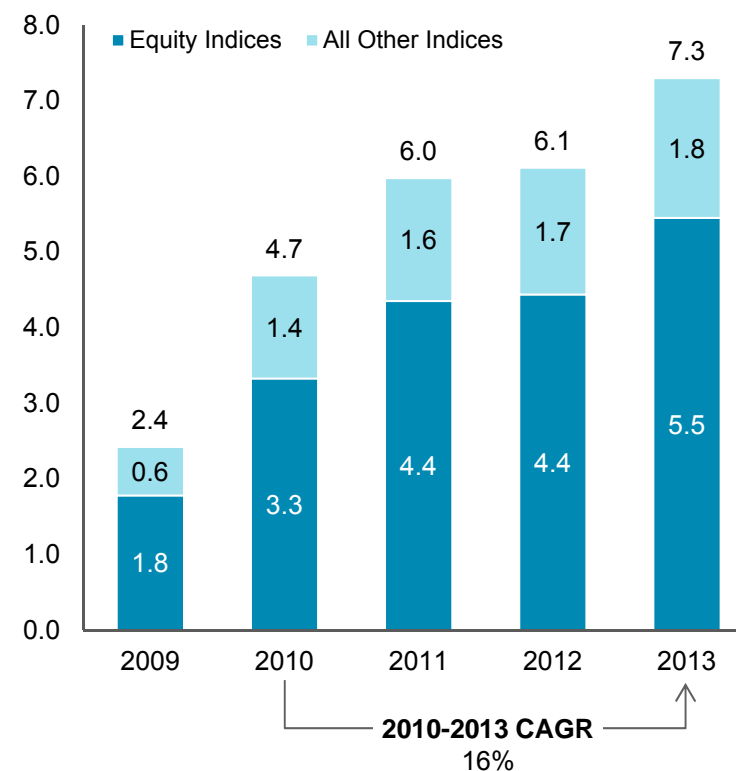
<sup>1</sup> Pensions & Investments Survey of Index Managers (indexed assets under management), data as of June 30, 2013

### 3 Index Rebalances

#### Value of transaction to market

- The total value of assets under management tracking major indices surpassed \$7TN in 2013
- Index tracking (in all its forms) is an increasingly popular investment strategy for individual and institutional investors
  - Efficient market access » expense ratios on equity index fund average 12 bps vs. 89 bps for actively managed funds<sup>2</sup>
  - Equivalent (and in many cases superior) cost-adjusted performance relative to actively managed funds
- ICI estimates that 30% of US households invest in at least one mutual fund index tracker, a subset of the product universe
- Tracking error can dramatically impact the economics of index tracking, with average daily volatility in any given index erasing any cost advantage
- Investment strategy would effectively break down without dealer support to minimize market impact around index rebalances

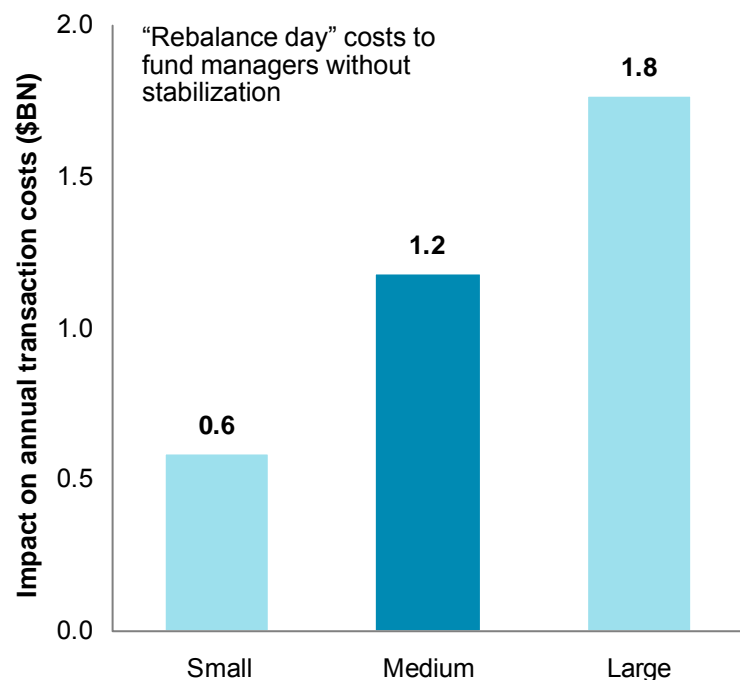
#### Evolution of index tracking \$TN, 2009-2013<sup>1</sup>



<sup>1</sup> Pensions & Investments Survey of Index Managers (indexed assets under management), data as of June 30, 2013  
<sup>2</sup> 2014 ICI Factbook (page 91)

### 3 Index Rebalances

#### Projected impact of volatility ex stabilization Cost of major index rebalance events (\$BN)



Exposure as % of Avg Daily Vol	Small	Medium	Large
	50%	100%	150%

Source: MSCI, Bloomberg

1 Total market cap of \$3.2TN (MSCI counted twice to reflect multiple rebalances)

#### Background

- Mutual funds and ETFs that track equity indices are affected by supply-demand imbalances during index rebalance events
- Portfolio trading desks contribute to market efficiency by managing inventory to facilitate these events

#### Methodology

- Analyzed 5 major index rebalance events representing approximately \$120BN of imbalance volume – Russell (June), MSCI DM (May, Nov), and MSCI EM (May, Nov)<sup>1</sup>
- Analysis assumes fund managers tracking indices are exposed to “market impact” losses equivalent to the average daily volatility for each index during the year
- Data and assumptions
  - \$120BN in rebalance volume (3.6% of market cap)<sup>1</sup>
  - Average daily volatility 2% across indices, 1.6-2.4% range
  - 50% liquidity provided by dealers (assumption)
- We estimate the potential market impact loss from a loss of dealer support to be \$1.2BN: \$120BN rebalance volume \* 2% ADV \* 50% liquidity support from dealers

## 2.4 | Equity Underwriting

## 4 Equity Underwriting

### Description

- Dealers provide direct support for businesses raising capital in the equity markets via underwriting services, both IPOs and follow-on activity (including block trades)
- Dealers purchase new shares directly from issuers, selling the shares into the market as soon as practical (minimizing the impact on share prices for existing shareholders)
- Most deals are “worked down” over the course of the transaction date, but the option to hold the inventory to minimize the impact on share prices is critical

### Users

- Corporate issuers
- Investors holding large equity stakes

### Impact of proposed NSFR on product provision

- Dealers required to fund short-term (consistently less than 30 days) inventory held to support deal at long-term rates
- Higher projected or potential funding costs will be embedded in underwriting fees (discount) or dealer support for block underwriting declines or dries up

### Market size

- \$90BN+ in capital raised globally in 2013; \$55BN+ in US

### Benefits to the market

- Established and reliable means of raising capital, with two unique advantages over traditional offerings
  - Speed with which capital can be raised
  - Reduced pricing risk on transaction

### Potential impact of proposed NSFR on the market

- Corporate issues pay substantially higher underwriting fees or discounts » at historical pricing, total underwriting costs for US issuers would have been \$1.4BN higher in 2013<sup>1</sup>
- Reduced levels of capital raising by corporates, with potential knock-on effects for corporate investment, employment and economic growth

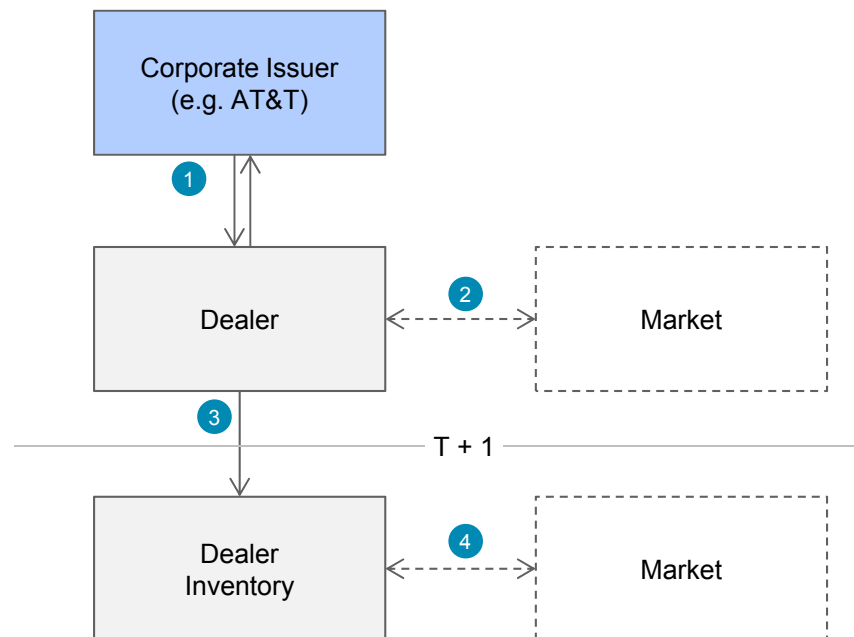
<sup>1</sup> Total underwriting fees and discounts were 6.1% of transaction volume in 2010, but declined to 3.7% between 2010-2013. Total underwriting fees and discounts paid on block underwriting transactions in 2013 were approximately \$2.1BN; total would have been \$3.5BN at 2010 pricing (6.1%). We focus on the US market due to the greater availability of data. Source: Dealogic

## 4 Equity Underwriting

### Transaction profile

- Block trades are a common form of underwriting for seasoned (or follow-on) equity offerings
- Dealers purchase new shares directly from corporate issuers; cash is transferred to the issuer in exchange for shares on an agreed transaction date
- Issuers accept a discount on the original offering to compensate dealers for
  - Arranging the transaction » gross spread
  - The market risk of transaction » re-offer discount
- Dealers sell the new shares into the market as soon as practicable, holding shares as needed to minimize market impact and price volatility
- Nearly all deals are worked down within 30 days of the transaction, and most are completed intraday, but the option to hold the shares in inventory to support the deal is a critical service provided by the dealers

### Illustration



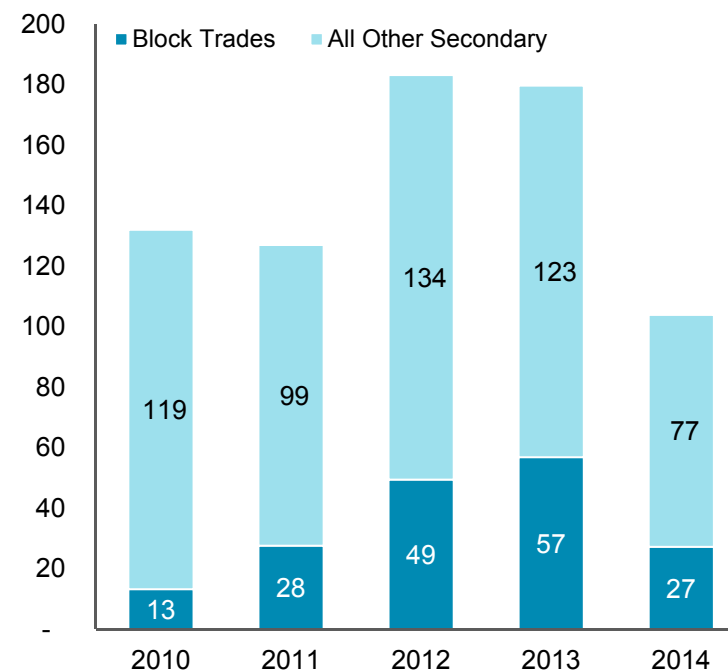
- 1 Corporate issuer (e.g. AT&T) transfers new shares to Dealer at agreed discount; dealer transfers cash to issuer
- 2 Dealer sells as much of the new shares into the market as possible on the transaction date
- 3 Dealer transfers unsold shares, as needed, into inventory to be worked down over time (rarely more than 1 month)
- 4 Dealer works down remainder of position

## 4 Equity Underwriting

### Value of transaction to market

- Corporate issuers (and holders of large equity stakes) use block trades as an efficient means of raising capital in the secondary markets
- Block trades generally offer 2 benefits that are not accessible through traditional offering
  - Accelerated capital distribution » no need to build the book over time
  - Reduced underwriting risk » less risk of information leakage during book building process, certainty of pricing at agreed discount with dealer
- In the US market, where data is most readily available, the cost of underwriting through block trades has declined sharply since 2010
  - 6.1% average all-in underwriting costs in 2010
  - 3.7% average all-in underwriting costs in 2013
- US corporate issuers paid \$2.1BN in block trade underwriting discounts in 2013, supporting more than \$55BN in new equity for their businesses

### Evolution of US block trade underwriting \$BN, 2010-2014YTD<sup>1</sup>



#### Summary statistics on block trades

Count	75	83	138	154	99
U/W Fees	1.5%	1.3%	1.0%	1.0%	1.1%
Offer Discount	4.6%	3.7%	3.0%	2.7%	2.6%

Source: Dealogic  
 1 Data through August 14, 2014

## 2.5 | OTC Options



## 5 OTC Options

### Description

- Investor or corporate client buys call (right to buy) or put (right to sell) options from dealer to lock in returns, or manage and hedge risk
- If client buys a call option, dealer purchases the reference asset from the market as a “delta hedge” on the transaction

### Users

- Corporate issuers
- Investors
- Financial institutions

### Impact of proposed NSFR on product provision

- Dealers required to fund short-term inventory held to hedge exposure on options facilitation
- Higher projected or potential funding costs will be embedded in option fees or dealer participation in OTC options liquidity provision declines or dries up

### Market size

- Approximately 170k equity swap contracts with a gross notional value of \$3.6TN were outstanding in 2013<sup>1</sup>

### Benefits to the market

- Investors tailor returns profiles and manage portfolio risk
  - Defined benefit pensions tailoring investment returns
  - Insurers needing to meet annuity investment targets
  - Retail investors investing in note format
- Corporates also benefit from well-functioning options market, for risk management and corporate strategy objectives
  - Hedge transaction risk in new equity offerings
  - Hedge employee stock awards plans
  - Optimize capital structure through stock buy backs

### Impact of proposed NSFR on the market

- Options pricing become less efficient, increasing the costs of hedging, impairing a key channel for risk-return optimization
- Capital raising by corporates becomes more risky and ultimately declines in volume, with potential knock-on effects for corporate investment, employment and economic growth<sup>2</sup>

<sup>1</sup> ISDA OTC Equity Derivatives Survey, Q4 2013

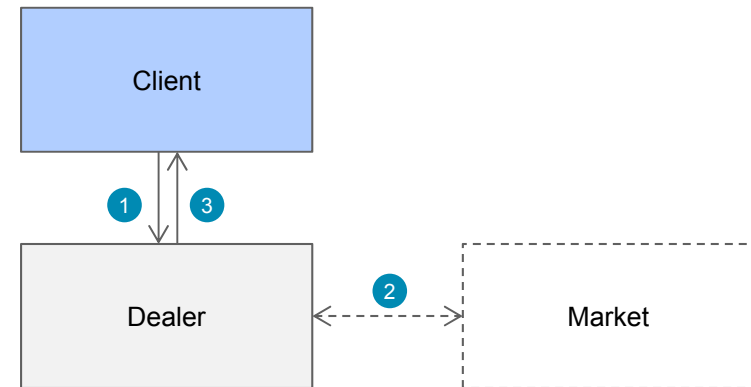
<sup>2</sup> Increased hedging costs also make corporate ESOP plans more expensive, discouraging corporations from making stock awards for employees, and decrease ASR derivative efficiency discourages efficient stock buyback activity with negative implications for corporate capital structure optimization

## 5 OTC Options

### Transaction profile

- Investor or corporate client buys call (right to buy) or put (right to sell) options from dealer to lock in returns, hedge downside risk, or manage pricing volatility for corporate finance activities
- In the illustration shown here, client buys a call option and the dealer purchases the reference asset from the market as a “delta hedge” on the transaction

### Illustration



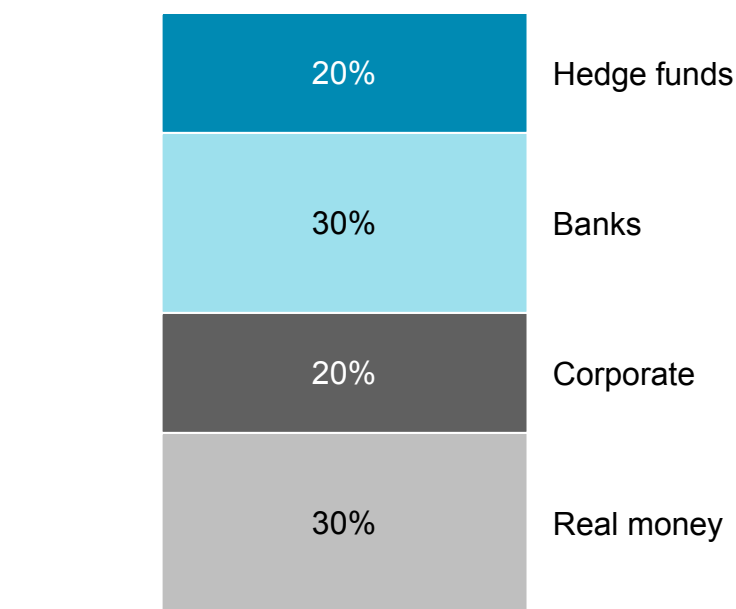
- 1 Investor or corporate client buys call option on an equity security from Dealer
- 2 Dealer purchases underlying asset from the market and holds the underlying for the duration of the option life
- 3 Either the Dealer delivers the asset to the Client if the option is exercised, or the option expires without exercise; Dealer closes out the hedge position at termination of option contract

## 5 OTC Options

### Value of transaction to market

- Investor clients use equity options to tailor portfolio profiles and manage risk, for example
  - Defined benefit pension schemes seeking to shape risk-return profile of investment strategies
  - Insurers seeking to match liabilities with customized returns over time
  - HNWI/retail investors needing a structured note with specific payoff or protection
- Corporates also benefit from a well-functioning equity options market, to fulfil risk management and corporate strategy objectives
  - Corporates needing to hedge employee stock awards plans
  - Corporates needing to optimize capital structure and buy back own stock efficiently
  - Corporates in new equity offerings needing to hedge transaction risk and manage other financial objectives

### Estimated breakdown of OTC derivatives users By client sales, 2012-13<sup>1</sup>



<sup>1</sup> Oliver Wyman proprietary data and analysis

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