

GLOBAL SECURITIES LENDING MARKET INTELLIGENCE NEWSLETTER

Welcome to Northern Trust's quarterly Global Securities Lending Market Intelligence newsletter. We are dedicated to providing you with timely and transparent communication about recent industry trends in the securities lending market.

This issue focuses on market commentary from our global trading and short duration fixed income experts, the latest updates on regulations impacting the securities lending market as well as information on the key industry conferences and events.

Northern Trust's securities lending team remains dedicated to monitoring market conditions while focusing on capitalizing on the demand for our clients' securities. We will continue to keep you informed of market developments and securities lending program changes in the coming year in our conversations with you and through this quarterly newsletter.

TRENDS IN BORROWER DEMAND

UNITED STATES – EQUITY

The second quarter of the year continued the upward trend for the U.S. equity markets, mainly driven by the strengthening of corporate earnings, improving U.S. economy and continued support from central banks. Despite the Trump administration's challenges with parts of its agenda and political events from Brazil to Europe, the major U.S. equity indices all posted gains for the quarter: S&P 500 +2.5%, Dow Jones +3.3% and NASDAQ +3.8%.

The U.S. employment situation continued its positive momentum with continued growth during the quarter. Inflation, while still subdued, is expected to rise as the economy continues to exhibit signs of growth.

As widely expected, The Federal Open Markets Committee (FOMC) increased the level of interest rates by 25 bps at its June meeting, moving the target range for the Federal Funds rate from 75-100 bps to 100-125 bps. In addition to adjusting its monetary policy, the Federal Reserve (Fed) signaled that it may reduce its balance sheet later this year. One of the key questions for the rest of the year will be the extent to which bond and equity markets can withstand a gradual reduction in monetary stimulus.

Measures of volatility during the first half of the year were at or near multiyear lows in the U.S. The CBOE Volatility Index (VIX), a measure of future stock price volatility, traded at or near historic lows during the quarter and finished the quarter down 10%. Lower levels of volatility and the sustained rally in equity prices kept many hedge funds on the sidelines during the quarter and contributed to ongoing short covering. Hedge funds continue to maintain a net long conviction, with few willing to bet that the market will decline anytime soon. Short interest on the New York Stock Exchange (NYSE) decreased 7% for the quarter.

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Borrower demand remained largely focused on directional trading strategies with the highest conviction of short interest seen for the following sectors: internet media, energy, healthcare, pharmaceuticals, bio-pharma, telecom carriers, transportation & shipping, software and consumer discretionary. Oil price volatility increased during the quarter, resulting in increased shorting activity and borrower demand for companies in the sector. Bearish bets remain well below levels registered during the height of 2016 volatility. Oil price depreciation was mainly attributed to bumper U.S. production numbers and ongoing questions about the future state of Organization of Petroleum Exporting Countries (OPEC) supply cuts. Snap Inc. and Under Armour, Inc. were notable names during the quarter. Snap Inc. was a top revenue producing stock, with demand largely driven by negative directional play. Lending fees on Under Armour, Inc., which has lost more than half of its value in the last 12 months, widened during the last two months of the quarter as a result of an increase in short interest demand. The apparel landscape continues to remain highly competitive.

UNITED STATES – FIXED INCOME

The widely expected June 14th rate hike did not contribute to a spike in demand for U.S. Treasuries. Demand to borrow U.S. Treasuries vs cash collateral remains subdued. Instead, non-cash collateral, including U.S. Agencies and OECD sovereign debt, is the preferred collateral type. Borrowers also continue to expand their list of preferred non-cash collateral and are now looking to pledge both U.S. and non-U.S. large cap equities.

In the U.S. corporate bond market, low oil prices contributed to high demand for securities in the energy supply and service sector. Consumers' shift to online shopping contributed to the retail sector trading at higher security lending spreads. Like U.S. Treasuries, demand to pledge non-cash collateral by borrowers is growing and non-cash collateral now represents nearly 35% of all collateral pledged.

CANADA – EQUITY

The Canadian equity market reversed course for the second quarter with the S&P TSX Composite Index declining over 3%. Both the energy and materials sectors accounted for the decline, with crude futures reaching six month lows as the competition continued between U.S. shale producers and OPEC output. Spot gold prices fell 4% after reaching a high in May, weighing heavily on the outlook for producers to maintain positive margins.

Performance of Canada's large natural resource sector is highly correlated to the price of crude. Softer crude prices, along with failed trade negotiations between Canada and the U.S., contributed to a softer market outlook during the quarter. As a result, borrower demand for securities in the oil and natural resource sectors strengthened as hedge funds increased short exposure to companies in these sectors. Canadian equity balances and utilization returned to pre-proxy levels over the quarter as lending supply for both Canadian and U.S. markets returned after another proxy season came to an end. Many of the fees for in demand names returned to their previous levels as the temporary constraint in supply was alleviated.

The Canadian specials market continued to benefit from demand in financials, specifically mortgage lenders. The news relating to Home Capital Group Inc.'s liquidity challenges and sudden implosion dragged down the alternative mortgage lender sector, fueling borrowing activity as hedge funds placed a negative bias on the sector overall. The healthcare and pharmaceutical sectors tumbled further, driving demand and generating higher fees versus the previous quarter as the sector continued to face a negative bias. Department store retailers attracted hedge fund demand as retailers struggled to generate profits in the face of stronger competition and higher debt loads. Many Canadian retailers continue to examine possible sale or restructuring opportunities to produce cost efficiencies and avoid insolvency.

As with previous quarters, a larger portion of the revenue generated from Canadian equities is driven by dividend yield enhancement trades, coupled with the dividend reinvestment plan (DRIP) trade. Continued demand from borrowers to

pledge various forms of non-cash collateral (e.g., equities and corporate debt) as well as cash, has dominated the securities lending market, providing opportunities for market participants who are flexible between these collateral types within their risk parameters.

CANADA – FIXED INCOME

Throughout the second quarter, the Bank of Canada (BoC) held the overnight rate at 0.5%. Markets had expected the BoC to maintain the policy interest rate for the remainder of 2017, however, markets have now priced in a greater than 80% chance of a rate increase being announced in the July meeting. The Canadian dollar gained over 3% for the quarter against the U.S. dollar after strong messaging from the BoC indicated an end to easing monetary policy. The yield on the Canadian 10 year benchmark bond surged over 37 bps from its low at 1.39% to 1.76% with the prospect of an interest rate hike in July.

Evolving regulation continues to be a driving force for borrower behavior. Liquidity rules from Basel III and Investment Industry Regulatory Organization of Canada (IIROC) create the need for banks to hold higher levels of high quality liquid assets (HQLA). This, in turn, has strengthened the demand for Government of Canada (GoC) issuances, especially structured in a term basis. With very little having changed from the first quarter in the bond market, the make-up of borrower balances remained consistent with continued demand for Canadian sovereign debt issuances.

Stable demand from sustained shorting pressure continued into the second quarter for energy related debt issuances as well as in the financial, communications and real estate sectors.

EUROPE/MIDDLE EAST – EQUITY

After reaching new highs in May, European equity markets closed slightly down on the quarter, with the EURO STOXX 50 and MSCI Europe closing less than 1% lower. While consumer sentiment remains buoyant, the equity markets weakened in the second half of the quarter due to renewed political uncertainty surrounding President Trump's leadership and hawkish comments from the Fed and the European Central Bank (ECB). Announcements from both central banks pointed to a reduction in fiscal stimulus packages which, over recent years, have helped support equity market growth.

Despite continued uncertainty around the longer term direction of European equity markets, there have been signs of growth in the deployment of hedge fund capital into Europe relative to 2016. Equity long/short strategy funds have typically been the largest beneficiaries of these inflows due to stronger 2017 performance. This said, hedge fund's investment conviction to increase their short exposure remains modest, with much of the stronger 2017 returns being attributed to the performance of their long positions. As a result, lending volumes in the region have generally remained relatively flat, reflecting this cautious approach.

The oil and energy sector remained a strong source of specials demand as oil prices fell over the quarter and reached a new low in June. Oil exploration and drilling related securities attracted the most interest due to the continued low levels of capital expenditure in the oil sector. The financial sector, most notably Italian and Spanish banks, continued to generate specials demand due to concerns over their levels of distressed debt. Plans to strengthen balance sheets by raising capital created significant lending opportunities as well. As has been the theme over recent quarters, the biometric technology sector remained a strong source of directional demand from hedge funds.

In common with previous years, the second quarter saw an increase in yield enhancement trading activity due to the heightened volume of companies distributing their annual dividends through the period. Balance sheet constraints and

higher funding costs led to an easing in both pricing levels and demand versus 2016. In general, the strongest demand was reserved for higher yielding main index securities.

Political uncertainty in the UK caused by the failure of the governing conservative party to secure a majority in the June elections failed to stimulate notable new demand in the lending market. However, those UK companies with the greatest exposure to a weaker pound remained the focus of hedge fund demand. These include selected UK supermarkets, retail names, and UK home builders. Optional scrip dividends continued to be a robust source of trading activity.

EUROPE/MIDDLE EAST – FIXED INCOME

In a sharp turnaround, this quarter was characterized by hawkish central bank rhetoric as diminishing political headwinds led a number of major central banks to prepare to reduce accommodative monetary policy over the coming months, with global bond prices falling and yields subsequently rising during the quarter.

In the Euro area, while data has improved throughout the period, inflation remains worryingly subdued. However, ECB President Mario Draghi appeared to confirm a tolerance with below-target inflation, leading to a reassessment of policy expectations and bringing forward the prospect of an increase to the deposit rate. Borrower appetite remained focused on top-rated German, French and Dutch sovereign bonds in order to source inventory of regulatory-important HQLA, while specials trading was largely concentrated on cheapest-to-deliver bonds ahead of the June futures expiry date.

Demand for gilts was also mostly unchanged over the quarter, as political instability resulted in diverging opinions on the UK's post-Brexit competitiveness. However, a more hawkish than expected Bank of England (BOE) vote later in the period saw three committee members surprisingly call to lift the base rate by 25 bps, leading to a rally in sterling, and markets pricing the first UK rate hike in May 2018. This followed further comments from Mark Carney, Governor of the BOE, stating that some removal of stimulus may be necessary. As in the previous quarter, an abundance of liquidity led to a minimal number of gilts trading with special value.

Finally, emerging market (EM) debt continued to perform well during the quarter, supported by the current global macro environment and sustained period of low volatility. The Fed's slow and predictable road map for policy tightening and balance sheet reduction has resulted in money continuing to flow into dedicated EM funds. This positive sentiment is evident in securities lending markets with well-contained fees in most jurisdictions. One negative over the quarter was seen in commodity valuations, with the depressed oil price weighing on commodity-sensitive issuers. This led to strong demand and elevated fees for Venezuelan sovereign and corporate bonds, for example. Meanwhile, an ever-increasing number of EM high-yield issuers on negative credit watch drove ongoing demand for Brazil and Qatar sovereign bonds.

ASIA – EQUITY

Developing Asia-Pacific economies powered ahead in the second quarter driven by a resiliency in global trade and a positive corporate reporting period. Additionally, expectations of favorable U.S. tax reform boosted sentiment across international equities, which helped extend gains in Asia. Demand for securities lending remained subdued, largely unchanged quarter-over-quarter, as rising equity markets drove long biased investment strategies and short covering.

Japanese markets performed better than most for the quarter with the Nikkei higher by 5.5%, underpinned by a weaker yen against the U.S. dollar, which in turn spurred a steady stream of upward revisions to corporate earnings throughout the quarter. This generally translated to softer securities lending demand outside of selected pockets of interest that were largely driven by directional demand for securities with weak fundamentals, as well as securities with convertible bond arbitrage opportunities. In addition, a number of corporate events, particularly new share issuances coupled with yield enhancement demand over June record dates, provided additional revenues for the quarter.

In Hong Kong, the Hang Seng Index was once again higher by almost 6.5% for the quarter, driving investors to continue increasing their long exposure, boding unfavorably for securities lending activity. However, borrower demand continued to remain robust for select securities within the automobile and solar manufacturer industries following the Chinese government's announcement that it would reduce government subsidies for green energy vehicles and renewable energy initiatives in 2017. Price spikes in property developers with mainland exposure also drove active short interest.

Australian indices declined in the second quarter with the ASX 200 down by 2.57%. This was largely driven by the financial sector as the Australian federal government announced it would introduce bank levies for the nation's five largest banks as part of the federal budget, in addition to Moody's downgrading the big four banks on rising levels of potential risk from residential mortgage exposure. While the news did not immediately translate into securities lending demand, increased capital requirements by regulators could drive banks to raise capital through discounted dividend reinvestment plans, which would be positive from a securities lending perspective. Additionally, consumer discretionary retailers saw an increase in borrower demand as Amazon prepared to launch in Australia and threaten their revenue margins.

Emerging markets in Asia followed a similar trend to developed markets, as the main indices in both South Korea and Taiwan rallied higher by 10% and 4% respectively for the quarter. South Korea's rally was underpinned by stronger consumer confidence, which rose to the highest level in six years further to growing exports and new political policies designed to spur job creation. This, in turn, spurred short covering, which weakened securities lending demand outside of small-mid cap securities where demand was sustained by active quantitative-type strategies. In Taiwan, a rising index had a similar impact to broader demand although, positively, there was heightened activity ahead of annual record dates as borrowers sought to replace domestic callable borrows with offshore non-callable inventory.

SHORT DURATION FIXED INCOME

The Federal Open Market Committee (Committee) raised the target range for the federal funds rate from 75-100 bps to 100-125 bps at their June meeting. Unlike the March increase, this hike was well anticipated and "baked" into the forecasts of many investors. While conversations from Fed officials prior to June had been cautiously optimistic, the tone has shifted as Fed Chair Janet Yellen and her team exuded more confidence in the revitalization of the economy at their most recent meeting. Key economic indicators such as labor data, household spending and business spending have trended upwards. Inflation remained surprisingly soft, but the Fed believes this is just a near-term event and is not concerned about reaching their two percent objective over time. A notable change in the June meeting minutes is the explicit, yet still unclear, reference to the timing of balance sheet normalization. If current economic conditions persist or strengthen, the Fed expects to begin unwinding their securities holdings this year. Our desk is in agreement that spreads will likely widen, but we continue to debate the magnitude of the move.

The labor market held steady in the 200,000 range for job gains coming off of last quarter, with the exception of May. May data leaned toward the softer end, with jobs clocking in at 152,000 and wage growth increasing by an unimpressive 0.2% month-over-month. The lower unemployment rate of 4.3% was not attributable entirely to a strengthening labor market, but rather to a drop in the size of the labor force. However, weak as it may be, the results were not enough of a concern to push the Fed off course from a June rate increase. Apart from the month of May, economic activity expanded at a moderate pace. The April and June job numbers came in at 207,000 and 222,000 respectively. Better-paying jobs pushed the number of people who went from being out of the labor force back into employment to 4.7 million in June. Though the pickup in U.S. hiring over the last few months has undoubtedly been promising, an undercurrent of confusion and bewilderment surrounds economists and policy makers as they try to rationalize the depressed wage levels. Going forward, wage gains will likely become a more central part of the economic narrative if they keep lagging behind meaningful payroll changes. Personal consumption expenditures (PCE)

was reported at 1.5% year-over-year for April and fell slightly to 1.4% year-over-year for May. The pace of U.S. consumer spending, although not stellar, appears to be enough to keep the economy on track for a rebound. It may be the case that Americans are holding off on spending until consistently higher wages give them the “green light.” In the meantime, low borrowing costs are working overtime to support consumer purchases. In the Quarterly Summary of Economic Projections, the Committee widened their range of the forecasted federal funds rate for the end of 2017 to 1.1% - 1.6%. The 2017 U.S. forecasted unemployment rate declined at 4.1% - 4.5%. Additionally, the Committee kept its gross domestic product forecast relatively the same at 2.1% - 2.2% for 2017 from 2.0% - 2.2% and decreased its inflation forecast to 1.6% - 1.7% for 2017 from 1.8% - 1.9%. There was little change in the 10-year Treasury yield after the June rate announcement, meaning investors were probably anticipating views of low inflation and a potentially slower rate path in the future. The Committee forecasts three rate hikes for 2017. Markets are currently showing only a 16.1% chance of a September rate hike.

Monetary policy abroad held steady again. The Bank of England (BOE) left the rate unchanged at 0.25% in June and kept the Gilt Purchase Plan at 435Bn Pounds. The vote was much closer at this meeting than that of March, with three members now in support of a rate hike as Michael Saunders and Ian McCafferty have joined Kristin Forbes in her hawkish outlook of the economy. Faster inflation, reduced labor market slack and the possibility of overshooting the 2% target are some of the reasons a rate increase may be warranted soon. Conversely, doves argue the recent tightening in consumer spending presents risks that are grave enough to prevent BoE action. Factoring the effects of Brexit negotiations into the existing economic forecast will further complicate the Monetary Policy Committee’s decision in the coming months. The pound strengthened to 1.277 and the 10-year Gilt yield climbed 8.4bps to 1.01% after the announcement.

The European Central Bank (ECB) also left its monetary policy unchanged with the main refinancing rate at 0% and deposit facility rate at -0.4%. A key divergence in the briefing for June was the clear omission of the need for another rate cut in the near term. Though this was perceived as hawkish by most economists, it is important to keep in mind rate manipulation is but one weapon in the ECB’s arsenal of options. The EU is still far from implementing a stimulus exit. While risk assessment of growth was upgraded to “broadly balanced” and GDP forecasts were raised to 1.9% in 2017, 1.8% in 2018 and 1.7% in 2019, underlying inflation pressures remain quiet. The ECB lowered the outlook for inflation to 1.5% in 2017, 1.3% in 2018 and 1.6% in 2019. Cautious language from Mario Draghi on inflation pushed most euro-area bond yields lower with the Italy 10-year yield down as much as 13bps.

The Fed instructed its Open Market Trading Desk (the Desk) to execute \$2 trillion in overnight Reverse Repurchase Agreements (RRP). The overnight RRP operations were open to all eligible counterparties and U.S. Treasuries were used as collateral with the goal of ensuring liquidity in the short term money market. Money market participants welcomed the additional collateral due to a limited supply of investment opportunities during the fiscal quarter-end period. On June 30, there was \$398.9 billion in interest of overnight RRP at 100 bps, notably lower than the amount the Desk made available. Shorter dated U.S. Treasury bills (one to three month bills) traded between 90-100 bps in June as investors attempted to bring down their overnight liquidity balances before year-end. Overnight repurchase agreements with broker/dealers traded between 100 and 105 bps. Comparatively, overnight time deposits traded between 115 and 120 bps. The additional repo collateral and overnight time deposits helped money market participants invest all of their cash for quarter-end.

CONFERENCE UPDATES

INTERNATIONAL SECURITIES LENDING ASSOCIATION

Experts from Northern Trust's Global Securities Lending team attended the 26th annual International Securities Lending Association (ISLA) Securities Finance and Collateral Management Conference in Berlin, Germany at the end of June.

As to be expected, a large amount of conference time was dedicated to regulation. The Regulatory Overview panel was dominated by discussion about the approaching deadlines for Securities Financing Transaction Reporting (SFTR) and Markets in Financial Instruments Directive (MiFID II), which all panelists agreed will increase the cost of running the business, with the potential to erode earnings. The SFTR initiative prompted significant discussion among the borrower community to allow them to prioritize supply from clients with favorable attributes such as risk-weighted capital treatment on a pre-trade basis as opposed to a post-trade basis that is currently in place.

The evolution of securities lending markets received a great deal of attention across a number of panels, with participants covering a range of initiatives including central counterparty (CCP) usage, pledge structures, and peer-to-peer lending. The adoption of the CCP model remains slow, largely due to the challenges associated with the client onboarding process this complex legal construct demands. A pledge structure, as opposed to the traditional title transfer method, is viewed by many as a quicker means of achieving significant capital savings for the borrower community. Panel discussions also focused on the opportunity for borrowers to access beneficial owners with a challenging netting opinion. The emergence of peer-to-peer lending platforms has had little impact on the industry, with most participants encouraged by the resilience shown over the last 10 years. All agreed that the aforementioned initiatives will play some part in the evolution of the securities lending market going forward, though the general consensus was that the initiatives were more likely to serve as an alternative route to market, as opposed to a more entrenched distribution opportunity.

Focusing on market trends, it was clear that hedge fund demand remains challenged on the short side as equity markets continue their significant rally in 2017. Short covering remains the theme for fundamental long/short hedge funds. With no major signs of managers reducing risk in the near term, this trend is expected to continue while stock market momentum remains. Quantitative strategies have attracted an increasing level of interest recently as funds look to diversify, however, they remain a relatively small proportion of the equity hedge space.

Meanwhile, demand for highly rated government bonds that are classified as High Quality Liquid Assets (HQLA) under the Basel III definition has continued to grow over the last year, helping lenders achieve significant earnings growth in fixed income portfolios. This has led to a trickle-down effect, with fees for general collateral also widening, particularly over regulatory-sensitive periods. More generally, financing considerations remain a dominant theme in terms of borrower demand with an increased number of firms coordinating more closely across asset classes as they strive to maximize efficiency in the funding space. In addition, counterparts remain focused on efficiencies around collateral flexibility and automated trading capabilities. In this respect, the majority of borrowers have embraced the concept of automated trading, which Equilend's Next Generation Trading (NGT) provides. Northern Trust is regarded as a leader among the agent lender community as we updated our proprietary lending system with full NGT functionality in late 2016.

CANADIAN SECURITIES LENDING ASSOCIATION

The 7th Annual Canadian Securities Lending Association (CASLA) conference was held in June in Toronto. This one-day event was attended by more than 150 delegates with topics ranging from the securities lending environment and regulations to statistics on the Canadian market. Northern Trust participated as a main sponsor of the conference and shared our securities lending expertise during panel discussions.

George Trapp, Head of North America Client Services, Securities Lending, moderated the Industry Leaders panel discussion which was comprised of both lending agents and borrowers who provided insights on regulations, demand trends and opportunities. It was noted during the panel discussion that while regulations continue to put pressure on the borrower's balance sheet, some regulations have created trades that better position the borrowers to meet certain regulations. For example, CCP transactions continue to be an area that both borrowers and lenders are reviewing as a means to reduce the capital impact. However, a scalable model for lending agents has yet to be adopted by the industry. The panel also commented on the efforts the industry is making in light of the upcoming shortening of the settlement timeframe, from T+3 to T+2. Borrowers and lenders in Canada and the US are preparing for this shortened timeframe to take effect in September 2017.

A panel focused on market statistics highlighted that Canada was responsible for 5.3% of securities lending revenue globally in 2016. In the first quarter of 2017, however, the percentage of global revenue attributed to Canada jumped to 6.7%. Canada is the second largest market in terms of loan volume behind the U.S., and boasted an 11% utilization rate for the first quarter of 2017. The volume of fixed income assets on-loan has increased in Canada, which in large part is attributable to the country's AAA sovereign debt rating and the increasing demand for HQLA for banks.

The popular regulatory panel focused on the impact of recent regulations causing disintermediation of prime brokers and banks for securities finance transactions. The emergence of CCPs, internal crossing, exchanges, and other alternative types of borrowers such as pension plans or investment funds has helped bolster liquidity in the market. Panelists mentioned several different approaches currently under review for resolution planning efforts, such as bail-in, bridge bank, forced sale to counterparty, and stay. Each has its own unique requirements with the goal of providing liquidity and stability in the event of a counterparty default.

The CASLA conference ended with experts summarizing conference topics regarding securities finance and industry trends. This conference continues to be a strong forum for market participants to gain insight into the Canadian securities lending market place.

ISF SOUTH AFRICA SECURITIES FINANCE MASTER CLASS III

Industry experts from Northern Trust attended the 3rd Global Investor/ISF South Africa Masterclass III conference held in Cape Town, South Africa in May. The conference brought together a range of participants in the securities lending market, both local and international, with a key theme being how the business can be made more efficient in order to reduce costs.

Joseph Gillingwater, International Head of Fixed Income Securities Lending Trading, participated in a panel along with other subject matter experts, primarily focused on how beneficial owners are adapting to an evolving environment, providing the audience with an international perspective on some key regulatory and market-driven changes. In this respect, it was an opportunity to share thoughts on topics such as maturity tenor extensions, different trading venues and new trade structures such as CCPs and Pledge opportunities. These topics tied into the broader theme of the increasing cost of capital. Additionally, the audience was eager to understand how regulation is driving the cost of indemnification, while money market reform was covered in some depth in order to educate and inform the delegates of the effects of continually evolving market dynamics.

Regulation was a key theme across several panels, with both local and international speakers often making reference to the SFTR and MIFID II reporting requirements and LCR/NSFR liquidity funding ratios. In addition, the role of technology and its resulting efficiencies was actively discussed, with updates on how the Blockchain distributed ledger technology has the potential to increase the speed of settlement while reducing costs in securities lending trading.

REGULATORY ENVIROMENT

The updates below summarize the status of regulations affecting the securities lending industry and the anticipated impacts that may occur.

BASEL III:

Section	Status	Anticipated Impacts
Capital	US rules finalized July 2013 and effective January 2015	Increased capital requirements will make it more costly for agent lenders to provide indemnification.
	US Treasury responds June 2017 to Executive Order on Core Principles for Regulations	Suggests that more appropriate risk sensitive methodologies be considered for SL exposures.
Large Exposures	Final Basel III standard released April 15, 2014, securities lending exposures remains open	Similar in concept to Counterparty Concentration Limits; restricts a bank's combined credit exposure to a single counterparty to a portion of the bank's capital.
Leverage Ratio	US rules finalized September 2014.	Exposure for indemnified securities lending to be measured generally by current exposure, which should be negligible given securities lending positions are over-collateralized.
	Disclosure requirements starting January 2015 and compliance by January 2018	Additional leverage ratio impact for any guarantees or exposures beyond replacement securities.
Net Stable Fund Ratio	Final standards published October 2014; US rules proposed May 2016; awaiting adoption of the framework by US regulators	Affects securities lending activity for borrower counterparties (and therefore potentially their demand).
		Intended to ensure that banks have sufficient stable funding based on their asset profile. Available stable funding (ASF) divided by required stable funding (RSF) must be at least 100%; available stable funding measure is based on liabilities and required stable funding on assets, both weighted by prescribed factors.
Liquidity Coverage Ratio	Final US rules published September 2014	Potential mismatch in ASF and RSF treatment on the different legs of the borrower transaction
		Affects securities lending activity for borrower counterparties (and therefore potentially their demand).
Haircut Floors	Published in November 2015; comment period ended January 5, 2016	Requires banks to hold enough eligible High Quality Liquid Assets ("HQLA") to cover "Total Net Cash Outflows". May shape borrower demand for certain transactions, including greater use of non-cash collateral.
		Proposes minimum haircut on non-centrally cleared securities lending transactions.
		Agency lending transactions would be exempt when cash collateral is invested in accordance with certain standards and non-cash collateral is not re-used.

DODD-FRANK ACT:

Section	Status	Anticipated Impacts
Counterparty Concentration Limits – 165(e)	Second proposal published in March 2016; awaiting final rules	Limits a bank's combined credit exposure to a single counterparty to no more than 25% of the bank's capital.
	US Treasury responds June 2017 to Executive Order on Core Principles for Regulations	Credit exposure calculations include indemnified securities lending transactions; agent lenders may face constraints on providing indemnification and accepting sovereign debt as collateral. Suggests that more appropriate risk sensitive methodologies be considered for SL exposures (as stated under Basel III, Capital).
Securities Lending Transparency – 984	Awaiting proposed rules (overdue since mid-2012); no clear timeframe for rules to be issued	Requires SEC to increase transparency in securities lending. Expectation is that SEC will develop regulations that align with proposals from the Financial Stability Board's Work stream on Securities Lending and Repo.

FINANCIAL STABILITY BOARD:

Section	Status	Anticipated Impacts
Work stream on Securities Lending and Repos under the FSB Shadow Banking Task Force	Guidelines for minimum margins and haircuts published October 2014	Examines securities lending and repurchase agreements Published policy recommendations on transparency, disclosure, minimum standards on cash reinvestment and collateral valuation, and requirements on collateral rehypothecation
	Awaiting adoption of FSB framework by local regulators	Experts Group proposed standardized data reporting elements for securities lending and repo transactions
	Northern Trust and other agent lenders participated in a voluntary Fed/OFR pilot study on data collection	Published standards for evaluating margin sufficiency on transactions that are not centrally cleared, which may result in higher requirements. Recommended haircut floors for certain transactions; excluding agency securities lending transactions assuming cash is invested consistently with earlier FSB standards and non-cash collateral is not re-used
Total Loss Absorbing Capacity (TLAC)	US rules finalized in December 2016	GSIBs to be subject to even higher capital requirements; defines instruments eligible to satisfy TLAC requirements.

FINANCIAL TRANSACTION TAX:

Section	Status	Anticipated Impacts
Proposed EU Directive	Implementation now aimed at 2016 / 2017 but significant technical challenges remain	Sets out the framework for a harmonized FTT across 11 participating EU member states. Client purchases, sales and exchanges of financial instruments, the conclusion of derivative contracts, repos, and securities lending transactions are all in scope of the draft document, which is far from final

MIFID II:

Section	Status	Anticipated Impacts
MIFID II	<p>Significant overhaul of Investor protection standards being extended to “professional investors”</p> <p>Implementation January 2018</p>	<p>Greater transparency for investors into services provided by financial institutions including securities lending</p> <p>Additional Securities Lending reporting will be made available</p> <p>Certain disclosures on the way Securities Lending programs are run will be provided by lending agents. May require updates to legal contracts</p>

RESOLUTION STAYS:

Section	Status	Anticipated Impacts
ISDA Resolution Stay Protocol for Securities Finance Transactions	<p>German implementing regulations effective January 2016, UK implementing regulations effective June 2016 and additional global regulations to be issued</p> <p>ISDA developed protocols specific to each relevant jurisdiction</p>	<p>The ISDA Stay Protocol was implemented for derivatives in 2014 and is being expanded to apply to securities lending and repo transactions.</p> <p>It is intended to address the issue that resolution regimes of one jurisdiction may not be enforceable in other jurisdictions in a cross-border resolution.</p> <p>Adherence to ISDA Stay Protocol is required for G-SIBs and may be voluntary for other market participants, but failure to adhere may affect a lender's ability to lend to certain counterparties that are required to transact only with adhering counterparties</p> <p>May effect termination and default rights of counterparties transacting with G-SIBs and other adhering counterparties for qualified transactions, including securities lending and repo</p>

SECURITIES FINANCING TRANSACTIONS (STFR):

Section	Status	Anticipated Impacts
Transparency of SFTR	<p>Political agreement reached on level 1 text</p> <p>ESMA and the European commission now working on defining what will be required to be reported</p> <p>Implementation timeline not yet defined</p>	<p>Reporting of all Securities Financing Transactions required to give regulators a transparent view of the market</p> <p>ESMA implementation of FSB recommendations</p> <p>Agents likely to report on behalf of beneficial owners but this will be driven by final technical standards</p>

UCITS V:

Section	Status	Anticipated Impacts
UCITS V	Level 2 text expected late 2015 with deadline for transposition into National law in March 2016	Harmonization of rules covering core safekeeping and depository oversight for UCITS funds across the EU
	ESMA consultation on asset segregation may impact final outcome. ESMA response is now overdue	Enhanced reporting required for depositories to monitor Securities Lending activity for UCITS funds Segregation of assets for UCITS clients potentially impacting collateral processes, similar to AIFMD

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