THE PURPLE

A DATALEND RESEARCH PUBLICATION

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CONTENTS

DEAR READERS,

Standards are a funny thing. Everyone supports standards in theory... until it comes time to embrace change and adopt standards that are different than what they are used to. Most people would prefer to maintain their way of doing things and have others change to comply with their "standards." In other words, standards are great, as long as the rest of the world embraces *my* process as standard and *I* don't have to change. That just doesn't work!

At EquiLend, we have a considerable amount of experience with standards. After all, when we began our journey 17 years ago, our tagline was "The Global Standard in Securities Lending." We created standard workflows for fully automated trading and post-trade services and standardized messaging protocols where none existed. When we re-architected our fully automated trading under our NGT initiative, we expanded on our standardization from years ago. Everyone complied. But some said we weren't standard enough.

In 2017 we created standards for client performance reporting for the beneficial owner community. This has been incredibly well received and embraced by most of our clients. In fact, it's been so successful that others in the market have begun to copy our standards as if they were their own, as if it were their idea. Regardless of how we get there, the outcome is good for our industry and for the ultimate principals in the transactions. After all, as Oscar Wilde once said: "Imitation is the sincerest form of flattery that mediocrity can pay to greatness."

Enjoy *The Purple!*

Brian Lamb
CEO, EquiLend
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DEAR READERS,

As we go to press with Issue 7 of *The Purple*, I am reminded of an article published back in Issue 2 in February 2017 titled "Standardizing Performance Measurement." Here, we outlined the steps DataLend took to ensure consistency across beneficial owner performance reporting as we recognized that beneficial owners struggled to find a consistent approach to performance measurement.

We have come a long way since DataLend spearheaded the initiative to create standards around securities lending performance reporting. Today, DataLend is excited to collaborate with ISLA, agent lenders, beneficial owners and our data provider peers to work toward implementing these standards across the industry.

The work the ISLA group is performing is certainly timely. I recently attended one of the industry's key beneficial owner conferences where I presented the results of the Funds Europe/DataLend Beneficial Owners 2019 survey (read more on page 6). The beneficial owners in attendance were very engaged, and their feedback was aligned with our survey results: Beneficial owners are and should be using securities finance data and analytics to drive decisions related to their lending programs and to perform adequate governance.

Securities lending data is used more generally by beneficial owners and market participants for collateral optimization, portfolio construction, index creation and trading signals. A securities finance data feed may be one of many data sets consumed as part of broader analysis. It is an exciting time for securities finance data!

I hope you enjoy this issue of *The Purple*!

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Beneficial Owner Performance Reporting

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Survey: Beneficial Owners on Data

Funds Europe found in its recent survey of beneficial owners that these institutions view securities lending as an investment product and should in turn use independent securities lending data to optimize their programs, mitigate risk and support them in their fiduciary responsibilities.

SECURITIES LENDING is increasingly viewed by beneficial owners as an alpha-generating investment product—and many are utilizing securities lending data and analytics to sharpen the performance of their lending strategies and to integrate with their portfolio decision making. However, there is still a sizeable group of beneficial owners—defined as asset managers, insurance companies, sovereign wealth funds, pension funds and other asset owners that engage in securities lending—that may be failing to extract full value from their lending programs because they do not have access to market data.

These are key conclusions emerging from the DataLend Portfolio Beneficial Owner Survey 2019 conducted in partnership with Funds Europe.

During 2018, securities lending generated almost $10 billion in revenue for the asset owner community. This is motivating lenders to develop a deeper understanding of how their lending parameters are delivering performance against their industry peers—and at what level of risk. While previously assumed to be of interest primarily to asset servicing teams, lending data is now being used to feed portfolio construction and to track investment opportunities in the market.

Indeed, 66% of beneficial owners participating in the survey said that their primary motivation for engaging in securities lending was to generate alpha, a 7% increase on the response from the previous Beneficial Owner Survey conducted in December 2017. Commenting on these results, Nancy Allen, Global Product Owner at DataLend, says that many beneficial owners are no longer content simply to receive a summary report at the month end detailing how much the portfolio generated through lending activity.

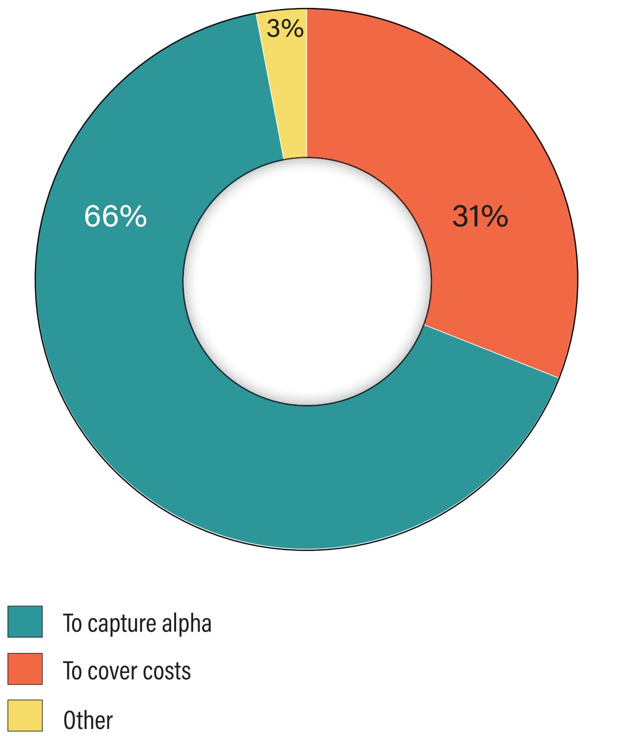
"Rather, beneficial owners are demanding more detailed data and analytics to drive their decision making. They are using data to determine which assets to enroll in their lending program, to monitor returns on those assets, to monitor loan demand across specific counterparties and to determine if they should revise collateral eligibility criteria. With the right data, beneficial owners can assess their current lending guidelines and decide whether they wish to tighten or relax those parameters to target a different expected return."

Although many asset owners currently receive securities lending market data from their agent lender, the survey reveals that 13% of respondents currently source independent securities lending data from a market data service such as DataLend and a further 9% source this from an independent consultant. However, it is noteworthy that approximately one-fifth of respondents said they do not have access to securities lending market data.

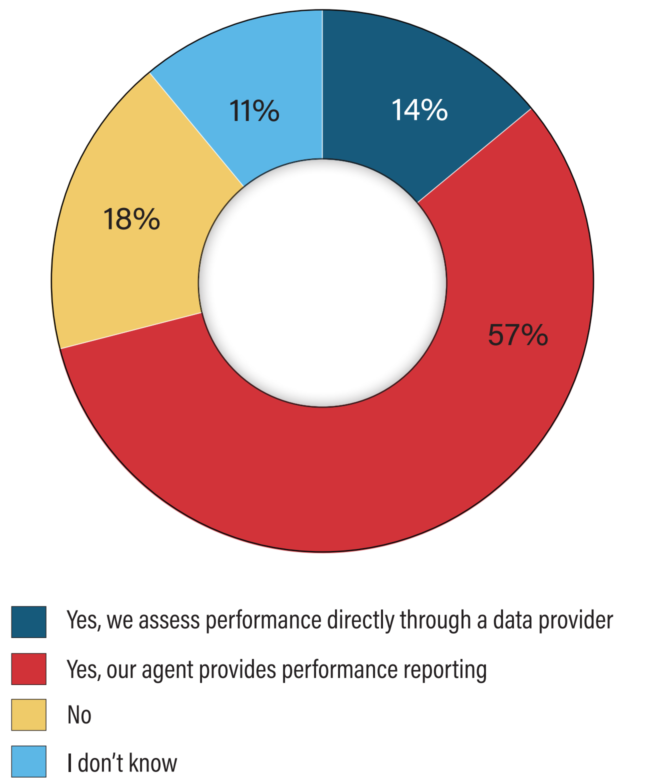
"This result indicates that a sizeable group of beneficial owners are leaving value on the table by failing to apply market data and analytics to guide their lending strategies," says Allen. "By utilizing tools such as DataLend Portfolio, we can demonstrate to beneficial owners that they may be losing out on value by restricting certain securities—and predict how much additional revenue will be generated by including these assets in their lending programs."

The survey also highlights the importance of independent research reports and publications in enabling asset owners to stay informed about current trends in securities lending markets. More than 50% said that they use independent research and trade publications, such as DataLend's quarterly securities lending publication *The Purple*, to stay informed about developments in the market—often using this

What is your firm's primary objective for participating in securities lending?



Does your firm monitor securities lending performance relative to the broader market?



in parallel with market information they receive from agent lenders.

"This reflects the way that beneficial owners are now thinking about their lending activity," says Allen. "We have seen a strong rise in demand for DataLend Portfolio over the past two years, enabling beneficial owners to apply independent evaluation of performance across their loan portfolios – and to compare across standardized peer groups (based on type of legal entity, location and collateral type for example) to ensure like-for-like comparison regardless of which agent lender they may be using."

To strengthen fiduciary oversight, beneficial owners are also inviting consultants to give board-level presentations, providing detailed analysis of the risks, the key drivers of performance and the compliance responsibilities associated with their lending programs.

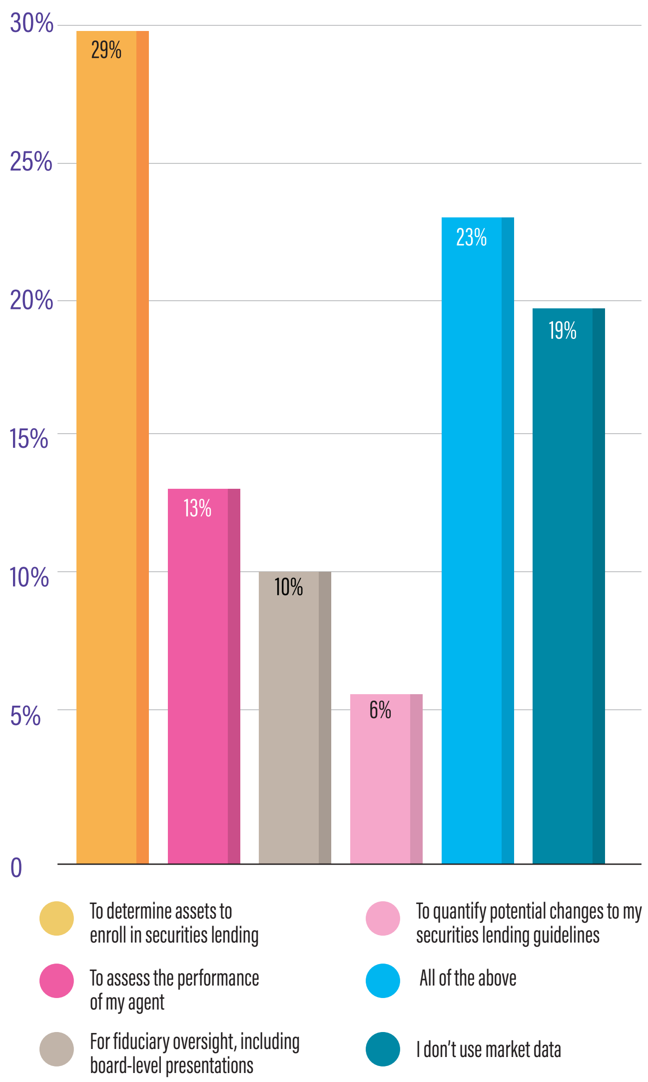
As appetite for independent securities finance data continues to grow, the key is to offer flexibility in service delivery while minimizing operational complexity this may present to the client. Many beneficial owners—whether managing securities lending in-house, or through single or multiple agent lenders—wish to receive consolidated reporting across their lending program, accessible via a single login.

While many clients prefer to access data via a Web-based user interface, others may choose to receive a raw data file, to use an Excel add-in tool or to pull data directly from the data provider via an application programmable interface (API).

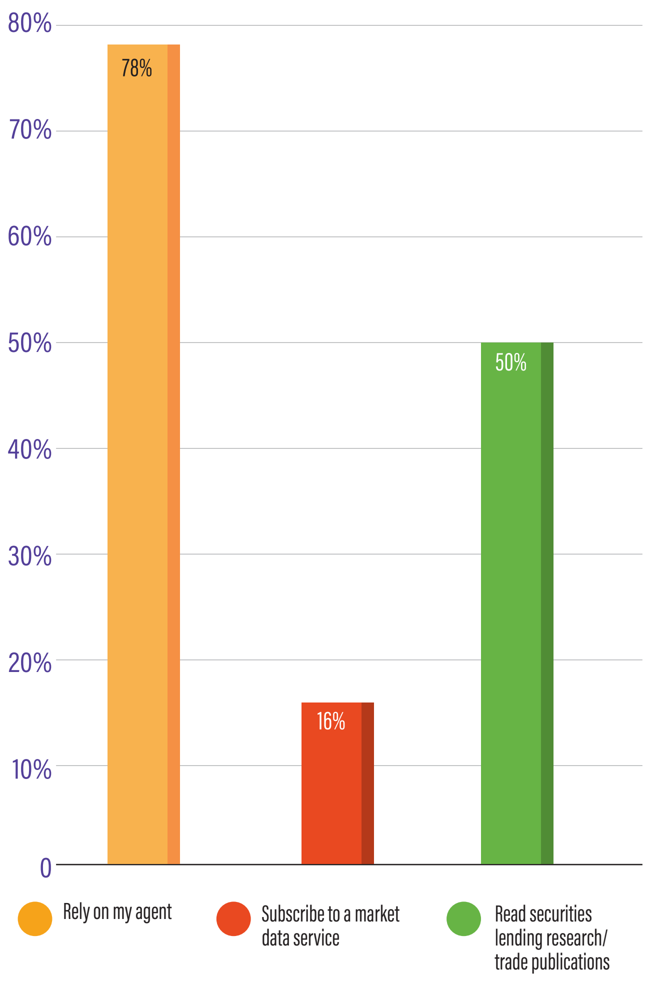
For DataLend, the future is to work closely with beneficial owners—and with lending agents—as they apply data to drive decision-making within their securities lending programs. Looking ahead, Allen predicts a rise in the application of artificial intelligence and machine learning, allowing users to apply predictive analytics to their lending strategies. "We recognized that securities finance data can unlock untapped value in securities lending markets, and we are working with beneficial owners and with lending agents to extend these advances to a wider community of users," says Allen.

This article initially appeared in Funds Europe *magazine.*

How does your firm primarily use securities lending market data?



How do you stay informed of securities lending market trends? (May choose more than one.)



Initial Trading Days

Following Initial Public Offerings, How Do Stocks Fare in the Securities Lending Market?

By Chris Benedict, Product Specialist, DataLend

IN A MARKET where global revenue is down significantly, one looks for bright spots where they can find them.

One of the brightest spots in the securities finance market is activity related to initial public offerings (IPOs). The volatility that often occurs during the first days and weeks after an IPO can cause large fee swings, high re-rate activity and an influx of new loans against returns until a proper valuation of the asset can be reached and prices stabilize. Some IPOs can initially trade warm to hot, only to settle toward a more GC level just a few days later. Other IPOs can remain red-hot for weeks or even months at a time as optimistic long investors battle the more sanguine short sellers who may disagree with a company's post-IPO valuations. As a result, IPOs can be a significant source of revenue for lenders in the securities finance market.

The primary objective of an IPO is to raise new capital to help fund a company's growth. There are a number of factors that determine the price of an IPO, including investor demand, the company's growth prospects, the price-to-earnings ratios of competitor firms in the same industry, the reception of a company's "roadshow," the size of the issue, the economic health of the overall market and other considerations. The higher the investor demand for the company, the higher the company can price its shares and the greater the potential profit from the offering.

Too much demand in the form of a very high IPO price may appear to be "irrational exuberance" by some market participants; investors may believe the secondary market IPO price is too expensive and will seek to borrow shares immediately in the aftermarket once the IPO has settled to execute a short sale of a potentially overvalued asset.

While DataLend's analysis is written from a securities finance perspective, there are other components that can impact how an IPO trades and the stock's subsequent fee to borrow. These components include the size of the IPO, the number of pre-IPO financing rounds and the sophistication of that investor base, the capital structure of the company and volumes in the cash markets, amongst others.

The number of issues brought to the IPO market in 2019 has been a bit subdued compared to recent years, possibly due to heightened geopolitical tensions and ongoing uncertainty around trade issues amongst the U.S., China and the EU. Still, there were plenty of high-profile, large, very hot and gravity-defying IPOs in both the traditional cash and securities finance markets.

DataLend looked back at the top 50 most actively traded IPOs thus far in 2019 across various countries, sectors and industries to see if there were common trading patterns across the issues.

Fees to Borrow

One common theme observable across many of the top 50 IPOs of 2019 was that volume-weighted average fees (VWAF) to borrow the newly issued securities skewed extremely high during the first few days of trading in the securities finance market. On average, they then tended to cool off over subsequent weeks.

DataLend calculated and plotted the combined VWAF for a basket of the top 50 most actively traded IPOs issued in 2019 from all sectors and countries around the world during their respective first 30 days of trading in the securities finance market. The VWAF to borrow this basket of IPOs was priced at just below 3,000 bps on the first day of trading, as seen in Figure 1. The average fee plummeted to around 1,300 bps by the second day of trading. By the fourth day of trading, the fees to borrow the basket of IPOs had settled into a 400 bps to 500 bps trading range. Calculating the standard deviation of VWAFs for the IPO basket across the 30-day timeframe yielded a figure of 498 bps, indicating a wide range of fees and high volatility for the IPOs during their initial days in the securities finance market.

Undoubtedly, some very high-profile and volatile IPOs magnified this effect. Highly traded names such as Beyond Meat (BNYD), Lyft (LYFT), Slack Technologies (WORK), Zoom Media (ZM), Change Healthcare (CHNG), Adaptive Biotechnologies (ADPT), Jumia Technologies (JMIA) and others started their initial days trading in the securities finance market commanding several thousands of basis points in borrow fees before cooling.

Even when removing these very hot names from the data set, other newly issued securities such as Ascelia Pharma (ACE SF), Nexi Spa (NEXI IM), Tufin Software Technologies (TUFN), JDC Corporation (1887 JP), Uber Technologies (UBER), Pinterest (PINS), Chewy Inc. (CHWY), Crowdstrike Holdings (CRWD) and others followed a similar pattern of high fees to borrow in the early days of trading followed by a significant drop in those fees by the fourth or fifth day.

However, fees to borrow the top 50 IPOs reversed that downward trend beyond the second week of trading, rising from 473 bps on day 15 to over 766 bps by day 30. Some of the securities contributing to this trend reversal include Bicycle Therapeutics (BCYC), Stoke Therapeutics Inc (STOK), Akero Therapeutics Inc (AKRO), HOOKIPA Pharma Inc (HOOK), Luckin Coffee (LK), Lyft and Beyond Meat. Beyond Meat was so successful in the cash markets that the traditional rules of banking were modified to accommodate restricted shareholders in an unprecedented move: Private equity holders were able to reduce the traditional lock-up period and sell additional shares on July 31 at $160 per share, an incredible 540% increase from the IPO price of $25 per share just three months earlier.

Beyond Meat will be cited as one of the most successful IPOs of this year, as well as one of the top-earning securities in securities finance for 2019.

In the above examples, the security prices in the cash markets stabilized and rebounded. This in turn enticed bearish shorts to increase their existing positions, or to enter back into the market after covering. This illustrates that there is still volatility (and profitability) for IPOs in the securities finance market well beyond the first weeks of trading.

Lendable Supply

As noted, the first few days after an IPO begins trading can be chaotic in both the cash and securities finance markets. As the security price in the cash market fluctuates, new loans are booked, rates are renegotiated (or shares are returned) and beneficial owners make their long supply available to the market. However, that lendable supply for some IPOs may appear to be somewhat uncertain during the initial days of trading. When charting the total inventory value and quantity across the basket of top 50 IPOs of 2019 over the first days of trading in the securities finance market, we can see a bit of a ramp up in lendable supply in Figure 2. Even when adjusting for potential price appreciation in the cash markets by plotting lendable quantity instead of value on the second axis, the initial

Figure 1. Volume-Weighted Average Fees to Borrow the Top 50 IPOs During Their First 30 Days of Trading

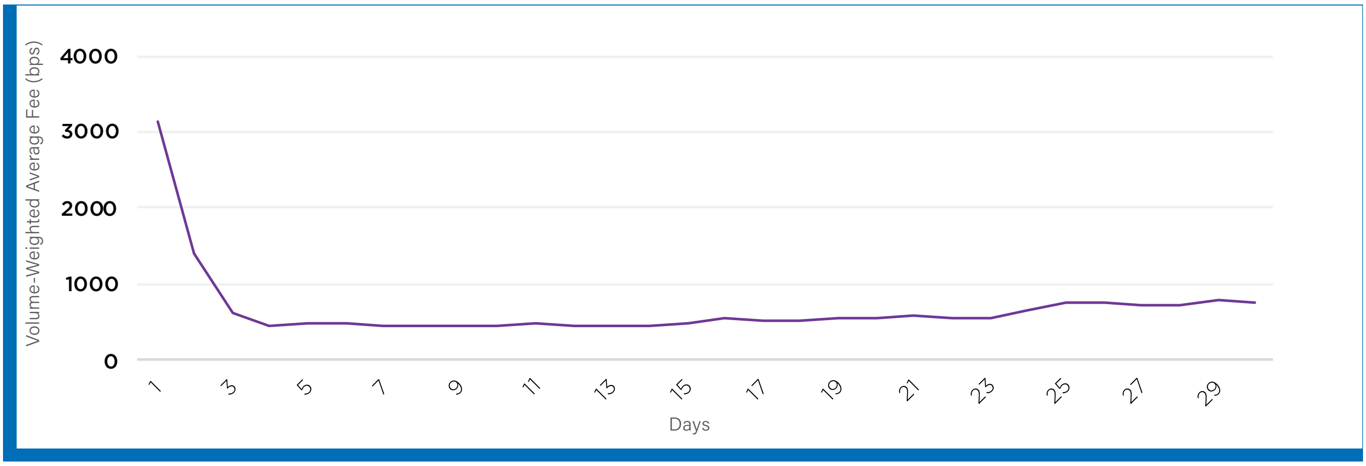


Figure 2. Top 50 IPOs, Inventory Value and Quantity During the First 30 Days of Trading

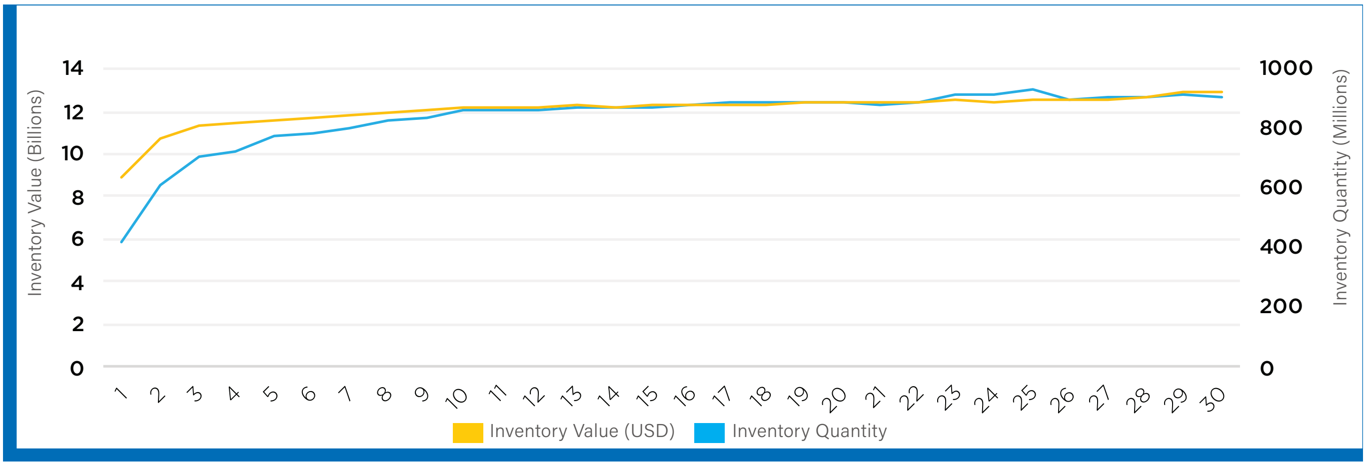
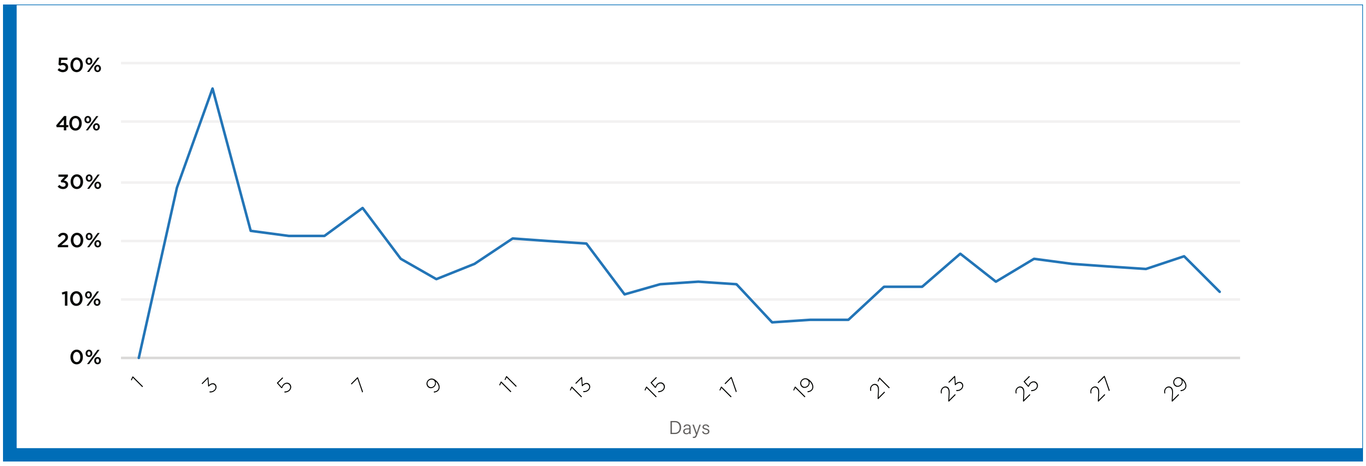


Figure 3. Volume-Weighted Average Re-Rates for the Top 50 IPOs of 2019 as a Total Percentage of On Loan During the First 30 Trading Days



increase in lendable supply is apparent. This behavior is likely attributable to institutional investors right-sizing their portfolio investment based on valuation and target ownership.

This ramp up in supply could be inversely correlated to the high fees to borrow IPOs during their initial days trading in the securities finance market: As beneficial owners allow their agent lenders to lend their newly purchased IPOs, supply is made available to prime brokers to borrow on behalf of hedge funds executing short sales. As the supply increases, newly borrowed shares can command lower fees.

However, hedge funds waiting for fees to decrease before they decide to borrow might lose out on the opportunity to short while post-IPO prices are high. For example, traders waiting for fees to cool before borrowing Lyft, Atreca Inc. (BCEL), Greenlane Holdings (GNLN) or Jumia Technologies (JMIA) may have missed out on fairly significant price drops immediately after the IPOs came to market.

There could be a few reasons for this "lendable lag." Some reasons could be operational related, such as ensuring accurate IPO settlement and allocation across various beneficial owner accounts. Other causes might be business related, such as beneficial owners' hesitation to act until prices in the cash and securities finance markets stabilize, or anticipation of fees or rebate rates reaching a certain profitability threshold before making their supply available. Others still might be only making part of their inventory available to lend initially, doling out some of their position over time. Supply may also be impacted by regulatory requirements on the ability to margin newly offered securities. Whatever the case, as new loans are being booked and inventory comes into the market, utilization figures can see some significant day-over-day swings of an IPO's early trading days in the securities finance market.

Re-Rate Activity

Hand-in-hand with initial fees skewing higher just after an IPO reaches the aftermarket, so too do we see a flurry of re-rate activity across many IPOs in the early days of trading in the securities finance market. DataLend calculated the re-rate activity as a percentage of total on-loan balance across the basket of top 50 IPOs during the first 15 days of trading in the securities finance market to investigate this activity.

Per Figure 3, the re-rating activity peaked on the third business day, where a little over 45% of the entire on-loan volume of our list of 50 IPOs was re-rated during this time. That re-rate percentage drops significantly down to around 23% of the total on-loan volume across our basket of IPOs as market prices, fees to borrow and lending supply begin to stabilize by the third trading day. After 17 business days, the percentage of total on-loan volume being re-rated decreases to below 10%, but much like the VWAF in Figure 1, re-rate activity picks back up during the latter half of the 30-day period.

The volume of re-rate activity depends on how much interest and volatility there is in the settled IPO to begin with. For example, some 68% of the total on-loan volume of Uber was re-rated cooler on May 16, the third day of that security trading in the secondary market. Lyft saw almost 53% of its total on-loan volume re-rated cooler on the third day of trading in the secondary market on April 4, while Pinterest saw almost 55% of its total on-loan volume re-rated on April 25, three days after the IPO. Other IPOs with significant re-rating activity during the initial days of trading in the securities lending market included GSX, Beyond Meat and Zoom Media.

One commonality observed in IPOs with a high degree of re-rating activity was a very high initial fee to borrow just after the IPO settled. Lyft saw fees to borrow drop a staggering 88% in the three days after the IPO began trading. Zoom Media saw a 54% decrease in fees to borrow during the same timeframe. Other IPOs with very high fees to borrow show similar re-rating patterns. This in turn is possibly related to changing lendable supply: As more supply comes into the market, new loans are booked with lower fees than previous days, and borrowers begin to look for rate relief on their previously borrowed shares.

However, there were a number of IPOs in the top 50 that saw little to no re-rate volume during their initial weeks of trading, including Traton SE (8TRA GF), Stadler Rail (SRAIL SE), Personalis Inc. (PSNL), Network International Holdings (NETW LN), Crowdsource (CRWD), The Realreal Inc. (REAL) and others. Not surprisingly, newly settled IPOs with little to no re-rating activity are typically characterized by low utilization and fairly low fees to borrow.

Only a handful of the top 50 IPOs were re-rated hotter during the first few days of trading. These included Douyu International Holdings (DOYU), Xinyi Energy Holdings (3868 HK) and Stoke Therapeutics. Luckin Coffee Inc and Beyond Meat were mixed as both names were re-rated cooler during their initial days of trading, only to have the re-rate direction reversed to head hotter after the fourth or fifth day of trading.

Profitability

The frenzy of activity in the days following an IPO can yield substantial positive results in the form of higher-than-average lending revenue. The basket of tracked IPOs referenced throughout this article generated a little over $130 million in lender-to-broker revenue globally for securities lenders from January through the end of July 2019. The most profitable IPO this year (by far) is Beyond Meat, which generated over $83 million on extremely high average fees from early May to the end of July.

Beyond Meat's fairly sizeable daily average on-loan value of $380 million—as a result of its positive performance in the cash markets—also helped to drive revenue. Lyft came in a distant second in terms of profitable IPOs with revenue of over $31

Figure 4. Top 10 IPOs by Revenue, January 1 to July 31, 2019

	Security Description	Industry	Total Revenue
BYND	BEYOND MEAT INC COM	Packaged Foods and Meats	$83,176,532
LYFT	LYFT INC COM CLASS A	Trucking	$31,117,636
JMIA	JUMIA TECHNOLOGIES AG SPON ADS EACH REP 2 ORD SHS	Internet Retail	$5,861,955
ZM	ZOOM VIDEO COMMUNICATIONS INC COM CL A	Application Software	$3,859,275
LK	LUCKIN COFFEE INC SPON ADS EACH REP 8 ORD SHS	Restaurants	$2,271,755
UBER	UBER TECHNOLOGIES INC COM	Trucking	$1,548,573
PD	PAGERDUTY INC COM	Application Software	$493,742
YJ	YUNJI INC SPON ADS EA REP 10 ORD SHS	Internet Retail	$466,544
PINS	PINTEREST INC COM CL A	Interactive Media & Services	$378,403
GSX	GSX TECHEDU INC SPON ADS EACH REP 0.666 ORD	Education Services	$307,812

million from April to July 31 of this year with fees averaging just over 1,000 bps. Lyft also provides an interesting contrast to its competitor, Uber, which floated in May but has only generated $1.5 million in revenue on much lower fees by early autumn 2019. At the time of writing, Lyft had a market cap of $13.8 billion, while Uber commanded a much larger $59 billion market cap.

The outlook for other high-profile IPOs later this year seems uncertain. We Co. (better known as WeWork) was expected to be the next big IPO with an estimated $47 billion valuation. That changed when anchor investors cut their internal reserve calculation to just $20 billion in early September. This valuation slash combined with concerns around its corporate governance prompted We Co. to postpone its IPO. Saudi Arabia's much-anticipated mega-IPO of Aramco also looks to be delayed after an attack on its oil facilities. It will be interesting to see how these names trade in the securities finance market when they finally go public.

As noted, IPOs can be a significant source of revenue in the securities finance market. The Security Performance Reporting screen in DataLend's Client Performance Reporting and DataLend Portfolio platforms is an excellent resource to measure profitability performance in IPOs against different customizable peer groups.

In addition to the various metrics listed in this article, intra-day data such as the top 100 indications of interest (IOIs) from NGT on the Market Movers screen may help to gauge interest in IPOs on the morning they begin trading. Intra-day recall information within the Transactions widget on the Security Search screen could also be beneficial in spotting changing market demand.

The New Loans Versus Returns histogram in the Graph Builder of DataLend's Security Search screen aids in determining demand patterns for securities, whether they are heating up or cooling down. Users are also able to track day-over-day, week-over-week and month-over-month changes in fees, utilization, on-loan values and many other metrics in the Research Reports Deltas screens across a custom list of uploaded securities as well as specific asset classes, countries, sectors or the market as a whole. By incorporating these and other metrics from DataLend's user interface, Excel Add-In tool or API across any basket of securities, users can determine the volatility—and potential profitability—of any issue trading in the securities finance market.

THE DRIVERS OF DURATION

By Matthew Ross, Nagisha Devala & Chris Benedict, Product Specialists, DataLend

SECURITIES FINANCE market participants sift through a number of lending metrics every day and are quite familiar with demand and volatility indicators such as fees to borrow, utilization, short interest, lendable quantity, days to cover and others. While these are likely amongst the most well-known metrics, there is another figure that can provide insight into a security's activity and volatility: average duration. Average duration is a measure of how long a trade is open, from the time that the security is borrowed to the time that it is returned back to the lender.

Volume-weighted average duration is calculated for each security via the following formula:

$$VWAD = \frac{\sum (Open\ Loan\ Duration\ x\ Loan\ Value)}{\sum (Loan\ Value)}$$

In this formula, the open-loan duration is the number of days between the settlement date of a trade versus the current date.

The average loan duration of a security can change as a result of new loans being booked or loans being returned or recalled. Market demand, fees and supply are critical factors driving these activities and can have a significant impact on the average duration of a security.

In some instances, as demand for a security increases and fees rise, borrowers may return high-fee shares in search of cheaper supply; this scenario may occur as securities previously trading GC begin trading warmer, or as warm securities begin trading hot. In such cases, there is usually still supply available in the market, allowing borrowers to be price conscious. However, this is not the case with hot securities trading hotter. Hot securities typically have very high utilization figures, indicating a dearth of supply. Borrowers with positions in hot securities being re-rated may be unable to source alternate supply and therefore may need to absorb higher costs. As shares are not returned, the average duration figure remains high.

DataLend examined how average duration varies by region and instrument type to see how this metric varies across a range of fee bands: super GC (0-25 bps), GC (26-50 bps), warm (51-100 bps), hot (101-300 bps) and special (300+ bps). DataLend retrieved historic data for all of 2019 YTD to assess any trends occurring within these specific parameters. The results were interesting, and at times unexpected.

Regional Analysis

Loans in the Asia Pacific region generally have a longer average duration (reflected in Figure 1). Looking at both common shares and corporate debt, one can see that the average duration for borrowing common shares in the region is almost seven days longer, or about 8% longer on average, than it is to borrow that same instrument type in the Americas.

The average duration of corporate debt in the Americas is even shorter, at 72 days versus just over 92 days in Asia Pacific. However, this is not the case for all countries in Asia. In Japan and Australia, two of the more established and GC markets in the region, average duration generally appeared shorter and more in line with EMEA or the Americas with average durations of 75 and 66 days, respectively.

This contrasts with other, hotter countries such as South Korea, Thailand and Hong Kong. The fee and supply dynamic in these markets impact the average duration: It may be that once borrowers have sourced the supply of hard-to-borrow securities, they are reluctant to return them even if those securities are re-rated hotter, as sourcing new supply could prove challenging.

EMEA has the shortest average duration of the three regions. This may be due to more new loans being booked (and subsequently returned) due to Europe's busy spring corporate event season. We can see that the duration for borrowing common shares in EMEA is roughly 28 days, or 46% shorter than APAC. The same shorter average duration to borrow corporate debt in EMEA is also observable and about 31% shorter than the average duration in Asia Pacific.

Instrument Type Analysis

When looking at durations sliced by instrument type, it is clear that sovereign debt has longer durations compared to corporate debt or common shares. A possible explanation for this could be the fact that borrowers borrow sovereign debt over longer time frames to pledge high-quality liquid assets (HQLA) as non-cash collateral against other transactions to meet liquidity requirements as a result of the Liquidity Coverage Ratio (LCR) mandated by Basel III.

Because common and corporate shares trade more actively in the market and are borrowed primarily for momentum short selling, these instrument types would be expected to have shorter average durations, as shown in the data. Market conditions are constantly changing for these two instrument types, leading to more frequent re-rate activity than sovereigns, and subsequently they have higher fees and fee ranges.

Individual Securities

DataLend examined the impact of re-rates on average duration for some individual securities being re-rated hotter over time. Yeti Holdings Inc (YETI) was a security that showed an interesting trend between its fees and average duration. As fees gradually increased in mid-February this year due to the company delivering fourth-quarter results notably higher than

Figure 1. Average Duration, Fee and Utilization Metrics by Region and Instrument Type, H1 2019

	AMERICAS	APAC	EMEA
Common Shares			
Average Duration (Days)	83	90	62
Average Fee* (bps)	46	104	62
Average Utilization (%)	8	9	7
Corporate Debt			
Average Duration (Days)	73	92	70
Average Fee* (bps)	27	54	35
Average Utilization (%)	5	5	7
Sovereign Debt			
Average Duration (Days)	139	95	198
Average Fee* (bps)	8	-2	12
Average Utilization (%)	34	40	32

*Intrinsic fee relative to benchmark

Figure 2. Average Duration (Days) by Fee Band and Region, H1 2019

APAC	SUPER GC	GC	WARM	HOT	SPECIAL
Common Shares	79	76	105	130	127
Corporate Debt	87	70	94	106	254
AMERICAS					
Common Shares	83	71	73	76	78
Corporate Debt	71	80	73	84	115
EMEA					
Common Shares	56	63	64	67	87
Corporate Debt	62	71	93	108	144

market expectations, the average duration increased as well, from a little over 14 days to 44 days. Utilization during this time was very high, peaking at 98% by March. Average fees to borrow YETI increased 2,700% from mid-February to late March, but the re-rating activity happened gradually over time as opposed to sudden, sharp rate increases. The calculated weighted-average re-rate fee for YETI during the time that the fees increased (February 15 to March 29) was 77 bps, meaning that on average shares were re-rated hotter by 77 bps per day. Borrowers were willing to absorb these re-rates knowing that sourcing shares elsewhere would be difficult.

However, in Arcadia Biosciences (RKDA), an agricultural biotech company, we see a different trend occur in August this year. RKDA's share price had a very sharp move to the upside in August as a result of a USDA approval of their HB4 drought-tolerant soybeans for the U.S. market. Fees to borrow the security were already very high and skyrocketed over 600% between August 9 and August 20. During this timeframe, utilization jumped from 66% to 99%. The significant re-rate increases over a relatively short amount of time seemed to be too much for borrowers to bear given some excess supply in the market; shares were returned, new loans were booked and average duration dropped from 38 days to just 15 during the same timeframe. The weighted-average re-rate fee from August 5 to August 20 came out to almost 7,500 bps.

These examples illustrate two different patterns, but tie back to previous observations: Securities with very limited supply may have fewer shares returned during re-rate activity and thus longer average durations versus securities trading with lower fees and excess supply (especially given such sharp re-rate activity in RKDA).

Where Can Users Find Average Duration in DataLend?
Like all securities lending metrics, the average duration field can be found across many screens and applications within DataLend.

For example, average duration can be found on a security level on the Data Ribbon in the Security Search screen. It can also be found in the Industry Metrics section of the Research Reports, in the latest version of the DataLend Daily Aggregate Results file and is also a field available in the Excel Add-In and API.

Using average duration in conjunction with other securities lending metrics such as utilization, fees, re-rate activity, new loans and returns can give borrowers and lenders a better understanding of how specific securities trade based on the currently available supply as various circumstances in the securities finance markets arise.

Figure 3. YETI Duration vs. Utilization

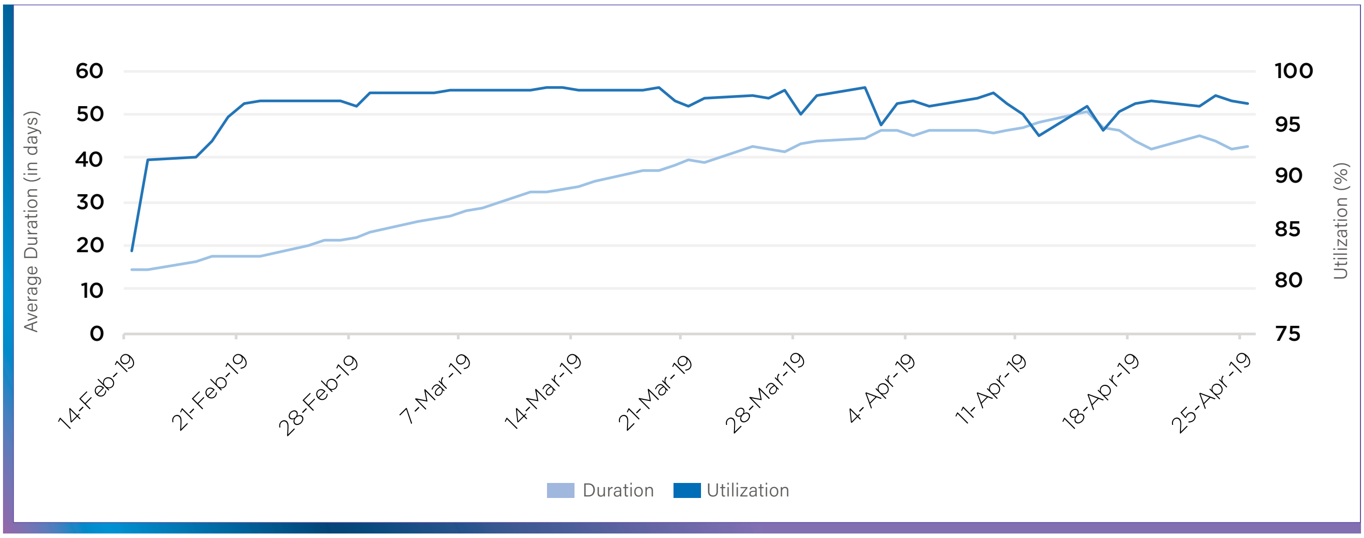
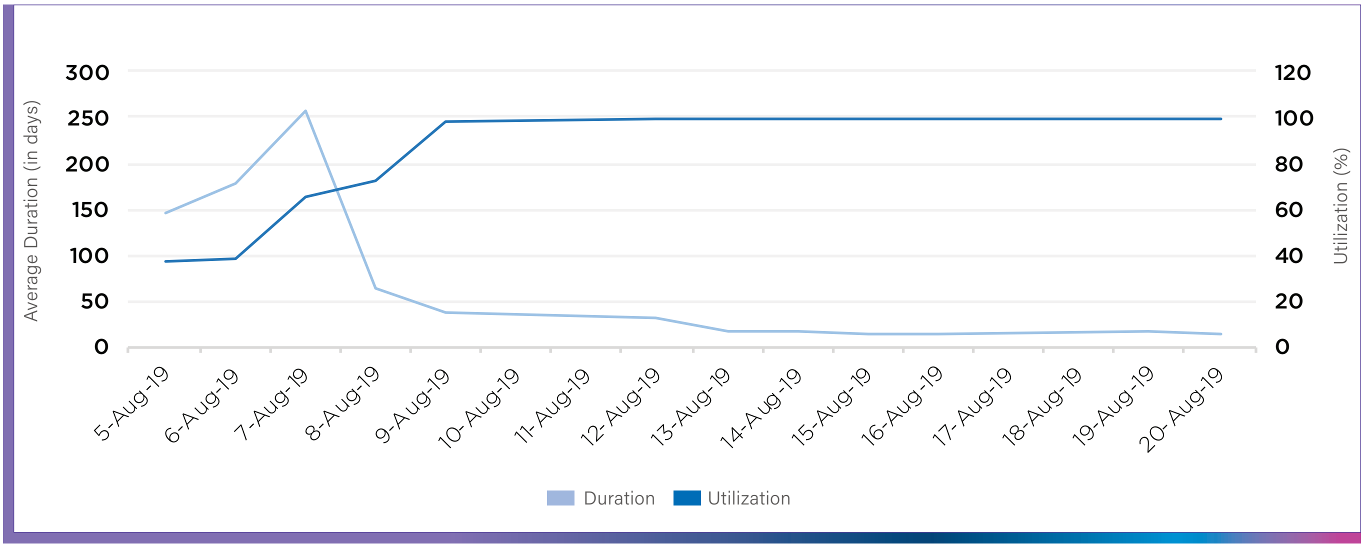


Figure 4. Arcadia Biosciences Duration vs. Utilization



EMERGING TRENDS IN SECURITIES FINANCE

By Keith Min & Matthew Ross, Product Specialists, DataLend

As summer 2019 drew to a close, DataLend reviewed trends that emerged throughout the season to see if the securities lending industry heated up along with the temperatures.

While overall revenue generated in the securities lending market continued its downward swing through July and August, a few areas resisted this trend in DataLend's findings.

HOT SECURITIES BACK IN FOCUS

The first half of summer 2019 saw declines in European and North American equity lending volume, which dropped in July and August (down 25% and 5%, respectively, compared to the same period last year). However, the hard-to-borrow equities space (trading at 500+ bps) gained momentum with fees in European hard-to-borrows increasing by 15%. This jump resulted in revenue returns of $208 million, which accounted for 42% of all equity revenue in the region over the period, up from 32% the previous year. North America saw an increase in hard-to-borrow loan balances and fees by 27% and 33%, respectively. This increase led to revenue returns of $416 million, accounting for more than half of all equity revenue in the region (66%), up from 41% the previous year.

ASIAN ETFS GAINING TRACTION

In addition, July and August did not see positive movement in Asian equities, which experienced a 20% revenue decrease from the same period last year, though not all asset classes experienced the same downturn. In this period year over year, ETFs in the region saw increases in the number of securities lent (up 50%), average on-loan value (up 51%) as well as revenue generated (up 40%). Japan and Hong Kong hosted the bulk of the activity, with index ETFs for the NIKKEI 225, FTSE A50, CSI 300 and TOPIX all trading within the 75 bps to 350 bps fee range.

SECTOR HIGHLIGHTS

With Applied Optoelectronics, Sunpower and Ubiquiti Networks all declining from their 2018 peaks, the Information Technology sector saw a substantial dip in average fee from 74 bps to 51 bps during the same period in 2019. However, loan balances in the sector increased by 14% year on year leading up to pending acquisitions by both Fiserv and Fidelity National Information Services. In addition, the Energy sector cooled dramatically, from 68 bps to 50 bps, with Tecnicas Reunidas and Diamond Offshore Drilling more recently trading just outside the GC range. For higher fees, one would have to look at the Consumer Staples sector, where average fees doubled over the same period to 137 bps, led by newcomer Beyond Meat.

SOVEREIGN DEBT UPDATE

While July and August 2019 witnessed slowing lending activity in global sovereign debt, resulting in revenue decreasing by 26% compared to the same period last year, Australian sovereign debt lending increased considerably. Balances rose 12% in July and August amidst rate cuts, leading to a 163% increase in lending revenue in this asset. Coincidentally, a similar trend appears to be emerging in U.S. Treasurys, as balances have increased by 5% in August following the recent Fed rate cut.

The securities lending industry is showing progress in key areas, and with autumn now here, DataLend will continue to monitor where these trends lead and no doubt discover new ones along the way.

SECURITIES FINANCE REVENUE

JANUARY 1 TO JUNE 30, 2019

Global

$4,521,391,656

-17% YEAR OVER YEAR FROM
$5,466,114,564 IN 2018

FIGURES REPRESENT LENDER TO BROKER ACTIVITY ONLY

Americas

$2,022,008,438

-19% YEAR OVER YEAR FROM
$2,507,700,072 IN 2018

EMEA

$1,441,456,458

-22% YEAR OVER YEAR FROM
$1,846,113,035 IN 2018

Asia Pacific

$1,057,926,760

-5% YEAR OVER YEAR FROM
$1,112,301,456 IN 2018

AMERICAS H1 2019

FIGURES ARE FROM JANUARY 1 TO JUNE 30, 2019, AND REPRESENT LENDER TO BROKER ACTIVITY ONLY. DELTAS REPRESENT YEAR ON YEAR CHANGE

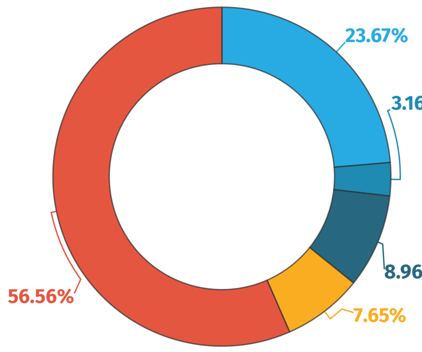
LENDABLE
$12.83 Trillion Δ 5.4%

ON LOAN
$1.50 Trillion Δ -5.9%

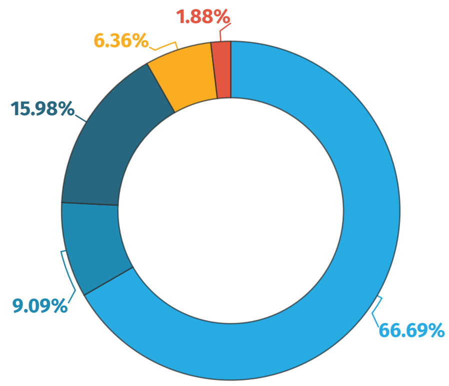
FEES
28 bps Δ -12.5%

REVENUE
$2.02 Billion Δ -19.4%

EQUITY REVENUE BY FEE BAND



FIXED INCOME REVENUE BY FEE BAND



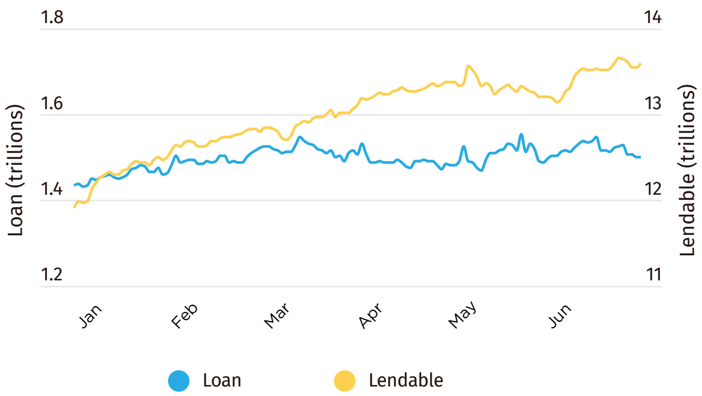
TOP EQUITY EARNERS

	Security	Revenue
	ELI LILLY AND COMPANY	$78,557,885
	AURORA CANNABIS INC	$47,157,934
	CANOPY GROWTH CORPORATION	$44,831,832
	NIO INC	$42,799,748
	BEYOND MEAT INC	$33,449,526
	ELANCO ANIMAL HEALTH INC	$32,573,210
	GTT COMMUNICATIONS INC	$30,371,201
	SOCIEDAD QUIMICA Y MINERA DE CHILE ADR	$30,271,252
	MODERNA INC	$27,358,050
	LYFT INC	$22,680,796

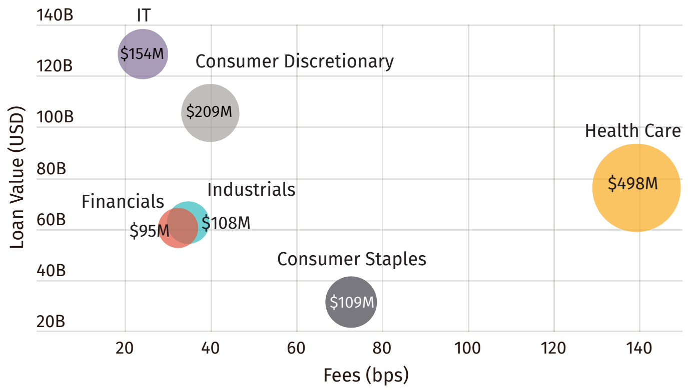
TOP CORPORATE DEBT EARNERS

	Security	Revenue
	CHK 8% 01/15/25	$3,994,348
	CTL 7.5% 04/01/24	$2,650,831
	BKNG 0.9% 09/15/21	$1,811,437
	AR 5% 03/01/25	$1,732,791
	PRTY 6.625% 08/01/26	$1,730,602
	DIS 2.95% 06/15/27	$1,552,401
	WFT 7.75% 06/15/21	$1,492,387
	RLGY 4.875% 06/01/23	$1,387,147
	CRC 8% 12/15/22	$1,282,027
	ILMN 0% 08/15/23	$1,171,853

ON LOAN VS LENDABLE



TOP SECTORS BY REVENUE



MARKET BREAKDOWN

		LENDABLE	ON LOAN	FEES	REVENUE
EQUITY	UNITED STATES	$7.36T Δ 4.7%	$626B Δ 1.8%	43 bps Δ -18.3%	$1.31B Δ -19.5%
EQUITY	CANADA	$553B Δ 1.4%	$43B Δ 2.1%	116 bps Δ 25.5%	$248M Δ 29.7%
EQUITY	LATIN AMERICA	$36.6B Δ -8.4%	$2.1B Δ -17.9%	104 bps Δ -11.8%	$11M Δ -27.9%
FIXED INCOME	UNITED STATES	$3.85T Δ 8.6%	$693B Δ -12.3%	11 bps Δ -27.0%	$368M Δ -36.1%
FIXED INCOME	CANADA	$810B Δ 3.5%	$120B Δ -4.5%	11 bps Δ 6.9%	$65M Δ 0.7%
FIXED INCOME	LATIN AMERICA	$222B Δ 0.2%	$13B Δ -13.4%	37 bps Δ -27.2%	$25M Δ -37.4%

EQUITY FIXED INCOME

EMEA

EUROPE, THE MIDDLE EAST AND AFRICA H1 2019

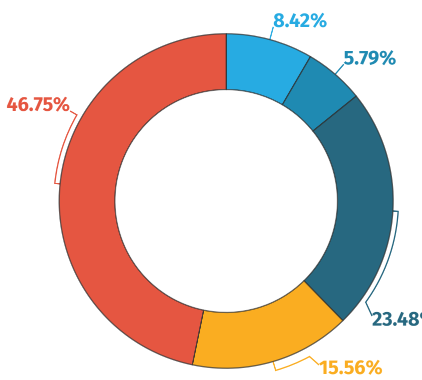
LENDABLE
$4.49 Trillion Δ -9.6%

ON LOAN
$537 Billion Δ -22.3%

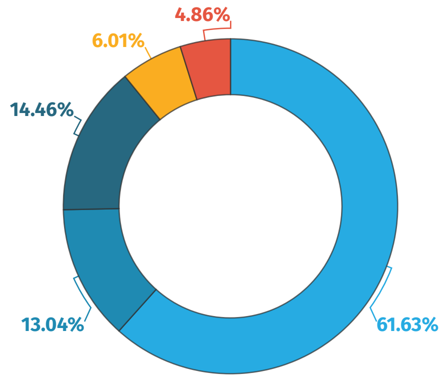
FEES
56 bps Δ 1.6%

REVENUE
$1.44 Billion Δ -21.9%

EQUITY REVENUE BY FEE BAND



FIXED INCOME REVENUE BY FEE BAND



0-25 bps 25-50 bps 50-250bps 250-500 bps 500+ bps

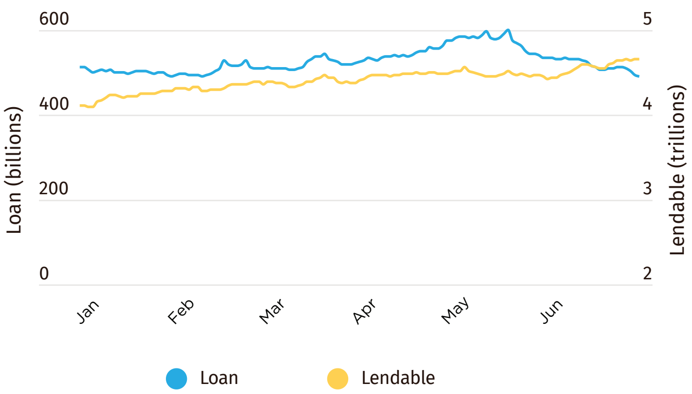
TOP EQUITY EARNERS

	Security	Revenue
	INTRUM AB	$27,384,505
	TOTAL SA	$24,962,182
	WIRECARD AG	$23,179,960
	BNP PARIBAS	$22,461,794
	CASINO GUICHARD-PERRACHON	$22,212,576
	SANOFI	$22,100,018
	SOCIETE GENERALE	$20,368,806
	AXA	$19,119,778
	EUROFINS SCIENTIFIC	$16,430,178
	SAMPO PLC	$14,459,734

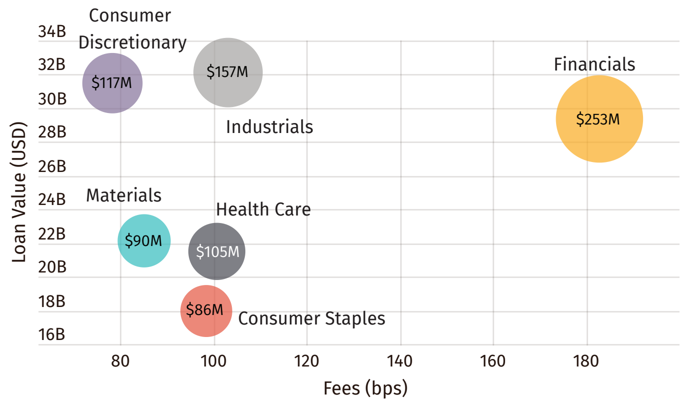
TOP CORPORATE DEBT EARNERS

	Security	Revenue
	TEREOS 4.125% 06/16/23	$4,261,213
	MNK 5.75% 08/01/22	$3,414,165
	ERFFP 3.375% 01/30/23	$1,498,172
	SPCCHEM 8% 10/01/26	$1,461,392
	WEPAHY 3.75% 05/15/24	$1,054,900
	NDB 6% 06/29/20	$955,724
	TTMTIN 5.625% 02/01/23	$870,338
	DIVRSY 5.625% 08/15/25	$786,926
	INEGRP 5.375% 08/01/24	$782,628
	TOTAL 0.5% 12/02/22	$763,695

ON LOAN VS LENDABLE



TOP SECTORS BY REVENUE



MARKET BREAKDOWN

		LENDABLE	ON LOAN	FEES	REVENUE
EQUITY	FRANCE	$406B Δ -7.1%	$42B Δ -19.5%	170 bps Δ 18.4%	$331M Δ -7.6%
EQUITY	SWEDEN	$130B Δ -8.8%	$15B Δ -22.1%	183 bps Δ -6.3%	$127M Δ -25%
EQUITY	GERMANY	$298B Δ -17.5%	$26B Δ -26.6%	99 bps Δ -14.3%	$126M Δ -38.3%
EQUITY	UNITED KINGDOM	$781B Δ -8.4%	$39B Δ -25.4%	61 bps Δ 17.6%	$122M Δ -11.8%
EQUITY	SWITZERLAND	$335B Δ -3.2%	$25B Δ -1.8%	76 bps Δ 8.3%	$89M Δ 7.2%
FIXED INCOME	FRANCE	$303B Δ 0.9%	$73B Δ -16.9%	21 bps Δ 1.6%	$76M Δ -15.4%
FIXED INCOME	GERMANY	$204B Δ -20.5%	$72B Δ -32.5%	17 bps Δ -9.8%	$60M Δ -39.5%
FIXED INCOME	UNITED KINGDOM	$397B Δ 0.4%	$71B Δ -13.1%	16 bps Δ -5.9%	$56M Δ -18.7%
FIXED INCOME	NETHERLANDS	$173B Δ -4.2%	$22B Δ -24.1%	22 bps Δ -6.3%	$24M Δ -29.3%
FIXED INCOME	ITALY	$94B Δ -31.1%	$16B Δ -45.1%	20 bps Δ 13.4%	$18M Δ -31.9%

EQUITY FIXED INCOME

APAC

ASIA PACIFIC H1 2019

FIGURES ARE FROM JANUARY 1 TO JUNE 30, 2019, AND REPRESENT LENDER TO BROKER ACTIVITY ONLY. DELTAS REPRESENT YEAR ON YEAR CHANGE

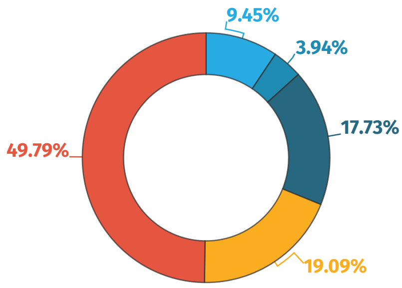
LENDABLE
$2.38 Trillion Δ 0.8%

ON LOAN
$220 Billion Δ 2.7%

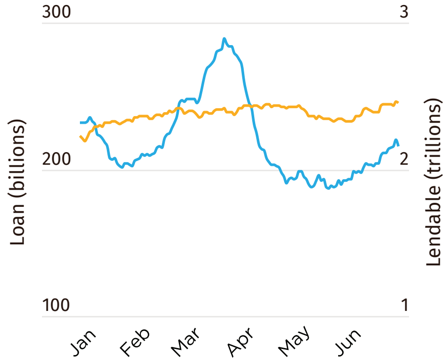
FEES
97 bps Δ -6.6%

REVENUE
$1.06 Billion Δ -4.9%

EQUITY REVENUE BY FEE BAND



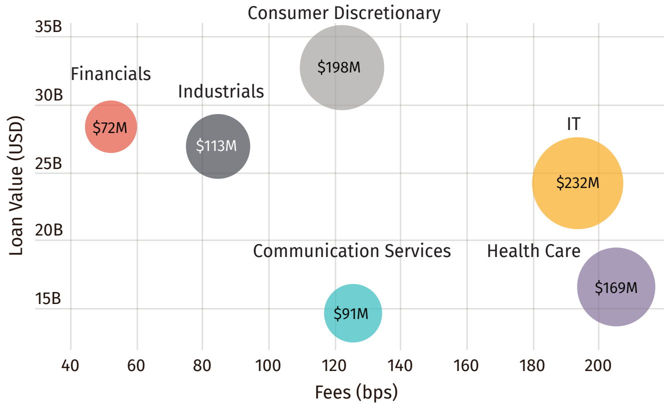
ON LOAN VS LENDABLE



TOP EQUITY EARNERS

Security	Revenue
MEITUAN DIANPING	$45,398,830
TAKEDA PHARMACEUTICAL CO LTD	$26,531,576
SAMSUNG ELECTRO-MECHANICS CO	$23,080,344
CELLTRION INC	$20,702,004
SILLAJEN INC	$19,319,888
YAGEO CORP	$16,933,642
BYD COMPANY LIMITED 'H'	$16,333,343
CELLTRION HEALTH CARE CO LTD	$14,620,294
WALSIN TECHNOLOGY CORP	$13,786,916
CYBERDYNE INC	$11,746,050

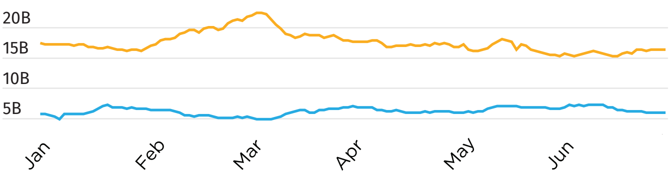
TOP SECTORS BY REVENUE



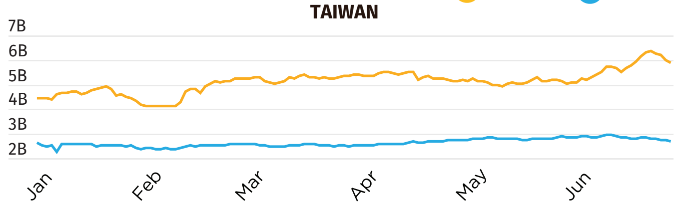
ONSHORE VS OFFSHORE LOAN BALANCE

OFFSHORE ONSHORE

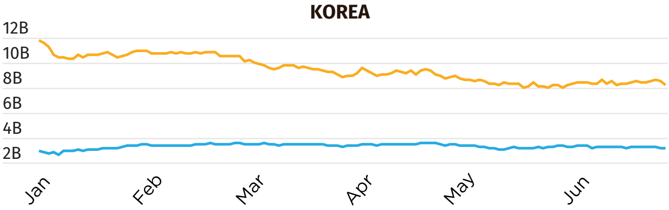
AUSTRALIA



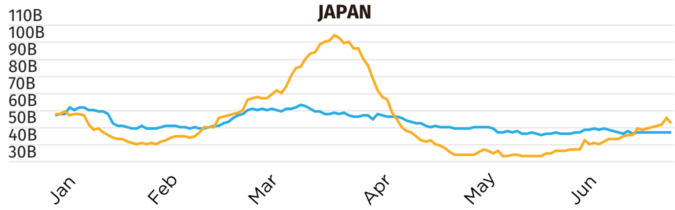
TAIWAN



KOREA



JAPAN



MARKET BREAKDOWN

EQUITY

	LENDABLE	ON LOAN	FEES	REVENUE
JAPAN	$907B Δ -2.2%	$108B Δ 10.3%	75 bps Δ -7%	$401M Δ 2.1%
KOREA	$145B Δ -6.3%	$13B Δ -11.2%	326 bps Δ -3.5%	$208M Δ -15.2%
HONG KONG	$482B Δ 2.8%	$34B Δ -3.4%	124 bps Δ 1.8%	$206M Δ -2.4%
TAIWAN	$77B Δ 6%	$8B Δ -10.2%	317 bps Δ 9.5%	$125M Δ -2.3%
AUSTRALIA	$343B Δ 5.3%	$24B Δ 8.7%	53 bps Δ -14%	$62M Δ -7.5%
THAILAND	$30B Δ 0.7%	$2B Δ -2%	230 bps Δ 6.2%	$19M Δ 3.2%
SINGAPORE	$49B Δ -18%	$2B Δ -9.5%	134 bps Δ -2.6%	$14M Δ -14.2%
MALAYSIA	$14B Δ 4.8%	$516M Δ -22.1%	344 bps Δ -5.3%	$9M Δ -29.1%

Fixed Income

By Tom Ashton, Product Specialist, DataLend

The first half of 2019 has not been kind to the fixed income market, with total revenue down 30%. Average on-loan balances (-15%), fees (-18%) and utilization (-17%) were all down relative to the same period in 2018. At the same time, there was an increase in supply, as average daily lendable grew from $6.84 trillion in 2018 to $7.01 trillion in 2019.

North America

Fixed income revenue in North America overall was down 32% in H1 due to lower on-loan balances along with lower average fees ($812.4 billion from $915.4 billion and 10.75 bps from 14.08 bps, respectively). Convertible and corporate debt saw the biggest decreases in revenue in the region, down 49% and 27% respectively, although average daily balances were up compared with H1 2018. The decrease is mainly due to lower fees and utilization.

EMEA

Revenue in EMEA was down 26%, grossing $312.6 million in H1 2019. As per the global trends, on-loan balances were down 22% year on year, but average fees and utilization dropped only slightly; fees were down 1 basis point to an average of 19 bps, while utilization dropped from 21% to 18%.

Asia

The fixed income story in Asia follows the same plot as the other regions so far in 2019, with revenue, on-loan balances, fees and utilization falling when compared to the same period last year. The exception has been total lendable, which increased 9% from $288.6 billion in H1 2018 to $313.7 billion in H1 2019. Australia and Japan continued to dominate the supply in the region, accounting for almost 60% of the total availability in Asia.

Here's Why

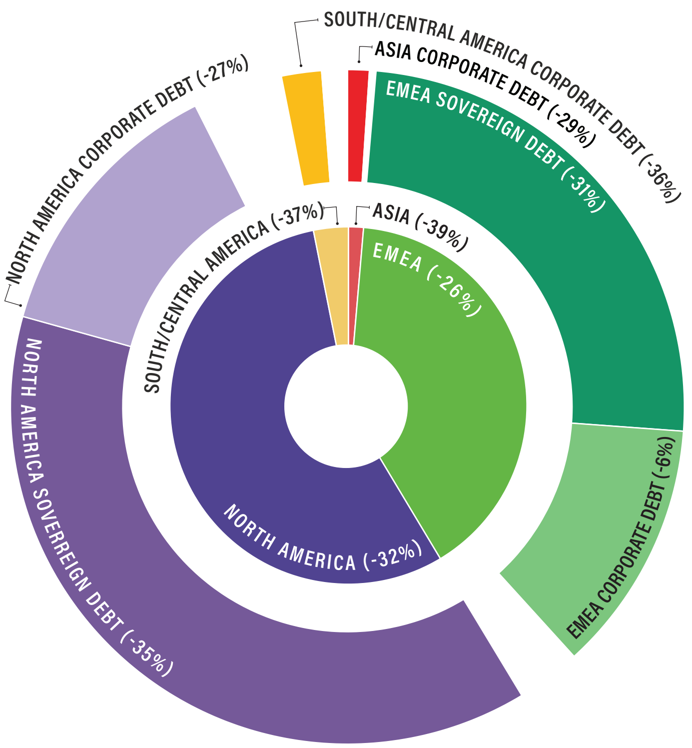
The fixed income markets suffered in 2019 as a result of global macro uncertainty, central bank actions, lack of conviction from hedge funds and banks' decreased demand for high-quality liquid assets (HQLAs) for collateralization purposes.

Historically, a driver of U.S. Treasury balance was the USD/JPY pair trade. Recently there has been a narrowing in the spread on this trade, causing some borrowers to close out these trades completely.

In the U.K. market, Brexit has had a significant impact on specials, and in general, liquidity worries across the market are contributing to a slump in demand.

However, among the ocean of negative news there is one pearl of positivity, and that is in North American agency debt, where revenue was up 13% from $11.1 million in the first half of 2018 to $12.6 million from January through June 2019. Increased revenue was primarily driven by higher fees, which were up 22% year over year.

FIXED INCOME REVENUE BY REGION AND INSTRUMENT TYPE



TOP 10 CORPORATE DEBT EARNERS

Corporate Debt	H1 2019 Revenue
TEREOS FINANCE GROUP I 4.125% GTD SNR 16/06/23 EUR	$4,261,213
CHESAPEAKE ENERGY CORP 8% GTD SNR 15/01/25	$3,994,348
MALLINCKRODT INTL FINANCE SA 5.75% GTD SNR 01/08/22 USD	$3,414,165
CENTURYLINK INC 7.5% SNR 01/04/2024 USD 'Y'	$2,650,831
BOOKING HOLDINGS INC 0.9% SNR 15/09/2021 USD	$1,811,437
ANTERO RESOURCES CORPORATION 5% GTD SNR 01/03/25	$1,732,791
PC MERGER SUB INC (PARTY CITY) 6.625% SNR 01/08/26	$1,730,602
WALT DISNEY COMPANY (THE) 2.95% SNR MTN 15/06/27 USD	$1,552,401
EUROFINS SCIENTIFIC SE 3.375% SNR 30/01/23	$1,498,172
WEATHERFORD INTL LTD/BERMUDA 7.75% GTD SNR 15/06/21 USD	$1,492,387

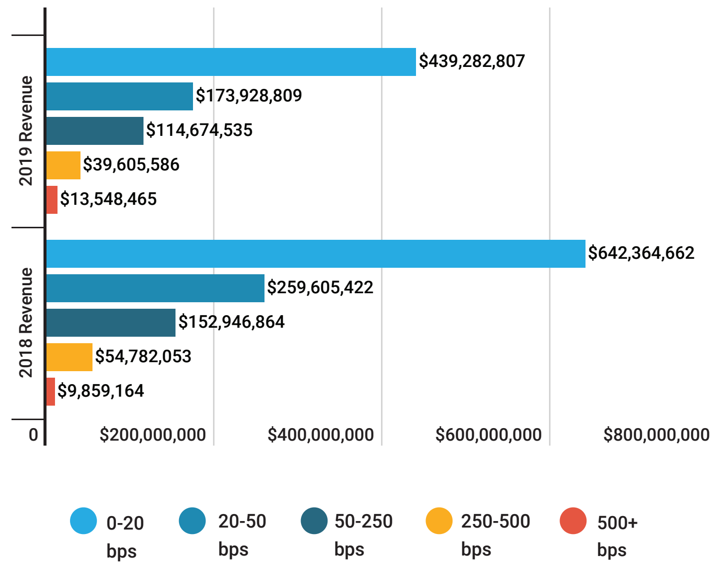
MARKET TRENDS

	Delta				
Market	Revenue	On Loan	Lendable	Fees	Util
United States	-36%	-12%	9%	-27%	-19%
France	-15%	-17%	1%	2%	-18%
Canada	1%	-4%	3%	7%	-8%
Germany	-39%	-33%	-20%	-10%	-15%
United Kingdom	-19%	-13%	0%	-6%	-13%
Netherlands	-29%	-24%	-4%	-6%	-21%
Italy	-32%	-45%	-31%	13%	-20%
Luxembourg	-8%	27%	30%	-27%	-2%
Austria	-27%	-15%	1%	-14%	-16%
Cayman Islands	-50%	-10%	5%	-44%	-15%

GLOBAL FIXED INCOME MARKET

H1 2019	TOTAL	YOY DELTA
REVENUE (TOTAL FOR H1)	$781,040,203	-30%
AVG DAILY ON LOAN (USD)	$1,184,477,069,530	-15%
AVG DAILY LENDABLE (USD)	$7,008,986,118,409	3%
AVG DAILY FEES (bps)	13.28	-18%
AVG DAILY UTIL (%)	16.90%	-17%

FIXED INCOME REVENUE BY FEE BAND



TOP 10 MARKET BREAKDOWN

	2019					2018				
Market	Revenue (USD)	On Loan (USD)	Lendable (USD)	Fees (bps)	Util (%)	Revenue (USD)	On Loan (USD)	Lendable (USD)	Fees (bps)	Util (%)
United States	$368,265,901	$692,640,990,414	$3,849,931,154,676	10.71	17.99%	$575,892,998	$789,700,268,000	$3,544,384,929,080	14.67	22.28%
France	$75,644,279	$72,566,626,327	$302,953,951,910	21.06	23.95%	$89,397,733	$87,273,305,257	$300,296,871,941	20.72	29.06%
Canada	$64,930,759	$119,785,940,564	$810,425,171,002	11.02	14.78%	$64,465,657	$125,370,506,232	$783,243,284,962	10.31	16.01%
Germany	$59,548,530	$71,964,626,941	$204,315,677,458	16.79	35.22%	$98,380,493	$106,634,450,715	$256,938,728,387	18.62	41.50%
United Kingdom	$56,438,069	$70,590,679,236	$396,524,002,691	16.13	17.80%	$69,390,924	$81,260,354,453	$394,978,845,620	17.14	20.57%
Netherlands	$23,998,278	$22,288,086,588	$172,800,780,748	21.75	12.90%	$33,929,353	$29,354,989,244	$180,288,811,149	23.21	16.28%
Italy	$17,681,233	$15,932,413,876	$94,383,737,731	20.37	16.88%	$25,972,890	$29,042,311,946	$136,962,028,460	17.96	21.20%
Luxembourg	$17,481,080	$5,724,590,996	$49,233,711,210	61.53	11.63%	$18,986,664	$4,497,330,073	$37,889,178,646	84.43	11.87%
Austria	$14,763,295	$24,281,710,158	$86,397,342,477	12.32	28.10%	$20,220,458	$28,495,076,573	$85,653,221,481	14.29	33.27%
Cayman Islands	$5,973,886	$2,706,860,836	$56,807,891,383	44.55	4.76%	$12,018,346	$3,006,815,924	$53,896,825,135	80.12	5.58%

CASE STUDY

GIVING CUSTOMER DATA AN ENGINE

WHO WE WORKED WITH

A large derivatives exchange handling more than 3 billion contracts each year.

WHAT THE COMPANY NEEDED

- To consolidate fragmented customer information found in different systems
- To reduce credit risk exposure
- To put scalable technology to work to handle increasing volume

HOW WE HELPED

We cleansed, matched, and reconciled customer data while connecting databases and removing duplication.

WHAT THE COMPANY GOT

A crystal clear, full view of customer data with unique, standardized entities.

genpact

Transformation Happens Here

The firm was ready to grow and expected volumes to go up, so leadership gave the go-ahead to bring in scalable technology. Genpact and the exchange were already working together on applications, business process management, mobility, and big data solutions. The company knew that we understood its market and could propose relevant solutions, so it expanded our mandate.

Challenge

TURNING DATA INTO A COHESIVE WHOLE

The derivatives company has a huge, diverse customer base but didn't have a single, consolidated view of its clients. Why? Because data resided in disparate exchanges and databases. And as datasets didn't link up, the firm couldn't easily see the customer base as a whole. Doing so required tremendous manual effort and cost—and that meant service requests took too long to fulfill. What's more, with duplicated customer information, the company's credit risk exposure was high.

We started by performing a thorough root-cause analysis, using Lean and Six Sigma principles. We quickly discovered the company's pain points: fuzzy matching and poorly reconciled data. The enterprise was wasting a lot of time and effort matching customer names duplicated in various unconnected datasets. Getting a consolidated view of the customer base would take comprehensive data cleansing.

We weren't surprised. This is a common problem in transaction-heavy industries such as capital markets. That's why we developed Genpact's Data Matching Engine—to help enterprises eliminate fuzzy matching, duplications, Challenge and poorly reconciled data. We wanted operational and regulatory excellence for the company and knew our solution would meet its needs.

Solution

A POWERFUL DATA CLEANSER

Genpact's Data Matching Engine uses powerful algorithms to link, match, and reconcile disparate datasets and clean and remove duplications. The solution works on both structured and unstructured data, including flat files, spreadsheets, and financial transactional data dumps. It also works on corporate data such as business names, employee information, and product names.

Impact

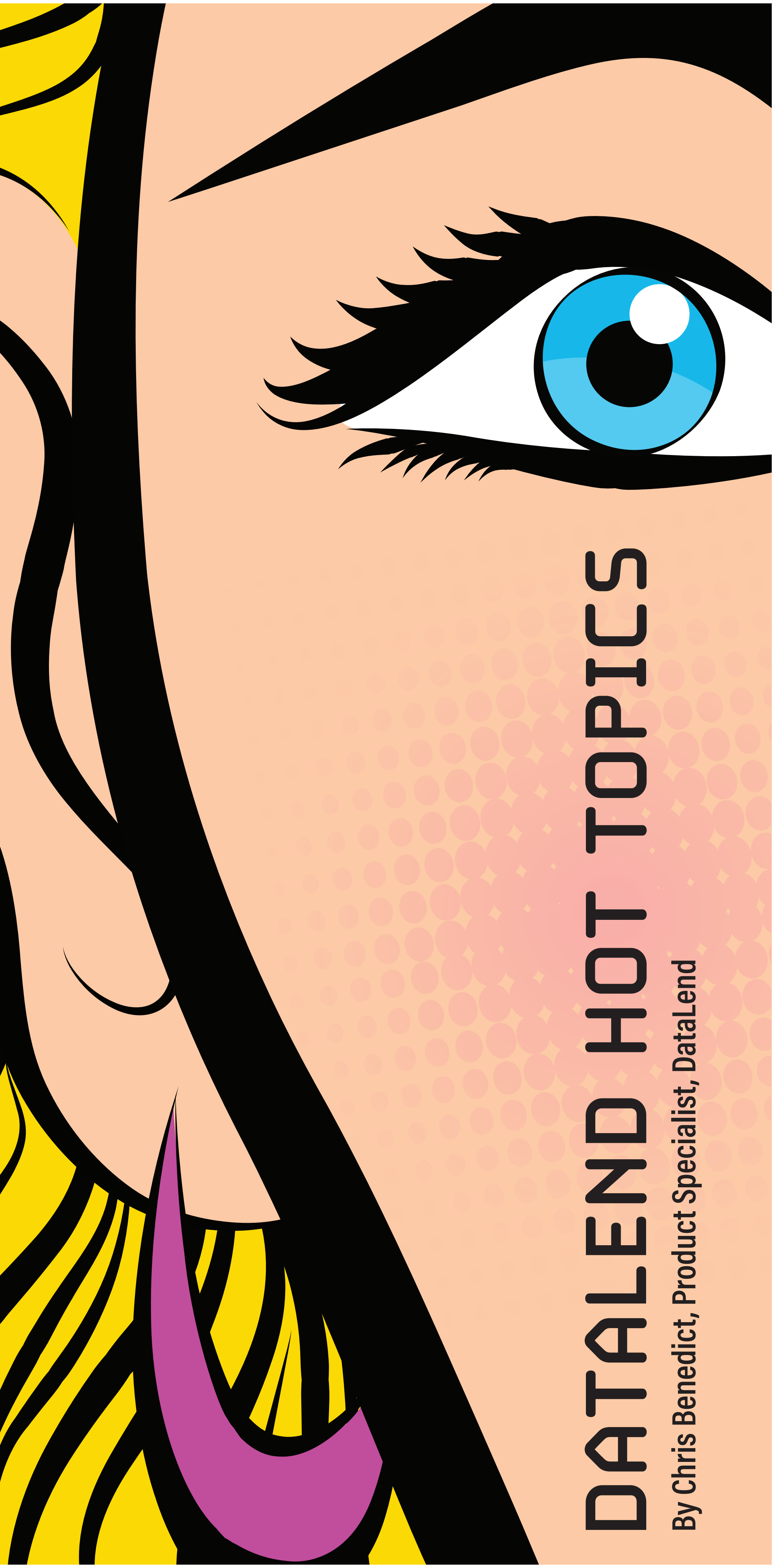
AN ENTERPRISE WITH AN UNIMPEDED VIEW

Genpact's engine provided a low-cost, fuzzy-matching solution that is scalable and cuts credit risk exposure by eliminating duplicate data. The derivatives exchange expects to benefit from:

A 360-degree view of the customer created a 10% improvement in sales effectiveness

- Reduced manual efforts
- Cost savings of $1 million annually
- Better customer service with the ability to fulfill service level agreements faster

This is yet another way that the company is getting great satisfaction from its partnership with Genpact.



DATALEND HOT TOPICS

By Chris Benedict, Product Specialist, DataLend

The Opioid Crisis

There has been substantial media coverage regarding the ongoing opioid crisis sweeping through America, from which headlines have begun to spill over into the financial world. On August 26, the Oklahoma courts handed down a ruling against Johnson & Johnson (JNJ), slapping the firm with a $572 million fine for its purported role in the epidemic within the state. The stock price sold off slightly in the days after the news, but the securities finance market did not react: Utilization remained around 1% on very low fees to borrow. DataLend analyzed data across several other firms mentioned in conjunction with the opioid crisis to see if the securities finance market has been reacting to this event.

While some of these companies have been under long selling pressure for some time now, it appears that the securities finance market has not become very involved after news of the fine. Many of the healthcare companies with direct ties to the manufacturing and distribution of opioids are well capitalized with plenty of shares in the securities finance market available to borrow.

While there has recently been a slight increase in shares on loan for Cardinal Health (CAH), utilization was just 13% recently on GC borrowing fees. Other names such as McKesson Corporation (MCK), Allergan (formerly Actavis, AGN), Endo International (ENDP), Amneal Pharmaceuticals (AMRX), AmerisourceBergen (ABC), CVS Health Corporation (CVS), Walgreens Boots Alliance (WBA) and Taro Pharmaceutical Industries (TARO) are also currently trading in the same range: low utilizations and low fees to borrow.

Mallinckrodt PLC (MNK) appears to be somewhat of an outlier with a 75% utilization. Fees have recently climbed to a warm range. Even beleaguered generic drug manufacturer, Teva Pharmaceutical Industries (TEVA), which was hit with an $85 million fine by the U.S. state of Oklahoma earlier this year and has seen its share price wither over the last few years, is still trading with GC fees to borrow and a 44% utilization.

One instance where the securities finance market was very involved in an opioid crisis-related health care company was in now-bankrupt Insys Therapeutics Inc. (INSYQ), which manufactured liquid fentanyl under the brand name Subsys.

Insys traded hot in the securities finance market with very high utilization figures for years before fees to borrow spiked massively in early July after a federal jury found Insys executives guilty of racketeering charges and the company filed for Chapter 11 bankruptcy.

Oklahoma Attorney General Mike Hunter suggested that the Johnson & Johnson fine could act as a "road map" for other states to follow. Some might consider a $572 million fine to be quite punishing, but when compared to the $342 billion market capitalization of Johnson & Johnson and the firm's $5.61 billion in net income for Q2 2019, it could have been worse.

From a directional standpoint, the low fees and utilization appearing in health care companies related to the opioid crisis suggest that at present, the securities finance market may think that these companies are able to weather future fines without too much impact to their overall profitability. However, with privately held Purdue Pharmaceuticals filing for Chapter 11 bankruptcy protection on September 15 and thousands more lawsuits from various government agencies awaiting trial, these names could see increased selling pressure and more borrowing demand in the future.

The Trade Wars Revisited

The trade wars between the U.S. and China continued to rage during the summer of 2019 with threats of an additional 10% tariff on $300 billion worth of Chinese imports, a steep devaluation in the yuan and an almost complete cessation of Chinese firms importing U.S. agricultural products, turning instead to buy from rivals in South America. Despite a flurry of meetings, promises, headlines and tweets, it seems unlikely that any agreements will be reached soon. According to Goldman Sachs, consumer prices in goods impacted by tariffs have risen significantly compared to those that have not been affected, and the firm says it could get worse.

When revisiting a few of the industries and companies profiled in our trade wars article in Issue 6 of *The Purple* earlier this year, DataLend demonstrates that average fees to borrow South Korean transportation industry stocks have eased from their high of 457 bps in mid-June down to 282 bps more recently. Fees to borrow Hong Kong transportation industry stocks also have cooled from 149 bps in May down to about 67 bps. The hottest securities in the Hong Kong and Korean Transportation industry most recently have included Orient Overseas (316 HK), Heung-A-Shipping (003280 KS), Hanjin Kal Corporation (180640 KS) and Hyundai Merchant Marine (011200 KS).

A similar cooling pattern is observable in Hong Kong Technology, Hardware and Equipment shares. This subsector saw very large increases in fees to borrow last fall into January of this year. Since then, however, there has been a marked decrease in borrowing fees, from a high of 515 bps on January 7 to just 131 bps by the end of August.

Conversely, the Taiwanese Technology, Hardware and Equipment industry continued to gradually heat up over the summer, rising from just below 400 bps in early March to 500 bps in early August. Some of the hotter names in this industry at present include Yangtze Optical Fibre and Cable (6869 HK), Camsing International Holdings (2662 HK), Walsin Technology Corporation (2492 TT) and Yageo Corporation (2327 TT).

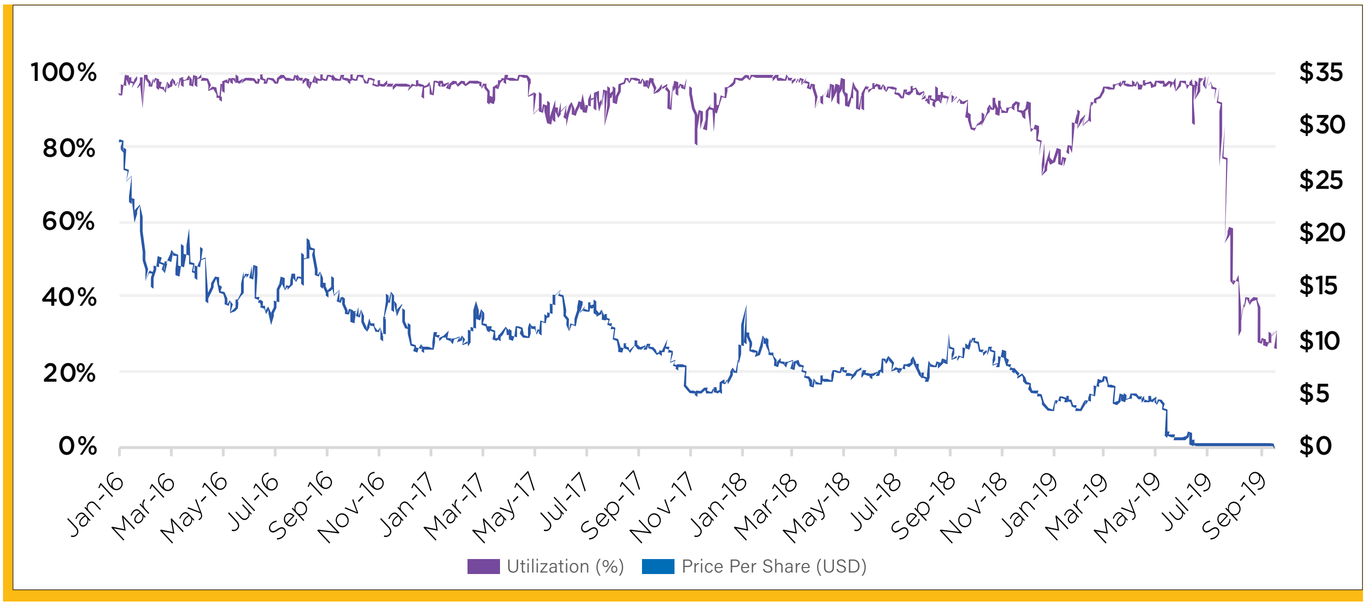
The Hong Kong Capital Goods industry also has seen some changes since the beginning of this year when fees to borrow averaged close to 250 bps. Fees subsequently dropped to 95 bps by the end of August. A similar pattern can be seen in the South Korean Capital Goods industry as well; average fees reached a mid-April high of 306 bps and cooled down to 213 bps by late August.

One of the main purposes for the initiation of tariffs against the United States' many trading partners was to reduce the overall purported $621 billion trading deficit (with China supposedly contributing a whopping to 47% of that total) in an effort to create more jobs. It seems unlikely that the Trump administration will back away from recent additional tariffs, and still more could be in the wings. While many of the Asian industries and companies reviewed have seen their fees to borrow ease, they could reverse course at a moment's notice given the fragility of negotiations to date. The next shot fired (or tweeted) in the trade wars could happen at any time.

Attacks on Saudi Arabia and Oil

Just prior to this issue of *The Purple* going to press, a surprise attack allegedly carried out by Iranian operatives hit Saudi

Figure 1. Utilization and Price Per Share, Insys Therapeutics, January 2016 - Present



Arabia's Abqaiq oil processing facility on September 15. The attacks took almost 50% of Saudi Arabia's oil production offline in just minutes, perhaps the worst supply disruption the world has ever seen.

This caused an oil supply shockwave to reverberate around the world: The price of crude jumped almost 15% from $54.85 Friday, September 13, to $62.90 on Monday the 16th, one of the largest percentage increases on record. Other immediate impacts to the market included the postponement of mega-IPO Aramco, a presidential authorization to release oil from the U.S. Strategic Petroleum Reserve, a bump in the price of U.S. shale oil companies and some selling pressure for U.S. refiners.

Some movements of note in the securities finance market following the attack include an increase in fees to borrow U.S. Oil, Gas Exploration & Production and Gas Storage and Transportation securities. Some of the names trading with noticeably higher fees including Yuma Energy Inc. (YUMA), New Concept Energy Inc. (GBR), Pedevco Corp (PED), Synthesis Energy Systems (SES), Torchlight Energy Resources (TRCH), NGL Energy Partners LP 9% Preferred Shares (NGGLP) and others. Fees increased as a result of short sellers reacting to the price per share jumps in many of these names after the supply disruption.

This recent sneak attack combined with previous attacks against and confiscation of oil tankers in the Strait of Hormuz by Iran's Revolutionary Guard in June this year suggest increased volatility in the energy sector. In the words of Credit Suisse energy analyst Saul Kavonic: "Political-risk premiums are now back on the oil-market agenda."

Repo Moves

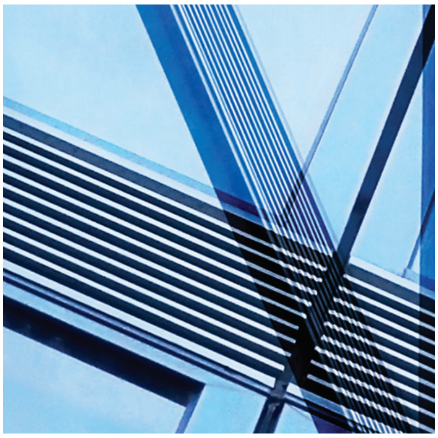
In other breaking news, borrowing rates soared from 2.29% to reach an intra-day high of 10% on Tuesday, September 17, a move that shocked the markets and triggered dark memories of the 2008 liquidity crunch. The Federal Reserve stepped in, providing $53.2 billion worth of liquidity to tamp rates back down to their targets. Additional rounds of liquidity injections at $75 billion each came into play over the following days.

DataLend reveals that the on-loan balance of U.S. Treasurys dropped from $648.5 to $629.8 billion from September 16 to the 17th, while volume-weighted average rebate rates for U.S. Treasurys booked versus cash collateral jumped from just under 250 bps to 479 bps during the same timeframe, an astonishing 91% day-over-day increase. A similar move was observed in rebate rates for U.S. Agencies versus USD cash collateral.

The gross reinvestment rates against cash collateral USD trades also spiked in conjunction with the repo market dislocation, with some loans showing reinvestment rates as high as 1,500 bps.

We clear the path

OCC has the largest centrally-cleared stock loan offering in the world with approximately $80 billion in cleared loan balances. Over the last 25 years, OCC has built an innovative and unique U.S. program for securities lending transactions where OCC steps in as the counterparty (with a two percent risk weight) and guarantees the return of stock or collateral. We continue to enhance and expand access to our stock loan program in order to offer clearing solutions and capital efficiencies for our members and the entire securities finance industry.



As the world's largest equity derivatives clearinghouse, OCC is committed to providing market participants with high quality and efficient clearance, settlement and risk management services. As a Systemically Important Financial Market Utility, we work to enhance our resiliency in order to reduce systemic risk, increase market transparency, and provide capital and collateral efficiencies for the users of the U.S. capital markets.