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DEAR READERS,

Data, data, data...and more data! Big data, meta data, data security, data privacy, data storage, data transmission, data integrity.

Data is everywhere, and it is all anyone wants to talk about. It is in the news with Facebook, Google, Twitter and other technology firms regarding personal data and the appropriate use of one's data. It is all over the regulatory landscape with regulations like SFTR and GDPR, to name a few. Is it the next precious resource? Is it the next oil?

Regardless of the answer, we know there is a tremendous amount of data in our world today. In fact, experts estimate that if you were to add up all the data in the world today, it might approximate 25 zettabytes in size. A zettabyte is 1 billion terabytes, or 1 trillion gigabytes. That is 1,000,000,000,000,000,000 bytes of data, times 25. And it is growing larger and at a faster pace every day.

And I thought securities lending notionals had a lot of zeros!

How can we make sense of all that data? I'm not sure. But what I do know is that our latest product, **The Pulse—Precision Analytics Powered by DataLend**, is designed to help our clients make sense of their own data in the context of all the information in our industry. We can't wait to show you more.

Please enjoy this latest edition of *The Purple*. Thank you all for your support!

Brian Lamb
CEO, EquiLend
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DEAR READERS,

As the DataLend team embarked upon the fourth edition of *The Purple*, we reflected upon our 2017 success. The agent lender community enthusiastically embraced our Client Performance Reporting tool and introduced their beneficial owner clients to **DataLend Portfolio**, the first dedicated beneficial owner performance tool with standardized peer groups and data aggregation across multiple agents.

Later in the year, DataLend released non-cash collateral benchmarking (read about it on page 4) as well as **Bespoke Reporting**, a suite of exclusive market intelligence reports providing firms with insight into their market rank.

This year will be an even more exciting and innovative one for DataLend. Get ready for the launch of **The Pulse—Precision Analytics Powered by DataLend**. The Pulse comprises detailed NGT analytics designed to provide your business with the insight needed to optimize trade flows and capture missed opportunities. This is only the beginning; like DataLend and NGT, The Pulse will be an invaluable tool helping the market move toward greater automation and efficiency.

And finally, we will shortly be releasing the DataLend API and Excel tools, which we know many of you are eagerly awaiting!

We are grateful for the strong partnerships we have developed with our client base and thankful for your continued support and valuable insights. We look forward to continuing to incorporate your feedback into DataLend and The Pulse.

Nancy Allen
Global Product Owner, DataLend
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NON-CASH COLLATERAL BENCHMARKING

As non-cash collateral use grows across the globe, DataLend adds new benchmarking functionality to performance reporting tools

BY MATT ROSS, PRODUCT SPECIALIST, DATALEND

STANDARDIZING performance measurement has always been a key area of focus for DataLend. With the successful launch and market-wide adoption of our new-and-improved Client Performance Reporting (CPR) Suite, our next step—after extensive discussions with clients and an ongoing review of market trends—was to add non-cash collateral benchmarking to our performance reporting tools.

Non-cash collateral acceptance is on the rise and showing no signs of slowing down (see Figure 1), while cash collateral acceptance has remained flat to down over the past four years.

With almost two-thirds of the market, or \$1.6 trillion, on loan against non-cash collateral by the end of 2017, DataLend has made strides in providing transparency and accurate benchmarking into that area of the market.

Following this trend, agent lenders across the globe have indicated a need to benchmark their clients against other beneficial owners accepting similar types of collateral. As a result, DataLend has added a new benchmarking capability to CPR (for agent lenders) and DataLend Portfolio (for beneficial owners) to do just that.

In order to tackle this requirement, DataLend determined how best to classify a beneficial owner's non-cash collateral acceptance. In conjunction with the agent lender community, we developed a risk tolerance scale that would allow the lending agents to bucket their beneficial owner clients into

one of four categories depending on the client's "risk appetite." The first and most conservative bucket represents beneficial owners that only accept investment-grade sovereign debt (Sov1). The second accommodates those that are able to accept major index constituent equities (Equity1). The third bucket then introduced the acceptance of investment-grade corporate debt (Corp1) and lower-rated sovereign debt (Sov2). The fourth and final bucket includes beneficial owners willing to accept lower-rated corporate debt (Corp2), equities that are not part of a major index (Equity2) and all other types of collateral (Other).

Not surprisingly, the results of the collateral acceptance allocation exercise were heavily skewed toward the first two buckets: investment-grade sovereign debt and major index constituent equities.

With each beneficial owner's non-cash collateral acceptance defined, DataLend gathered data on the effects of different non-cash collateral guidelines. Figure 3 outlines some of the more noticeable differences between fees for clients accepting only investment-grade sovereign debt versus those accepting some level of equities as collateral.

A sizable difference in fees is evident for those clients accepting Sov1 as collateral versus those accepting Equity1 as collateral. The average borrow cost for all securities was 26.42 bps when investment-grade sovereign debt was pledged as collateral; however, when equities were pledged, the average fee

increased by nearly 7 bps.

Upon drilling into global fixed income and eventually down to U.S. Treasuries, the spread between the two collateral groups continues to widen—so much so that lenders accepting equities as collateral were earning 11 bps more on average than those who were just accepting other investment-grade sovereign debt.

With all of the recent financial regulations, this is evidence that borrowers are willing to pay up when pledging equities as collateral in order to source more high-quality liquid assets (HQLA). Non-cash collateral usage also appears to impact utilization, which in conjunction with fees drives a lender's return to lendable. Figure 4 gives a breakdown of utilization by non-cash collateral acceptance.

Similar to the disparity in fees, there is a difference in utilization when lending against sovereign debt versus equities. Across all assets, utilization increased noticeably when clients were willing to accept equities as collateral. What this illustrates is that when agent lenders have the ability to accept different types of collateral, they can lend at a higher rate of utilization and potentially generate a greater return to lendable.

With the increase in global non-cash collateral usage, and the disparities noted in both fees and utilization for clients with different non-cash guidelines, DataLend's non-cash collateral peer group benchmarking feature is a vital tool for agent lenders to optimize their books. ▲



FIGURE 1. CASH VS. NON-CASH LOAN BALANCE GLOBALLY (USD BILLIONS)

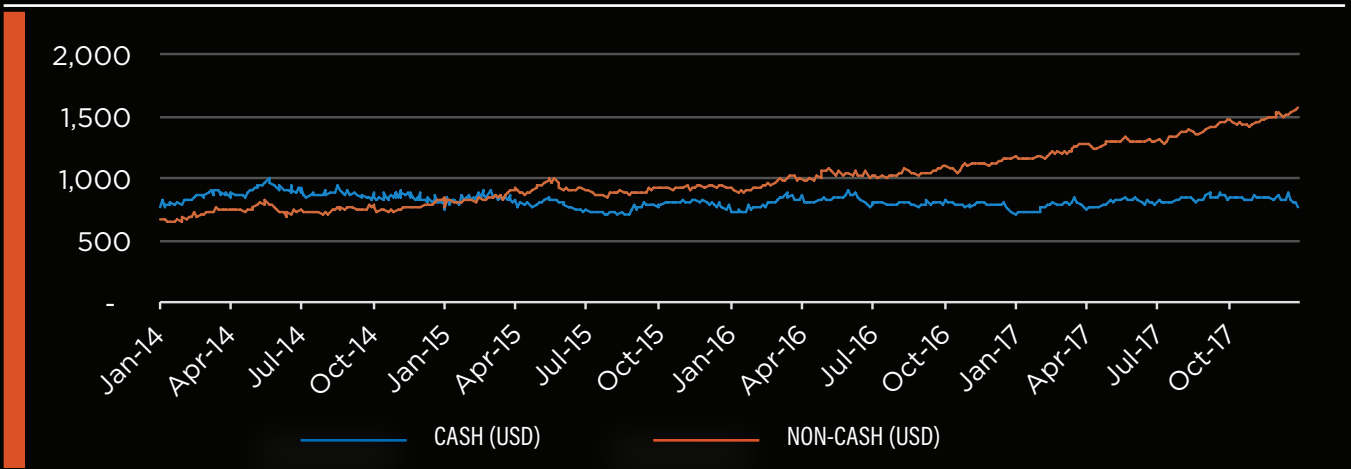


FIGURE 2. BENEFICIAL OWNER BREAKDOWN (BY COLLATERAL ACCEPTED)

CASH ONLY	MIXED COLLATERAL		NON-CASH COLLATERAL	
24%	41%		35%	
	SOV1	+EQUITY1	+SOV2, CORP1	+ CORP2, EQUITY2, OTHER
	59%	34%	4%	3%

FIGURE 3. AVERAGE FEES FOR DIFFERENT NON-CASH COLLATERAL ACCEPTANCE (BPS)

BORROWED ASSET	SOV1 AS COLLATERAL	EQUITY1 AS COLLATERAL
ALL SECURITIES	26.42	33.41
GLOBAL FIXED INCOME	14.61	23.45
US TREASURYS	16.37	27.76

FIGURE 4. AVERAGE UTILIZATION FOR DIFFERENT NON-CASH COLLATERAL ACCEPTANCE (%)

BORROWED ASSET	SOV1 AS COLLATERAL	EQUITY1 AS COLLATERAL
ALL SECURITIES	10.87	15.19
GLOBAL FIXED INCOME	18.25	23.53
GLOBAL EQUITY	5.94	9.24

NON-CASH COLLATERAL DEFINITIONS

Sov1 - Investment-grade sovereign debt, AAA-A rated
 Sov2 - Below A-rated sovereign debt
 Corp1 - Investment-grade corporate debt, AAA-A rated
 Corp2 - Below A-rated corporate debt
 Equity1 - S&P 500 or equivalent major index constituent
 Equity2 - Any other equity that is not a member of a major stock index
 Other - Any other collateral not defined above

BENEFICIAL OWNERS SURVEY

Securities lending is no longer just a way for fund managers to cover operational costs, such as custody, but has emerged as a vehicle to capture alpha

HOW SECURITIES lending has evolved in importance to fund managers—becoming a driver of alpha rather than just a means to cover operational costs—is a key finding of the DataLend Portfolio Beneficial Owners Survey, run in conjunction with *Funds Europe* magazine.

Close to two-thirds (59%) of the 41 beneficial owners who responded said that capturing alpha is their primary objective for participating in lending, with 36% saying it is to cover costs. As Nancy Allen, Global Product Owner at DataLend, notes: “It is not wholly a surprise that such a significant number of beneficial owners now see securities lending as an alpha-generating activity, but it certainly quantifies the shift in mindset we are seeing. Beneficial owners are treating securities lending as an investment product.”

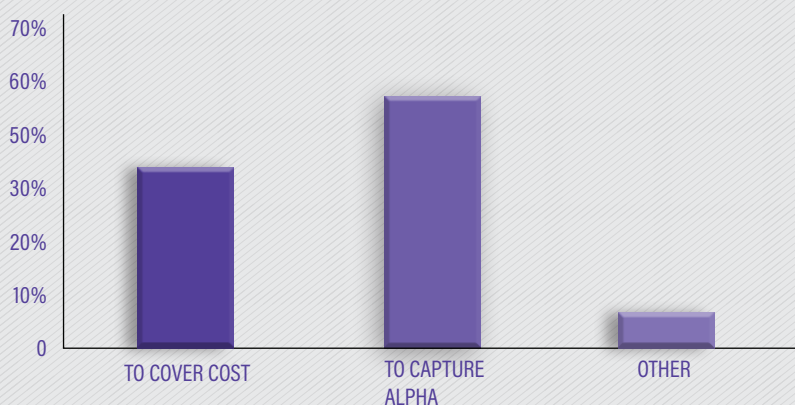
That shift aligns with a number of other current trends flagged by the survey. One relates to where responsibility for securities lending oversight resides within firms: the survey shows a clear shift toward the front office, in the shape of the chief investment officer or portfolio manager (56% of respondents), away from the chief operations officer or operations manager (36%). Moreover, while 39% of respondents still enroll all their assets in lending programs, 33% favor an asset class-based approach (equity versus fixed income), and 28% run intrinsic-only programs.

“Beneficial owners are now performing more detailed analysis of their portfolios to identify opportunities to obtain the best value for their fund,” says Allen. “To that end, we have seen heightened interest in our data from beneficial owners over the last couple of years. More recently, they have been allocating resource and budget to data as lending shifts toward an alpha-generating investment product. Beneficial owners recognize that the incremental value they can obtain through data analysis

more than covers the cost of that data.”

Asset managers are even incorporating securities lending data into their broader portfolio management strategy, she adds. Historically, beneficial owners have relied on their agents to provide data, typically focused on general market trends or comparative year-on-year performance, Allen says. “We are seeing a desire amongst beneficial owners for more detailed reporting. They want to better understand the revenue attribution

WHAT IS YOUR FIRM'S PRIMARY OBJECTIVE FOR PARTICIPATING IN SECURITIES LENDING?





of their portfolio as well as the key drivers of demand to ensure they are generating an optimal return. Beneficial owners are also using data to measure the performance of their portfolio relative to others in the market.”

To meet the demands of beneficial owners for consistent and standardized benchmarking, DataLend launched an overhauled performance measurement product in 2017. “In consultation with our beneficial owner and agent lender clients, we launched DataLend Portfolio exclusively for beneficial owners featuring standardized peer group analysis and benchmarking,” says Allen. “A beneficial owner can be confident that the DataLend matching algorithm behind our peer group performance analysis is consistent across agents.”

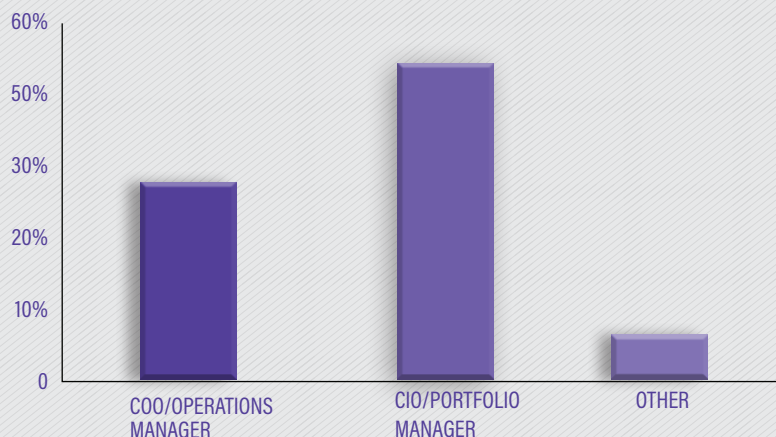
The reporting burden on firms engaged in securities lending activity will only increase given the enhanced transparency requirements stipulated by the EU’s incoming Securities Financing Transactions Regulation (SFTR). “SFTR will revolutionize the market, not least from a data perspective,” notes Allen. “The standardized, enhanced and more timely data will provide beneficial owners and market participants with the detail they need to better manage their programs and perform more accurate revenue attribution analysis.”

The perception of corporate governance as the biggest risk in securities lending (41% of survey responses, with operational risk in second place with 36%) does not surprise Allen. “A decade or so ago the biggest perceived risk likely would have been counterparty risk, but beneficial owners are now looking at lending more holistically, and considering it within the context of their broader governance practices.”

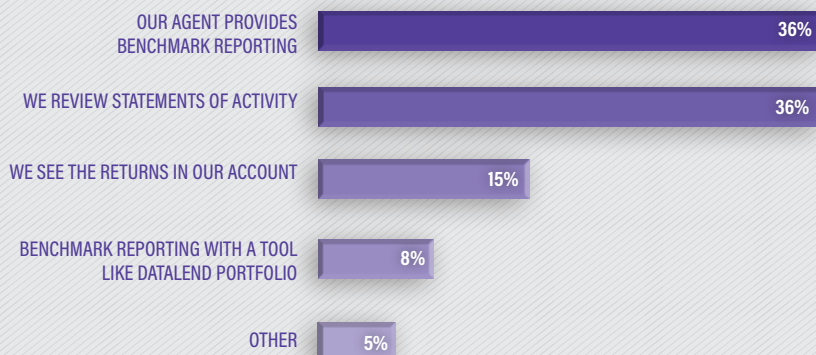
Looking to the future, Allen expects the engagement she sees today from beneficial owners only going in one direction as lending moves more firmly into the investment arena.

“As beneficial owners treat securities lending as an investment activity, they are leveraging data to help them structure their program guidelines, identify opportunities and provide standardized performance measurement. Beneficial owners are attracted to the independence that comes from third-party data, which allows them to perform consistent analysis across all their securities lending activity when utilizing one or more agent lenders.” ▲

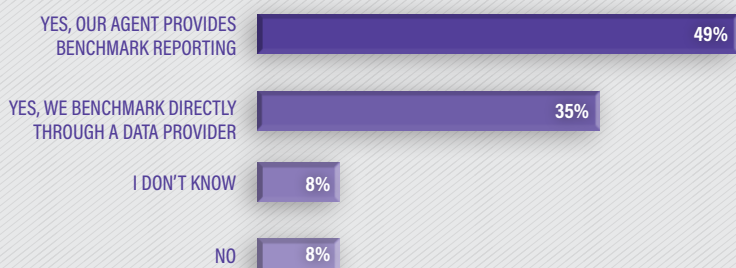
WHO AT YOUR FIRM IS RESPONSIBLE FOR OVERSEEING THE SECURITIES LENDING PROGRAM?



HOW DOES YOUR FIRM MONITOR ITS SECURITIES LENDING PROGRAM?



DOES YOUR FIRM BENCHMARK ITS SECURITIES LENDING PROGRAM TO THE MARKET TO ENSURE BEST PERFORMANCE?



EMERGING TRENDS IN SECURITIES FINANCE

BY KEITH MIN, PRODUCT SPECIALIST, DATALEND



TREND 1: REVENUE & BALANCES RISING AGAIN

Global revenue was up 16% and on-loan balances up 19% year over year for the first two months of 2018. The trend was especially pronounced in Asia, where revenue was up 35% in the same period as warms and hots rebounded.

TREND 2: HOT SECURITIES BACK IN FOCUS

North American revenue from hot securities (250+ bps) saw an increase of 33% year over year for the first two months of 2018. The top five North American earners amongst hot securities in the first two months of 2018 were 3D Systems (DDD), with \$11.7 million earned in January and February; Ubiquiti Networks (UBNT), with \$11.4 million; MiMedx Group (MDXG), \$10.5 million; Sirius XM (SIRI), \$9.4 million; and Frontier Communications (FTR), \$9 million.



TREND 3: TERMING ETFs

Global ETF balances increased 20%, with loan values in term trades almost doubling from \$159 billion in January and February 2017 to \$302 billion in the same period in 2018.

TREND 4: FIXED INCOME SPOTLIGHT

The global bond market has seen consistent loan value growth throughout 2017, and the trend continues in 2018. The year-over-year fixed income on-loan balance has increased by 24% in the first two months of the year, with utilization up by 2.5% since November 2017.



TREND 5: NON-CASH COLLATERAL STILL GROWING

Non-cash collateral is still on the rise in North America, accounting for 57% of total loan values compared to 50% over the same period in 2016—though it is still predominately used in GC trades. In North America, only 19.3% of the loan value amongst hot securities is using non-cash collateral, whereas Europe is using non-cash collateral for 63% of its hot securities loan value.



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- **League Tables**
Identify where you rank amongst your peers—see if your competitors are optimizing their NGT flow better than you
- **Trade Initiation Activity**
View your activity across NGT workflows (IOI, Targeted Availability, Unsolicited Bid)—benchmark yourself to the industry
- **Fee Buckets**
See your NGT performance at a fee band level—compare your market share of GC and specials to your competitors
- **Advanced Filtering**
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For more information about **The Pulse—Precision Analytics Powered by DataLend**, contact sales@equilend.com.

SPECIALS: AN UPDATE

BY MATT ROSS, PRODUCT SPECIALIST, DATALEND

WITH MARKETS rallying for much of the last year and a half, the securities lending industry has seen a reduction in the number of hard-to-borrow securities and thus a drop in revenue from these “specials.” In “How Special Are Specials in Securities Lending” (*The Purple*, issue 3, September 2017), DataLend investigated just how much of an impact the bull market had on specials revenue generation. With 2017 in the books, DataLend revisited the analysis to see

how the specials market rounded out the year.

Using the same analytical approach, DataLend allocated each security to one of five buckets based on the security's fee to borrow for every day over the past two years. For the purpose of the analysis, only lender-to-broker transactions were included, and any trades that were potentially due to seasonal corporate event activity were excluded.

Midway through 2017, GC (general collateral) securities made up just under 70% of the total on-loan balance in the securities lending industry, which was just about in line with 2016. Over the final six months of the year, however, the GC space continued to gain market share and represented over 72% (Figure 3) of the total on-loan balance for all of 2017, a 3% increase over 2016 (Figure 1).

With stock prices continuing to rise through the end of 2017, GC securities

FIGURE 1. 2016 LOAN VALUE BY FEE BAND

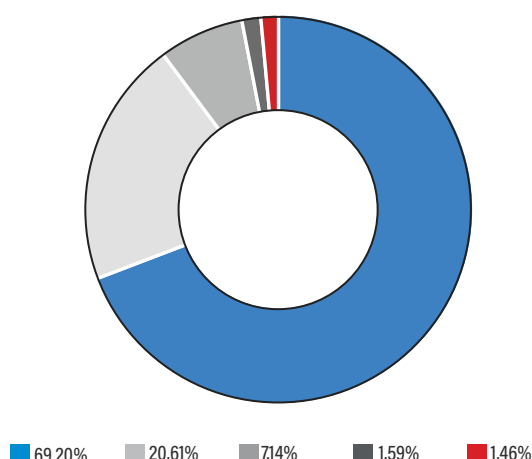


FIGURE 3. 2017 LOAN VALUE BY FEE BAND

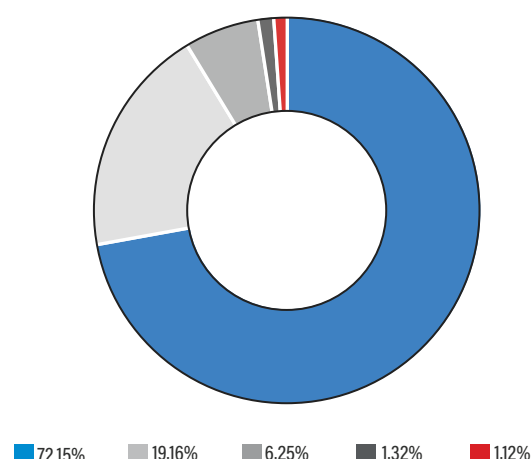


FIGURE 2. 2016 REVENUE BY FEE BAND

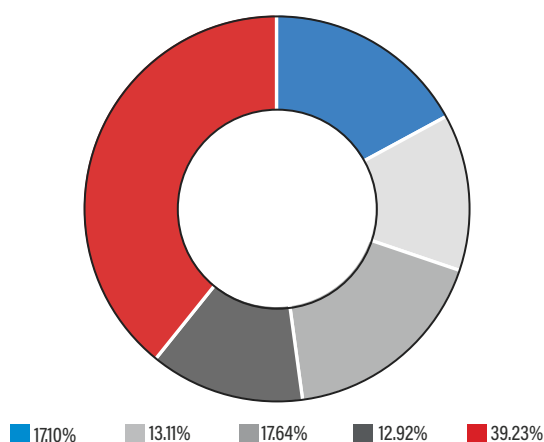
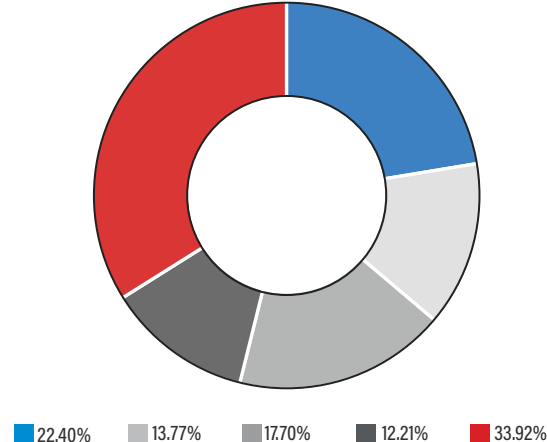


FIGURE 4. 2017 REVENUE BY FEE BAND





with large on-loan balances continued to gain market share in the industry, and in some atypical cases even cracked the list of top earners.

From a revenue perspective, 2017 finished in line with where the projections were at the midway point of the year. The GC (0-20 bps) and Barely Warm (20-50 bps) fee ranges finished the year accounting for more than 36% (Figure 4) of the total revenue generation, a 6% increase on the same two fee ranges from 2016 (Figure 2). Naturally, as a result, the Very Warm (250-500 bps) and Hot (500+ bps) fee ranges had an inverse result. In 2016, the Very Warm and Hot buckets were responsible for more than 52% of the overall revenue in the securities lending industry. That same figure dropped to just over 46% in 2017, in line with the overall reduction in on-loan balances for the Very Warm and Hot fee ranges from 2016 to 2017.

As addressed in the last issue, the

lack of market volatility throughout 2017 drove down fees in the typically lucrative specials market. While Q2 saw a slight uptick in fees for the top 50 earners in the securities lending market, largely due to some hot IPOs in the U.S. market, the relative cooling of the market continued as fees for the top 50 revenue earners dropped to 208 bps and 195 bps in quarters three and four, respectively (see Figure 5).

However, the continued rise of the stock prices meant a continued rise in the total on-loan balance for the top 50 revenue-generating securities in quarters three and four (see Figure 6). This rise in on-loan balance was able to offset the reduction in fees and meant that the revenue in the top 50 names was actually flat to a little up for the end of 2017.

The year 2016 saw a considerable number of specials and didn't even allow GC securities to sniff the list of top

earners. However, in 2017, perennially GC names like Alibaba (BABA) and Visa (V) both cracked the top 25 with revenue of \$29.14 million (70% increase from 2016) and \$26.25 million (57% increase from 2016), respectively, as their stock prices and therefore on-loan balances rose. So while there was a noticeable reduction in revenue to be had in the specials space, there were opportunities to be had in lending out GC names.

Lastly, DataLend reviewed the securities lending MVP of 2016: Tesla (TSLA). Tesla finished 2016 having generated over \$353 million in revenue, more than double the revenue of its closest competitor. In 2017, Tesla generated only \$78.43 million, barely a quarter of its 2016 revenue. Nevertheless, that number was good enough to make Tesla the fourth highest securities lending earner globally in 2017, which indeed puts some perspective on how "special" 2016 was. ▲

FIGURE 5. GLOBAL TOP 50 EARNING SECURITIES: REVENUE (USD) & FEE (BPS)

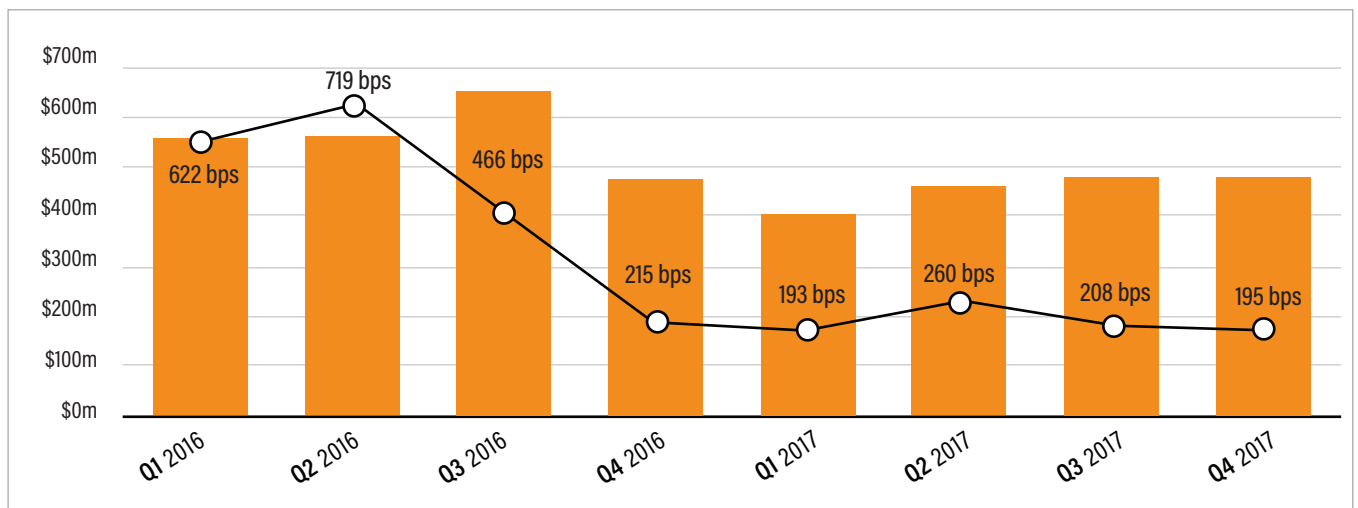
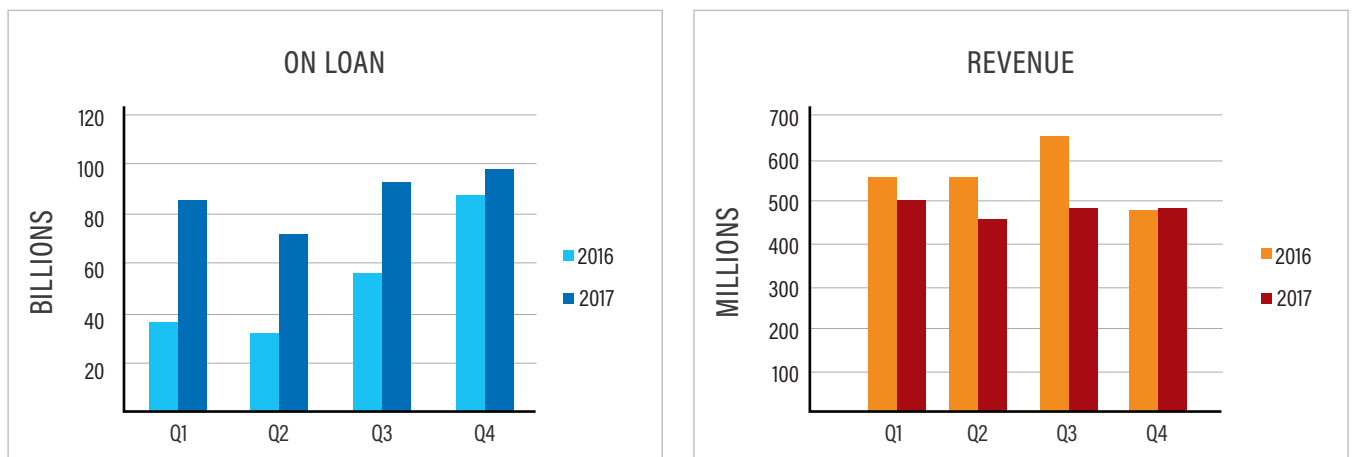


FIGURE 6. GLOBAL TOP 50 EARNING SECURITIES, ON-LOAN BALANCE & REVENUE



BORN AGAIN BLOCKCHAIN?

Some firms are reinventing themselves, apparently capitalizing on the market's fervent enthusiasm for all things blockchain. The securities lending market appears to be skeptical

BY CHRIS BENEDICT, DIRECTOR, DATALEND

ONE OF THE MOST ASTONISHING

trends of 2017 was the explosion in the value of cryptocurrencies. It was almost impossible to scan the headlines of any financial website without seeing "Bitcoin" or "blockchain" somewhere in the mix on almost any given day. The returns for cryptocurrencies—and companies purporting to use blockchain to enable some form of business solution—were astronomical last year, especially in Q4.

These returns were not for the faint of heart, however, as there has been massive volatility in the space, especially after the sharp cryptocurrency selloffs in late December 2017 and again in late January and early February of this year. While investors are flocking in droves to these new instruments and companies, the securities lending market seems to cast skepticism on the returns for newly minted blockchain companies at present.

While the share prices of these firms have gone parabolic, so too have the fees to borrow these thinly traded (and in some cases previously low-priced) names. DataLend captured some compelling data on these stocks at the end of 2017 and early 2018, many of which were trading over 10,000 bps and in some cases as high as 25,000 bps.

One new blockchain company that stands out from the rest in many respects is a company previously known as the Long Island Iced Tea Corporation,

now known as Long Blockchain Corporation (LBCC). What does iced tea have to do with blockchain, you may ask? The answer appears to be: absolutely nothing.

However, the company announced on December 21 last year that it was pivoting the business from tea brewing and distribution to "exploration of and investment in opportunities that leverage the benefits of blockchain technology." The news sent investors into a frenzy, and the firm's share price skyrocketed 245% higher in a single day. Fees spiked, and utilization quickly reached 100%, suggesting that securities lending market participants were taking a dim view of this change in business focus.

In a similar case, Longfin Financial (LFIN) became another very hot stock after the company acquired Ziddu.com, a micro-finance business lending firm for import/export businesses using "Ziddu coins," which are collateralized by warehouse receipts. After LFIN's stock price skyrocketed by 2,000% in late December, the CEO Venkat Meenavalli announced that the company's sudden \$3.8 billion market cap was "not justified." The securities lending market certainly agreed with that sentiment as fees soared by the end of the year, with just about every share of available stock on loan. Considering that Meenavalli was also a majority stakeholder of Ziddu.com, the

market may also have had some self-dealing concerns regarding the merger.

Riot Blockchain (RIOT) is another born-again blockchain company commanding very high fees. Previously known as Biopix, a biotech firm specializing in diagnostic equipment, the company transformed itself in October 2017 when it invested in Coinsquare Ltd and announced a name change, purporting to offer "targeted investments" in the "blockchain ecosystem." This caused the stock price to jump, and fees and utilization quickly followed suit. The securities lending market may be questioning this company's business model shift.

Mobile payment solution company Net Element (NETE) also waded into the blockchain frenzy in late December 2017 when it announced the launch of a Bitcoin business unit, sending the stock 144% higher in a day. While the stock has sold off a bit since then, fees and utilization remain very high.

Power solutions manufacturer DWP Holdings (DWP) was another beneficiary of blockchain exuberance when it launched a new line of power systems designed to keep power costs down for "miners" of cryptocurrencies. According to a recent *New York Times* article, creating a single Bitcoin token requires at least as much electricity as an average American home consumes in two years, so the electricity costs associated with "mining"



cryptocurrencies can be a real concern. This news, combined with rumors that Amazon was interested in purchasing hardware companies associated with cryptocurrency mining, sent DWP's price soaring. Just as in previous examples, the securities lending market reacted immediately, and lending fees skyrocketed in December before settling back down to less incendiary levels.

Then in early January, previously sleepy Eastman Kodak Co. (KODK) launched KODAKCoin, a solution that helps photographers receive payments for the use of their licensed images. Shares of the company almost tripled overnight, while fees and utilization escalated the next day. With a utilization just short of 100%, the securities lending market would suggest there is some excess ebullience in this name.

Those six securities have grossed agent lenders almost \$3 million since they became "born again" as blockchain stocks late last year. Other examples of companies capitalizing on the recent success of the cryptocurrency and blockchain bullishness include Seven Stars Cloud Group (SSC), Social Reality Inc (SRAX), On Track Innovations (OTIV), Pareteum Corp (TEUM), Hive Blockchain Technologies (HIVE CN), Marathon Patent Group (MARA) and Bitcoin Services Inc. (BTSC), just to name a few. (Note that the metrics provided in this article reflect lender

DataLend captured some compelling data on these stocks at the end of 2017 and early 2018, many of which were trading over 10,000 bps and in some cases as high as 25,000 bps



to-broker activity only; broker-to-broker fees trade even higher in these names as agent lender supply is all but exhausted in this space as of this writing.)

The fees and utilizations associated with many of these companies suggest that at least some in the securities lending market view these blockchain "solutions" as pure vaporware. Other challenges stem from increased calls to regulate this space.

The U.S. Securities and Exchange Commission is looking closely at the disclosures of public companies that shift their business models to capitalize on the perceived promise of distributed ledger technology and whether the disclosures comply with securities laws. Recent headlines in this space

have also given reasons for investors to pause, such as the total collapse of the Bitconnect Exchange, or the theft of hundreds of millions of dollars worth of cryptocurrency from the Coincheck exchange.

There is no question that blockchain has amazing potential as a transformative technology across a myriad of industries, and there are plenty of seasoned technology companies ready to unleash this potential.

But much like the dot-com days of the 1990s, just adding the word "blockchain" to a company's name does not make for a sustainable business model. In time, surely, the market will separate the blockchain winners from the losers. ▲



CRYPTOCURRENCIES

(AND SECURITIES LENDING)

Bitcoin's spectacular rise in value relative to government-issued centralized currencies has dominated headlines in the past year. Somewhat less known are the blockchain-based alternatives to Bitcoin, many of which are gaining steam too. DataLend highlights some of the cryptocurrencies taking the investment world by storm

BY CHRIS BENEDICT, DIRECTOR, DATALEND

CRYPTOCURRENCIES offer an advantage to traditional payment methods in that they mostly operate on decentralized peer-to-peer networks that all but eliminate the overhead associated with credit and banking functions. As of the end of March 2018, the value of all cryptocurrencies issued (or "mined") totaled about \$300 billion, according to CoinMarketCap.com, down from a peak of \$760 billion in early January. That total is spread across more than 1,500 unique cryptocurrencies.

The alleged key benefit of using cryptocurrencies in lieu of government-backed currencies is considered to be quicker payments due to the removal of third-party intermediaries. In addition, cryptocurrencies are said to be immune to counterfeiting, and payments via cryptocurrencies cannot be reversed by senders, two issues that can pose a challenge for credit card companies. Finally, many cryptocurrencies allow users to make payments in relative anonymity, which is attractive to some users.

Cryptocurrencies are far from perfect vehicles and have a long way to go before they overtake traditional currencies, banking and credit card activities. Critics highlight a number of downsides. Security is certainly a major concern given a series of very high-profile "wallet hacks" over the years, including the recent theft of hundreds of millions of dollars worth of cryptocurrencies stolen from Japanese exchange Coincheck in late January.

How cryptocurrencies are (or aren't) regulated also seems to be in flux. The U.S. Securities and Exchange Commission (SEC) recently announced that crypto exchanges would fall within its regulatory purview, stating: "If a platform offers trading of digital assets

that are securities and operates as an 'exchange,' as defined by the federal securities laws, then the platform must register with the SEC as a national securities exchange or be exempt from registration." Countries including China and South Korea said they were moving to curtail mining activity or ban cryptocurrencies altogether, which caused a sharp and broad selloff in mid-January. How various other governments and agencies will seek to regulate these new assets is anyone's guess.

Another concern raised by critics is the power it takes to "mine" cryptocurrencies: According to a recent *New York Times* article, the electricity it takes to generate one Bitcoin token could keep an average American household powered for two years. An additional critique is the limited use for most cryptocurrencies, with relatively few vendors accepting crypto payments to date.

Bitcoin (BTC), the most well-known of these new assets, constitutes more than a third of the entire cryptocurrency market cap as of early 2018. However, it has been losing market share to some of its competitors as new cryptocurrencies are mined. Ether (ETH), for example, now makes up a little over 17% of the total alt-coin market cap, while up-and-coming Ripple (XRP) is just above 9%. According to World Coin Index, Bitcoin saw a remarkable 1,200% increase in value relative to the USD from 2016 to the end of 2017. Ether also rose by an incredible 10,000% year over year, while Ripple was up an astonishing 45,000% during the same timeframe. Other alt-coins such as Eos, Dash, Litecoin, Monero and Tron also experienced staggering increases in value relative to the USD last year as momentum money

poured into the space.

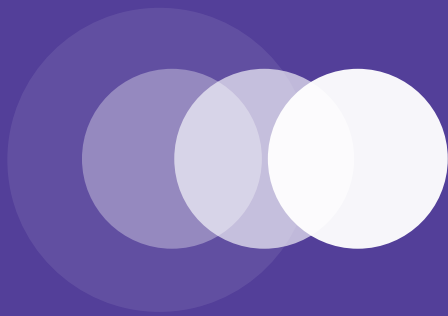
The Bitcoin Investment Trust ETF (GBTC), launched in 2016, offers a little insight into how the securities lending industry is reacting to Bitcoin. Much like the underlying currency itself, GBTC has been very volatile in both the cash markets and securities lending market. GBTC began 2017 trading in the cash markets at \$129 per share. By the end of the year it had increased to \$2,016, representing a rise of 1,400%.

GBTC was in fairly high demand in the lending market for most of last year. Utilization in this ETF began at a little over 66% but dropped to a low of 29% by summer 2017. However, by fall, utilization had risen again to 90%. Lender-to-broker fees traded in a wide range from warm to hot, while broker-to-broker fees traded even higher.

However, when comparing the utilization and fees to borrow this particular derivative versus Bitcoin itself, it is apparent that perhaps short sellers were a little wary of being too aggressive in this very volatile asset last year.

These are early and exciting days in the marriage between cryptocurrencies and financial instruments. Bitcoin futures are now trading on the CBOE and cleared at OCC (see "A Day in the Life of Craig Donohue," page 34). Other ETFs exposed to the cryptocurrency space, such as LEGR and BLOK, are now publicly traded, and more cryptocurrency-tracking ETFs are expected to launch this year.

While the potential for returns is high, so are the risks. As the cryptocurrency space continues to expand (or contract) and new issues are brought to market, follow DataLend for a unique look into how these trends are reflected in the securities finance industry. ▲



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ACCESSING **CHINA**

BY ROBERT ANTELMANN, PRODUCT SPECIALIST, DATALEND

INVESTORS have been clamoring for access to China's capital markets for decades. With China having overtaken the U.S. as the world's largest economy last year (although the U.S. is still top in terms of gross domestic product, at \$18.6 trillion), investors' desire for exposure to mainland Chinese assets from both the long and short side has never been greater.

While China's capitalist side roars, it is still a closed market compared to many other countries in the region. However, there are ways to access shares of Chinese firms listed on the Hong Kong and Shanghai equity exchanges.

Hong Kong H-shares

The Hong Kong securities lending market in its current form started back in December 1997 when the Central Money Markets Unit (CMU) launched a lending market for private sector debt. After extensive consultation with the market in March 2002, the Securities & Futures Ordinance (SFO) was enacted, providing a regulatory framework that is the foundation for today's Hong Kong securities lending market. The Hong Kong market provides a flexible over-the-counter market that has steadily grown since then.

The Hong Kong equity market is broken into two primary security types: H-shares and Hong Kong shares. Hong Kong shares represent firms incorporated in a country other than China that trade on the Hong Kong Stock Exchange (HKEX), whereas the H-shares refer to shares of Chinese-incorporated companies that are traded on HKEX.

H-shares saw a significant increase in loan balances over 2017, rising from around 25.52% at the beginning of 2017 to around 60.30% of the Hong Kong market by close of 2017. This was driven in part by Ping An Insurance "H" (2318 HK), which had loan balances ending 2017 at \$7.01 billion. While fees to borrow the insurance company are low, utilization in the stock steadily increased through last year, from 10% to 40% by the end of 2017.

The number of H-share securities on loan increased marginally from 155 to 164. The average on-loan balance of H-shares also increased during the same timeframe from \$37.30 million to \$44.80 million.

Automobile manufacturer BYD Company H-shares (1211 HK) continued to be the largest revenue earner in 2017, as in years past, bringing in an impressive \$24.54 million. Capital Goods firm Jinjiang Goldwind Science & Technology (2208 HK) H-shares were also profitable, yielding \$4.22 million in revenue last year.

Hong Kong Stock Connect

When viewing the Chinese market, there are essentially two market types: A and B share markets. China A-shares are Chinese securities traded on the Shanghai and Shenzhen exchanges that are denominated in renminbi, while B-shares are securities denominated in a foreign currency (U.S. dollars in Shanghai and Hong Kong dollars in Shenzhen). Historically the A-shares were open only to local participants and B-shares only to foreigners. That changed in 2001, when Chinese authorities relaxed the restrictions to open the B-share market to Chinese investors, and further in 2003, when a select number of foreign institutions were permitted to invest in A-shares.

Despite the size of China's market, the lending market for onshore lenders in Shanghai-listed A-shares remains very limited. In order to facilitate short selling of eligible Shanghai-listed securities, the Shanghai-Hong Kong Stock Connect scheme (northbound trading) was introduced in November 2014; the Shenzhen-Hong Kong Connect followed in late 2016. Only A-shares are included, while security types such as B-shares, REITs and ETFs are excluded. Borrowing can only be facilitated via exchange participants or designated qualified institutions regulated under the SFC Ordinance on a principal basis, and lenders must be Hong Kong registered. The requirement for either registration in Hong Kong, or as an exchange member, has greatly impeded use by the offshore lending market. Hong Kong regulators are looking to implement an identification program for all Hong Kong investors seeking to buy A-shares using the Connect schemes. This will make participation more transparent, bring the territory in line with mainland requirements and hopefully open up participation.

Stock lending in Connect is subject to restrictions put in place by the Shenzhen and Shanghai exchanges. For instance, securities lending transactions for the purpose of short selling cannot be longer than one calendar month, and all securities lending activities must be reported to The Stock Exchange of Hong Kong.

With the MSCI inclusion of Chinese A-shares, the impact of moving assets away from existing lending markets may provide a reason for review, hopefully eventually allowing investors access to these in-demand securities. While securities lending rules may be unviable in their current form, development and change is headed in the right direction. As a result, it is not a case of if, but of when, securities lending will happen via the connection. ▲

SECURITIES FINANCE

REVENUE 2017

GLOBAL

\$9,225,514,732





AMERICAS
\$4,967,507,652



EMEA
\$2,552,659,268



ASIA PACIFIC
\$1,705,347,812

REGION FOCUS: AMERICAS

CONTINUING on the trend observed in Q1 and Q2 2017, securities lending on-loan balances for both North and South America continued to grow during the second half of last year, assisted by the continued strong performance in global markets. In 2017, North America saw an average daily on-loan balance of \$1.54 trillion and an average lendable balance of \$10.42 trillion, resulting in an average utilization of 14.8%. The South America region averaged \$19.38 billion on loan with a daily lendable balance of \$252.19 billion to yield a utilization of approximately 7.7% for the year.

Not surprisingly, the U.S. continued to make up the lion's share of North America's lending balances with an average equity on-loan balance of \$587.20 billion and an average fixed income on-loan balance of \$786.09 billion for 2017. Canada saw a daily average on-loan balance of about \$44.39 billion for equities and \$125.02 billion for fixed income, while daily average lendable balances came in at \$462.60 billion and \$860.57 billion respectively.

An increasing discrepancy emerged in 2017 between average fees to borrow U.S. versus Canadian equities. Fees to borrow U.S. equities averaged 55.7 bps for 2017 while fees to borrow Canadian equities topped almost 100 bps for the year on average. Fees to borrow Canadian equities were buoyed by continued speculation in the budding medical marijuana space, as well as some hot individual securities in the Real Estate sector that traded on continued fears of a housing bubble in certain regions in Canada.

Despite some initial weakness in the North American equity lending market during the first half of the year, securities lending revenue in the region totaled \$4.85 billion in 2017, representing a 3.8% increase over 2016's \$4.67 billion in revenue. U.S. lending revenue contributed \$4.32 billion, or some 89% of the total revenue for the region.

The \$4.32 billion in U.S. lending revenue represents a modest 3.3%

increase over the \$4.18 billion in revenue in 2016. U.S. equities generated \$3.21 billion in revenue in 2017, while fixed income totaled \$1.11 billion.

The Consumer Discretionary sector was the most profitable sector or within the U.S. securities finance industry, generating \$810.34 million in total gross revenue for the year with fees averaging 78 bps in 2017. Information Technology came in second with total revenue of \$674.89 million and fees averaging almost 53 bps. Health Care was the third most profitable sector in the U.S., with \$510.01 million in total revenue and fees averaging 76 bps.

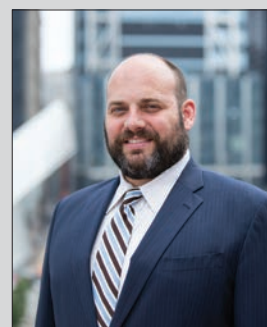
The top-grossing security in the U.S. in 2017—and indeed the entire securities finance industry globally—was social media firm Snap Inc. (SNAP), which generated almost \$110 million in lender-to-broker revenue with an average utilization of just under 92% for 2017. The second highest revenue-generating security in the U.S. was optical equipment manufacturer Applied Optoelectronics (AAOI), which produced \$81.85 million for securities lenders last year. Tesla Motors (TSLA) was once again a top earner in the Americas, bringing in \$78.43 million, though a far cry from the staggering \$353.20 million firms earned from lending the stock in 2016, when it was the #1 most profitable security in the entire global lending industry that year.

Revenue from lending Canadian securities totaled \$535.60 million last year, up 8.9% from the \$491.73 million realized in 2016. Securities lenders earned \$421.14 million in revenue from Canadian equities and \$114.47 million from fixed income in 2017.

Financials was the top revenue-generating sector for Canada in 2017, producing \$141.13 million in revenue with average fees of 128 bps and a utilization of approximately 8%. Energy took the #2 spot where average fees of 71 bps and a utilization of almost 13% combined to produce \$76.23 million in revenue last year.

Canada's top revenue-generating security was a well-known name

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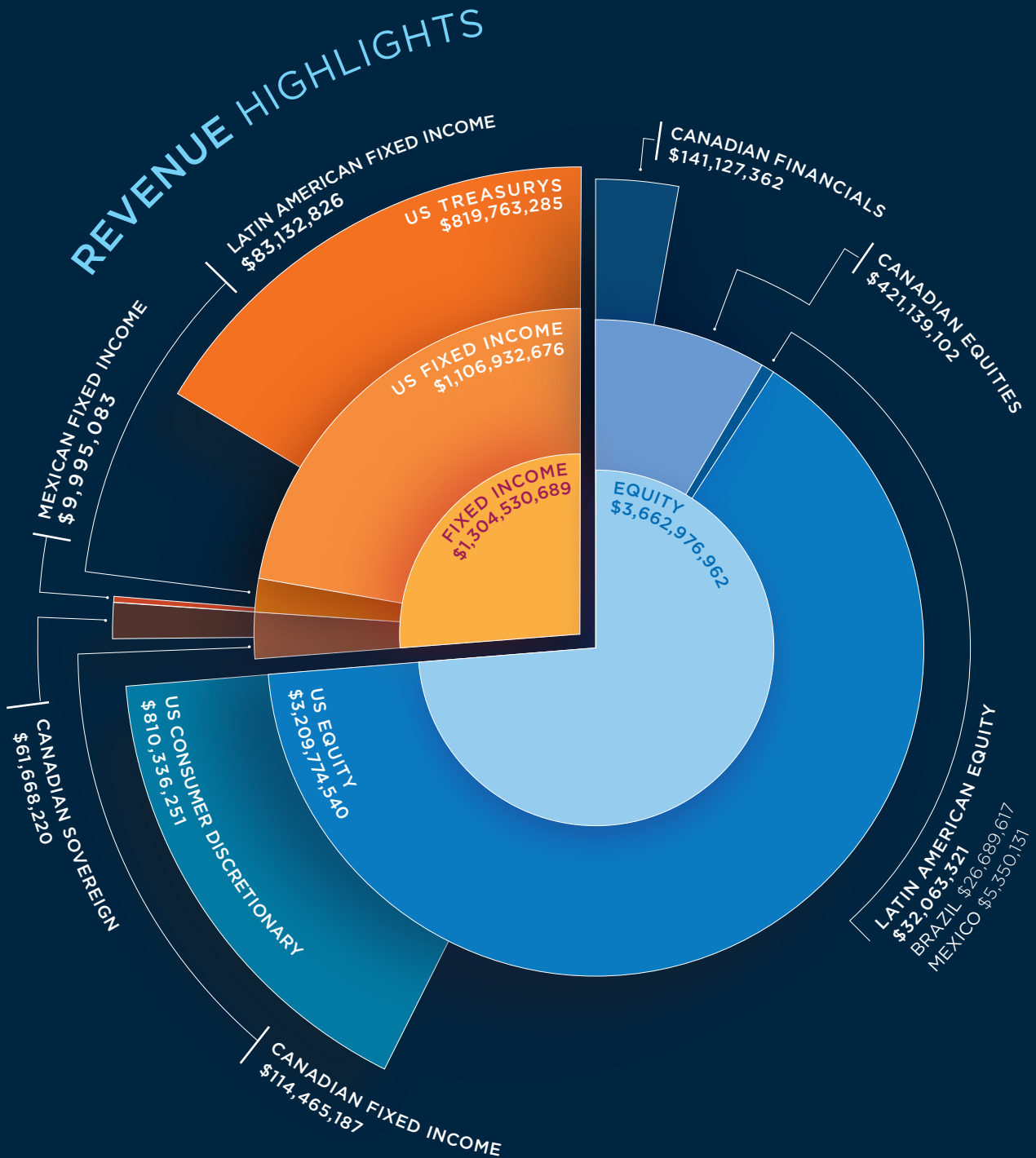
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LENDABLE
\$10.67 TRILLION

ON LOAN
\$1.56 TRILLION

REVENUE
\$4.97 BILLION



AMERICAS

REGION FOCUS: AMERICAS

CONTINUED

profiled previously in *The Purple*—real estate firm Home Capital (H G CN)—which returned \$31.63 million in revenue with an average utilization of 84% in 2017. Revenue from this security was off 17.5% from the \$38.33 million generated in 2016.

Enbridge Energy (ENB CN), another familiar name in the Canadian market, came in as the second highest grossing security for lenders there. It generated \$25.56 million in revenue in 2017, an increase of 23.7% from the \$20.74 million firms earned from lending the stock in 2016.

In the North American fixed income financing market, U.S. Treasuries had

a very strong 2017; they generated \$819.76 million in revenue for lenders with average fees of 14.74 bps and an average utilization of approximately 45%. Compared to the year prior, 2017 U.S. Treasury lending revenue was 77% higher than the \$462.01 million realized in 2016. A main driver for the increased demand for U.S. Treasuries—and sovereign debt globally—was growing demand to borrow high-quality liquid assets (HQLAs) due to ongoing regulatory requirements. U.S. corporate debt was another profitable fixed income security type; lenders earned \$256.22 million in revenue for corporates with fees averaging 34.4 bps and a utilization of 5% for the year.

Demand to borrow Canadian sovereign debt grew as well. The average fee for Canadian sovereigns was 8.5 bps in 2017; utilization was 41.5% in 2017 and revenue \$61.67 million.

In contrast to North America, the lending market in the South/Central America region is dominated by fixed income securities. (Note that while

these bonds may be denominated in non-local currencies and trade out of DTC and Euroclear, DataLend views these as South/Central America bonds based on the country of issue or risk.) South/Central America's securities lending revenue reached a total of \$115.20 million in 2017, \$83.13 million of which stemmed from fixed income lending with higher-than-average fees of 57 bps. Equities earned \$32.06 million in 2017 with fees averaging 122 bps.

Some of the more profitable countries from a securities lending perspective in South/Central America last year included Brazil (\$33.04 million in revenue, down 30% from 2016), Mexico (\$15.35 million, up 3% from 2016) and Chile (\$8.80 million, primarily from lending agency debt, down 67% from 2016). Brazilian insurance company Porto Seguro (PSSA3 BZ) was the most profitable equity security in 2017 for the region, generating \$2.46 million in revenue. ▲





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REGION FOCUS:

EMEA

THE diverse markets of Europe, the Middle East and Africa (EMEA) continue to present opportunities for securities lending participants. Securities in the region returned \$2.55 billion in lending revenue in 2017. Following a trend seen in much of the rest of the world last year, EMEA equity lending revenue was down by 12% year on year to \$1.83 billion. In contrast, a booming fixed income lending market generated \$725.23 million in revenue in 2017, a rise of 17% over 2016 totals. Overall, securities lending revenue in EMEA was down 5% from 2016.

Sovereign debt winners and losers

As in many other markets around the globe, fixed income balances, fees and revenue rose in 2017 over 2016 in EMEA as a whole—though not for all markets in the region.

The most striking increase was in Italian sovereign debt, where market vulnerability concerns triggered an increase in on-loan balances from \$10.35 billion in 2016 to \$25.55 billion in 2017 to achieve revenue of \$31.23 million last year.

Also notable was the solid performance increase in both German and French sovereign debt; on-loan balances grew by almost 20% in these markets to average \$102.36 billion and \$64.55 billion, respectively, in 2017. German sovereign revenue totaled \$195.68 million with average fees of 19.58 bps, and French sovereign debt earned lenders \$104.94 million with average fees of 17.25 bps.

On the other hand, despite on-loan balances increasing by 3.7%, fees to borrow U.K. Gilts dropped year on year by 2 basis points to an average of 14.31 bps. Revenue dropped 9% year on year to \$89.58 million.

Nordic equities

Key Nordic stocks that once returned significant securities lending revenue in years past continued to cool off through 2017, contributing to the 35% revenue decline in the Nordic equity lending market.

Revenue for biometric company Fingerprint Cards (FINGB SF), the biggest European earner in 2016, dropped by 74% year on year as its share price eroded from 2015-16 highs. Even though the stock remained hot and was nearly fully utilized throughout 2017, its average on-loan balance more than halved to \$161.44 million amidst the stock's devaluation and investor sell-off.

The decline of revenue from lending Fingerprint Cards is part of a wider underperformance in the Nordic lending market. Various other hot names in the region—such as Seadrill (SDRL NO), Ericsson (ERICA SF) and Novo-Nordisk (NOVOB DC), to name a few—returned less profit or lenders in 2017 than in the year prior; Nordic equities, excluding Fingerprint Cards, experienced a 27% decline in revenue year on year. Statoil Asa (STL NO), Nordea Bank (NDA SS) and Hennes & Mauritz (HMB SS) remained strong revenue earners to bring in a combined total of \$75.07 million in revenue for lenders. However, these top earners were not able to fully offset the wider decline in the region.

French common shares

Of the securities returning the lion's share of lending revenue in France for 2017, all are common share equities, with notable sectors being Energy and Financials. Total SA (FP FP) retained the #1 revenue-generating spot in the market, albeit with a 6% reduction in year-on-year revenue. This security still generated \$97.98 million in lending revenue with an average utilization of 20%.

Also in the Energy sector, Vallourec SA (VK FP) and Bourbon Corporation (GBB FP) generated healthy revenue in 2017 for lenders. Vallourec saw a nearly 300% revenue boost to \$18.14 million and an average utilization of 88% for 2017. Bourbon revenue was up 19% year on year to return \$8.40 million from very high fees and a utilization of 93%.

The French Financials sector continued to return steady lending revenue, with AXA leading the pack. Although fees to borrow AXA were

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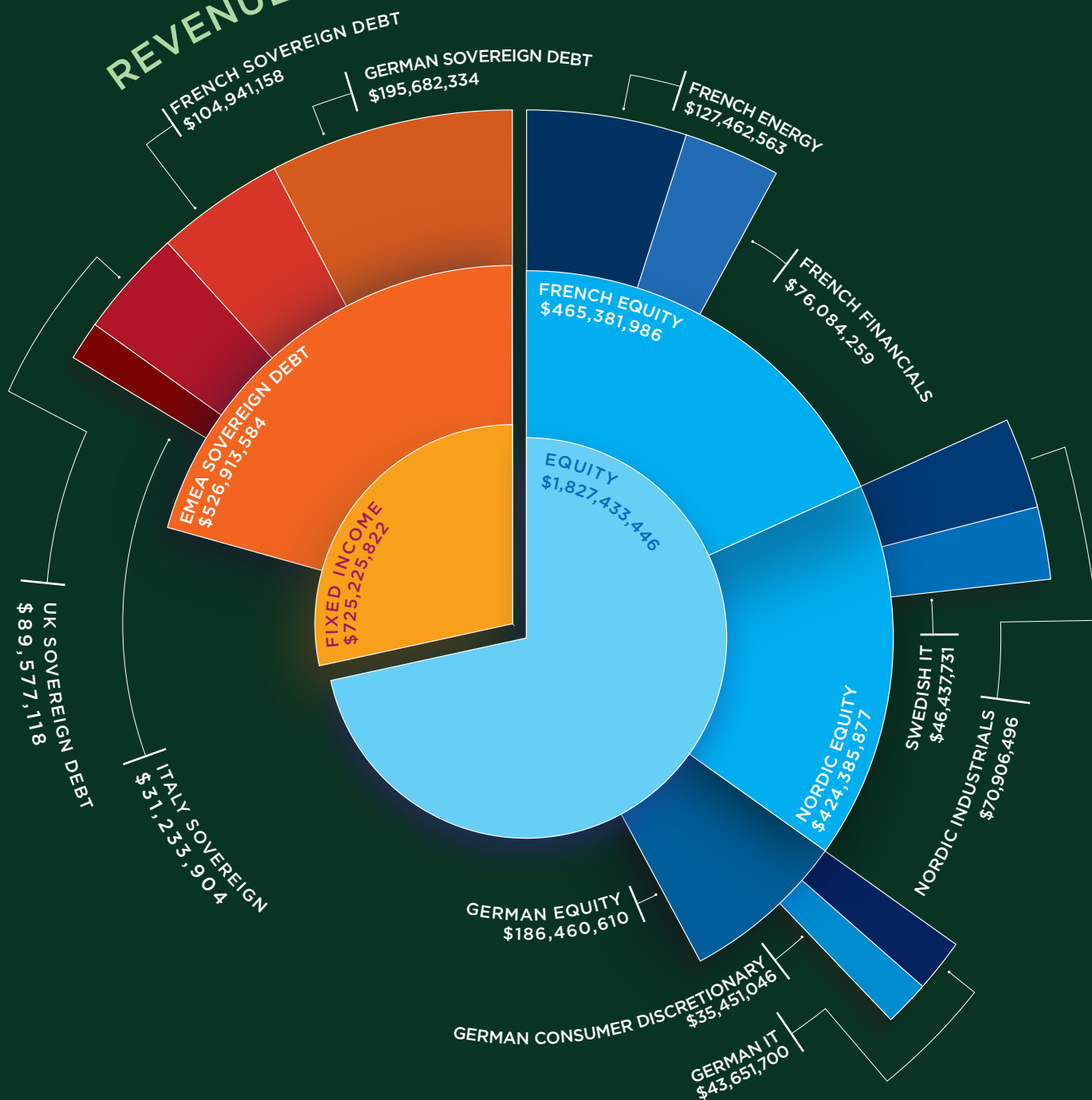


LENDABLE
\$4.20 TRILLION

ON LOAN
\$586.38 BILLION

REVENUE
\$2.55 BILLION

REVENUE HIGHLIGHTS



EMEA

REGION FOCUS:

EMEA

CONTINUED

down somewhat year on year, loan balances trended higher to return \$20.27 million with a utilization of 9.3%. Banks BNP Paribas and Société Générale returned steady year-on-year revenue of \$15.21 and \$11.10 million, respectively. Fees were down significantly for these two stocks on their 2016 levels, but loan balances compensated—up 104% for BNP Paribas and 81% for Société Générale.

ETFs

The demand to borrow exchange-traded funds (ETFs) continued to grow last year as the instrument type regained popularity amongst investors and the hedge fund community. Demand was reflected in a 31% increase in securities lending revenue attributed to EMEA ETFs in 2017, amounting to \$17.49 million last year.

Market participants continue to develop ETFs into a core function of their lending programs by accepting ETFs as collateral and overcoming technological hurdles to source European ETFs. The share of revenue in Europe generated from lending these instruments should be an interesting figure to watch.

Despite a marginal revenue decline as a whole in 2017, the EMEA region continues to show upward trends in both lendable and on-loan balances. Average lendable balances for the region increased by almost 17% from \$3.61 trillion to \$4.20 trillion last year, while average on-loan balances were up by nearly 13% from \$520.04 million to \$586.38 million during the same timeframe. As political and regulatory challenges are shaping (and possibly reshaping) the region, the EMEA markets continue to offer attractive securities lending returns for investors. ▲



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REGION FOCUS:

ASIA PACIFIC

(EX-JAPAN)

WHILE 2017 securities lending on-loan balances remained steady in Asia ex-Japan, fees to borrow securities in the major Asian markets notably declined when compared to 2016. As a result, lending revenue declined by 8% year over year in the region, from \$1.19 billion in 2016 to \$1.09 billion in 2017. That said, while the Asian securities lending market in 2017 started slower than in years prior, it picked up in the second half both in flow and revenue.

Fees to borrow Hong Kong equities stabilized somewhat after a decline in early 2017, averaging just under 125 bps with an average utilization of 9% for the whole of 2017. Lending revenue for Hong Kong equities reached \$336.22 million in 2017, up slightly from the \$333.91 million realized in 2016. Consumer Discretionary was the #1 most profitable sector in Hong Kong, generating \$69.26 million in revenue in 2017, followed closely by the Real Estate sector, which produced \$68.72 million.

Shares of Hong Kong real estate company Fullshare Holdings Ltd (607 HK) continued to experience rising fees through the second half of 2017, overtaking China Evergrande (3333 HK) as the top-grossing stock in the Hong Kong lending market. Fullshare grossed \$29.57 million over the year while competitor China Evergrande generated \$18.44 million for lenders. Consumer Discretionary firm YD Company Ltd (1211 HK), another familiar name on Asia hot stock lists, grossed \$24.54 million. Fullshare, China Evergrande and BYD together comprised 21% of total revenue generated in the Hong Kong lending market.

While Hong Kong real estate stocks are top earners for securities lenders, many are Chinese firms listed in Hong Kong and not always linked directly to the Hong Kong real estate market. See “Accessing China” in this issue to explore this dynamic in further detail.

Despite rising tensions with the North for most of 2017, South Korea continued to see borrowing fees erode last year relative to 2016. South Korean equities grossed \$305.47 million with

fees averaging 286 bps and an average utilization of 9.51%. This represents a year-over-year revenue drop of 21.6% from the \$389.86 million generated lending South Korean equities in 2016.

Health Care continued to be the highest-earning sector in the South Korean lending market with \$113.81 million in revenue generated last year. Well-known biotechnology firm Celltrion (068270 KS) was once again the most profitable security firm from South Korea (and was the #2 most profitable in all of Asia) with \$43.21 million earned for lenders. However, this represents a massive drop from the \$147.97 million in revenue realized from lending Celltrion in 2016. Chemical firm OCI Company (010060 KS), the second most profitable security in South Korea, yielded \$15.94 million.

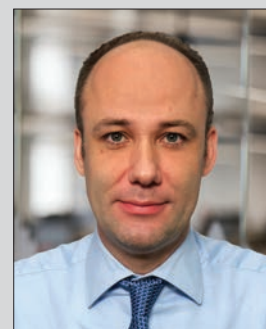
With the regional focus on the Korean lending market in recent years, it will be interesting to see how the road ahead for many of the *chaebols* will impact the profitability of the market longer term. Additionally, possible future changes in collateral requirements from onshore lenders may make a meaningful difference with regard to the split in balances between onshore and offshore lending.

In Australia, the securities lending market generated \$117.06 million in revenue last year, a 5% dip compared to the \$123.51 million from 2016. While the Consumer Staples sector was a top revenue-earning sector in Australia in the first half of 2017, average fees to borrow securities in the sector dropped in the second half from 90 bps to 66 bps by the end of the year. As a result, Consumer Staples generated \$20.42 million for the full year, ultimately eclipsed by the Materials sector, which grossed \$27.02 million to become the most profitable sector in Australia last year. Retailer Blackmores (BLK AU) was the highest-earning name in Australia for lenders in 2017, yielding just shy of \$10 million in lending revenue. The Commonwealth Bank of Australia (CBA AU) was the second most profitable security with \$5.74 million in revenue.

While Hong Kong saw a meager increase in lending revenue and both Australia and South Korea saw year-over-year revenue decreases in 2017, Taiwan bucked the regional trend to generate \$219.81 million with fees averaging 265 bps in 2017, up 14% from the \$192.17 million observed in 2016. Information Technology again was the most profitable sector in the market last year, grossing just under \$133 million with fees averaging 276 bps. Technology Hardware and Equipment firm H C (2498 TT) was the largest revenue-generating name in Taiwan last year, bringing in \$9.35 million in revenue for lenders. AU Optronics (2409 TT) came in a close second with \$7.43 million in revenue.

Outside the robust Japanese market, much of the securities lending revenue generated in the region is concentrated in just a small number of stocks, making it susceptible to volatility. For the foreseeable future, the constant questions remain in Asia regarding ever-changing regulations, the opening up of China, what will happen in India and when and if additional markets will open to lending soon. ▲

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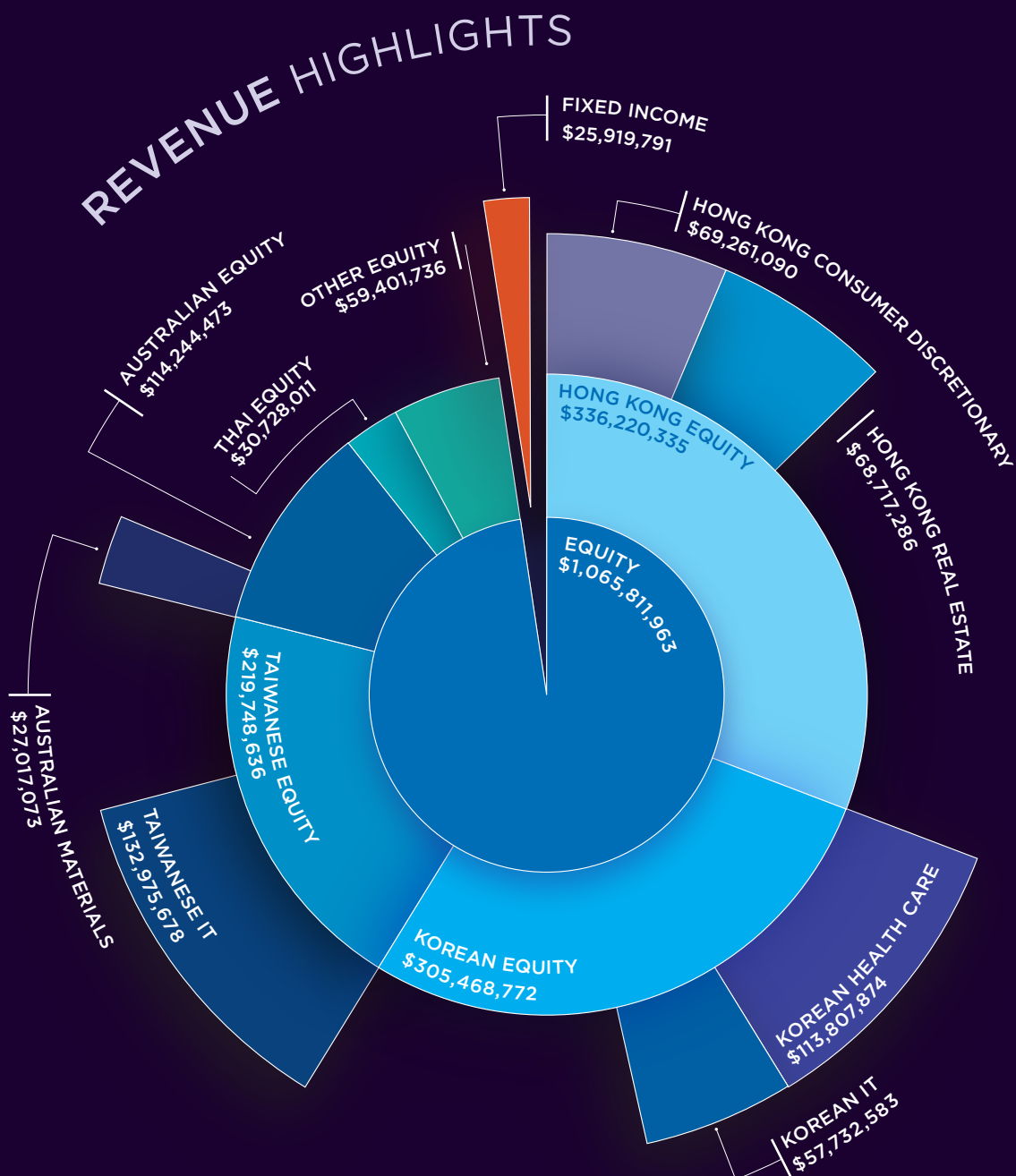
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LENDABLE
\$1.02 TRILLION

ON LOAN
\$88.78 BILLION

REVENUE
\$1.09 BILLION



ASIA PACIFIC (EX-JAPAN)

JAPAN

BY YUKA HASUMI, VICE PRESIDENT, SALES, EQUILEND ASIA

AVERAGE LENDABLE

\$717.86
BILLION

AVERAGE ON LOAN

\$87.81
BILLION

TOTAL REVENUE

\$613.62
MILLION

DATA FROM JANUARY 1 TO DECEMBER 31, 2017

A SURGE in IPOs across numerous industries in 2016 combined with increased corporate event activity last year helped to boost the equities market in Japan. As a result of growing optimism, the Japanese stock market surged to its highest level in a quarter century in 2017.

Japan's securities lending industry also fared very well again last year and retained its dominant position as the largest securities lending market in Asia, with over 3,800 unique securities on loan and 4,800 lendable. The market saw a daily average on-loan balance of approximately \$87.81 billion with an average lendable balance of \$717.86 billion last year, giving it an overall utilization of 12% for 2017.

The average cost of borrowing equities in Japan rose from 63 bps to 87 bps from the beginning to the end of 2017, an almost 40% increase year over year. When viewing fees as a percentage of total on-loan balances, Japan saw a shift away from balances below 20 bps into larger balances within the warmer 20 to 50 bps range, thus pushing the average fees to borrow Japanese assets higher overall throughout 2017.

The increased fees to borrow Japanese assets resulted in \$613.62 million in gross revenue for securities lending participants in 2017, a noteworthy 29% increase over the \$475.05 million generated in 2016. The result makes Japan one of the best-

performing securities lending markets in the world last year. Japan was responsible for more than a third of all securities lending revenue generated in Asia in 2017.

Revenue from the top-five earning securities in Japan rose to \$135.10 million in 2017, almost tripling first-half 2017 revenue of \$52 million. The top-five earners increased as a percentage of total market revenue from 17% in 2016 to 22% year over year.

The top revenue-grossing sector in Japan in 2017 was Information Technology, generating \$155.47 million with fees averaging 152 bps for the year and an average utilization of just under 13%. IT was followed closely by the Consumer Discretionary sector, which generated \$155.45 million with fees averaging 93 bps and an average utilization of 13.2%.

The top revenue drivers in the Japanese IT sector included software firm Line Corp (3938 JP), which generated \$14.31 million for securities lenders in 2017. Japan Display Incorporated (6740 JP) was another popular borrower in Japan, grossing \$9.70 million in revenue last year.

In the Consumer Discretionary sector, electronics firm Sharp (6753) remained the largest revenue maker in Japan by far, totaling \$64.92 million for the year, equivalent to more than 10% of Japan's total revenue with one of the highest borrowing rates in the Japanese equity

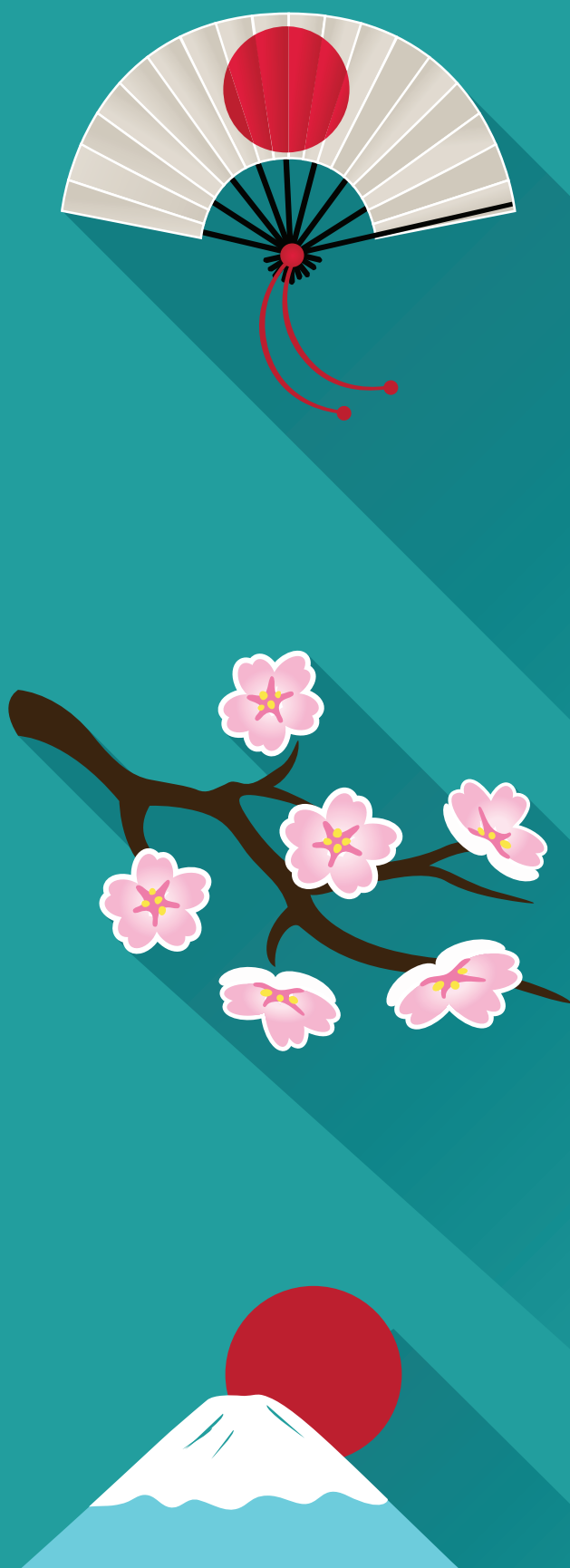
space. Toyota Motors (7203 JP) was a distant number two in this sector, generating \$3.74 million with low fees.

While not the most lucrative sector, Health Care was definitely the hottest in Japan last year with fees averaging a high 164 bps to realize \$79.62 million in revenue.

Revenue from the Health Care sector was driven predominantly by securities including equipment and supplies manufacturer Cyberdyne (7779 JP), which generated \$35.62 million, biotechnology company Peptidream (4587 JP), \$10.55 million, and pharmaceutical firm Sosei Group (4565 JP), \$6.15 million.

Japan differs from many of its neighbors in Asia in that it hosts a very robust fixed income lending market. The bond lending market also contributed to Japan's position as the top revenue earner in the region, adding \$14.04 million from fixed income lending fees averaging 8.5 bps last year. Japanese sovereign debt was responsible for nearly \$10 million of that figure.

Over the past few years, much attention has been paid to smaller but hotter and more volatile Asian markets such as South Korea, Taiwan and Hong Kong. However, with Japan outperforming the rest of Asia and many other countries in 2017, the securities lending industry may see focus shifting back to this quieter, more established market in 2018. ▲



HOTTEST SECTORS



HEALTH CARE
164 BPS



INFORMATION TECHNOLOGY
152 BPS



CONSUMER DISCRETIONARY
93 BPS



REAL ESTATE
76 BPS



INDUSTRIALS
61 BPS

AVERAGE FEES, JANUARY 1 TO DECEMBER 31, 2017

TOP 5 EARNING SECURITIES

Sharp Corp Npv	\$64,912,438
Cyberdyne Inc Npv	\$35,618,811
Line Corp Npv	\$14,313,112
Peptidream Inc Npv	\$10,553,681
Toshiba Corp Npv	\$9,702,649

TOTAL REVENUE, JANUARY 1 TO DECEMBER 31, 2017

HONG KONG

BY ROBERT ANTELMANN, PRODUCT SPECIALIST, DATALEND

AVERAGE
LENDABLE

\$316.94
BILLION

AVERAGE
ON LOAN

\$27.76
BILLION

TOTAL
REVENUE

\$338.65
MILLION

DATA FROM JANUARY 1 TO DECEMBER 31, 2017

THE ASIAN securities lending market continues to be dominated by the Japanese, Hong Kong, South Korean, Australian and Taiwanese markets. Japan remains the undisputed king in regional equities lending, representing almost 50% of regional on-loan balances and generating 36% of the region's revenue; however, Hong Kong scored second place in Asia for equity on-loan balances, averaging \$27.38 billion, or a little over 19% of total lender-to-broker balances in Asia.

Despite a smaller loan book than Australia and lower average fees to borrow than South Korea, Hong Kong equities still managed second place in revenue in Asia after Japan, totaling \$336.22 million last year, up slightly from the \$333.91 million realized in 2016. Fees to borrow Hong Kong equities averaged just under 125 bps with an average utilization of 9% for 2017.

Consumer Discretionary was the most profitable sector in Hong Kong with \$69.26 million in revenue in 2017, followed closely by the Real Estate sector, which generated \$68.72 million. Consumer Discretionary firm YD Company Limited (1211 HK) was the top-grossing name in the sector with

\$24.54 million in revenue generated last year. Retailer Cogobuy Group (400 HK) realized \$4.94 million in securities lending revenue from very high fees.

The top five earners for Hong Kong in 2017 were dominated by the Real Estate sector. Fullshare Holdings Ltd (607 HK) continued to see rising fees through the second half of 2017, overtaking China Evergrande (3333 HK) as the top-grossing stock in Hong Kong. Fullshare grossed \$29.57 million over the year, while China Evergrande generated \$18.44 million; Sunac China Holdings (1918 HK) came in with \$8.06 million in revenue. These three names were responsible for 17% of Hong Kong's total revenue last year.

The Hong Kong Real Estate sector may come under continued pressure with further increases in U.S. interest rates anticipated in 2018. The Hong Kong Dollar's peg to the USD is expected to translate into increased borrowing costs, hence downward pressure on the world's most expensive real estate market.

Fixed income lending in Asia is primarily focused around the domestic Japanese and Australian markets, along with the trading of European and U.S.

assets out of the Asian time zones.

While Hong Kong doesn't have the same depth of inventory or participants as its Japanese or Australian counterparts, it does exhibit a healthy mix of corporate, convertible and sovereign debt.

Hong Kong fixed income on-loan balances averaged \$376.58 million over 2017 at an average borrow fee of almost 84 bps for the year. Hong Kong corporate debt dominates the majority of that balance with a daily average on-loan balance of \$353.19 million last year with fees averaging just under 83 bps to generate \$2.22 million in revenue.

The largest revenue earners in Hong Kong corporate debt were an issue from Bagan Capital Limited and a bond from Bank of East Asia Limited, generating almost \$300,000 from those two securities.

(It is worth noting that these bond issues are primarily traded out of Euroclear, not domestically.)

As Singapore and Hong Kong battle to list new shares of Chinese companies on their respective exchanges, it will be interesting to see how the securities lending market in Hong Kong—and the region at large—evolves over time. ▲



HOTTEST SECTORS



REAL ESTATE
218 BPS



MATERIALS
186 BPS



HEALTH CARE
180 BPS



CONSUMER DISCRETIONARY
157 BPS



INDUSTRIALS
143 BPS

AVERAGE FEES, JANUARY 1 TO DECEMBER 31, 2017

TOP 5 EARNING SECURITIES

Fullshare Holdings Ltd \$29,567,362

BYD Company Limited "H" \$24,541,921

China Evergrande Group \$18,444,031

Semiconductor Manufacturing \$10,605,676

Sunac China Holdings \$8,064,219

TOTAL REVENUE, JANUARY 1 TO DECEMBER 31, 2017

A DAY IN THE LIFE OF

CRAIG DONOHUE

EXECUTIVE CHAIRMAN & CHIEF EXECUTIVE OFFICER, OCC


Tell us about your role as CEO of OCC. What does a typical day look like?

When you work in financial services, I am not sure there is a typical day. One day I can be in Washington, D.C., meeting with policymakers on behalf of our industry. Another day I can be meeting with members of our board of directors or management team on various strategic issues. I also talk on a regular basis with the heads of our partner exchanges as well as with some of our clearing firms. Plus, I always try to make myself available to any of my colleagues in our Chicago, Dallas or Washington, D.C., offices. The variety makes my job challenging and rewarding in terms of what we are accomplishing as an organization. I am very fortunate to work every day with some very talented people at OCC, not only at the management level, but at all levels of the company. Whether it is in our quarterly town hall meetings, our regularly scheduled "CEO Office Hours" sessions or when I run into a colleague in the hallway, there is a common thread in that they all understand the important role OCC plays in financial markets and that they are making a contribution to enhancing our resiliency and operational excellence so we can better serve market participants and help drive growth for the U.S. exchange-listed options industry.

What is the biggest challenge you face in your position?

One of the biggest challenges I face in my position is how OCC can continue to safeguard the integrity of cleared markets in our role as a Systemically Important Financial Market Utility. We have a responsibility as the foundation for secure markets to help reduce systemic risks, increase transparency and provide market participants with capital and collateral efficiencies. This last point is very important for the options industry market makers, who are being challenged by potential changes to market structure. Price may be important to market participants, but so are execution certainty and size visibility. Whatever regulatory changes occur in 2018, it is important that the real-world impact of any changes is considered, as they could impact market liquidity and trading volume for options market makers who are the lifeblood of our industry.

Central clearing is picking up steam in the securities lending market. How has the clearing landscape changed throughout your career?

The ecosystem in which securities lending transactions take place has been evolving for some time, and for several reasons. Regulatory change has sought to reduce risk in the financial system by increasing capital requirements, improving risk management systems and processes and by encouraging such activity to be centrally cleared. This has resulted in increased demand for central counterparties like OCC to expand the number of solutions they provide to the market. As a result, our securities lending program has evolved over time from providing margin efficiencies to delivering capital and credit efficiencies which in turn make OCC a more compelling value proposition for market participants. We continue to work with an industry coalition to refine the clearing model to allow for expanded participation in our clearing solution. The migration from non-cleared bilateral transactions to clearing will improve

the resilience and profitability of market participants. This is consistent with OCC's mission of promoting stability and market integrity through efficient and effective risk management, clearing and settlement services.

What is your proudest moment on the job?

When I joined OCC as executive chairman in 2014, things had fundamentally changed at the company. While OCC had a great track record of success for its first 40 years as the options markets grew and became more mature, the fundamental change came in the form of the Dodd-Frank legislation and OCC's designation as a Systemically Important Financial Market Utility. OCC was a solid organization operationally and in terms of the quality of its risk standards. However, it had fallen behind the curve in terms of adjusting to new regulatory requirements, and there was a heightened expectation on the part of regulators and market participants, particularly as it related to capital, financial and risk management-related resiliency. The challenge facing all of us was how we were going to meet that expectation, and I can say I am most proud of how my colleagues in Chicago, Dallas and Washington, D.C., have worked so hard to help OCC work to meet this expectation as our company evolves from being not only a market utility, but also an industry influencer. We now are laser-focused on strengthening our resiliency, accelerating the change process to adapt to a very different regulatory environment and enhancing our talented team of colleagues across all levels of our company.

What was OCC's role in the launch of Bitcoin futures?

On December 10, 2017, OCC became the first clearing house to successfully clear Bitcoin futures with the launch of the CBOE's new contract, and it is clear that 2018 is presenting itself as the year of institutionalized trading of cryptocurrency derivatives. We have the risk management infrastructure in place to support the launch of such



innovative products, but it will be critical for the industry to remain alert to the volatility that comes with Bitcoin and related cryptocurrencies. We have a great deal of confidence in our system for theoretical analysis and numerical simulations margining system, which has a two-day liquidation horizon, to handle products with this kind of volatility, although the volatility levels of Bitcoin-like currencies are less relevant for a central counterparty that clears related futures trades due to our not less than daily mark-to-market settlements among clearing firms. Only time will tell how Bitcoin performs in a regulated setting, so it will be equally important for OCC and regulatory bodies like

FINRA, the SEC and the CFTC to monitor how the product stands up against concerns around its volatility.

What lies ahead for OCC in 2018?

We have a full agenda for this year. Given that technology is at the core of everything we do, in late 2017 we initiated the process to evaluate options for replacing our 20-year-old Encore clearing platform and related infrastructure with a modularized system that will use an OCC-specific data model and warehouse. When it is done, this project will deliver a more nimble and self-controlled system that will lower our costs while providing our clearing firms and participating exchanges with

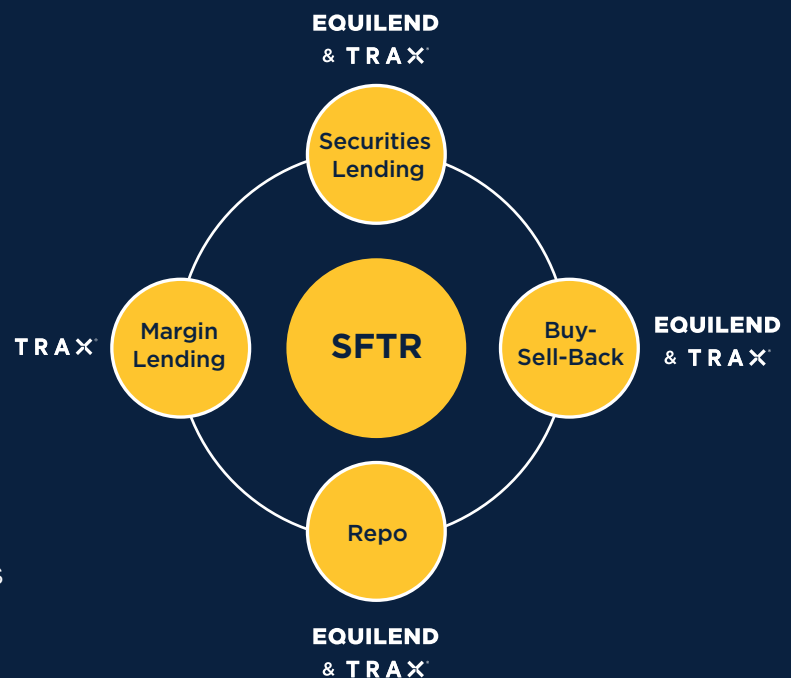
additional capabilities. We also will continue to improve our stress testing capabilities and enhance our information security while we support the launch of innovative new products by our participating exchanges and the growth in our securities lending program. All of this will be accomplished while we continue to provide high-quality and efficient clearing, settlement and risk management services in a cost-effective manner with operational excellence. ▲

Craig Donohue
Executive Chairman &
Chief Executive Officer
OCC
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THE INTEROPERABLE EQUILEND AND TRAX SFTR SOLUTION

MANAGING THE COMPLEXITIES OF SFTR

- A full front-to-back SFTR solution
- Leveraging existing functionality and connectivity
- Coverage of all SFTR-eligible asset classes
- Transaction and collateral reconciliation and matching across all required fields
- Report enrichment with reference data via Trax Insight™
- Seamless management of delegated reporting arrangements for either two-sided or single-sided reports



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