Securities Finance Quarterly Review

Q3 2019

Welcome to the Q3 Quarterly review.

As you will read in this review, Global securities lending revenues for Q3 2019 were $2.6bn, 4.7% above Q3 2018 revenue, making Q3 the first quarter of 2019 to deliver YoY revenue growth. The big story of Q3 was continued increase in North American equity specials, most notably Beyond Meat, whose revenues could be described as almost beyond belief. Excluding North American equities, global revenues were lacklustre in comparison with Q3 2018. Government bond lending and Asian emerging markets, which were both key to the post-crisis revenue peak in 2018 have continued to decline through Q3 2019.

Despite the summer recess, the quarter was rather busy. We were quite pleased with the feedback on our **New York forum** held in September. We were fortunate to hear from a broad array of market participants and commentators. At the forum, we heard that investments in technology for all firms continue apace, with the outlook for innovative technology increasing through 2020 and beyond. There was a reminder that whilst exciting opportunities do exist and disruptive technologies are becoming more prevalent, operational efficiencies cannot be compromised. Data and the use of data featured quite prominently as well. We received positive feedback on our enhanced lender league tables and borrower cost optimization tools, and discovered that more organizations are looking for data to drive problem solving and new opportunities. The audience appreciated the clients that participated in the Hedge Fund panel, as it provided insight into demand dynamics and into what type of lender/supply makes a good counterparty. As an FYI, **the London Securities Finance Forum will take place on 24 March 2020**.

I am pleased to advise that we implemented a new revamped and more intuitive **Quotes** page in the portal in September. Client feedback and reaction has been overwhelmingly positive, especially around the more logical organization of data and the ease of navigation. We are now working on a similar exercise to overhaul the benchmarking page, which should be released later this quarter.

I would be remiss if I did not take the opportunity to thank our clients for their feedback in the **Global Investor ISF Survey**, the results of which were announced a few weeks ago. We were delighted to receive four awards within the Data Vendor category, namely APAC Single Vendor, EMEA Two vendor, EMEA Three vendors and APAC Three vendors (tied). This has been a very positive year and it is always gratifying to be recognized, so thanks to all who voted.

Regards,

Paul R. Wilson

Managing director and global head of Securities Finance, IHS Markit

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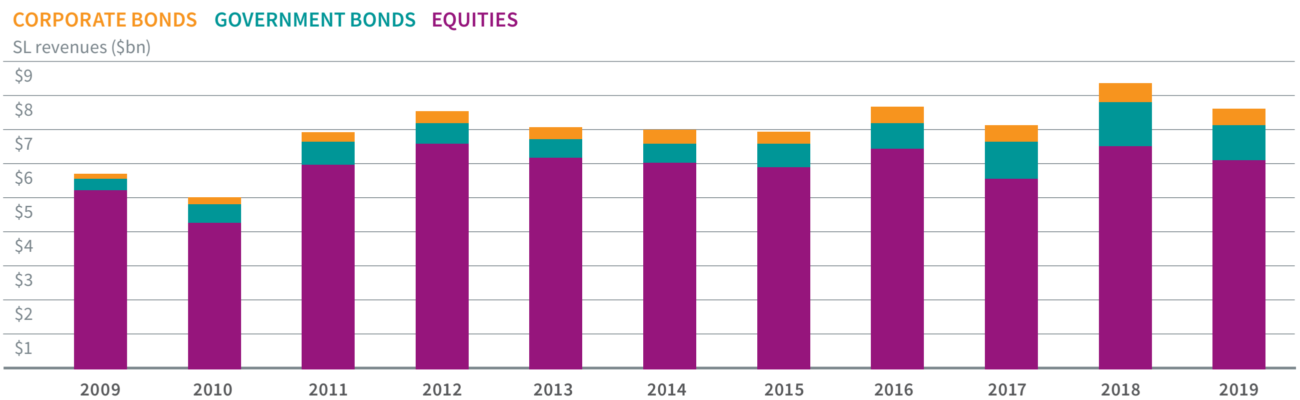
Securities Lending Q3 Update

$2.6bn in securities lending revenue

- Equity specials in North America drive revenue growth
- Asia and Europe see declining equity revenues
- Declining fixed income fees weigh on returns

Global securities lending revenues for Q2 2019 were $2.6bn, 4.7% above Q3 2018 revenue. That makes Q3 the first quarter of 2019 to deliver YoY revenue growth. Increasing demand for hard to borrow equities in US and Canada resulted in the highest quarterly revenue for North American equities since 2008, $1.1bn. The weighted average fee across all asset classes increased by 12% YoY. While increasing fees supported the revenue growth, the 7% YoY decline in loan balances served as a drag on returns.

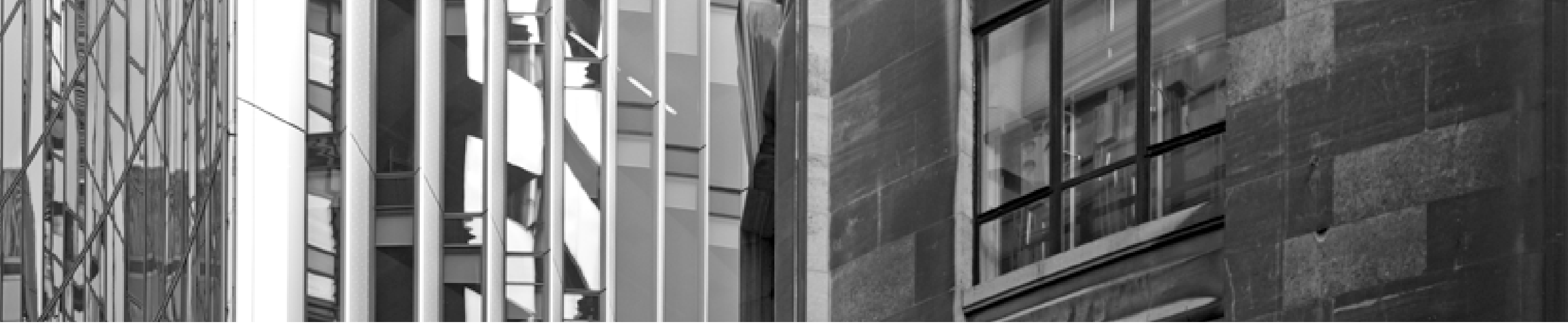
YTD Securities lending global revenues



In the Q2 update we noted the pickup in equity specials demand in May and June, which was encouraging given the shortfall in equity lending revenues in the first half of the year. The big story of Q3 was continued increase in North American equity specials balances and fees. The upswing largely came as the result of IPOs and Cannabis related equities. Beyond Meat has undoubtedly been the outstanding security of the year in terms of revenue, with eye-popping fees paid by borrowers on what is now one of the largest US equity short positions in nominal terms. Total revenues for lending BYND shares are easily the highest for any security YTD, $250m, an impressive feat given the firm didn't IPO until the first week of May.

Q3 GLOBAL TOP REVENUE GENERATING SECURITIES

Ticker	Name	Q3 Revenue	YTD Revenue	Market	Industry Group
BYND	Beyond Meat Inc	$198	$250	US Equity	Food, Beverage & Tobacco
WEED	Canopy Growth Corp	$54	$107	CA Equity	Pharmaceuticals, Biotechnology & Life Sciences
NIO	Nio Ads Rep 1 Cl A Ord	$47	$107	CN ADR	Automobiles & Components
CO	Casino Guichard Perrachon Sa	$41	$64	FR Equity	Food & Staples Retailing
ACB	Aurora Cannabis Inc	$38	$90	CA Equity	Pharmaceuticals, Biotechnology & Life Sciences
OSTK	Overstock.Com Inc	$33	$49	US Equity	Retailing
DDS	Dillard'S Inc	$29	$31	US Equity	Retailing
TLRY	Tilray Inc	$27	$64	US Equity	Pharmaceuticals, Biotechnology & Life Sciences
AXDX	Accelerate Diagnostics Inc	$21	$51	US Equity	Pharmaceuticals, Biotechnology & Life Sciences
ZM	Zoom Video Communications Inc	$21	$24	US Equity	Software & Services

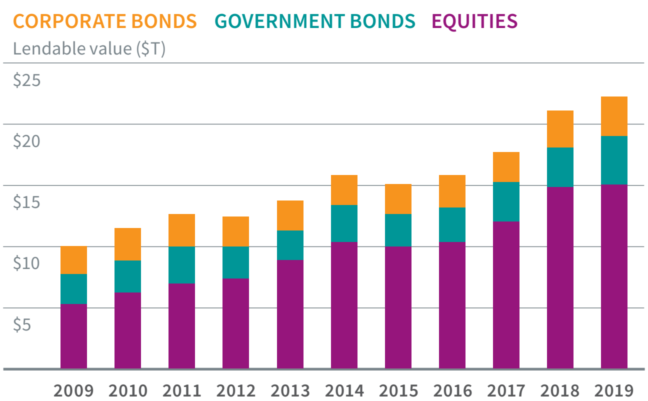


The boost in specials related revenue helped deliver $924m in Q3 US equity lending revenue, the most for any quarter since Q3 2008's $1.1bn record. The Q3 US equity returns narrowly edged out Q4 2015 and Q1 2016 which both had just over $900m.

Total equity lending revenues came in at $2.1bn, an 11% increase compared with Q3 2018. All the growth was in North America, with the rest of the world seeing a 13% decline in equity revenues. North American equities delivered 42% of all securities lending revenues in Q3, the highest ratio since Q4 2015.

Revenues in Asia were down 14% YoY as the growth in value on loan YoY was insufficient to cover the decline in average fees. The revenue decline was concentrated in emerging markets and was driven by declining demand and fees for previously hard to borrow equities. The top 10 Asian equities returned $61m in Q3 revenues, down from $76m in Q2. Revenues in Japan declined 1.3% YoY, belying a 29% increase in balances and nearly offsetting decline in fees.

Global securities lending global lendable assets



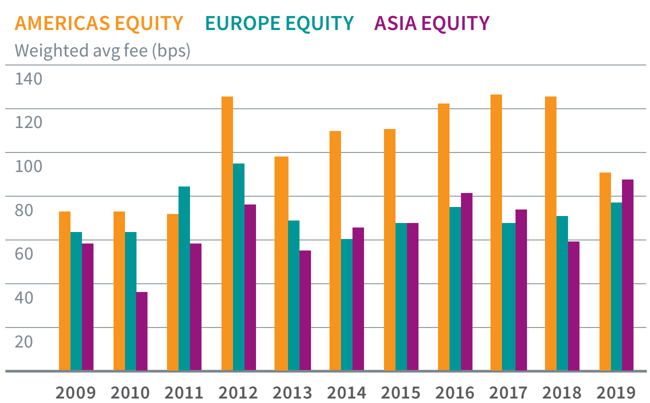
European equity lending revenues declined 13% YoY in Q3, as the result of a 20% decline in balances and an 8% increase in fees. The standout security in the region for Q3 was Casino Guichard Perrachon; Fees soared on a decrease in lendable assets and balances increased with the 46% increase in the share price. As a result of the surging Casino revenues French equities delivered the most Q3 revenue since 2012, $86m. UK equities were the only major EU market to see YoY growth in Q2, however Q3 revenues shrank by 16% in Q3 as the result of a 4% decline in average fees and an 14% decline in average balances.

ETF lending revenues continue to underperform relative to 2018; Q3 revenues came in at $77m, a decline of 10% compared with Q3 2019. Borrow demand for exchange traded products remains robust, with Q3 balances 11% higher YoY. The decline in revenues is primarily the result of lower fees for the high-yield credit products. Reflecting the continued adoption trend for exchange traded product, both the AUM and total lendable assets reached new all-time high in Q3.

The general theme in fixed income was declining revenue largely as the result of declining fees, however balances for government bonds and corporates both declined YoY in Q3. Government bond lending revenues peaked in Q1 2018 at $470m before trending steadily downward through the first three quarters 2019. There were some opportunities to lend government bond specials, most notably the US 10Y and the CA 30Y. The major story in sovereign lending in Q3 was the spillover from repo funding markets, which saw the rebate for financing transactions in UST's increase to 440bps on September 17th.

Corporate bond lending revenue fell 18% YoY, with Q3 revenues of $151m. The delta was almost entirely driven by a 17% decline in fees while average balances fell 1.6%. While the year over year comparison is harsh, revenues were little changed from the Q2 2019 total. USD corporate bond lendable assets reached a new all-time high in Q3, $2.3T, a 21% YoY increase.

Q3 regional equity weighted average fees



Wrap-up:

Revenues for Q3 saw some growth YoY, as the increase in equity revenues in North America were enough to offset declines in most other regions and asset classes. Revenues for the first half of 2019 declined 15% relative to first half of 2018, however H1 2018 was the best six-month span post-crisis. Through Q3 the YTD global securities lending revenues are $7.6bn, down 9% compared with the first three quarters of 2018. The mix of revenue drivers has evolved in recent years. At the outset of 2018 fixed income was all-important. Government bond lending saw the highest post-crisis revenue in Q1 2018. Credit followed suit with Q2 2018 delivering the most return to lending corporate bonds. While fixed income was the headline in the early going of last year, EM equity loan balances were also increasing and reached an all-time peak in June 2018. The growth in EM demand led Q3 2018 to be the best quarter on record for Asia equity lending. Then came Q4 2018. The decline in global asset values put pressure on returns. In Q4 2015 and Q1 2016 an increase in equity short positioning and specials delivered outsized returns despite the sell-off. In that case equity short sellers were badly burned in the latter portion of 2016, which may have caused some reticence in getting pressing shorts in Q4 2018.

The theme of Q3 was the return of specials balances North America, while other regional equity markets and fixed income lagged historical returns. The supply of government bonds appears to have caught up to the demand for HQLA, which has continued to cool the revenue stream from lending those assets. The lofty returns to sovereign debt investors YTD have also hurt borrow demand for those instruments, as short bets on rates instruments have gone awry with the US Federal Reserve cutting rates. Through that lens the steady demand for corporates is rather upbeat, despite the lower fees. Demand for hard to borrow emerging market equities has taken a step back, particularly in Asia. Those three former growth leaders for securities lending revenue, namely Asia equity, government bonds and corporate bonds, all took a backseat to the largest market by revenues, balances and lendable assets: US equities. The mid-teen percentage YoY revenue decline for the former growth asset classes were similar in Q3, however the decline in non-financing fees and balances for UST sticks out given the backdrop of rate cuts in the US. The surge in revenues from lending US Treasuries started with the first rate hike in 2015, suggesting that if the trend toward rate cutting remains in place we will likely see further downtrend in lending revenues for those securities. While the decline in sovereign debt lending revenues may be structural, the return of specials demand in North American equities is a most welcome offset.

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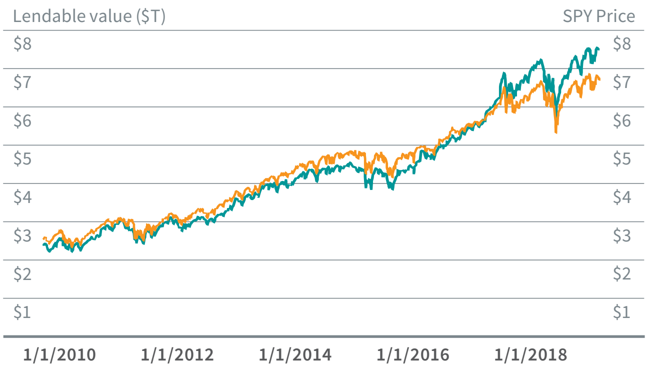
Growth in S&P 500 lendable assets

- 75% of S&P 500 lendable growth from appreciation
- S&P 500 lendable value all-time high $7.5T
- Utilization has declined 45% since 2010

There has been notable growth in lendable assets in recent years, with the supply generally exceeding borrow demand growth. The outpacing of demand growth has in turn pushed down on utilization and return to lendable for beneficial owners. We have broken the growth in S&P 500 lendable assets by increases in market value and increases in shares being added to lending programs.

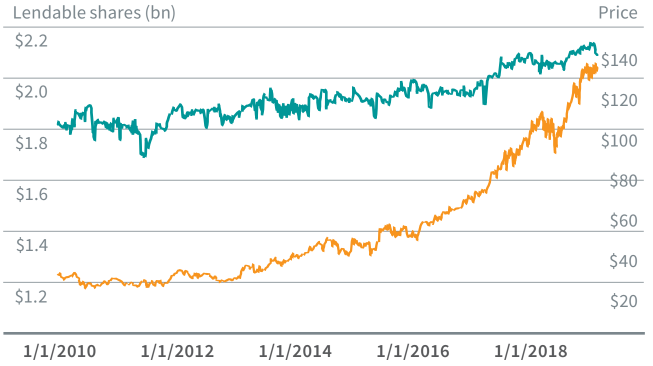
Total lendable value across S&P 500 firms has grown from $2.3T to $7.5T since the start of 2010. To determine the contribution of share price appreciation relative to shares being added to lending programs we compare the constituent level change in shares at the current price with the change in price at the initial number of shares.

S&P 500 constituent lendable & SPY price



We'll use MSFT as an example of the process for decomposing the source of lendable asset growth. At the start of 2010 there were 1.8bn MSFT shares reported as lendable assets, which increased to 2.1bn shares at the end of Q3 2019. That 239m increase in lendable shares represents $33bn at present, ie. the contribution to current lendable value from the addition of new shares to lending programs. Looking at the impact of appreciation, the 1.8bn shares already in lending programs at the start of 2010 were worth $56bn at the time; After the 356% appreciation through the end of September the value of those shares increased by $200bn, reflecting the contribution to current lendable value from appreciation. Putting the pieces together, the value of MSFT shares in lending programs has increased by $233bn since the start of 2010; 86% of the increase ($200bn) came from appreciation while 14% of the increase ($33bn) was the result of shares being added to lending programs.

Microsoft shares in lending programs & share price



Looking at the constituent level there is a wide distribution of the lendable growth ratio. For example, Verizon only had 31% of the increase in lendable value as the result of share price appreciation, with the shares in lending programs more than doubling while the share price only increased by 82%. In contrast General Electric saw a $13bn decline in lendable assets since the start of 2010, with a $14.5bn decline owing to share price decline set against a $1.4bn increase resulting from shares being added to lending programs.

Aggregating up to the index level we see total S&P 500 assets increased by $5.3T since the start of 2010, with 75% ($4T) coming as the result of appreciation of assets already in lending programs at the start of 2010, while 25% ($1.3T) was the result of shares being added to lending programs.

There are many drivers of the increase in lendable assets, from lenders who had dropped out in the immediate aftermath of the 2008 financial crisis, to those who had never lent considering the practice for the first time. In the US there has been the suggestion that the 40 Act lending disclosures have spurred new interest in lending assets, given the increased visibility of revenues to non-participants. There are also broader applications of the product in risk, collateral and funding for beneficial owners which have also introduced new supply to the market. While the marginal decision to lend has an impact on aggregate supply, the larger force over the last decade has been share price appreciation.

If the drivers of increasing lendable remain in place it is fair to assume there will be further increases in the fee for hard to borrow shares; With utilization and return to lendable assets falling, increasing fees where possible is the available offset for lenders. For the S&P 500, utilization of lendable assets has decreased by 45% since the the start of 2010.

APAC Equity

Decline in EM specials remains in place

Asian equity lending delivered $479m in Q2, down 14% from Q3 2018. Although Asian EM equity revenues have been subdued this year, Q3 revenues were 1.5% higher than those in Q2. The lower 2019 revenues were driven by a reduction in average fees, while loan balances increased by 17% YoY as the result of increasing loan balances in Japan. The top 10 Asian equities returned $61m in Q3 revenues, down from $76m in Q2.

The shortfall in revenues relative to 2018 has been primarily in the emerging markets, most notably South Korea and Hong Kong, both of which saw Q3 revenues decline by nearly 30% YoY. The shortfall was the result of lower fees for previously hard to borrow shares, which was the result of lower demand in some cases and increased supply in others.

Japanese equity revenues totaled $217 million for Q3, a 1.3% decline compared with Q3 2018. Loan balances saw significant growth, however that was mainly in low fee equities. Tokai Carbon Co generated the most Q3 revenue for Japanese equities for the 2nd consecutive quarter, however, the $6m in revenue generated by lending shares of the firm reflect a 23% decline from Q2.

South Korean (SK) equities remained the 2nd most revenue generating in the Asian equity market, having overtaken Hong Kong in Q2. SK equity revenues came in at $91m, a 29% YoY decline and a 7.3% sequential decline compared with Q2. The shortfall in revenue was primarily driven by a 27% YoY decline in fees, though the 5% decline in balances also contributed. The 2.8% average fees for SK equities was the lowest since Q3 2017, thanks to declines in formerly in-demand shares. The two most revenue generating SK equities were Samsung Electro-Mechanics and Sillajen, however, revenues for those top earners fell by a combined $7m compared with Q2.

Hong Kong (HK) equity revenues came in at $69.3m for Q3, a 28% decline compared with Q3 2019. Byd Co was the most revenue generating HK equity, though the $6.5m in Q3 revenue was 20% lower than the total for Q2. Ping An Healthcare and Technology was the 2nd most revenue generating HK equity, with the $6.2m in Q3 revenue, generating the most for any quarter since the firm's IPO in Q2 2018.

Overview

Quarterly Revenues
$479M ▼ 14%

Average Balances
$211B ▲ 17%

Weighted Average Fee
0.91% ▼ 27%

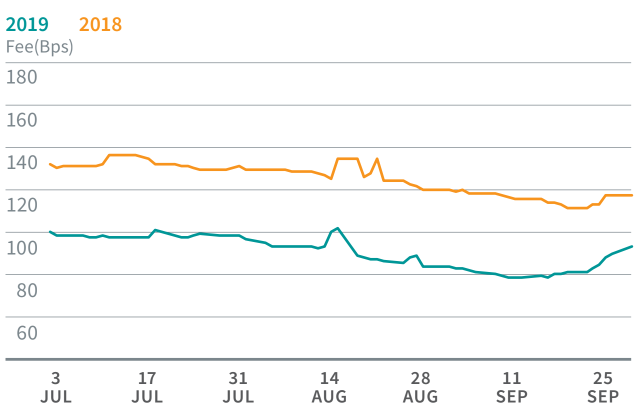
Average Lendable
$1.8T ▲ 1%

Utilization
6.21% ▲ 6%

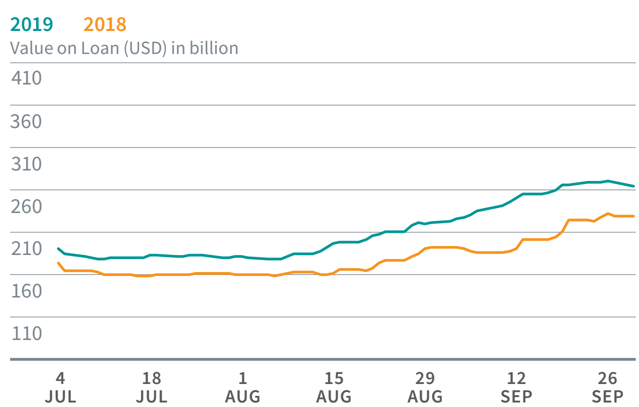
Yageo Corp was the most revenue generating equity for Asia in Q3, with the $8.3m in Q3 revenue being the most on record for the Taiwanese electronics firm. Yageo was the only Asian equity to appear in the top 10 global securities for Q3, as increasing fees in July and August drove increased revenues for lenders. The other notable name in Taiwan was Walsin Technology Corp, which delivered $6.8m in Q3 revenue, a 13% increase compared with Q2.

Taiwan and Singapore were the only Asian equity markets to see a YoY increase in revenues. For Singapore the $59.5m in Q3 revenue was the most on record, narrowly edging out the previous peak observed in Q2 2013.

Q3 FEE TREND



Q3 BALANCE TREND



OVERVIEW

- Decline in revenue from EM Asia equities
- Taiwan revenues increase with Yageo Corp
- YoY revenue decline primarily driven by lower fees
- Utilization increase in Japan as demand growth out-pace supply

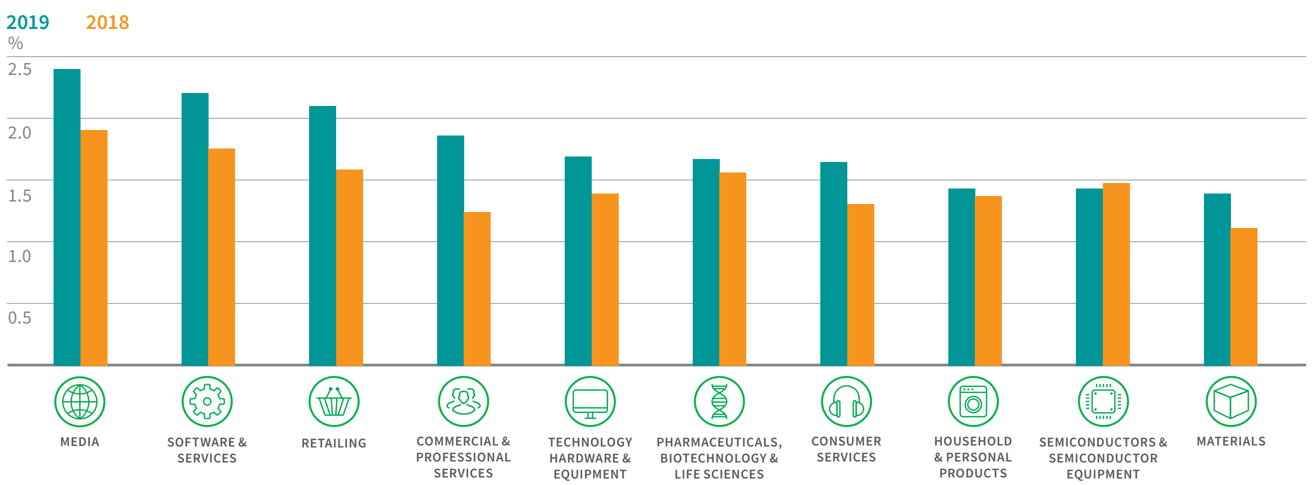
COUNTRY DETAILS

Country	Quarterly Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilization	YoY Change
Japan Equity	217.54	-1.3%	133.52	29.1%	0.7%	-24.0%	821.33	-4.0%	7.57	19.4%
South Korea Equity	91.24	-29.1%	12.87	-4.5%	2.8%	-27.0%	114.84	-9.5%	5.07	-15.1%
Hong Kong Equity	69.32	-28.6%	31.60	4.1%	0.9%	-32.0%	409.81	4.5%	5.60	-0.9%
Taiwan Equity	59.50	3.4%	8.69	-6%	3%	10%	57.00	-2.3%	6.02	-21.5%
Australia Equity	26.56	-23.5%	20.65	9.7%	0.5%	-31.0%	336.43	13.8%	4.91	-1.8%
Singapore Equity	8.54	31.4%	2.05	-6.7%	1.3%	23.0%	50.52	-3.9%	3.26	-2.8%
Malaysia Equity	2.60	-59.4%	0.44	-40.9%	2.3%	-32.0%	13.34	-9.1%	2.41	-48.2%
Thailand Equity	2.53	-37.9%	0.77	-13.8%	1.3%	-28.0%	18.79	11.1%	3.04	-23.6%
New Zealand Equity	0.70	-18.7%	0.63	-6.2%	0.4%	-14.0%	8.98	20.7%	5.04	-25.1%

TOP 10 REVENUE GENERATING STOCKS

Instrument Name	Ticker	Sector	Country	Revenue Generated ($)
Yageo Corp	2327	Technology Hardware & Equipment	TW Equity	8.31
Samsung Electro-Mechanics Co Ltd	009150	Technology Hardware & Equipment	KR Equity	7.38
Walsin Technology Corp	2492	Technology Hardware & Equipment	TW Equity	6.79
Sillajen Inc	215600	Pharmaceuticals, Biotechnology & Life Sciences	KR Equity	6.69
Byd Co Ltd	1211	Automobiles & Components	HK Equity	6.47
Ping An Healthcare And Technology Co Ltd	1833	Health Care Equipment & Services	HK Equity	6.21
Tokai Carbon Co Ltd	5301	Materials	JP Equity	6.02
Harmonic Drive Systems Inc	6324	Capital Goods	JP Equity	5.25
Netmarble Corp	251270	Media and Entertainment	KR Equity	4.38
Xiaomi Corp	1810	Technology Hardware & Equipment	HK Equity	4.26

AVERAGE % OF SHARES ON LOAN



EMEA Equities

France advances amid broad EU slowdown

European (EU) equity lending revenue was $319m for Q3, a 13% decline compared to Q3 2018. The revenue shortfall was due to a 20% decline in balances, while average fees increased by 7.45%.

Casino Guichard was the only EU equity to crack the top 10 overall earners for Q3. Casino shares delivered $41m in Q3 revenue, 47% of $87m in total revenue for French equities. The upswing in Casino revenues drove a 63% YoY increase in revenues for French equities compared with Q3 2018. Excluding the impact of Casino from both years would have resulted in a 9% YoY decline.

South African equity lending revenues spiked as a result of Nasper's spinning off it's holding of Tencent, which drove a significant short term borrow demand in September. The total revenue generated by lending Naper's shares in Q3 was $15.8m. That was just over half of all revenue generated by lending South African equities in the quarter, highlighting the importance of corporate actions to lending revenues.

German equity lending revenue fell by 20% YoY as the result of a 7% decline in balances and a 15% decline in fees. Osram Licht was the most revenue generating German equity, with the shares on loan only decreasing slightly in Q3 despite an increase in fees while the share price recovered from losses earlier in the year. German equity lendable assets declined in Q3, driving an increase in utilization despite the decrease in loan balances.

UK equities delivered $42m in Q3 revenues, a decline of 16% YoY, as the result of a 14% decline in average balances and a 3% decline in average fees. The most revenue generating UK equity was IQE Plc, which delivered $1.8m in Q3, having steadily declined from the $4.7m in Q4 2018. UK real estate trust Intu Properties also narrowly missed the region's top 10, with $2.6m in Q3 revenues. While the Intu equity generated special fees, there was also an increase for the firm's debt in Q3.

Following up on a strong first half of 2019, Greek equities continued to deliver in Q3 with $4.7m in revenue, the most for any quarter since Q4 2010 ($4.7m). The revenue upswing has been led by the banking sector based on higher loan balances and fees. Most of the country's equities are hard to borrow, a fact reflected in the 12.8% average lending fee, easily the highest for any country globally.

Overview

Quarterly Revenues
$319M ▼ 13%

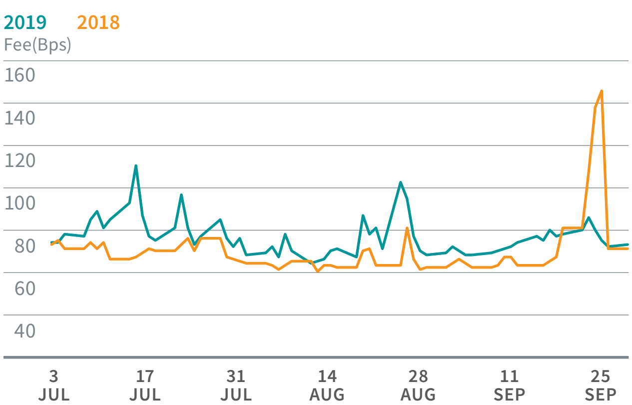
Average Balances
$166B ▼ 20%

Weighted Average Fee
0.76% ▲ 7.42%

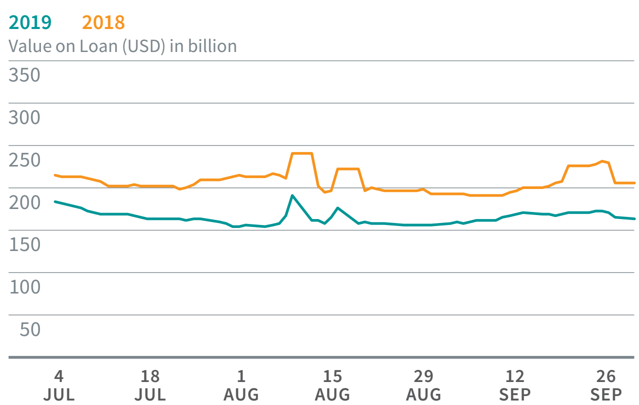
Average Inventory
$2.5T ▼ 5%

Utilization
4.50% ▼ 13%

Q3 FEE TREND



Q3 BALANCE TREND



OVERVIEW

Revenues decline on decline in balances

Casino Guichard delivers growth for French equities

Naspers' spin-off of Tencent spurs growth in South Africa revenues

Semiconductors still most borrowed sector despite YoY decline

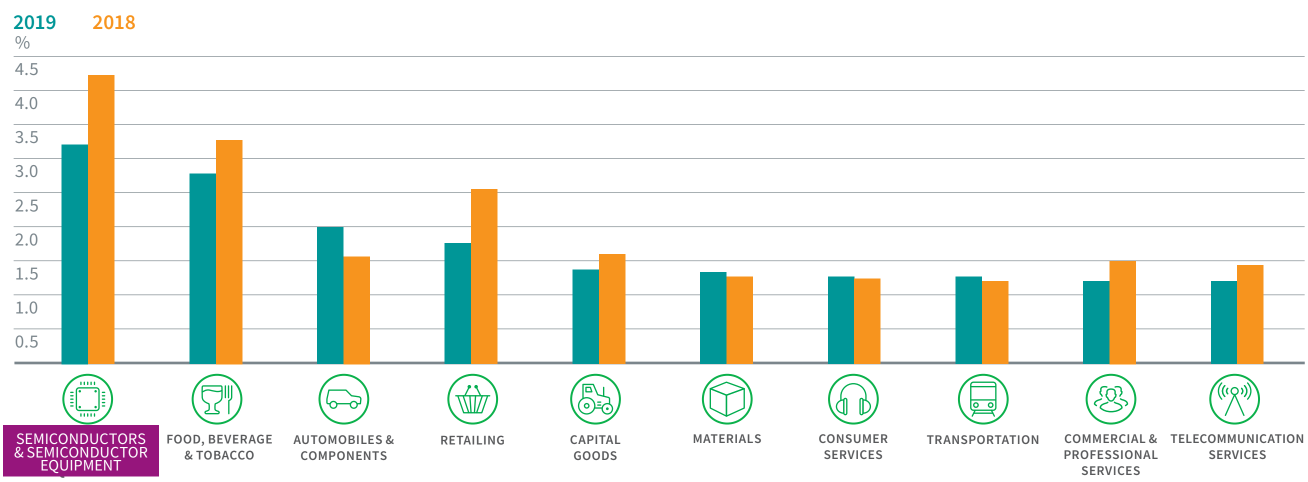
COUNTRY DETAILS

Country	Quarterly Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilization	YoY Change
France Equity	86.94	62.5%	25.58	-23.3%	1.35%	109.65%	397.35	-1.0%	4.35	-7.4%
Germany Equity	46.20	-20.5%	24.30	-7.1%	0.75%	-15.31%	294.84	-16.3%	5.20	18.6%
UK Equity	42.35	-16.1%	37.00	-14.4%	0.45%	-3.07%	740.84	-5.7%	3.86	-10.6%
South Africa Equity	31.15	101.9%	7.26	6.2%	1.70%	88.14%	55.46	-7.8%	7.15	22.9%
Italy Equity	30.13	-4.9%	8.63	-38.3%	1.39%	52.47%	94.38	-8.9%	5.55	-32.7%
Sweden Equity	22.49	-48.0%	12.55	-35.0%	0.71%	-20.86%	115.37	-6.3%	7.47	-29.0%
Switzerland Equity	18.29	-36.2%	20.60	-4.8%	0.35%	-33.69%	378.09	15.1%	3.67	-17.5%
Netherlands Equity	15.85	-1.0%	7.91	-32.2%	0.80%	44.47%	141.10	-3.2%	3.52	-30.4%
Norway Equity	10.15	-41.0%	3.42	-38.0%	1.18%	-5.91%	34.40	-15.2%	6.28	-27.1%
Spain Equity	9.31	-65.5%	7.04	-34.1%	0.52%	-48.19%	100.06	-7.4%	4.22	-28.7%
Denmark Equity	8.68	6.7%	7.10	7.9%	0.48%	-2.22%	65.32	-3.2%	7.76	18.3%
Turkey Equity	6.53	-10.2%	0.91	11.1%	2.84%	-20.10%	6.92	3.0%	9.28	7.3%
Belgium Equity	5.65	-20.8%	3.64	-21.0%	0.62%	-0.79%	48.38	-23.8%	5.18	3.0%
Finland Equity	5.39	12.5%	3.72	-30.1%	0.57%	59.26%	39.51	-17.0%	6.48	-10.6%
Greece Equity	4.52	124.2%	0.14	70.6%	12.87%	29.99%	2.21	13.3%	5.13	50.7%
Austria Equity	2.34	-0.8%	1.44	21.2%	0.64%	-19.06%	12.44	-17.9%	7.75	49.5%
Poland Equity	1.59	-74.8%	0.51	-53.7%	1.24%	-46.08%	9.26	-14.5%	4.03	-42.7%
Portugal Equity	0.56	-29.7%	0.53	14.7%	0.42%	-39.35%	7.63	-11.2%	4.35	32.0%

TOP 10 REVENUE GENERATING STOCKS

Instrument Name	Ticker	Sector	Country	Revenue Generated ($)
Casino Guichard Perrachon Sa	CO	Food & Staples Retailing	FR Equity	41.13
Naspers Ltd	NPN	Retailing	ZA Equity	15.80
Osram Licht Ag	OSR	Capital Goods	DE Equity	7.27
Eurofins Scientific Se	ERF	Pharmaceuticals, Biotechnology & Life Sciences	FR Equity	6.75
Aurelius Equity Opportunities Se & Co Kgaa	AR4	Diversified Financials	DE Equity	5.79
Tod'S Spa	TOD	Consumer Durables & Apparel	IT Equity	4.11
Bio-On Spa	ON	Materials	IT Equity	3.88
Eni Spa	ENI	Energy	IT Equity	3.86
Ambu A/S	AMBU B	Health Care Equipment & Services	DK Equity	3.32
Mediaset Spa	MS	Media and Entertainment	IT Equity	3.24

AVERAGE % OF SHARES ON LOAN



Americas Equities

IPO’s, cannabis & retail specials lead

In 2019, the trend in the Americas has been the increase in fees for hard to borrow equities, concentrating on the 2019 vintage of IPOs as well as the entirety of the Cannabis sector. North American equities posted $1.1bn in Q3 lending revenue, a 42% YoY increase. The YoY increase in revenues was the first since Q2 2018. While the revenues are increasing, so too is the concentration; The 10 most revenue generating NA equities delivered 43% of Q3 revenues, more than doubling the ratio of 20% from Q3 2018.

Beyond Meat (BYND) was by far the most revenue generating security globally, delivering $198m in Q3 revenues. However, the increase in concentration isn’t all about BYND, the other 9 of the top 10 equities generated 25% of Q3 revenue, a higher ratio than the top 10 in Q3 2018.

Apart from the great BYND, other US IPOs delivered significant returns for lenders in Q3, led by Zoom with just over $21m in revenue. The ride-hailing firms also generated significant returns in the quarter, with LYFT returning $21m, and Uber just over $5m. Uber ended the quarter with far higher loan balances and fees than Lyft, suggesting that a reversal of lending fortunes is likely in the ride-hailing space for Q4.

The Canadian Cannabis stocks delivered $120m in Q3 revenues, the most on record for any quarter. The increased demand and willingness to pay elevated fees was unsurprising given the downward trajectory of constituents in the quarter. Canopy Growth delivered the most lending revenue, $54m, representing the majority of the $22m uptick in CA Cannabis revenues relative to Q2.

Overall, Canadian equities delivered $186m in Q3 revenues, a YoY increase of 47%. While the overall result is positive, it’s worth noting that excluding Cannabis, revenues would have declined 28% YoY. One non-Cannabis CA equity which warrants a mention is Ballard Power Systems which delivered just over $4m in Q3 revenues, the most on record for the manufacturer of fuel cell products.

American Depository Receipt (ADR) revenues for Q3 came in at $106m, an increase of 23% YoY. The largest contributor to the upswing was Chinese electric carmaker Nio, whose share price declined nearly 40% in the quarter despite its initial rally in July. While borrow demand for shares of BABA collapsed in Q2, borrow demand for Chinese ADRs ex-BABA has been consistently hovering just above $10bn over the last 12 months.

Overview

Quarterly Revenues
$1113M ▲ 42%

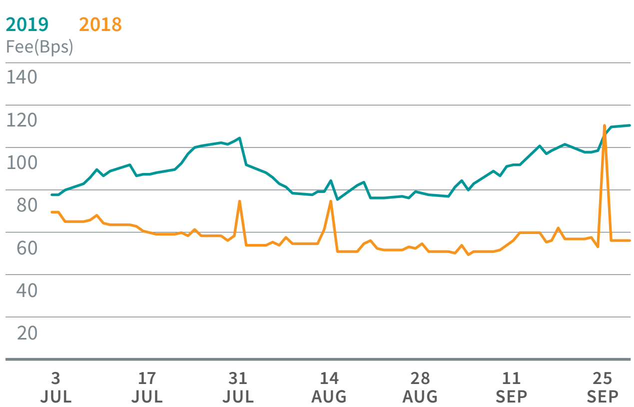
Average Balances
$504B ▼ 6%

Weighted Average Fee
0.88% ▲ 49%

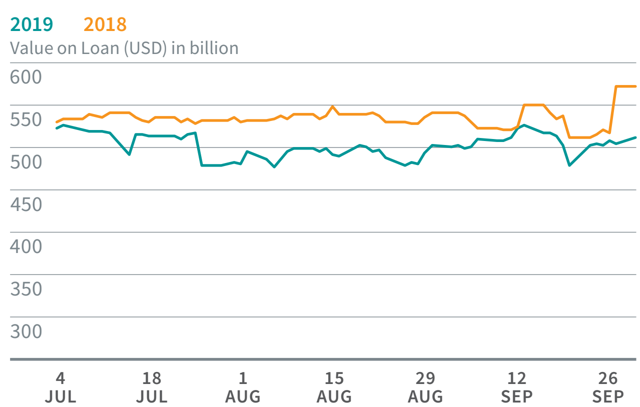
Average Inventory
$10T ▲ 3%

Utilization
4.07% ▼ 8%

Q3 FEE TREND



Q3 BALANCE TREND



OVERVIEW

BYND delivers most quarterly revenue for any equity since TSLA in Q3 2016

Cannabis related equities spur Canada revenue growth

Americas equities see most revenue since Q3 2008

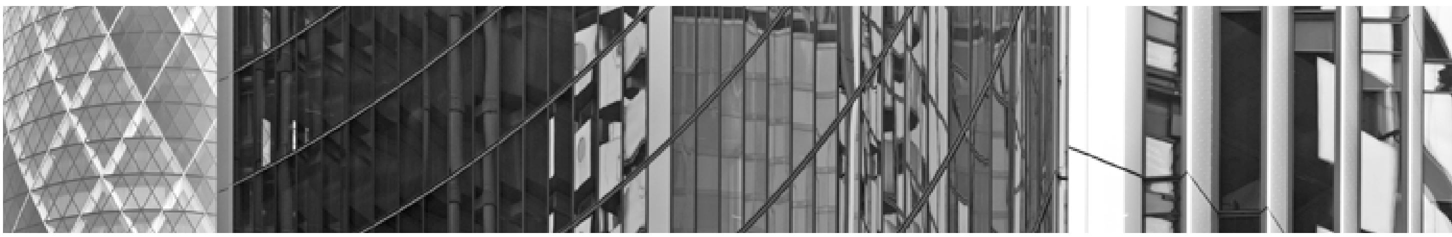
Recent IPOs and retail deliver US equity returns

COUNTRY DETAILS

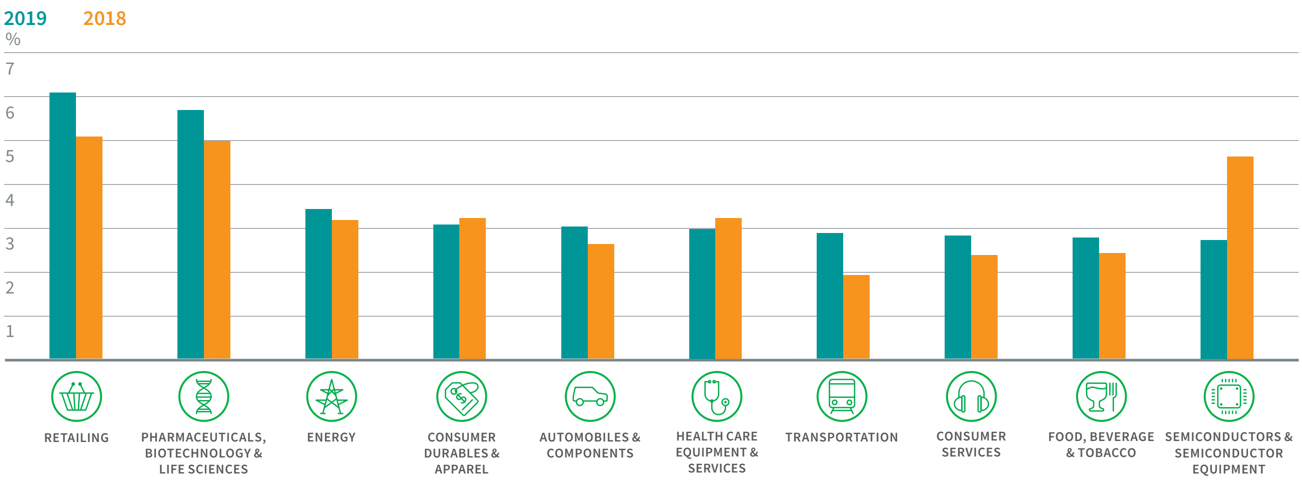
Country	Quarterly Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilization	YoY Change
USA Equity	924.17	41.0%	461.18	-6.3%	0.80%	49%	9,463.58	3.7%	3.94	-8.6%
Canada Equity	186.73	46.7%	42.02	0.7%	1.76%	44%	524.95	-0.1%	6.62	-0.7%
Brazil Equity	1.87	-4.2%	0.35	-19.0%	2.13%	17%	1.84	-2.5%	6.10	7.8%
Mexico Equity	0.73	-43.3%	0.66	-25.3%	0.44%	-25%	25.66	-16.1%	1.94	-21.0%
American Depository Receipts	106.32	22.8%	24.06	-54.7%	1.75%	168%	221.90	0.2%	8.28	-53.0%

TOP 10 REVENUE GENERATING STOCKS

Instrument Name	Ticker	Sector	Country	Revenue Generated ($)
Beyond Meat Inc	BYND	Food, Beverage & Tobacco	US Equity	198
Canopy Growth Corp	WEED	Pharmaceuticals, Biotechnology & Life Sciences	CA Equity	54
Nio Ads Rep 1 Cl A Ord	NIO	Automobiles & Components	CN ADR	47
Aurora Cannabis Inc	ACB	Pharmaceuticals, Biotechnology & Life Sciences	CA Equity	38
Overstock.Com Inc	OSTK	Retailing	US Equity	33
Dillard'S Inc	DDS	Retailing	US Equity	29
Tilray Inc	TLRY	Pharmaceuticals, Biotechnology & Life Sciences	US Equity	27
Accelerate Diagnostics Inc	AXDX	Pharmaceuticals, Biotechnology & Life Sciences	US Equity	21
Zoom Video Communications Inc	ZM	Software & Services	US Equity (Others)	21
Lyft Inc	LYFT	Transportation	US Equity	20



AVERAGE % OF SHARES ON LOAN



Exchange Traded Funds

Lower fees for credit ETFs weigh on revenues

2018 was the best year on record for ETF lending with more than $398m in revenue, $287 of which came in the first three quarters of the year. The first three quarters of 2019 have delivered $232m, a 19% YoY decline. The YoY decline is due to lower fees, with the $52bn in 2019 average loan balances through Q3 being the highest on record for exchange traded products. Looking at Q3, ETF lending revenues were $77m, an $8m decline YoY.

The decline in revenues and fees are primarily the result of lower demand for corporate bond related products. Emblematic of the changing borrow dynamic is the lack of high-yield bonds on the top 10 revenue generating ETFs. The decline in YoY revenues for HYG & JNK, the two most liquid High-yield ETFs, was $14m, or more than the entire ETF YoY shortfall. Excluding the pair of HY ETFs from the analysis, Q3 revenues would have increased 9% YoY. Total fixed income ETF revenues fell 37% compared with Q2.

One upbeat development on the fixed income front was the increase in revenues for the BKLN leveraged loans ETF, which delivered $2.7m in Q3 revenue, the most on record for the product. The divergence between the high-yield and loans funds is primarily the result of challenges with creating the latter from borrowed securities. For high-yield ETFs, the growth in constituent lendable assets has kept a lid on fees YTD.

On the equity side revenues increased by 9% sequentially compared with Q2. Similar to single stock revenues in North America, the Cannabis sector was represented in the top 10 revenue generating funds list via the Alternative Harvest ETF, MJ. It is worth noting the presence of US and HK listed ETF's with exposure to China on the top 10 list, now featuring four such funds rather than one in Q2.

Overview

Quarterly Revenues
$77M ▼ 10%

Average Balances
$52B ▲ 11%

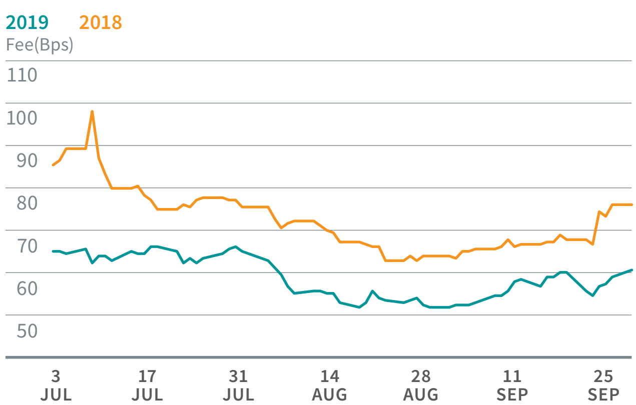
Weighted Average Fee
0.58% ▼ 20%

Average Inventory
$308.2T ▲ 8%

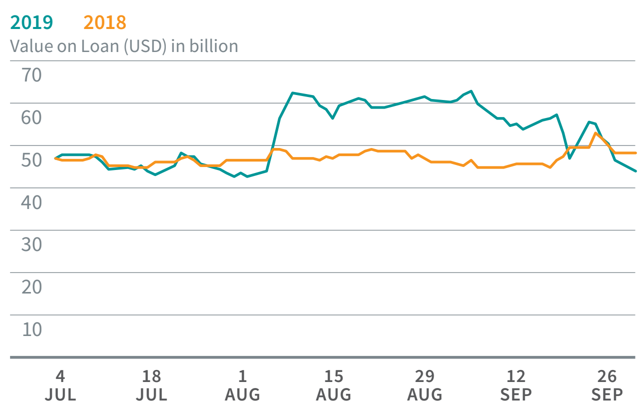
Utilization
10.32% ▲ 5%

Global ETF AUM first reached $5T in Q2 2018. That once significant threshold has now been left in the dust with ETF AUM ending Q3 at $5.9T. The increase in use by institutional investors is reflected by the growth of lendable assets in securities lending. Global ETF lendable assets averaged $308bn in Q3, the highest level on record.

Q3 FEE TREND



Q3 BALANCE TREND



OVERVIEW

- ETF revenues fall with declining high-yield fees
- BKLN loans ETF delivers most revenue on record
- Average ETF loan balances increase globally
- Equity ETFs deliver 77% of Q3 revenues

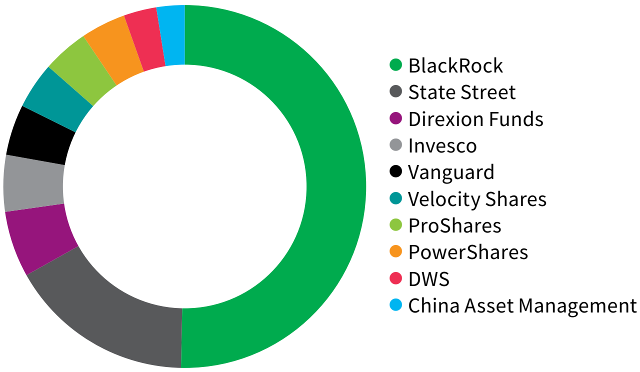
COUNTRY DETAILS

Country	Quarterly Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilization	YoY Change
Americas ETF	53.23	-17.8%	45.80	10.1%	0.46%	-26%	196.75	13.9%	14.42	-1.4%
European ETF	15.85	0.3%	4.34	1.8%	1.45%	-3%	56.28	3.5%	4.67	6.9%
Asian ETF	5.49	113.2%	1.32	77.3%	1.65%	19%	2.23	14.3%	20.14	78.2%

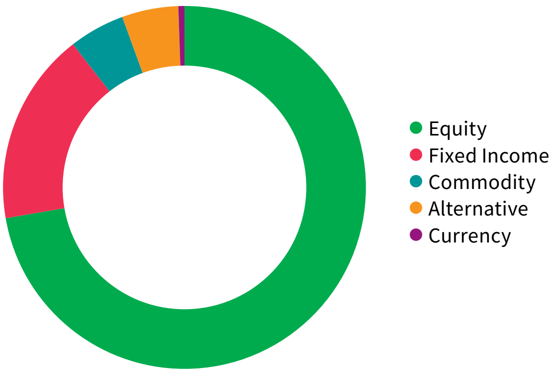
TOP 10 REVENUE GENERATING FUNDS

Instrument Name	Ticker	Listing Country	Asset Class	Q4 Revenue Generated ($)
Ishares Russell 2000 Etf	IWM	US	Equity	$3.6
Invesco Senior Loan Etf	BKLN	US	Loans	$2.7
Xtrackers Hvst Csi 300 China A-Shs Etf	ASHR	US	Equity	$2.6
Chinaamc Csi 300 Index Etf	3188	HK	Equity	$2.3
Spdr S&P 500 Etf Trust	SPY	US	Equity	$2.1
Kraneshares Csi China Internet Etf	KWEB	US	Equity	$1.7
Invesco Qqq Trust Series 1	QQQ	US	Equity	$1.5
Ishares Msci Turkey Investable Market Index Fund	TUR	US	Equity	$1.3
Etfmg Alternative Harvest Etf	MJ	US	Equity	$1.1
Ishares Ftse A50 China Index Etf Hkd	2823	HK	Equity	$1.0

LENDING REVENUES BY ISSUER



LENDING REVENUES BY ASSET CLASS



Corporate Bonds

USD credit revenues underwhelm

Global corporate bond lending revenues came in at $152m for Q3, an 18% YoY decline. The decline from peak revenue in Q2 2018 has been primarily driven by fee compression, with loan balances hovering around $200bn globally since Q1 2018.

USD denominated credits continue to be the most in demand. Average daily loan balances were $109bn in Q3, a 2.6% decline YoY, however slightly above the Q2 average. USD credit revenues were down 28% YoY, the shortfall primarily driven by lower fees.

The most revenue generating credit was Antero Resources 5% note maturing in 2025, which delivered $1.8m in the quarter. Antero was the only issuer to have two bonds in the top 10 by revenue, which was indicative of the short demand for Energy credits as the sector underperformed in August and September.

A few issuers who warrant mention for the crossover borrow demand for both the bonds and equity include Mallinckrodt, Teva Pharmaceutical, Chesapeake Energy and Casino Guichard. No firm has had both their bond and equity among the top 10 most revenue generating for their respective asset classes since Tesla in Q2 2018.

USD issues are still the most revenue generating currency of issuance, however their significance to global corporate lending revenues is in decline. In 2016 USD denominated issues generated 64% of all corporate bond lending revenues; That figure has declined each year since, only 52% through the first three quarters of 2019. USD denominated issues remain on pace to generate the least revenue since 2015, a challenging follow up to 2018 which had the most revenue on record. Through Q3 USD corporate bond lending revenues total $245m for 2019, a 26% YoY decline.

While USD issues are facing multi-year low in revenues, non-USD have been stable around $74m for Q2 and Q3, following Q1 which saw $79m. Overall non-USD credits are on pace to deliver 1.3% less revenue than last year. That figure belies some internal movement. CAD denominated corporates increased revenues by 70% YoY as the result of demand for the Canada Housing Trust bonds, though it would be valid to consider those to be more like agency bonds given the government backing.

Investment grade bond balances increased 3% YoY, however declining fees caused revenues to fall 11%. Non-Investment grade credit lending revenues were down 19% YoY, primarily as the result of lower fees, though balances also declined. NIG credits generated 59% of Q3 corporate bond revenue, down from 61% in Q3 2018.

Convertible bond lending revenues were down 10% YoY, due to lower fees with balances growing by 7%. Illumina's 2023 bond was the only convertible in the top 10 most revenue generating corporate bonds in Q3.

Overview

Quarterly Revenues
$152M ▼ 18%

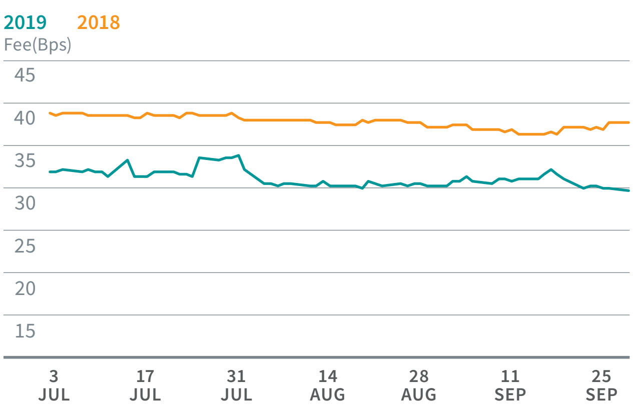
Average Balances
$193B ▼ 2%

Weighted Average Fee
0.31% ▼ 18%

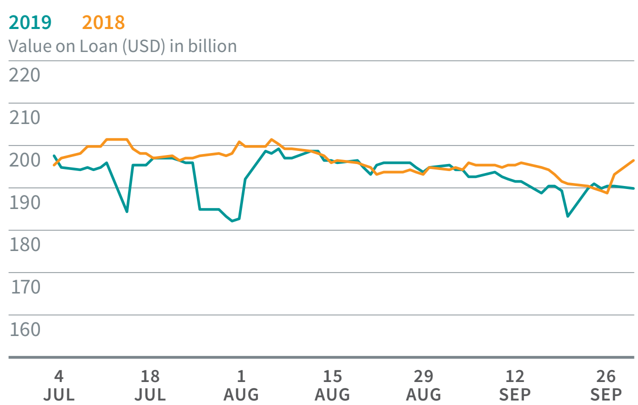
Average Inventory
$3.8T ▲ 19%

Utilization
4.48% ▼ 17%

Q3 FEE TREND



Q3 BALANCE TREND



OVERVIEW

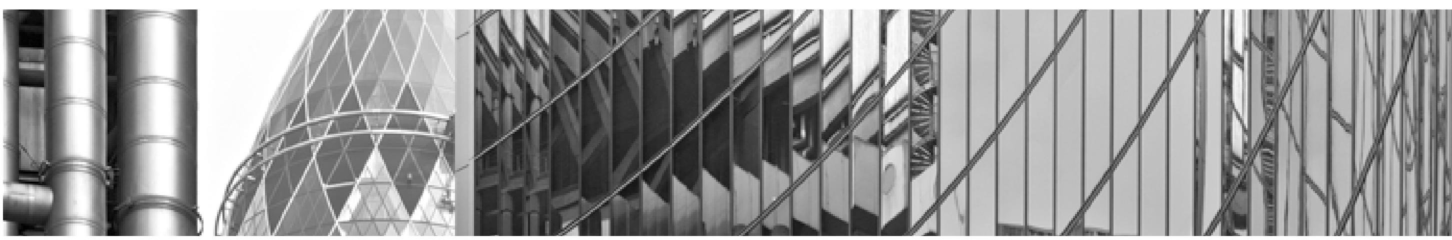
Revenues decline as result of lower fees	Growth trend in lendable assets remains in place	NIG credits deliver 59% of Q3 revenues	Fifth consecutive quarter with QoQ revenue decline

ISSUE TYPE DETAILS

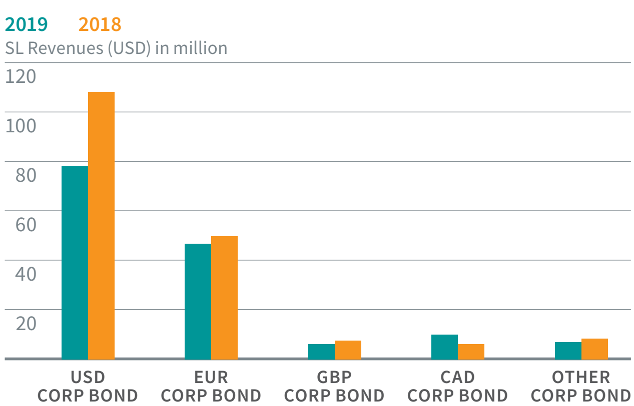
Issue Type	Quarterly Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilization	YoY Change
Conventional Bonds	145.92	-18.3%	193.28	-1.6%	0.30%	-18%	3,431.25	15.4%	4.88	-15.3%
Convertible Bonds	10.14	-10.1%	5.63	7.4%	0.71%	-17%	46.44	2.6%	9.16	4.9%
Asset Backed Securities	0.19	-78.3%	0.50	-60.2%	0.15%	-46%	367.61	63.7%	0.13	-22.7%

TOP 10 REVENUE GENERATING BONDS

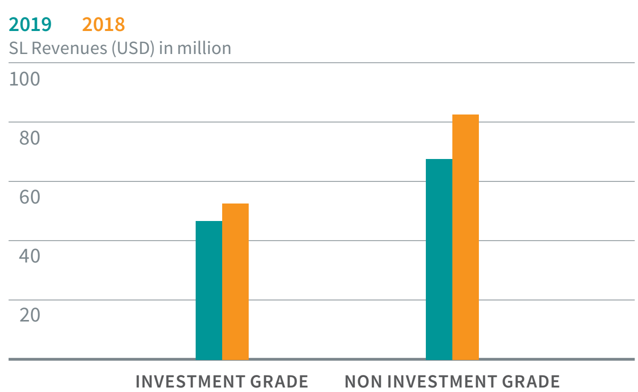
Top Earning Assets	Cusip	Denomonation	Aseet Class	Revenue Generated ($)
Antero Resources Corp (5% 01-Mar-2025)	AR	USD	Non-Investment Grade	$1.8
Goodyear Tire & Rubber Co (5% 31-May-2026)	GT	USD	Non-Investment Grade	$1.6
Tereos Finance Groupe I Sa (4.125% 16-Jun-2023)	TERES	EUR	Non-Investment Grade	$1.5
Rackspace Hosting Inc (8.625% 15-Nov-2024)	INCPR	USD	Non-Investment Grade	$1.3
Mallinckrodt International Finance Sa (5.75% 01-Aug-2022)	MNK	USD	Non-Investment Grade	$1.3
Antero Resources Corp (5.625% 01-Jun-2023)	AR	USD	Non-Investment Grade	$1.2
Diamond Bc Bv (5.625% 15-Aug-2025)	CNTLI	EUR	Non-Investment Grade	$1.2
Illumina Inc (0% 15-Aug-2023)	ILMN	USD	Convertible	$1.1
Chesapeake Energy Corp (8% 15-Jan-2025)	CHK	USD	Non-Investment Grade	$1.1
Party City Holdings Inc (6.625% 01-Aug-2026)	PRTY	USD	Non-Investment Grade	$1.1



Q3 SECURITIES LENDING REVENUES BY DENOMINATION



Q3 SECURITIES LENDING REVENUES BY RATINGS CATEGORY



Government bonds

Marginal uptick relative to Q2

Government bond lending revenues were $337m for Q3, a 15% YoY decline. The YoY comparison is unfavorable since 2018 delivered the most revenue on record, however Q3 revenues did increase QoQ. That makes Q3 2019 the first quarter with improving sequential revenue since Q1 2018.

US Treasuries were the primary driver of record government bond lending revenues in Q1 2018, so it is no surprise that they also led the way down from the peak, until now. In Q3, lending revenues for sovereign debt declined more in nominal terms in Europe, -$38m YoY, than in the US, -$22m. Italian debt revenues declined by more than 70% YoY, continuing the slide from the peak in demand for the 10Y in 2018. Revenues for lending UK debt declined 21% YoY.

One explanation for the general decline in borrow demand may be the increased number of primary dealer US Treasury inventories amid increased issuance, according to the Federal Reserve Bank of New York; this could be reducing the need to borrow in HQLA collateral. The spike in the funding cost for Treasuries on September 17th, reflected in the rebate for funding transactions in securities lending market reaching 440bps, was a reflection of the changing dynamics in both supply of and demand for US Treasuries, at the time exacerbated by the run-off of the Fed balance sheet.

The Q3 decline in interest rates may also be stifling demand for sovereign debt borrowing, with the bond rally making short positions in rates instruments challenging; the US Federal Reserve cut rates for the first time in the decade following the financial crisis and the ECB cutting rates further into negative territory.

Overview

Quarterly Revenues
$337M ▼ 15%

Average Balances
$858B ▼ 10%

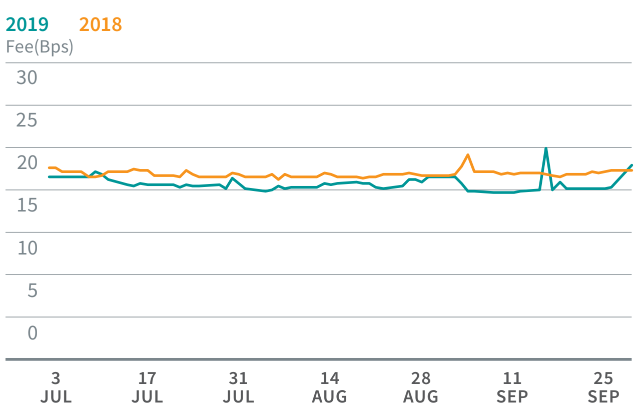
Weighted Average Fee
0.16% ▼ 7%

Average Inventory
$3.3T ▲ 12%

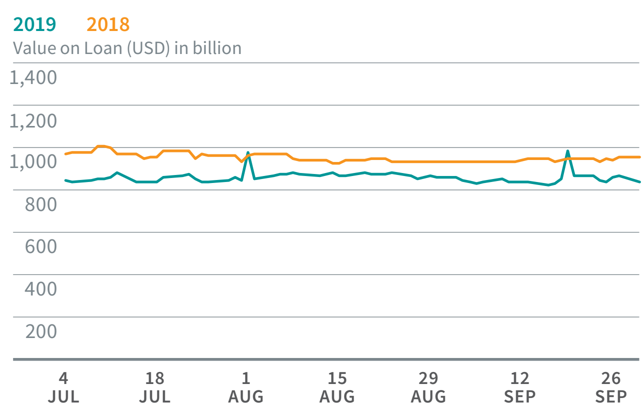
Utilization
20.87% ▼ 16%

Once again Australia saw the largest nominal increase in sovereign debt lending, on the back of a 28% YoY increase, which was offset by the decline in Japan when aggregating for the Asia region. The 2nd largest nominal increase in revenues was in Canada, though in percentage terms the increase in CA sovereign and provincial debt was only 2.3%.

Q3 FEE TREND



Q3 BALANCE TREND



OVERVIEW

Declining demand and increasing supply depress returns	Balances decline in all regions	Opportunities to lend US 10Y in Q3	UST securities generate 59% of government bond lending revenues

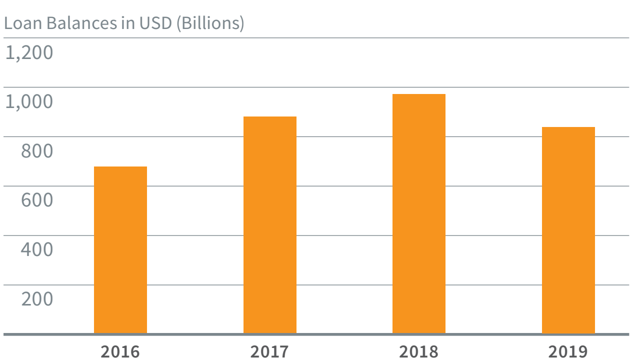
REGIONAL DETAILS

Country	Quarterly Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilization	YoY Change
Americas	216.76	-9.3%	524.42	-1.2%	0.16%	-9%	2,209.91	15.4%	19.89	-11.3%
Europe	110.28	-25.8%	308.67	-16.2%	0.14%	-12%	1,020.42	5.9%	23.52	-22.1%
Emerging Market Bonds	12.85	-14.9%	17.00	-6.3%	0.30%	-10%	288.71	28.4%	5.36	-29.0%
Asia	10.07	-9.7%	25.23	-51.4%	0.16%	84%	78.51	22.0%	14.11	18.8%

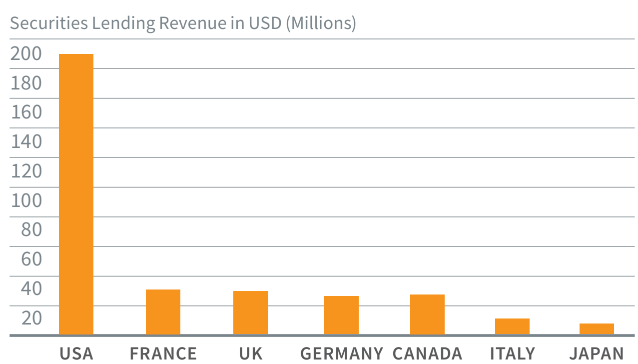
TOP 10 REVENUE GENERATING BONDS

Instrument Name	ISIN	Currency	Issuer	Revenue Generated ($)
United States Treasury (2.375% 15-May-2029)	9128286T2	USD	USA	4.89
Canada (2.75% 01-Dec-2048)	135087D35	CAD	CA	1.84
United States Treasury (1.5% 15-Aug-2026)	9128282A7	USD	USA	1.81
United States Treasury (2.75% 15-Nov-2023)	912828WE6	USD	USA	1.63
United States Treasury (2% 31-Jul-2022)	912828XQ8	USD	USA	1.61
United States Treasury (2.625% 31-Aug-2020)	9128284Y3	USD	USA	1.60
United States Treasury (1.875% 31-May-2022)	912828XD7	USD	USA	1.51
United Kingdom of Great Britain (1.625% 22-Oct-2028)	G4527HBW0	GBP	UK	1.24
United States Treasury (2% 15-Feb-2023)	912828UN8	USD	USA	1.22
United States Treasury (3% 15-Feb-2049)	912810SF6	USD	USA	1.17

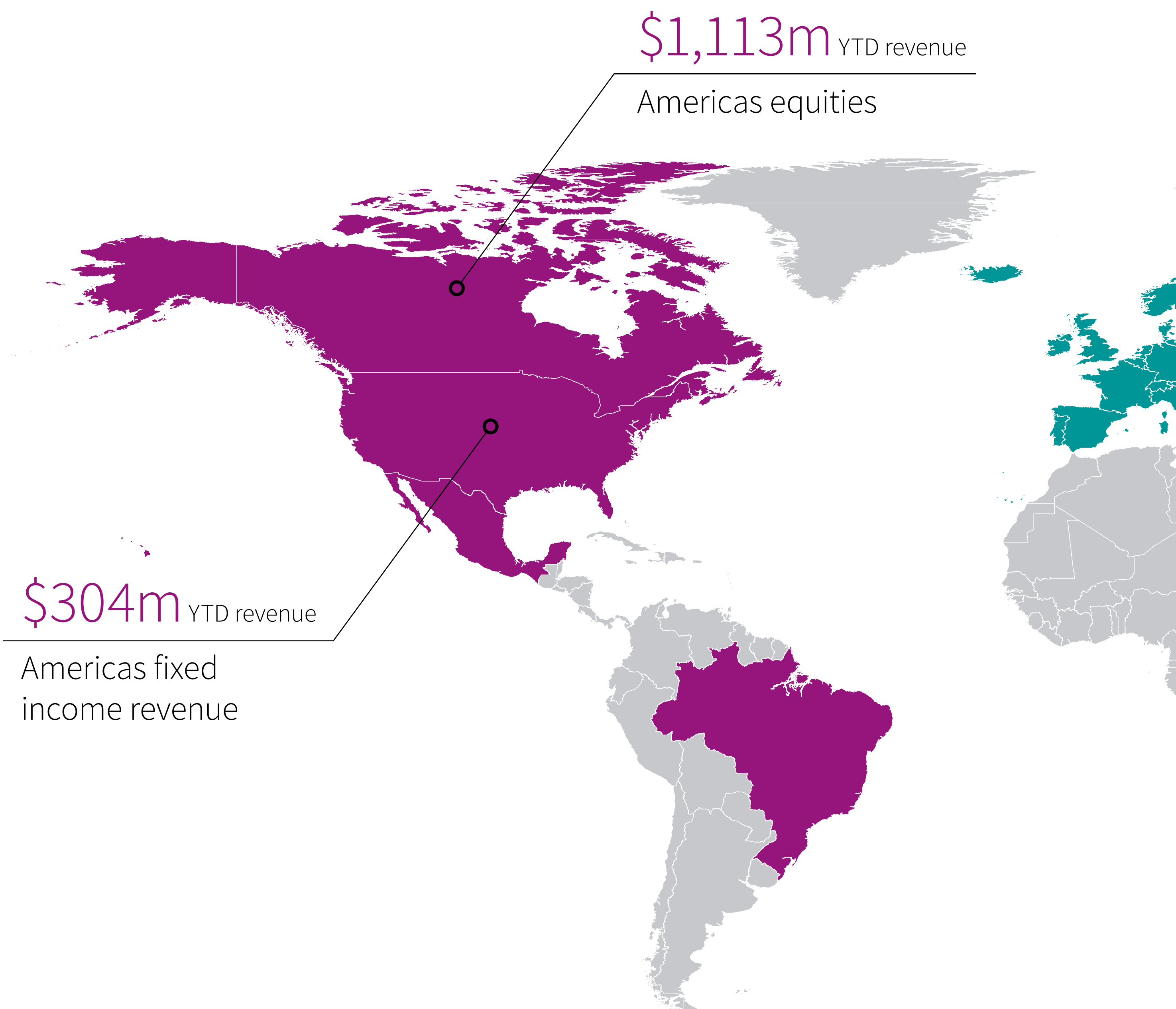
GOVERNMENT BOND BALANCE TREND



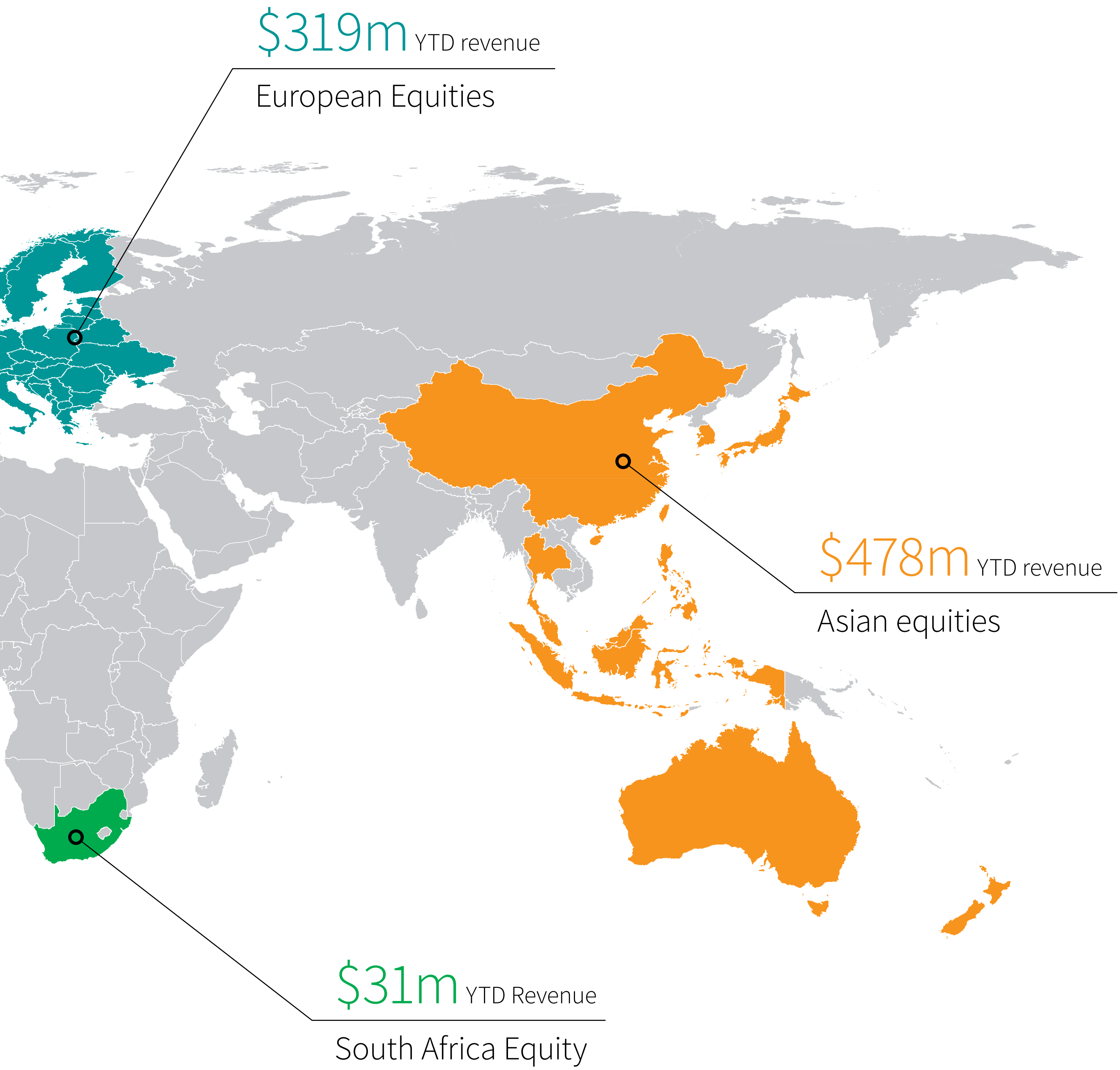
Q3 REVENUES BY ISSUER



Global snapshot



Asset Class	Lendable Assets ($T)	Loan Balance ($T)	% Non-Cash	Utilization (%)	SL Fee
All Securities	$22.5	$2.0	73%	7.0	0.51%
Government Bonds	$3.3	$0.9	92%	20.9	0.16%
Corporate Bonds	$3.4	$0.2	49%	4.9	0.30%
Equities	$14.5	$0.9	63%	4.4	0.87%
Depository Receipts	$0.2	$0.0	41%	8.3	1.76%
Exchange Traded Funds	$0.3	$0.1	41%	10.3	0.59%


$319m YTD revenue
European Equities
$478m YTD revenue
Asian equities
$31m YTD Revenue
South Africa Equity

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