Securities Finance Quarterly Review

Q3 2018

Welcome to the Q3 edition of the Securities Finance Quarterly Review of 2018. As the 2^{nd} edition of the newsletter that I've presided over, I'm delighted to report some recent progress that we've made, which includes the release of IHSM benchmark standard, the addition of a public short interest datafeed, with forecasts, and the roll-out of the aggregate corporate bond dataset. I appreciate the support I've received from the industry in my new role thus far and look forward to delivering solutions to the ever-changing information needs of Securities Lending practitioners.

As a core element of our strategy we are developing the next generation of benchmarking tools. Specifically, we are responding to the demand from the market for more transparent benchmarking reports and greater standardization of reporting. Over the past year, we have dramatically increased the depth of data available in our benchmarking tool and are excited about further developments to support the evolving needs of the industry. Improving transparency around revenue by collateral type along with "what if" scenario testing are a key focus going forward. Progress with our design partners on the SFTR build continues apace, and we look forward to a successful implementation in 2019. While the scale and scope of requirements are tremendous, we have committed the resources to build a comprehensive solution, and appreciate the support from our 32 design partners and clients.

As mentioned above, one use case for securities lending data as a proxy for short interest. Other sources of short interest data, such as FINRA and ESMA mandated reports, are limited by frequency, completeness and timeliness. To provide our clients with the best possible short demand color, we've added a datafeed with all publicly available short interest data, along with our forecasts for the next report. The feedback on the new short interest fields has been positive from all quarters and we look forward to further developments on that front.

Along with expanding short color, we continue to see increased adoption of our intraday Securities Finance dataset, which is an exciting result from a multi-year process. We are currently working on an intraday tool for the buy side. We are also working with our third-party distributors on enhanced offerings of these additional datasets.

At IHS Markit, our mission is to empower clients with data and solutions to capture the present opportunity set for their businesses, while staying ahead of regulatory hurdles. We view ourselves as the leading independent global information powerhouse, and we continue to leverage the resources of our broader enterprise, as well as our strategic partners in the industry, to best serve our Securities Finance clients. A decade on from the financial crisis we're pleased with the progress we've made toward that mission and are encouraged by the growing industry revenues thus far in 2018 (though a few more US equity specials wouldn't hurt!)

Regards,

Paul R. Wilson

Managing director and global head of Securities Finance product, IHS Markit

*We'd love to hear feedback from you with suggestions for future editions or questions on methodology. Please drop us an email at **MSF-media@markit.com** and let us know what you think.*

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What a difference a decade makes!

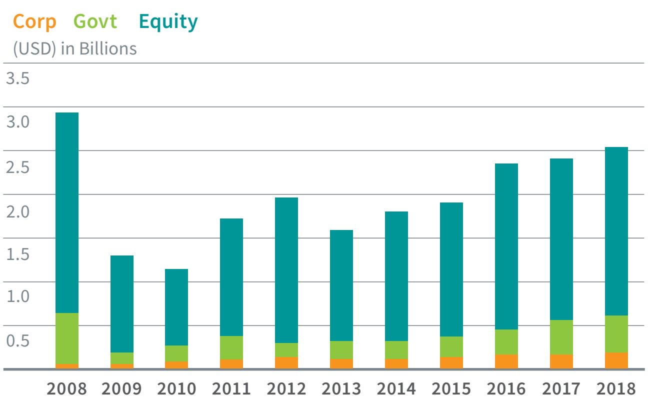
Ten years ago, the third quarter of 2008 delivered $2.9bn in global securities lending revenue, a high-water mark which no third quarter has managed to equal since. The pickup in market volatility in 2018 (after an anemic 2017) has yielded a welcome uptrend in lending revenues this year, however. Extending the trend, the $2.5bn in Q3 revenue was the most since 2008 and represents a 6% increase vs Q3 2017. The growth in industry revenues has been boosted this year by high quality collateral needs, increased EM equity demand, particularly in Asia, demand for corporate bonds and some special situations for equity lending.

Adding the Q3 returns to the $5.8bn in H1 revenues reveals that the first three quarters of 2018 have had the highest post-crisis securities lending revenue. For some context, that is still 27% lower than the first three quarters of 2008.

Government Bonds:

While demand for government bonds has increased significantly in recent years, lending revenues for government paper were 28% lower in the third quarter of this year compared with 2008, when extreme collateral needs boosted fees. Demand for government bonds has remained near an all-time high in 2018, just above $1t. Commensurate with that, revenues have also increased – with the just over $1.3bn earned in the first three quarters of 2018 being the highest post-crisis and 19% above the first 3/4 of 2017. While the demand for government bonds continues to increase, the rate of change has slowed over the last two quarters.

Historical Q3 lending revenue by asset class



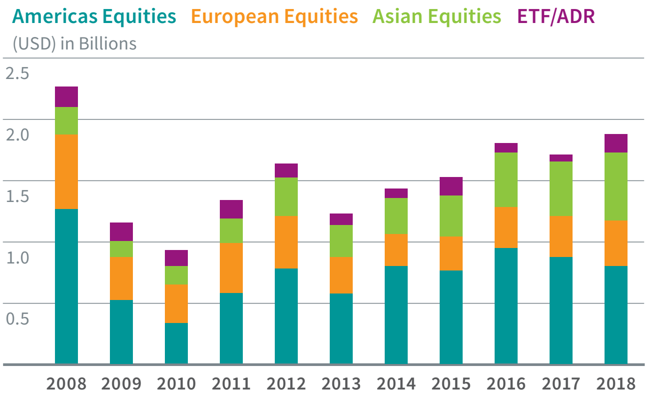
Equities:

A similar story emerges for equities, with a 6% YOY growth in Q3, though the $1.8bn in revenues was 15% lower than Q3 2008. Despite the rise of fixed income lending, equities still account for more than 76% of global lending revenue, down from 86% in 2014.

Asia has led the growth in equity lending revenue in recent years, with emerging markets playing an increased role this year. Asia equities delivered $563m in Q3 lending revenue, the most for a single quarter on record; Combined with H1 revenues, the $1.5bn total is the highest revenue recorded through the first three quarters of a year, going back to 2006. South Korea was a standout for the 3rd quarter, with Celltrion delivering the most lending revenue for any security globally, as share price appreciation in the quarter did not reduce borrow demand.

A lack of specials demand limited North American lending revenues in Q3. Tesla remained in the warm space, with increased balances driving the stock's $35m in revenues, the 2nd highest for any security in the quarter. In Canada, while the extreme lending fees for Tilray were much discussed, the weighted average lending fee for Cannabis stocks fell during the quarter. That largely resulted from some of the larger borrows in the space, most notably

Historical Q3 global equity lending revenue



Aurora Cannabis, seeing borrow fees fall on increased share issuance. NA equity revenues came in at $802m, a decline of 8% compared with Q3 2017. An 11th hour revenue boost came in the form of Fortive Corporation's exchange offer for it's automation business. That special situation lending opportunity drove over $19m in revenues in the last week of the quarter for Fortive shareholders who were willing to forgo the opportunity to tender their shares.

European equities delivered $371mm in Q3, a 12% improvement over Q3 2017 and the most lending revenue generated in the 3rd quarter since 2012. Even better news for beneficial owners: Utilization of lendable inventory increased in the 7 of the 10 largest markets by revenue.

Equity Specials: As noted above, the lack of specials balances has hindered US equity lending revenue, which only equated to 38% of lending revenue for common shares in Q3, down from 45% in Q3 of 2017. Looking at balances on loan with fees greater than 500bps, US equities have gone from an average of $9.5bn in the first half of 2018 to an average of $7bn in Q3. After the extremely challenging June for short sellers in hard to borrow stocks, portfolio managers have reduced exposure to US HTB stocks.

It was a similar story in Asia, where average balances with fees greater than 500bps fell to $8.6bn in Q3, down from an average of $9.4bn in the first half of the year. South Korea pushed against that trend, increasing average specials balances by $700m in Q3 relative to H1.

Interestingly, only Europe saw an increase in specials balances in Q3 relative to the first half of the year, however that was moving off a low base of $2.5bn in H1, increasing to $2.8bn in Q3. That was almost entirely the result of CYBG fees moving above 500bps early in the quarter and remaining there for the duration of the quarter.

Corporate Bonds:

Interestingly, corporate bonds are the only asset class to post higher lending revenue YTD compared with 2008, with the $738m in 2018 revenue nearly tripling the returns from a decade ago. That's partly a reflection of reduced broker-dealer inventories, which were a larger source of supply pre-crisis. The Q3 average global corporate bond balance of $196bn is at the higher end of the range observed since late 2015, when credit concerns drove an uptick in demand.

Emerging Markets:

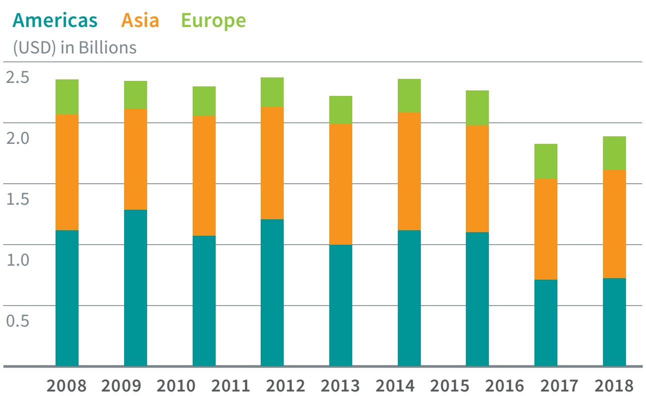
Borrow demand for emerging market equities has been strong amid the underperformance for the asset class globally. The total lending revenue for global EM equities was $331m in Q3, the highest on record both in nominal terms and as a percentage of all equity revenues, just over 17%. Assuming present trends remain in place, global EM

will have no difficulty moving past $1bn in total revenue for 2018, which will mark the best year on record.

Chinese ADR's have performed particularly well, generating nearly 10% of all EM equity lending revenue. While BABA gets much of the attention, ex-BABA Chinese ADRs delivered as much revenue in Q3 as they did in all of 2017, just over $26m.

Outside of Asia the revenues are moving off a relatively low base, but are putting up significant percentage gains in Ireland, Greece and Russia. Interestingly despite some increased balances, the YOY increase in Turkish equity lending revenues is only in the high single digits.

Equity special balances (fee > 500bps)



While the revenues associated with EM equities are much higher than fixed income, it's interesting to note that in general, revenues have been relatively flat for credit, which earned $47.7m in revenue through the first three quarters of 2018. That total revenue is actually down 8% compared with the first three quarters of 2017. One notable exception is Turkish government bonds, which have more than doubled the return YTD, though the total is only $3.4m, compared with over $18.7m revenue generated by lending Turkish equities.

Wrap up:

October 9th was the 10-year anniversary of the SEC ending the ban on short selling of US financial stocks; the 2.5-week tenure of which saw a 40% reduction in US equity loan balances. Despite the decline in revenues in the last week of Q3 2008, it retains the title of most lending revenue on record for the third quarter. That highlights a key aspect of securities lending: revenues improve in down markets, helping to offset mark to market losses for beneficial owners. While less extreme, the improvement in securities lending revenues this year has helped to offset declining valuations in some sectors, most welcome for emerging market investors. With demand robust across asset classes, the uptrend in revenues doesn't show any signs of slowing down as we move through the 4th quarter of 2018 (though some more US equity specials wouldn't hurt!)

Asia Equity

Demand uptrend remains in place

Asian equity lending revenue continued to increase in the 3rd quarter of 2018, up 26% from the comparable quarter of 2017. The increasing revenues were driven by growing loan balances, with fees posting a modest decline. Specials balances fell 6% compared with Q2, however the $22.5bn average balance with greater than 100bps fee was 17% higher than Q3 2018. The good news for beneficial owners is that utilization also increased, primarily driven by demand for Japanese and South Korean equities.

As previously mentioned, demand for emerging market equities was a key revenue driver in Q3. South Korea, Taiwan and Thailand each saw increasing balances, fees and utilization compared with Q3 2017. Chinese firms listed in Hong Kong achieved a 27% upswing in revenues and captured four of the top ten revenue-generating stocks in the region in Q3.

The largest contribution to the revenue upswing in nominal terms was once again Japan, which pulled in $222 million during Q3, a 15% increase compared with Q3 2017. Sharp Corp was the highest revenue generating stock in Japan, with just over 9% of all revenue in the country. Cyberdyne was the 2nd most revenue-generating Japanese equity, with rates stabilizing and starting to trend back up as demand continues to increase. The uptrend in Japanese equity revenues was driven by increased GC balances, with special balances trending down through the quarter.

The 2nd largest market in Asia was South Korea, whose lending revenue increased to $130m in Q2, a whopping 72% increase compared with Q3 2017. One key driver of the uptick was Celltrion with $38m in Q3 revenue making it the 2nd most revenue-generating equity globally. On top of that, Celltrion Healthcare delivered more than $11m of Q3 revenues, third most in the region.

Hong Kong Q3 equity lending revenue bettered its 2017 comparable by 27%. The increase was entirely the result of increasing balances, with average fees posting a marginal decline. Specials balances were similar to Q2, but have yet to get back to the level seen in Q1. The largest contributors to Q3 revenues in Hong Kong were BYD Co, Xiaomi Corp and Fullshare Holdings. China Evergrande Group was also in the top 10 revenue generators and borrow demand for the firm's bonds also drove revenue gains for the firm's investors.

Overview

Quarterly Revenues
$563M ▲ 26%

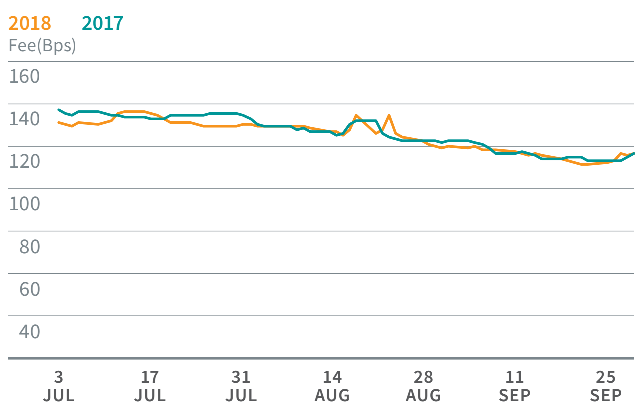
Average Balances
$180B ▲ 28%

Weighted Average Fee
1.35% ▼ 1%

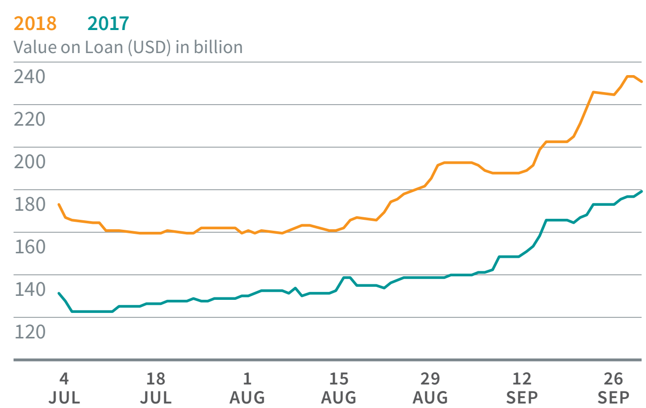
Average Inventory
$1.8T ▲ 22%

Utilisation
5.86% ▲ 15%

Q2 FEE TREND



Q2 BALANCE TREND



OVERVIEW

South Korea revenue soars on specials demand	Utilization increasing in largest markets	Celltrion remains top revenue generating Asia equity	Decreasing demand for Food & Staples retailing

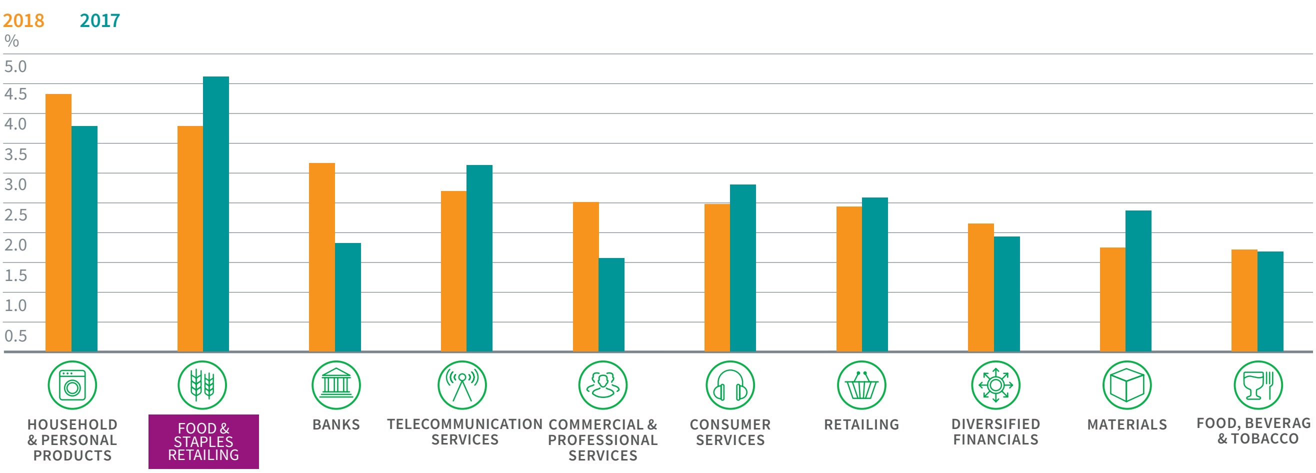
COUNTRY DETAILS

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 Utilisation	YoY Change
Japan Equity	222.82	14.9%	103.38	43.4%	0.93%	-20%	845.61	22.5%	6.34	28.5%
South Korea Equity	130.30	72.3%	13.50	20.9%	4.16%	42%	126.85	8.1%	5.99	29.2%
Hong Kong Equity	97.91	27.6%	30.27	28.8%	1.39%	-1%	390.57	24.8%	5.63	10.3%
Taiwan Equity	58.50	25.0%	9.35	3.3%	2.70%	21%	58.41	13.2%	7.80	1.7%
Australia Equity	35.08	-1.6%	18.82	-8.8%	0.80%	8%	294.30	25.5%	5.00	-11.4%
Singapore Equity	6.57	-12.9%	2.20	-13.2%	1.29%	0%	52.54	8.0%	3.37	-11.0%
Malaysia Equity	6.54	3.2%	0.76	6.3%	3.72%	-3%	14.69	28.9%	4.74	-18.0%
Thailand Equity	4.11	62.2%	0.90	25.0%	1.97%	30%	16.88	26.2%	3.99	14.3%
New Zealand Equity	0.87	-34.5%	0.68	48.6%	0.56%	-56%	7.43	18.5%	6.73	25.0%

TOP 10 REVENUE GENERATING STOCKS

Instrument Name	Ticker	Sector	Country	Revenue Generated ($)
Celltrion Inc	068270	Asia Pharmaceuticals, Biotechnology & Life Sciences	KR Equity (Others)	38.0
Sharp Corp	6753	Japan Consumer Durables & Apparel	JP Equity (Others)	21.8
Celltrion Healthcare Co Ltd	091990	Asia Health Care Equipment & Services	KR Equity (Others)	11.0
Byd Co Ltd	1211	Asia Automobiles & Components	HK Equity (Others)	9.3
Yageo Corp	2327	Asia Technology Hardware & Equipment	TW Equity (TWSE)	8.0
Cyberdyne Inc	7779	Japan Health Care Equipment & Services	JP Equity (Others)	6.4
Xiaomi Corp	1810	Asia Technology Hardware & Equipment	HK Equity (Others)	6.3
Fullshare Holdings Ltd	607	Asia Capital Goods	HK Equity (Others)	6.2
China Evergrande Group	3333	Asia Real Estate	HK Equity (Others)	5.6
Hlb Inc	028300	Asia Consumer Durables & Apparel	KR Equity (Others)	5.4

AVERAGE % OF SHARES ON LOAN



EMEA Equities

Best Q3 since 2012

European equity lending revenue was just over $371m for Q3, a 12% improvement compared to Q3 2017 and the most revenue generated by EMEA equities in Q3 since 2012. Germany led the way, improving on both balances and fees to deliver $59m in Q3 revenue. Revenues were harder to come by in France and the UK, with both seeing a reduction in specials balances. The declining fees overwhelmed marginal increases in demand and both countries saw declining revenue compared with Q3 2017.

While Brexit uncertainty persists, Q3 borrow demand for the FTSE 250 fell to the lowest level since Q1 2017. CYBG was the top earning UK equity in the quarter, with demand largely driven by merger arbitrage. Purplebricks was the otherUK equity in the top 10 by revenues, with increased fees offsetting declining demand to deliver $4.1m in Q3 revenue. Overall revenues for UK equities declined by 12% YoY, also to the lowest level since Q1 2017.

The Nordic region saw mixed results in Q3, with Sweden and Denmark posting improved revenue compared with Q3 2017, while Norway and Finland saw revenues decline. Specials demand drove the 42% increase in revenue for Swedish equities, yielding three stocks in the top 10 revenue generators.

From an industry group perspective, semiconductor stocks saw the largest increase in demand. IQE plc delivered the most lending revenue for the group, boosted by an accelerating fee increase into the end of the quarter.

Overview

Quarterly Revenues
$371M ▲ 12%

Average Balances
$207B ▲ 7%

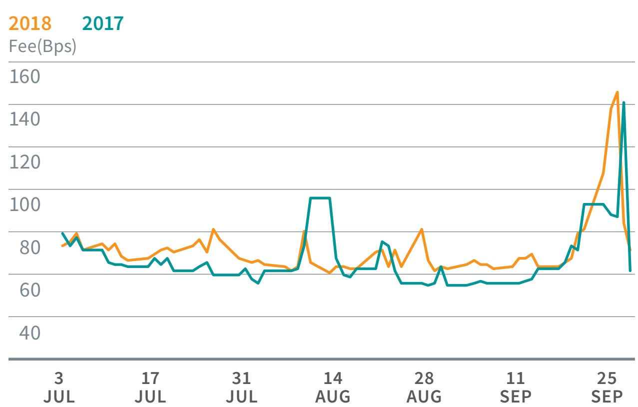
Weighted Average Fee
0.77% ▲ 0.77%

Average Inventory
$2.6T ▲ 10%

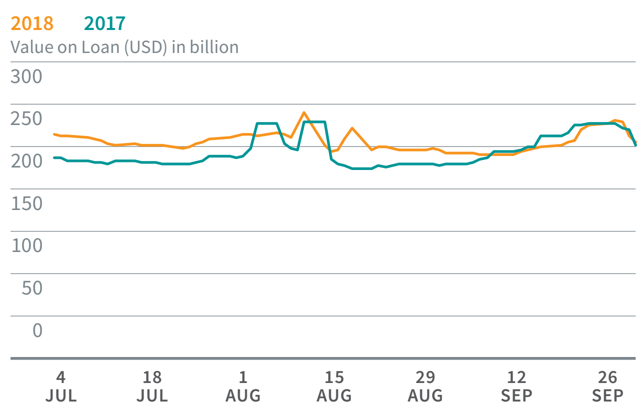
Utilisation
5.15% ▲ 5%

With increasing borrow balances outstripping lendable supply growth, pushing up on utilization and the potential for global macro pressures to drive increased hedging activity, there appear to be tailwinds to lending revenue for the region in Q4. With that said, the declining revenues in the UK push back against this narrative and suggest that Brexit uncertainty is causing short sellers to stay on the sidelines.

Q2 FEE TREND



Q2 BALANCE TREND



OVERVIEW

Increasing demand for semi-conductor stocks	German equity revenue up on demand and fee increases	Intrum Ab leads Nordics equity revenues	CYBG leading demand for UK specials

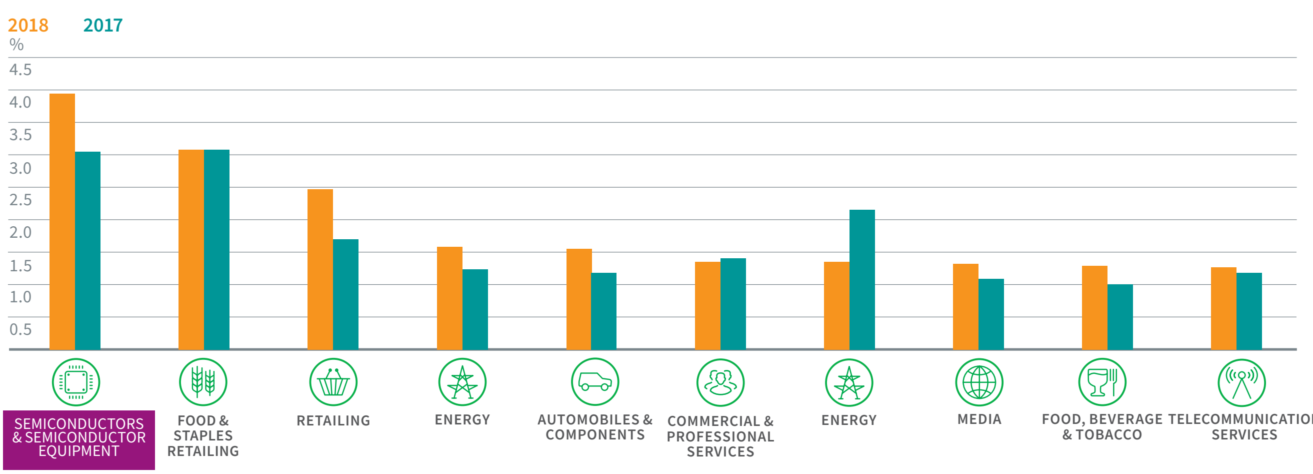
COUNTRY DETAILS

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 Utilisation	YoY Change
Germany Equity	59.05	34.6%	26.19	5.4%	0.97%	28%	352.18	0.6%	4.38	5.3%
France Equity	54.13	-20.8%	33.48	0.2%	0.70%	-21%	401.34	13.4%	4.72	-4.5%
UK Equity	51.06	-12.3%	43.23	4.9%	0.51%	-16%	785.53	17.7%	4.32	4.9%
Sweden Equity	43.59	42.8%	19.28	20.1%	0.97%	19%	123.06	6.4%	10.52	25.1%
Italy Equity	31.99	15.5%	13.99	3.0%	0.99%	12%	103.64	3.4%	8.24	10.0%
Switzerland Equity	28.95	39.5%	21.61	14.1%	0.58%	22%	328.06	6.6%	4.45	11.6%
Spain Equity	27.47	128.4%	10.71	28.0%	1.11%	78%	108.03	-1.2%	5.94	50.9%
Norway Equity	17.31	-6.7%	5.52	26.1%	1.35%	-26%	40.57	46.0%	8.60	0.3%
Netherlands Equity	16.15	-4.3%	11.66	-7.3%	0.60%	3%	145.59	14.8%	5.05	-18.9%
South Africa Equity	15.53	10.9%	6.81	-17.0%	0.98%	34%	60.10	9.2%	5.79	-16.5%
Denmark Equity	8.23	32.6%	6.58	-3.8%	0.54%	38%	67.45	1.5%	6.55	-4.7%
Turkey Equity	7.36	6.5%	0.82	-8.7%	3.86%	17%	6.74	-39.1%	8.64	41.7%
Belgium Equity	7.12	26.1%	4.60	16.8%	0.67%	8%	63.47	-4.7%	5.02	38.3%
Poland Equity	6.32	34.8%	1.10	-21.5%	2.49%	72%	10.81	-4.0%	7.03	-28.0%
Finland Equity	4.86	-2.9%	5.32	10.9%	0.39%	-13%	47.56	35.6%	7.25	-19.6%
Austria Equity	2.39	41.6%	1.19	-0.7%	0.86%	43%	15.14	12.4%	5.18	-0.5%
Greece Equity	2.04	149.7%	0.08	94.0%	10.77%	29%	1.95	-7.4%	3.41	122.0%
Portugal Equity	0.81	-23.4%	0.46	-37.6%	0.75%	23%	8.58	18.3%	3.32	-40.7%

TOP 10 REVENUE GENERATING STOCKS

Instrument Name	Ticker	Sector	Country	Revenue Generated ($)
Total Sa	FP	EMEA Energy	FR Equity (CAC)	20.8
Intrum Ab	INTRUM	EMEA Commercial & Professional Services	SE Equity (Others)	8.2
Tecnicas Reunidas Sa	TRE	EMEA Energy	ES Equity (IBEX)	7.7
Enel Spa	ENEL	EMEA Utilities	IT Equity (MIB30)	7.0
H & M Hennes & Mauritz Ab	HM B	EMEA Retailing	SE Equity (OMX)	6.5
Mycronic Ab (Publ)	MYCR	EMEA Technology Hardware & Equipment	SE Equity (Others)	6.1
Cybg Plc	CYBG	EMEA Banks	UK Equity FTSE 250	5.9
Acciona Sa	ANA	EMEA Utilities	ES Equity (IBEX)	4.5
Hapag Lloyd Ag	HLAG	EMEA Transportation	DE Equity (SDAX)	4.2
Purplebricks Group Plc	PURP	EMEA Real Estate	UK Equity Others	4.2

AVERAGE % OF SHARES ON LOAN



Americas Equities

Lack of specials leads to revenue decline

North American equities posted an 8% decline compared with Q3 2017. The decline in fees was driven by declining demand for specials, particularly in the US, though overall loan balances did increase 15%. Lendable inventories increased by 28% in the quarter, more than offsetting the increase in loan balances, causing overall utilization to decline. The $802m in NA equity lending revenue was the lowest for a quarter since Q2 2017.

While borrow fees for Tesla trended down slowly throughout Q3, they remained above 100bps for the duration, leading shares of the electric automaker to deliver over $35m in Q3 revenues; a decline of just over 50% compared with Q2, when higher fees and balances led to over $70m in revenues. Coming into Q4, demand for the shares remains elevated, though there has been no real friction on the borrow since the last proxy vote in April.

As mentioned in the outset, the Fortive exchange offer delivered a quick jolt of revenue at the end of the quarter, with demand likely driven by arbitrageurs purchasing options to hedge positions, leading to option market makers hedging in the underlying stock. The demand for borrows which weren't tendered in the exchange offered made FTV shares the 2nd most revenue- generating behind TSLA, with $20m in Q3 revenues.

Canadian equity lending revenue totaled $128m, an increase of 14.5% compared with Q3 2017. The Cannabis space continues to see special borrow rates and elevated balances, with Tilray getting much fanfare for extreme borrow rates in the quarter, while Canopy and Aurora remain the most revenue-generating based on balances.

Overview

Quarterly Revenues
$802M ▼ 8%

Average Balances
$534B ▲ 14%

Weighted Average Fee
0.65% ▼ 20%

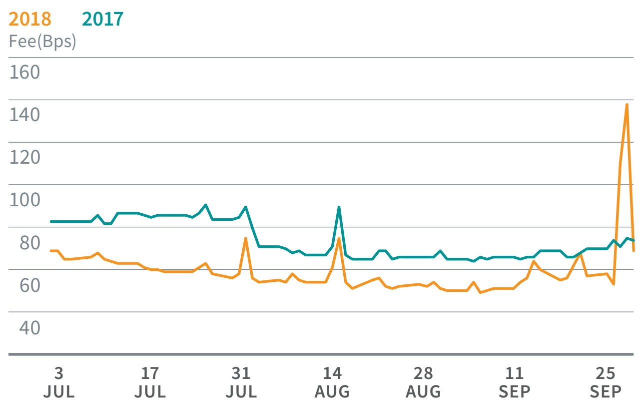
Average Inventory
$9.7T ▲ 28%

Utilisation
4.42% ▼ 5%

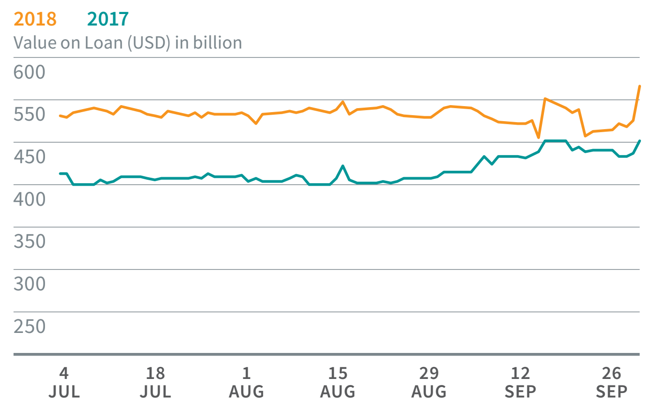
While the Cannabis stocks remain key drivers of demand for specials in Canada, it's worth noting more Energy, Materials and Real Estate stocks moving up in the most revenue generating stocks.

ADRs represented a bright spot, with Q3 revenues of $87.4m, up 43% compared to Q3 2017. Shares of BABA remain the most demanded, representing nearly 50% of ADR loan balances in the quarter; there is plentiful lendable supply which keeps a lid on fees causing the firm to generate only 13% of ADR revenues.

Q2 FEE TREND



Q2 BALANCE TREND



OVERVIEW

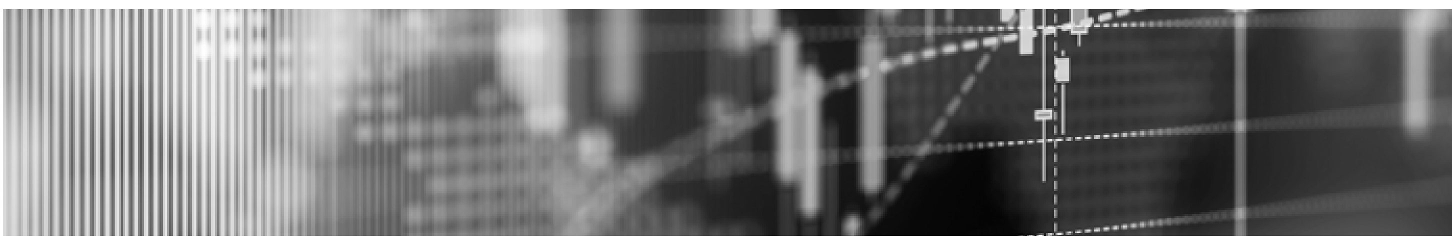
US revenues fall on lack of specials demand	Mexico up across the board	Fortive delivers revenue on exchange offer demand	ADR revenues up on surging demand and increased fees

COUNTRY DETAILS

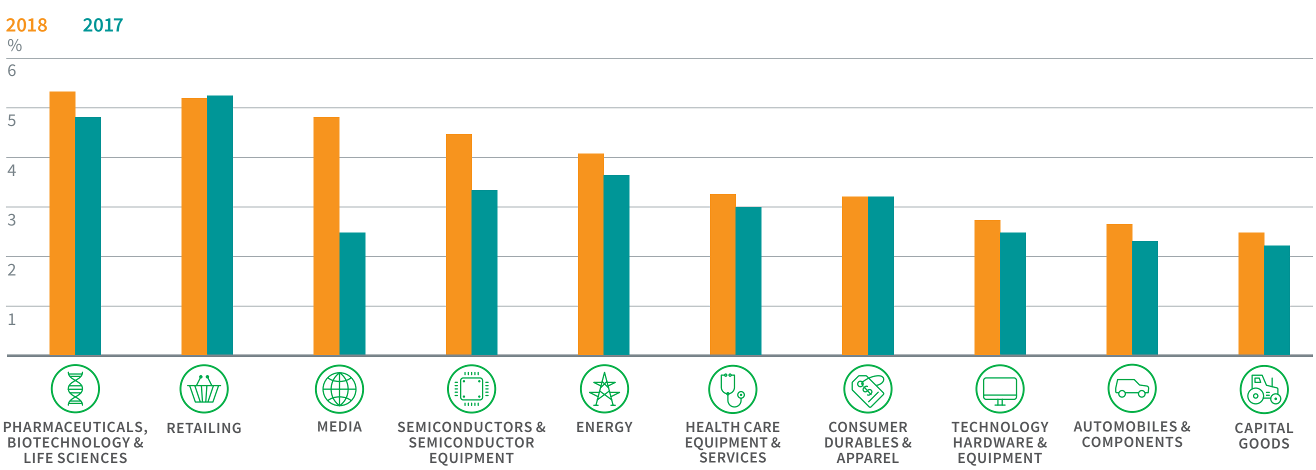
Country	Quarterly Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilisation	YoY Change
USA Equity	669.43	-11.5%	491.37	16.2%	0.59%	-24%	9,116.39	28.9%	4.30	-4.4%
Canada Equity	128.83	14.5%	41.77	-3.4%	1.33%	19%	523.16	9.3%	6.67	-8.5%
Brazil Equity	2.24	-16.4%	0.46	-23.7%	2.07%	10%	1.93	-34.0%	7.45	-9.3%
Mexico Equity	1.30	22.0%	0.89	10.5%	0.63%	10%	30.58	8.5%	2.46	6.3%
American Depository Receipts	87.35	43.1%	53.19	18.9%	0.71%	20%	221.30	14.2%	17.63	-4.2%

TOP 10 REVENUE GENERATING STOCKS

Instrument Name	Ticker	Sector	Country	Revenue Generated ($)
Tesla Inc	TSLA	North America Automobiles & Components	US Equity (Others)	35
Fortive Corp	FTV	North America Capital Goods	US Equity (S&P500)	20
Geron Corp	GERN	North America Pharmaceuticals, Biotechnology & Life Sciences	US Equity (RUSSELL 2000)	18
Ubiquiti Networks Inc	UBNT	North America Technology Hardware & Equipment	US Equity (RUSSELL 2000)	15
Transenterix Inc	TRXC	North America Health Care Equipment & Services	US Equity (Others)	15
Canopy Growth Corp	WEED	North America Pharmaceuticals, Biotechnology & Life Sciences	CA Equity (TSX MidCap)	13
Sunpower Corp	SPWR	North America Semiconductors & Semiconductor Equipment	US Equity (RUSSELL 2000)	12
Visa Inc	V	North America Software & Services	US Equity (S&P500)	11
Aurora Cannabis Inc	ACB	North America Pharmaceuticals, Biotechnology & Life Sciences	CA Equity (TSX MidCap)	11
J C Penney Company Inc	JCP	North America Retailing	US Equity (RUSSELL 2000)	11



AVERAGE % OF SHARES ON LOAN



Exchange Traded Funds

Revenue decline driven by non-US ETFs

ETF lending revenues were down 3% for the quarter relative to Q3 2017. The $87m in Q3 revenue also represents a 10% decline relative to Q2. From a regional perspective, the Americas remain robust, while declining fees in Europe and Asia have had a depressing impact on revenues.

Fixed income ETFs retained their prominence in the top 10 most revenue-generating ETFs, however the total revenue share from the asset class fell to 31% in Q3, down from 37% of all ETF lending revenue in Q2.

Global ETF AUM passed $5.25T in Q3, driven by increasing US equity valuations as well as $100bn in global equity inflows during the quarter. The total ETF lendable value averaged $284 billion, an increase of 21% compared with Q3 2017, though, only a 1% increase compared with Q2.

Overview

Quarterly Revenues
$86M ▼ 3%

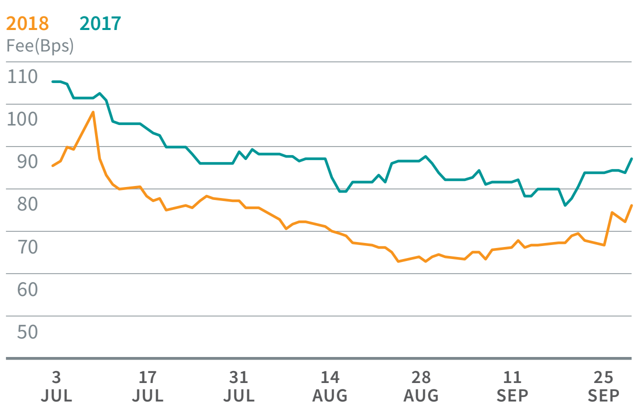
Average Balances
$47B ▲ 16%

Weighted Average Fee
0.79% ▼ 17%

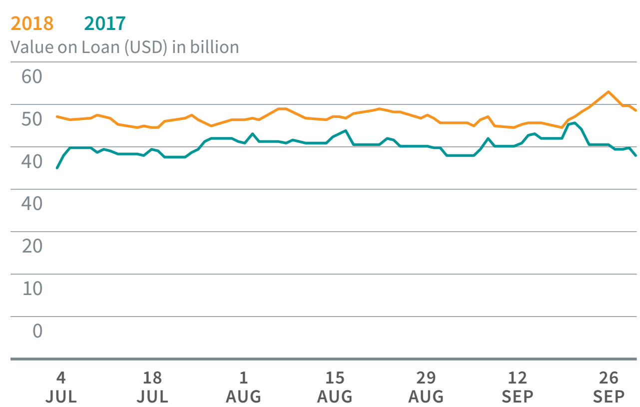
Average Inventory
$284.8B ▲ 21%

Utilisation
9.87% ▲ 0%

Q2 FEE TREND



Q2 BALANCE TREND



OVERVIEW

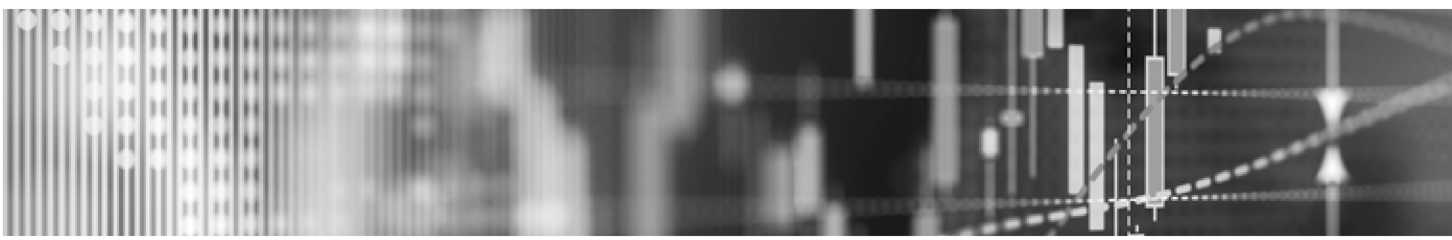
- Equity ETFs deliver 60% of revenues, up from 50% in Q2
- Fixed income remains atop most revenue generating fund list
- Corporate bond funds drive revenues

COUNTRY DETAILS

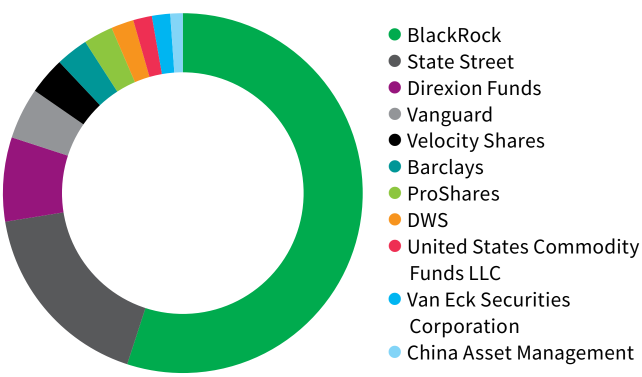
Country	Quarterly Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilisation	YoY Change
Americas ETF	65.58	6.3%	41.61	18.3%	0.68%	-10%	172.77	20.2%	6.97	0.0%
European ETF	16.01	-28.5%	4.27	-0.9%	1.62%	-28%	54.38	25.1%	12.26	0.0%
Asian ETF	2.60	-17.6%	0.74	20.9%	1.51%	-32%	1.96	56.2%	10.31	0.0%

TOP 10 REVENUE GENERATING FUNDS

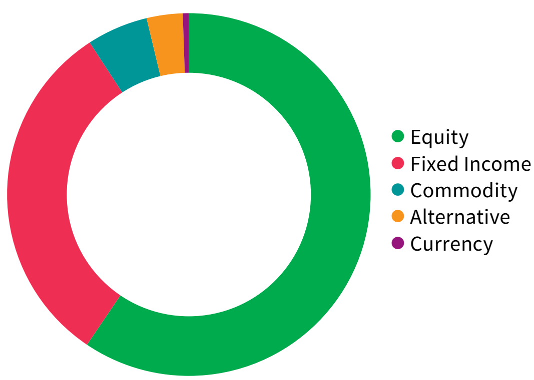
Instrument Name	Ticker	Listing Country	Asset Class	Q3 Revenue Generated ($)
Ishares Iboxx $ High Yield Corporate Bond Fund	HYG	US ETF	Corp Bond	$11.7
Spdr Bloomberg Barclays High Yield Bond Etf	JNK	US ETF	Corp Bond	$3.5
Ishares Russell 2000 Etf	IWM	US ETF	Equity	$2.9
Spdr S&P Biotech Etf	XBI	US ETF	Equity	$1.5
Ishares Msci Emerging Markets Etf	EEM	US ETF	Equity	$1.5
Spdr S&P 500 Etf Trust	SPY	US ETF	Equity	$1.2
Ishares High Yield Corp Bond Ucits Etf Eur(Dist)	IHYG	IE ETF	Corp Bond	$1.1
Alerian Mlp	AMLP	US ETF	Equity	$1.0
Ishares Core Ftse 100 Ucits Etf (Dist)	ISF	IE ETF	Equity	$0.7
Ishares Msci Mexico Etf	EWW	US ETF	Equity	$0.7



LENDING REVENUES BY ISSUER



LENDING REVENUES BY ASSET CLASS



Corporate Bonds

Steady state for demand

The borrow demand for corporate bonds continues to increase, but the rate of change is declining. The third quarter is the first of the last five where every key metric did not register a YoY increase, and the average fee making posting a small decline. The increased balances were sufficient to offset the declining fees, delivering an 11% increase in revenues compared with Q3 2017.

Investment grade bonds make up 68% of loan balances, a slight uptick compared with Q2. Higher fees for non-investment grade bonds invert that ratio, with NIG delivering 62% of all revenues. GBP denominated IG bonds saw the largest percentage increase in demand for investment grade bonds (46%), while EUR denominated NIG bonds had the largest increase in non-investment grade bonds.

While demand for Tesla bonds remained elevated in Q3, it was the first quarter of 2018 where the firm didn't have a bond in the top 10; Having been the only firm to have both it's equity and a bond in the top 10, for their respective asset classes, in the first half of the year.

Borrow demand for convertible bonds was down 20% in the quarter, driving down revenues despite a 9% increase in average fees. Booking Holdings remains the only convertible bond in the top ten corporates, having achieved just over 10% of all revenues associated with converts.

Overview

Quarterly Revenues
$187M ▲ 11%

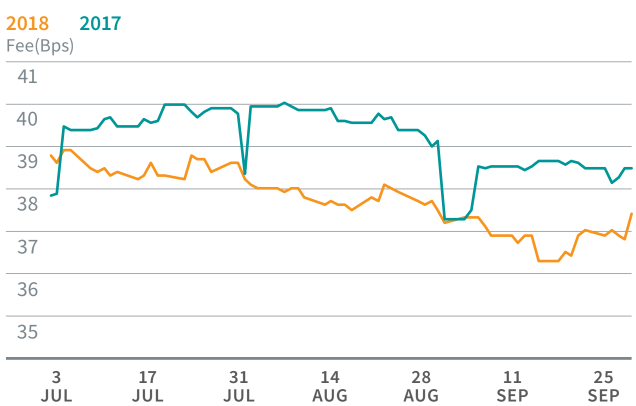
Average Balances
$196B ▲ 15%

Weighted Average Fee
0.41% ▼ 4%

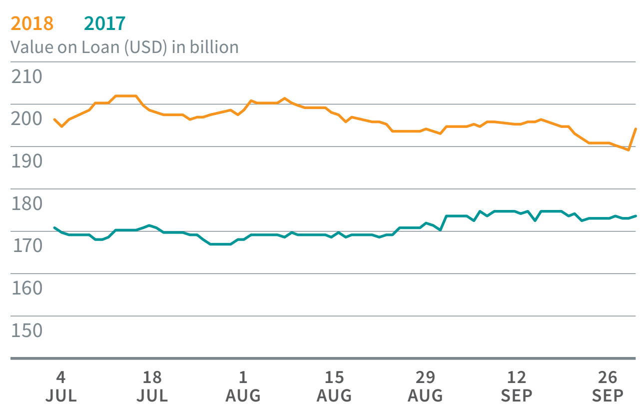
Average Inventory
$3.2T ▲ 5%

Utilisation
5.42% ▲ 8%

Q2 FEE TREND



Q2 BALANCE TREND



OVERVIEW

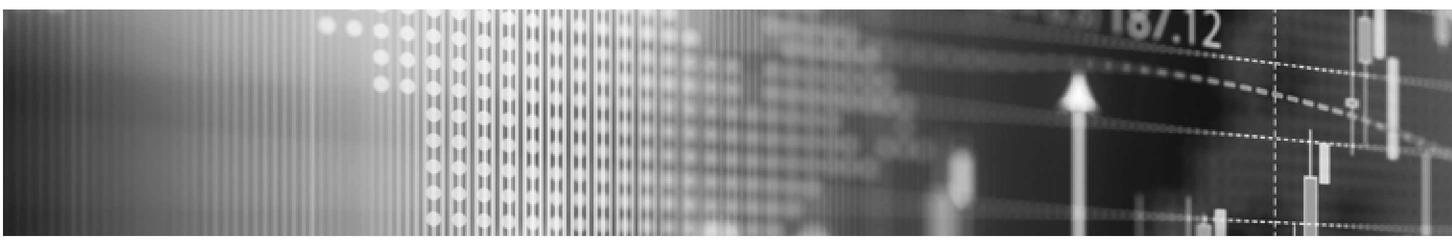
- Altice Luxembourg & CHS with multiple bonds in top 10
- Revenues increase on demand upswing
- Booking Holdings remains only convertible bond in top 10
- Increasing revenues for EUR issues

ISSUE TYPE DETAILS

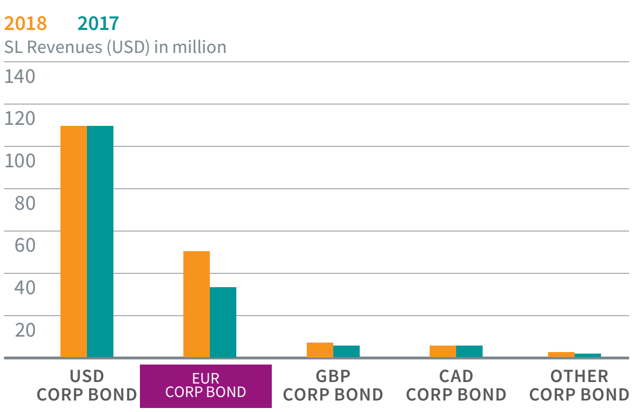
Issue Type	Quarterly Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilisation	YoY Change
Corp Bonds	174.51	12.3%	189.81	15.7%	0.40%	-3%	2,970.17	4.8%	5.76	9.0%
Conv Bonds	11.42	-12.8%	5.24	-19.4%	0.94%	8%	45.12	6.2%	8.74	-19.4%
Asset Backed Securities	0.89	772.8%	1.25	436.4%	0.31%	63%	224.37	3.4%	0.17	65.1%

TOP 10 REVENUE GENERATING BONDS

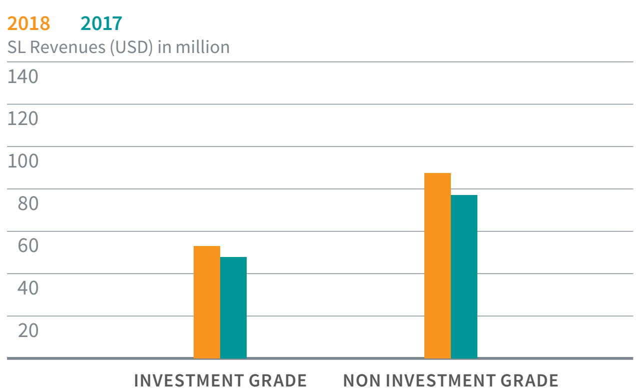
Top Earning Assets	Cusip	Denomonation	Aseet Class	Revenue Generated ($)
Altice Luxembourg Sa (7.625% 15-Feb-2025)	02154VAB7	USD	Priv. Placement	2.1
Tereos Finance Groupe I Sa (4.125% 16-Jun-2023)	F9294CAB9	EUR	Non-Investment Grade	2.1
Chesapeake Energy Corp (8% 15-Jan-2025)	165167CU9	USD	Non-Investment Grade	1.9
Mohegan Gaming & Entertainment (7.875% 15-Oct-2024)	608328BF6	USD	Priv. Placement	1.9
Altice Luxembourg Sa (7.25% 15-May-2022)	L0179ZAB0	EUR	Non-Investment Grade	1.6
Chs/Community Health Systems Inc (8.125% 30-Jun-2024)	12543DBA7	USD	Priv. Placement	1.5
Booking Holdings Inc (0.9% 15-Sep-2021)	741503AX4	USD	N.I.G. Convert	1.3
Astaldi Spa (7.125% 01-Dec-2020)	T0538FAB2	EUR	Non-Investment Grade	1.3
Pitney Bowes Inc (6.7% 07-Mar-2043)	724479506	USD	Non-Investment Grade	1.3
Chs/Community Health Systems Inc (11% 30-Jun-2023)	12543DAZ3	USD	Priv. Placement	1.3



Q2 SECURITIES LENDING REVENUES BY DENOMINATION



Q2 SECURITIES LENDING REVENUES BY RATINGS CATEGORY



Government bonds

Lowest revenue since Q3 2017

The first half of 2018 was a tough act to follow, featuring the two most revenue-generating quarters for post-crisis lending of government debt obligations. The third quarter failed to better the preceding quarters of this year, however, the $418 in Q3 revenues is still 7% higher than Q3 2017.

The delta in returns varied by region, with Asia and the Americas seeing increased revenues while Europe and EM revenues fell. The drivers of the returns also varied, with increased fees offsetting a marginal decline in demand for United States and Canadian issues, while dramatically increased balances drove gains in Asia, despite declining fees.

In Europe, gains in French government debt lending and UK revenues were offset by a 36% decline forGerman debt compared with Q3 2017. Italian government bonds posted $10.9m in revenue, their best revenue quarter on record, entirely on the back of increasing fees (balances fell 11% compared with Q2).

While the primary driver for government bond lending remains the demand for HQLA, there have also been some directional trading opportunities driven by rising interest rates and uncertainty about future central bank actions.

Overview

Quarterly Revenues
$403M ▲ 8%

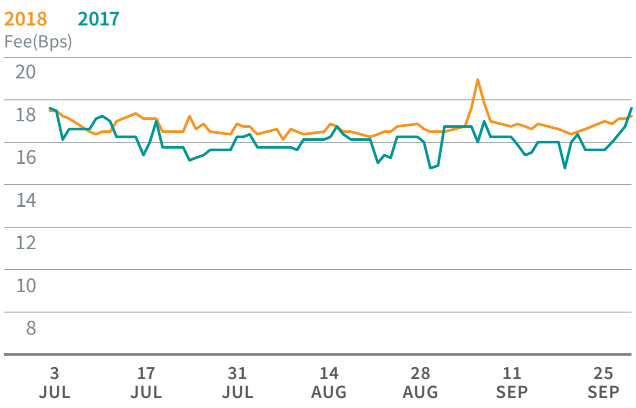
Average Balances
$951T ▲ 3%

Weighted Average Fee
0.18% ▲ 4%

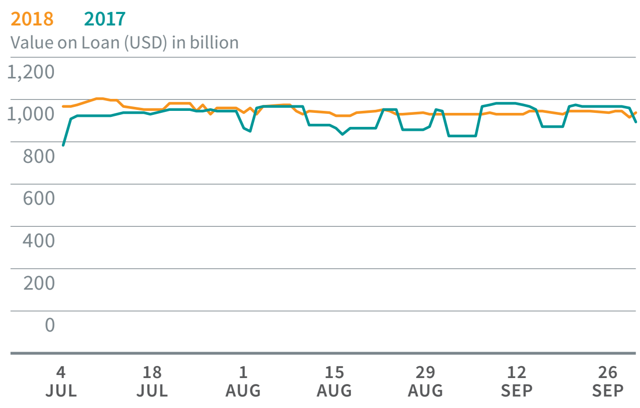
Average Inventory
$2.9T ▲ 13%

Utilisation
24.72% ▼ 11%

Q2 FEE TREND



Q2 BALANCE TREND



OVERVIEW

Americas revenues in uptrend, though rate of increase slowing	Italy has top revenue generating bond for first time in 2018	Utilization falling on flat demand vs increasing supply	Revenues for European issuers falls on declining fees, despite increased demand

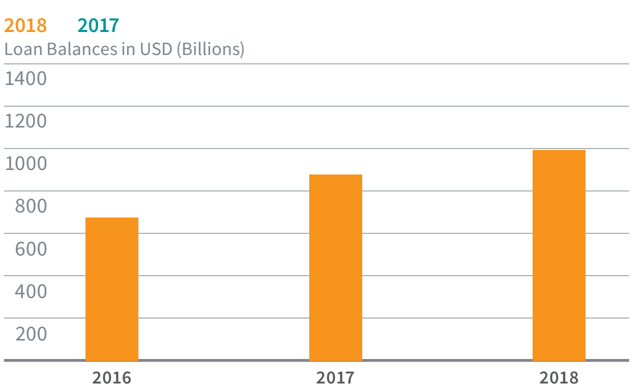
REGIONAL DETAILS

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 Utilisation	YoY Change
Americas Bonds (Govt)	241.47	14.4%	530.18	-0.9%	0.20%	15%	1,913.89	15.4%	22.41	-17.3%
Asian Bonds (Govt)	11.26	39.8%	51.88	66.1%	0.09%	-16%	64.36	33.4%	11.85	28.2%
European Bonds (Govt)	150.45	-3.4%	368.65	4.5%	0.18%	-8%	963.46	7.7%	30.18	1.5%
Emerging Market Bonds	15.27	-6.8%	18.14	15.8%	0.36%	-20%	224.71	19.8%	7.54	-1.5%

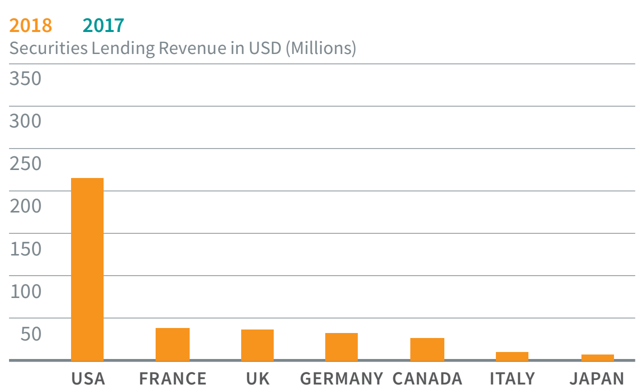
TOP 10 REVENUE GENERATING BONDS

Instrument Name	ISIN	Currency	Issuer	Revenue Generated ($)
Republic of Italy (4.75% 01-Sep-2028)	T6247AVQ6	EUR	Italy	3.9
Republic of France (3.25% 25-Oct-2021)	F40411LB8	EUR	France	2.6
Republic of France (0.5% 25-Nov-2019)	F43750CU4	EUR	France	2.2
United States Treasury (1.375% 31-Jul-2019)	9128282K5	USD	USA	2.1
United States Treasury (2% 31-Jul-2022)	912828XQ8	USD	USA	2.0
United States Treasury (1.375% 30-Sep-2019)	9128282X7	USD	USA	2.0
United States Treasury (2% 15-Feb-2023)	912828UN8	USD	USA	2.0
United States Treasury (0.75% 15-Jul-2019)	912828S43	USD	USA	1.8
United States Treasury (1.875% 31-May-2022)	912828XD7	USD	USA	1.7
United Kingdom (2% 22-Jul-2020)	G9T44MJU7	GBP	UK	1.6

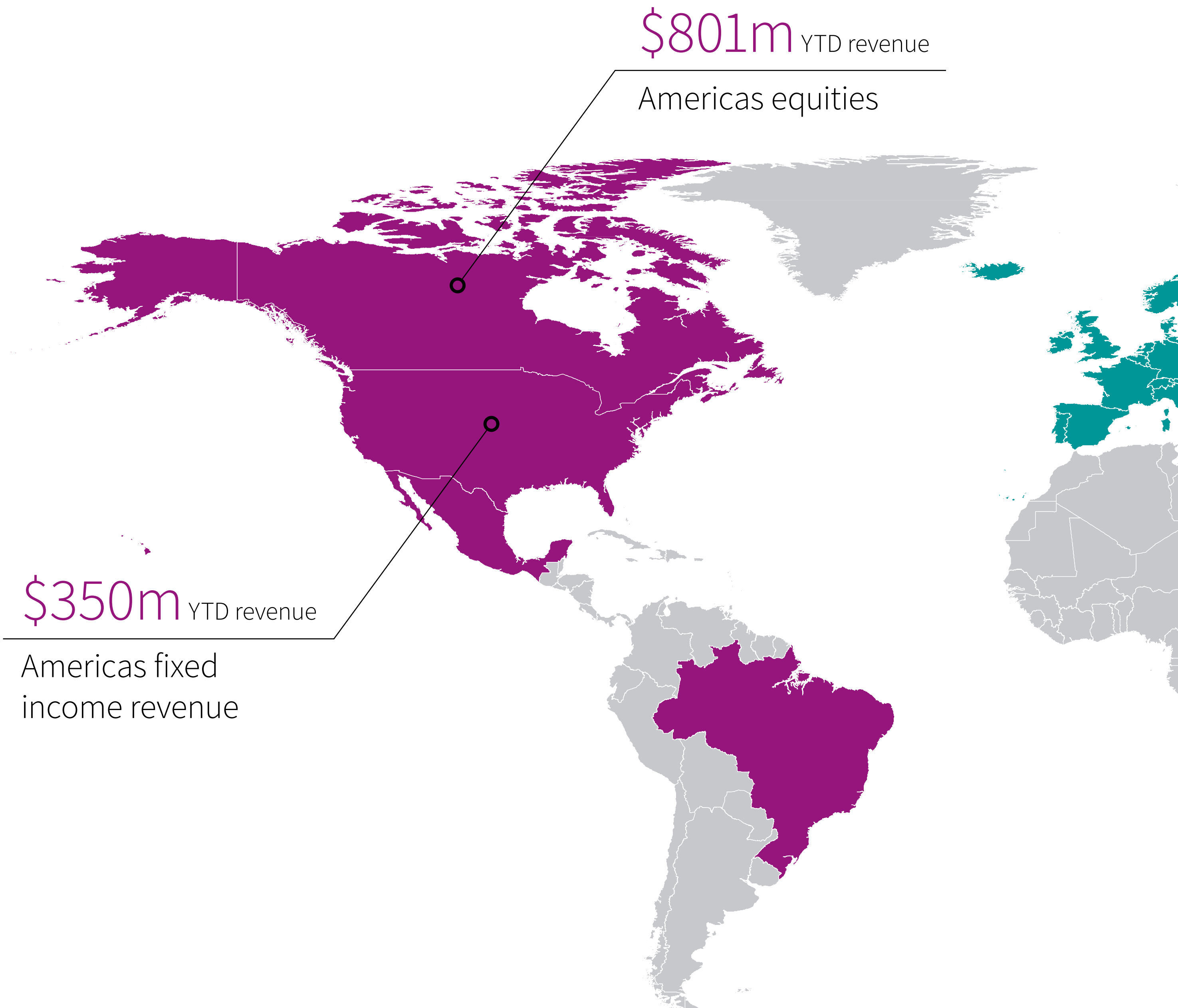
GOVERNMENT BOND BALANCE TREND



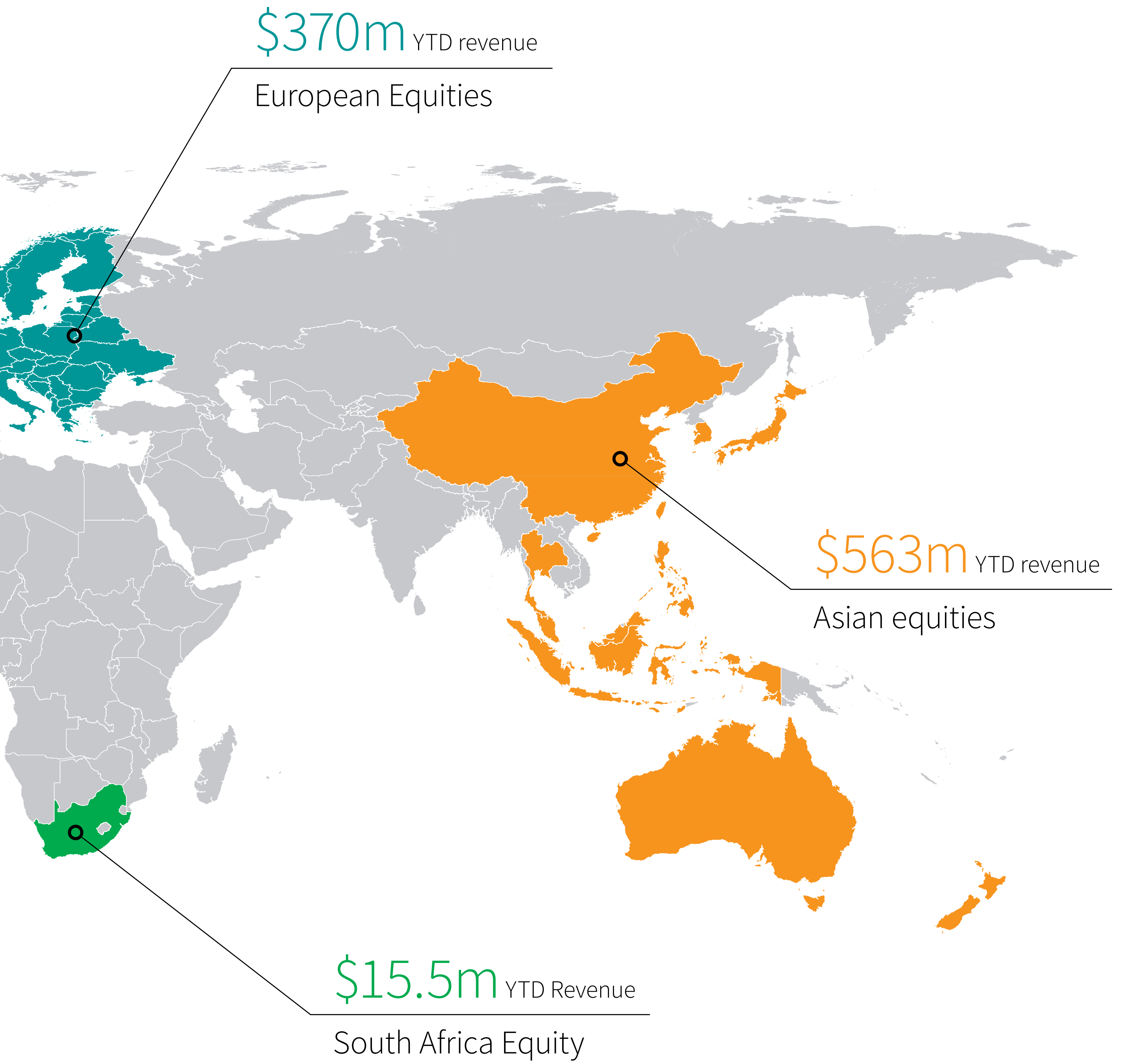
Q2 REVENUES BY ISSUER



Global snapshot



Asset Class	Lendable Assets ($T)	Loan Balance ($T)	% Non-Cash	Utilisation (%)	SL Fee (Bp)
All Securities	$21.2	$2.2	67%	8	0.46%
Government Bonds	$2.9	$1.0	77%	25	0.17%
Corporate Bonds	$3.0	$0.2	48%	6	0.36%
Equities	$14.2	$0.9	61%	5	0.75%
Depository Receipts	$0.2	$0.1	51%	18	0.67%
Exchange Traded Funds	$0.3	$0.1	33%	10	0.73%



$370m YTD revenue
European Equities
$563m YTD revenue
Asian equities
$15.5m YTD Revenue
South Africa Equity

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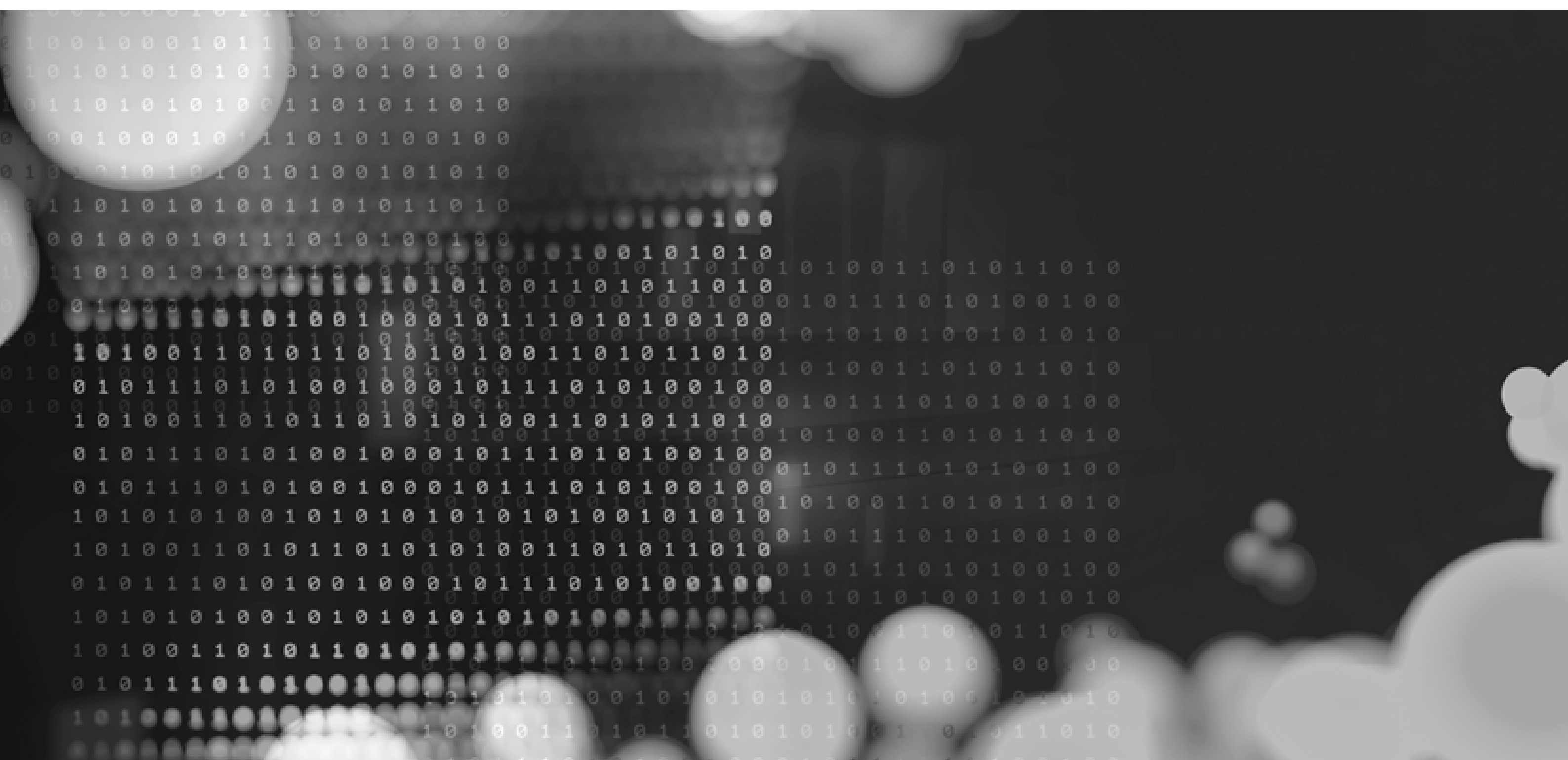

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