



IHS Markit®

Securities Finance mid-year review



H1 2020



Welcome to the IHS Markit Securities Finance mid-year review. It has been an extraordinary time for us all personally and professionally with adjustments to daily routines that would have seemed unimaginable even at the start of the year.

Most importantly I hope

you and your families, as well as your businesses have continued to fair well during this challenging time. As I think about the first half of the year, I think it has demonstrated how far the industry has evolved since the financial crisis. Most notably, everyone worked from home without major technological difficulties or product outages (though maybe a few grey hairs); secondly the inevitable short sells bans were widely condemned by virtually everyone (outside the industry); and lastly, beneficial owners majoritively continued to lend through the market sell off with our data suggesting less than 1% deciding to pause. Interestingly, we have seen new beneficial owners come to the market throughout this time.

I would be remiss not express my deep appreciation and gratitude to the entire IHS Markit securities finance team. They too have had to adapt, but day in, day out have ensured faultless delivery to our clients and been proactive in reaching out to offer support. The huge positive for us is that we have really deepened the partnership and relationship with our clients. During the first half of the year we have managed to maintain our strong program of new and enhanced feature functionality, which included:

- The growth of our dataset continues with the addition of new clients. The data set peaked at almost \$26 trillion of lendable assets and we have seen continued double-digit growth in our intraday dataset
- Implementation of market level returns and analytics on six iBoxx fixed income and six MSCI equity indices
- Implementation of the ability to apply minimum spread/fee portfolio performance measurements
- Investments in technological infrastructure and usability with improved design, speed and functionality, especially our screening & portfolio tool
- The announcement of our collaboration with Credit Benchmark to integrate securities finance and credit related data
- The launch of our global short squeeze model

- New features in League Tables with ability to trend rankings
- The addition of new reports for Beneficial owners to help with oversight and governance as well as the launch of our lending program snapshot service

This would be a respectable list of achievements in normal times, which makes it all the more satisfying that they were achieved during the most challenging of times.

We have a busy and robust agenda for the remainder of the year which includes:

- Additional data points on Bloomberg and development of Bloomberg App
- Availability of corporate action and proxy voting alerts
- Launch of a compliance tool for beneficial owners to help with governance and program oversight
- Implemented enhancements to support ISLA's Securities Lending Performance Measurement best practice

Thank you very much for all the continued support and feedback. I sincerely hope you are able to enjoy the remainder of the summer.

Regards,

Paul R. Wilson

Managing director and global head of Securities Finance, IHS Markit

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Securities Finance Mid-year Snapshot

H1 2020: Securities lending revenue totals \$4.78b

- H1 revenues decline 4.8% YoY
- US equity special balances soar
- Reinvestment return declining

Global securities lending returns in the first half of 2020 fell by 4.8% YoY. The utilization of lendable assets remains elevated YoY in aggregate as well as for most asset classes, despite declining from the YTD peak in March. The top-level changes belie a variety of asset class and region-specific dynamics which we'll discuss in this note. Increasing demand for US equity specials, US Treasuries and global ETFs drove increased returns for those asset classes. The revenue shortfall was caused by declining balances and fees for non-US equities, ADRs & corporate bonds, however it's worth bearing in mind that average H1 total return to lendable for all securities increased YoY based on reinvestment contribution.

GLOBAL SECURITIES LENDING SNAPSHOT - H1 2020

Asset Class	SL Revenue (\$M)	Rev YoY %Chg	Avg Balances (\$B)	Bal YoY %Chg	Avg Fee	Fee YoY %Chg	Avg Utilization	Utilization YoY %Chg
All Securities	\$4,775	-4.8%	\$2,090	2%	0.46%	-7%	7.4%	0%
Americas Equity	\$1,899	27.7%	\$455	-9%	0.83%	39%	3.7%	-14%
Asia Equity	\$799	-21.1%	\$196	4%	0.82%	-24%	5.7%	-2%
EMEA Equity	\$695	-35.0%	\$200	-6%	0.69%	-30%	6.1%	-1%
ADRs	\$120	-43.2%	\$22	-50%	1.09%	11%	6.7%	-54%
Exchange Traded Fund	\$200	28.7%	\$62	17%	0.63%	7%	12.0%	16%
Government Bond	\$767	11.3%	\$952	16%	0.16%	-4%	23.9%	12%
Corporate Bond	\$226	-29.4%	\$181	-8%	0.25%	-24%	4.0%	-18%

Note: Includes only fee revenue

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US equity revenues came in at \$1.6bn for the first half of 2020, an increase of 35% YoY. The revenue increase was driven by a 46% YoY increase in weighted average fees, which more than offset the 8.4% reduction in average YTD balances. The broad short squeeze in hard-to-borrow shares, particularly in April and early June, had the knock-on impact of increasing special balances broadly. Drivers of the upswing in US equity specials include arbitrage trades relating to convertible bonds, SPAC IPOs and exchange offers as well as increased trading of shares in firms which facing potential bankruptcy.

TOP REVENUE GENERATING EQUITIES FOR H1 2020

Ticker	Name	SL Revenue	Market	Industry Group
MTCH	Match Group Inc	122.1	US Equity	Media and Entertainment
WEED	Canopy Growth Corp	94.4	CA Equity	Pharmaceuticals, Biotechnology & Life Sciences
NKLA	Nikola Corporation	76.0	US Equity	Capital Goods
PTON	Peloton Interactive Inc	60.1	US Equity	Consumer Durables & Apparel
WDI	Wirecard Ag	51.3	DE Equity	Software & Services
SDC	Smiledirectclub Inc	48.1	US Equity	Health Care Equipment & Services
028300	Hlb Inc	41.4	KR Equity	Asia Consumer Durables & Apparel
ACB	Aurora Cannabis Inc	40.8	CA Equity	Pharmaceuticals, Biotechnology & Life Sciences
GME	Gamestop Corp	37.4	US Equity	Retailing
TLRY	Tilray Inc	37.4	US Equity	Pharmaceuticals, Biotechnology & Life Sciences

Source: IHS Markit Securities Finance

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Canadian equity lending revenues increased sequentially from May to June, however returns are still lower than they were in 2019, which has been true for each month of 2020 starting in March. Canadian equities had \$279m in H1 2020 revenues, a 2.8% YoY decline.

Equity lending in Europe has fallen well short of 2019 returns, with revenues of \$695m reflecting a 35% YoY decline. As the Wirecard story descended into scandal, the limited availability of shares in lending programs pushed up on fees resulted in the equity delivering \$37m in YTD revenue, 5% of all European equity lending returns. Dividend delays complicate the YoY comparison, which will become clearer this summer.

GLOBAL SECURITIES LENDING REVENUE

CORPORATE BONDS GOVERNMENT BONDS EQUITIES

SL revenues (\$bn)



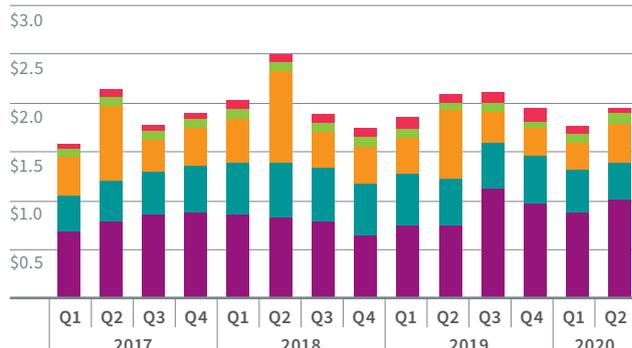
Notes: Revenues for first half of each year
Source: IHS Markit Securities Finance

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EQUITY LENDING REVENUE BY REGION

AMERICAS ASIA EUROPE ETF ADR

SL revenues (\$bn)



Source: IHS Markit Securities Finance

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Asia equity lending revenues remain subdued compared with prior years; H1 2020 revenues of \$798m reflect a 21% YoY decline. The largest market, Japan, delivered H1 revenues of \$303m, a 24% decline compared with the first half of 2019. The short sale ban in South Korea has limited lending revenue, equity lending revenues for H1 totalled \$169m, a 20% YoY decline. Hong Kong equity lending revenues picked up in May and June, however the Q1 shortfall meant H1 total fell 20% YoY. Australian equity revenues totalled \$44m in H1, a 29% YoY decline.

Global ETF revenues were \$200m for H1, a 29% YoY increase. ETF lending revenues soared in March, with \$53m in monthly revenue, more than double the March 2019 total after falling short of YoY comparison in January and February; Q2 monthly returns were consistently between \$32 to \$36m per month. Most ETF lending metrics peaked in March and declined thereafter but remain well above the January and February observations (including revenues, balances, fees and utilization).

Fee-based revenue for government bond lending came in at \$766m for H1, an 11% YoY increase resulting from larger loan balances; H1 average fees declined YoY as a function of falling short in January and February. US Treasuries returned \$468m for H1, a 29% increase. For beneficial owners, returns from lending US Treasury securities in 2020 have been substantially bolstered by reinvestment of cash collateral, however reinvestment returns have steadily trended lower since late March. Returns from lending European sovereigns were \$228m for H1, an 12% YoY decline as the result of both lower balances and fees, though spreads did widen in April and May which helped to offset declining balances.

Corporate bond lending revenues continue to fall short of 2019 comparison, mostly as the result of declining fees, however balances have also declined YoY. H1 corporate lending returns came in at \$226m, a 29% decline YoY. Some of the early 2020 specials, such as the Diamond Sports note, saw borrow demand decline as the credit sell-off accelerated. The Wirecard credit shorts stuck with the trade through the firm's collapse, paying up mightily to do so and making the firm the first since Tesla to occupy a spot on the top equity and corporate bond top revenue generators.

Conclusion

Short sale bans, central bank support for credit and dividend cuts have dampened borrow demand in the first half of 2020. US equity specials are leading the way into the 2nd half of the year, where the asset class runs into a more challenging YoY comparison. The increased popularity of retail trading has reinforced the importance of that supply of hard to borrow shares, however utilization and return to lendable are trending upward for agency lending of US equities, the largest market by lendable assets. Challenges and opportunities abound heading into the second half of the year, close monitoring of results is warranted.

APAC Equity

Lowest H1 revenue since 2017

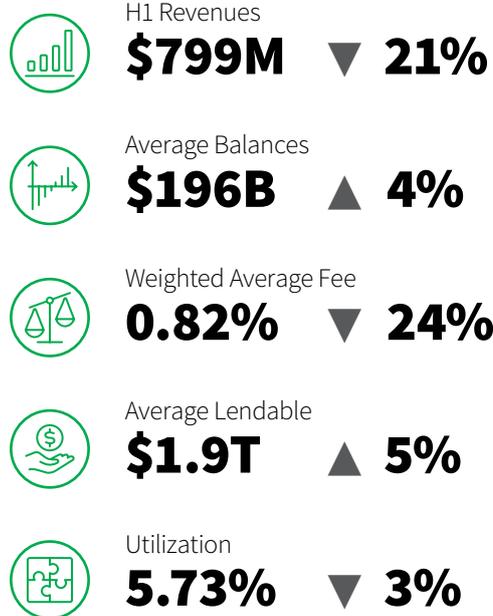
Asian equity lending delivered \$798m in H1 revenues, down 21% from H1 2019. The declining revenues made the first half of 2020 the least revenue generating since 2017 overall and for Q1 and Q2 individually. The total figures suggest the culprit for lower returns is primarily narrower fee spreads, however the largest market, Japan, looms large in those figures with a 14% YoY increase in balances (ex-Japan balances declined 9% YoY). On loan balances with fees greater than 500bps decreased 27% YoY to average \$8.8bn in H1. Asia equity lendable assets reached \$2T for the first time in late December 2019 and set a new all-time high of \$2.1T in early January; lendable assets recovered to end H1 at \$1.9T, while utilization has trended down from the peak in March.

Japanese H1 equity revenues totaled \$303 million, a 24% decline compared with H1 2019. Loan balances increased substantially in March and despite a Q2 decline, remain well above the start of the year. The most revenue generating JP equity, Anritsu Corp, delivered \$11.8m in H1, however, declining fees will make a repeat performance unlikely in the latter half of 2020.

Hong Kong equity lending delivered \$165m in H1 revenue, a 20% YoY decline. The shortfall was largely concentrated in February – April, with May and June posting YoY increase in returns on wider fee spreads and increased balances. Against the broader trend the most revenue generating HK Equity, BYD Co Ltd (1211), generated \$12.2m in Q1 and only \$4.4m in Q2 as a result of lower balances and fees. Utilization of HK equities has steadily increased YTD, one of the few such equity markets globally.

The short sale ban in South Korea limited lending revenue, with previously borrowed shares such as those of HLB Inc continuing to earn a return, while overall SK equity lending revenues declined 21% YoY.

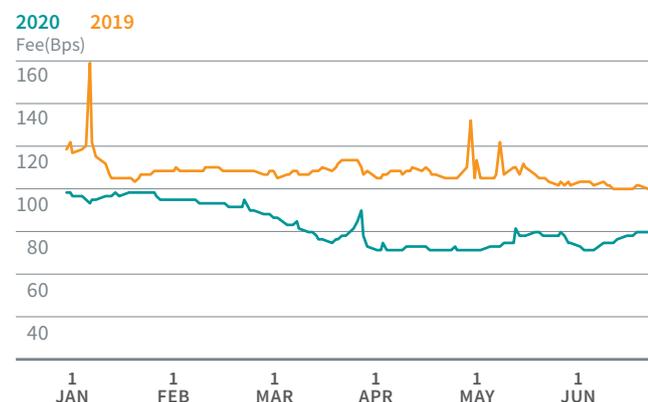
Overview



Average South Korea equity balances, fees and utilization declined sharply YoY and sequentially in the months following the imposition of the ban.

As noted in the ETF section, funds which invest in Chinese equities represented three of the top 10 funds, while lending returns for ETFs which are listed in Asia continue to trend upward.

H1 FEE TREND



H1 BALANCE TREND



OVERVIEW

Lack of specials limit returns

Lower fees across most Asia equity markets

Top 5 markets all see YoY revenue decline

HLB Inc most revenue generating Asia equity in H1

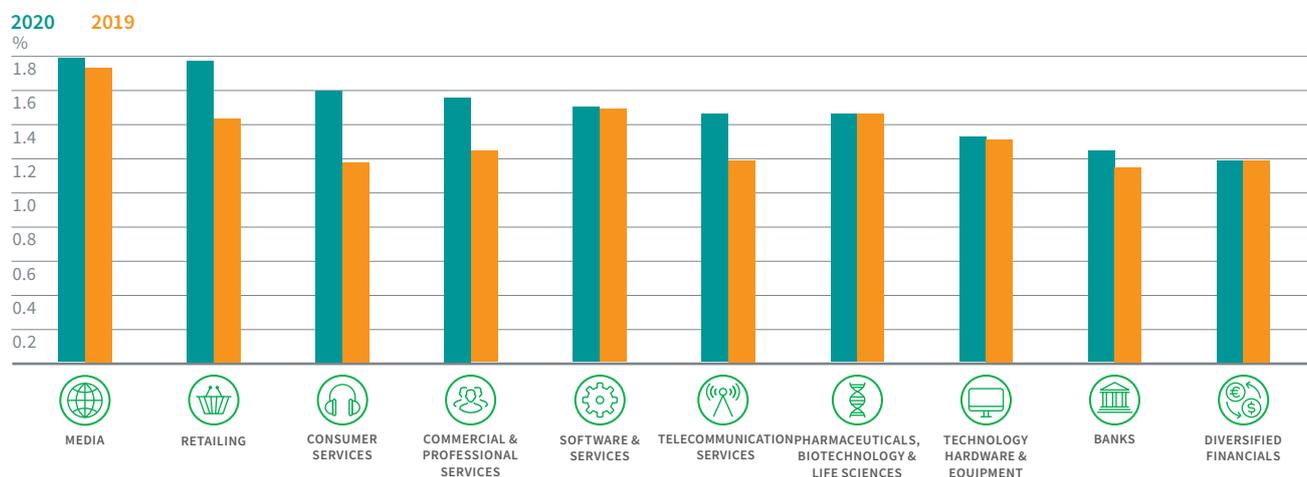
COUNTRY DETAILS

Country	H1 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	303.9	-24%	123.0	14.0%	0.5%	-18.0%	869.10	9.5%	6.67	0.4%
South Korea Equity	169.9	-21%	10.6	-21.0%	3.1%	11.0%	119.69	-3.0%	3.99	-28.1%
Hong Kong Equity	165.6	-20%	33.5	6.0%	1.0%	-21.0%	454.47	8.0%	5.60	2.4%
Taiwan Equity	86.8	-12%	8.9	17.0%	2%	-8%	58.75	2.0%	5.23	-3.7%
Australia Equity	44.4	-29%	16.3	-31.0%	0.6%	-13.0%	298.67	-4.9%	4.86	-15.9%
Singapore Equity	17.0	35%	1.9	-10.0%	1.7%	43.0%	45.47	-9.5%	3.28	-0.5%
Malaysia Equity	5.7	-37%	0.6	3.0%	1.9%	-34.0%	11.01	-25.1%	2.75	-16.1%
Thailand Equity	3.6	-47%	0.5	-38.0%	1.5%	-2.0%	14.66	-13.5%	2.59	-25.8%
New Zealand Equity	1.7	2%	0.7	9.0%	0.5%	-31.0%	9.39	14.1%	5.88	-3.3%

TOP 10 REVENUE GENERATING STOCKS

Instrument Name	Ticker	Sector	Country	Revenue Generated (\$)
HLB Inc	028300	Consumer Durables & Apparel	KR Equity	41.4
Byd Co Ltd	1211	Automobiles & Components	HK Equity	16.7
Kmw Co Ltd	032500	Technology Hardware & Equipment	KR Equity	12.6
Anritsu Corp	6754	Technology Hardware & Equipment	JP Equity	11.8
Zhongan Online P & C Insurance Co Ltd	6060	Insurance	HK Equity	8.8
Koolearn Technology Holding Ltd	1797	Consumer Services	HK Equity	8.4
Ping An Insurance Group Co Of China Ltd	2318	Insurance	HK Equity	6.2
Globalwafers Co Ltd	6488	Semiconductors & Semiconductor Equipment	TW Equity	5.9
Anges Inc	4563	Pharmaceuticals, Biotechnology & Life Sciences	JP Equity	5.7
Haidilao International Holding Ltd	6862	Consumer Services	HK Equity	4.9

AVERAGE % OF SHARES ON LOAN



EMEA Equities

Germany bucks broad downtrend

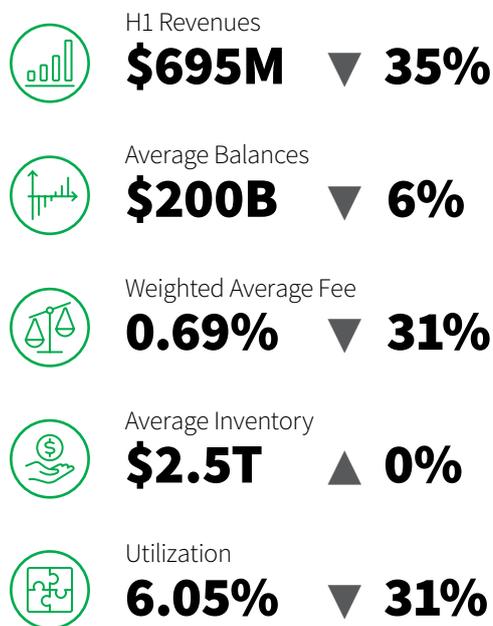
H1 European (EU) equity lending revenue of \$695m reflects a 35% YoY decline, and the lowest H1 return since at least 2006. H1 EU equity balances, fees, utilization and return to lendable also declined YoY. The drivers of the shortfall were primarily delayed/cancelled dividends as well as short sale bans. A more complete picture of dividends will continue to emerge as delayed dividends are paid out in Q3, however the IHS Markit Dividend product forecasts a 32% FY decline compared with 2019. Average EU equity loan balances fell 6% YoY, while balances with a fee greater than 500bps fell by 32%.

Wirecard (WDI) was far and away the most revenue generating EU equity in H1, generating \$51m. The borrow fee for WDI shares had been trending higher before a sharp mid-June increase as the firm collapsed. The upswing in WDI returns supported German H1 equity revenues increasing 45% YoY; the other key contributors include Deutsche Lufthansa Ag, Varta Ag and Grenke Ag, which combined for \$42m in H1 revenues.

UK equity lending returned \$65.9m in H1, a 41% YoY decline and the lowest H1 return on record. Aston Martin Lagonda Global Holdings Plc was the most revenue generating UK equity, with \$5.3m in H1 revenue nearly equalling \$5.8m of revenue from full-year 2019.

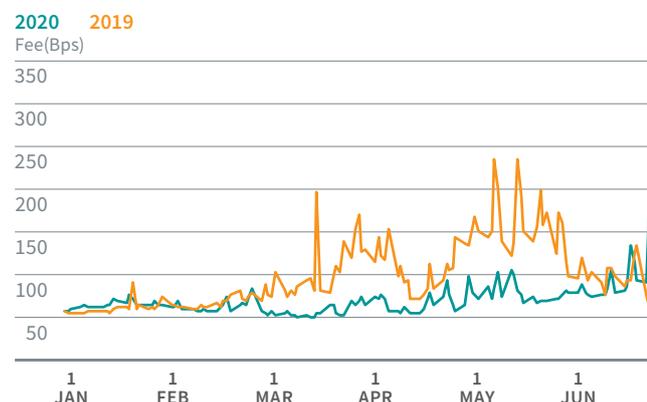
H1 French equity revenues were down 60% YoY, primarily the result of average fees declining just over 50%, however, balances also declined. Total Sa and Casino Guichard Perrachon Sa continue to be the most revenue generating French equities, combining for \$38m in H1 revenues (compared with \$47m for first half of 2019).

Overview



Just Eat Takeaway.com Nv supported Netherlands equity revenue, generating 32% of the country's \$34m in H1 revenues, after representing only 5% of 2019 revenues. Austria equity revenues were also bolstered by a significant solo contributor, Porr Ag, which generated 57% of the country's H1 return.

H1 FEE TREND



H1 BALANCE TREND



OVERVIEW

Revenues decline in all but four markets

Comment stays same

Lowest H1 revenue since 2006

Wirecard most revenue generating H1 EU equity

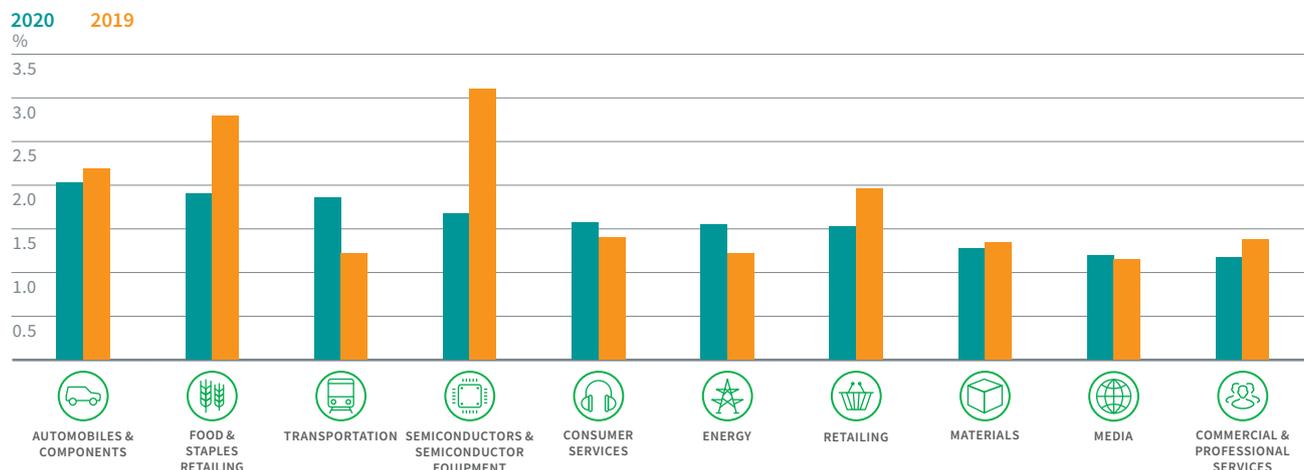
COUNTRY DETAILS

Country	H1 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
Germany Equity	175.3	45%	33.60	24.0%	0.70%	21.28%	274.73	-4.2%	8.78	48.8%
France Equity	130.2	-60%	39.50	-11.0%	0.56%	-49.49%	382.95	1.9%	7.77	-2.4%
UK Equity	65.9	-40%	33.30	0.0%	0.26%	-18.95%	682.61	-8.2%	3.67	-15.1%
Sweden Equity	53.1	-57%	14.20	-11.0%	0.54%	-47.52%	121.74	8.3%	8.55	-12.8%
Italy Equity	38.6	-50%	7.90	-36.0%	0.68%	-15.60%	89.95	-1.1%	5.99	-28.8%
Switzerland Equity	77.7	-10%	32.30	14.0%	0.29%	-21.31%	404.20	16.1%	5.93	6.5%
Spain Equity	13.5	-53%	6.60	-25.0%	0.33%	-38.40%	90.51	-10.7%	4.85	-12.4%
Norway Equity	29.7	-27%	4.10	-1.0%	0.97%	-31.52%	30.68	-12.9%	9.43	16.0%
Netherlands Equity	34.1	1%	12.80	29.0%	0.31%	-33.86%	159.72	20.0%	5.72	24.9%
South Africa Equity	23.7	-11%	3.80	-39.0%	0.85%	48.48%	42.68	-27.8%	5.01	0.6%
Denmark Equity	11.2	-18%	5.60	-17.0%	0.30%	13.42%	79.10	25.8%	5.28	-31.1%
Turkey Equity	14.0	55%	0.60	-24.0%	2.55%	32.23%	5.76	-16.5%	7.58	3.8%
Belgium Equity	12.6	-49%	3.70	-24.0%	0.52%	-44.66%	44.06	-13.5%	6.43	-4.5%
Poland Equity	1.8	-15%	0.40	-42.0%	0.62%	40.68%	7.08	-30.1%	3.60	-23.2%
Finland Equity	27.0	-51%	5.20	3.0%	0.67%	-36.21%	38.71	-6.5%	10.02	22.7%
Austria Equity	5.5	22%	1.40	-7.0%	0.48%	16.94%	10.46	-15.6%	9.78	21.4%
Greece Equity	3.6	-41%	0.10	-41.0%	7.92%	-16.86%	1.82	-3.7%	2.65	-36.1%
Portugal Equity	1.9	-28%	0.50	-9.0%	0.58%	-22.48%	8.16	7.1%	3.99	-12.5%

TOP 10 REVENUE GENERATING STOCKS

Instrument Name	Ticker	Sector	Country	Revenue Generated (\$)
Wirecard Ag	WDI	Software & Services	DE Equity	51.31
Total Sa	FP	Energy	FR Equity	23.88
Deutsche Lufthansa Ag	LHA	Transportation	DE Equity	18.79
Casino Guichard Perrachon Sa	CO	Food & Staples Retailing	FR Equity	14.08
Varta Ag	VAR1	Capital Goods	DE Equity	14.07
Just Eat Takeaway.Com Nv	TKWY	Retailing	NL Equity	10.85
Vinci Sa	DG	Capital Goods	FR Equity	10.53
Sanofi Sa	SAN	Pharmaceuticals, Biotechnology & Life Sciences	FR Equity	10.19
Grenke Ag	GLJ	Diversified Financials	DE Equity	8.73
Intrum Ab	INTRUM	Commercial & Professional Services	SE Equity	7.88

AVERAGE % OF SHARES ON LOAN



Americas Equities

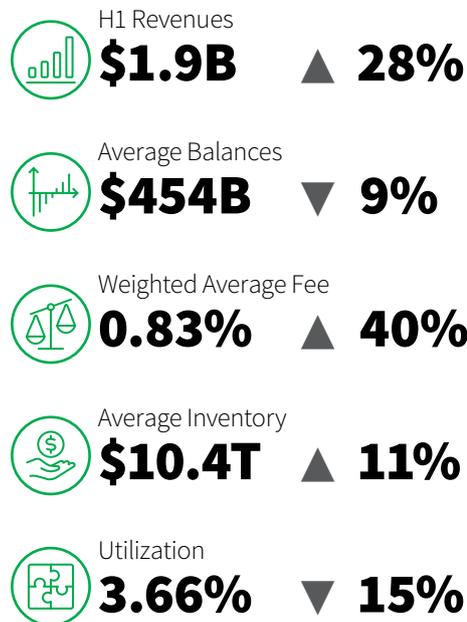
Best H1 since 2008

Americas equities generated \$1.89bn in H1 revenues, the most since 2008 (\$1.93bn) and narrowly edging out 2016 for that title (\$1.87bn). The 28% YoY upswing in returns was primarily driven by soaring “specials” balances. Many of the “specials” were driven by arbitrage trades, which often makes assigning the value of a lendable asset more straightforward, given that the potential profit on the trade for the borrower can be more readily assessed. While the YoY comparison is flattering it’s worth remembering that 2019 returns picked up substantially in H2; Compared with the 2nd half of 2019 the first half of 2020 revenues are down 9%.

US equity revenues totaled \$1.6bn in H1, a 35% YoY increase. Revenues accelerated substantially in May and June, after the market-wide short squeeze in hard to borrow shares which began in April boosted the on-loan special balances. Average daily US equity balances with a fee greater than 500bps increased 17% YoY, averaging \$11bn in H1 2020, while balances with fee greater than 1,000bps increased 22% YoY, averaging \$7bn. The surge in Q2 revenues made the quarter one of the most revenue generating on record, with \$897m, falling short of Q3 2019 (\$931m), however much less reliant on a single security; Beyond Meat generated 25% of Q3 2019 revenues, whereas top earner Match Group Inc only earned 11% of Q2 2020 returns. Match Group was the most revenue generating security globally in the first half of 2020, the result of an arbitrage trade arising as the firm was fully spun-off from IAC.

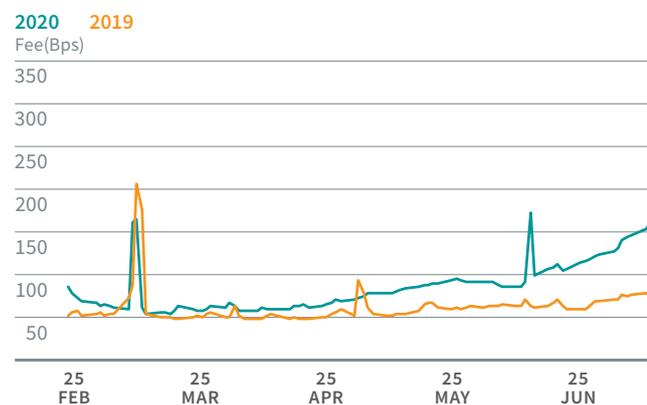
ADRs were an underwhelming area of US listings, with \$120m in H1 revenues, reflecting a 43% YoY decline and the lowest H1 figure since 2017. The drop-off in returns was primarily driven by lower on-loan balances, though lack of large on-loan balance specials didn’t help. Nio Inc traded special at the start of 2020, however increasing supply of shares, and decreasing demand, pushed down on fees in early January.

Overview

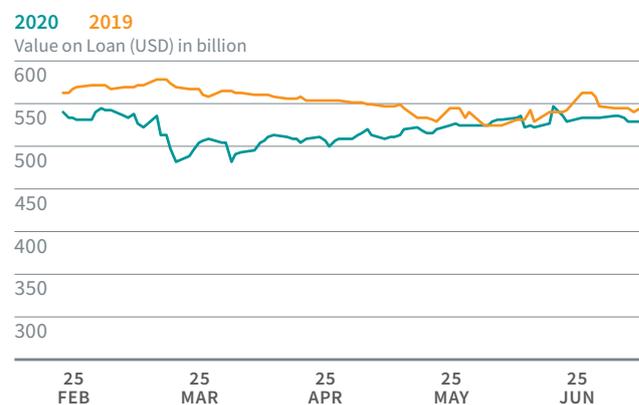


Canadian equities delivered \$279m in H1 revenues, a YoY decline of 2.6%. Cannabis related equities continue to be a significant driver of returns, generating 59% of H1 revenue, up from 50% in H1 2019; Excluding the Cannabis related equities, CA equity revenues declined by 23% YoY.

H1 FEE TREND



H1 BALANCE TREND



OVERVIEW

US revenues soar on increased special balances

Lower average balances across region

Arbitrage driven borrows support majority of top earners

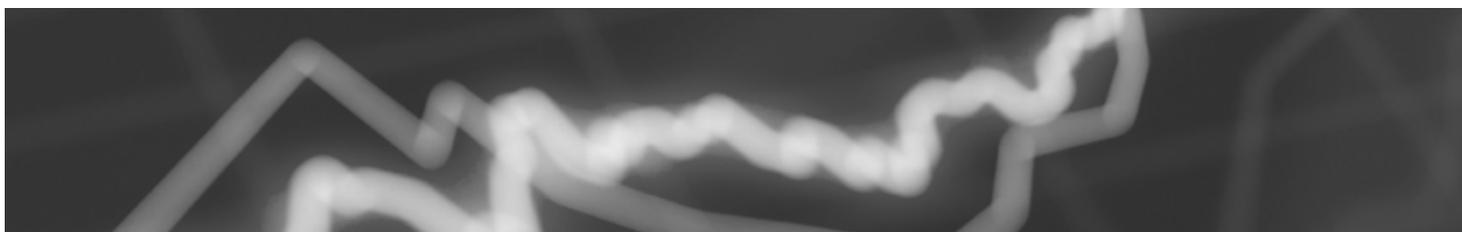
Average utilization decreased despite March spike

COUNTRY DETAILS

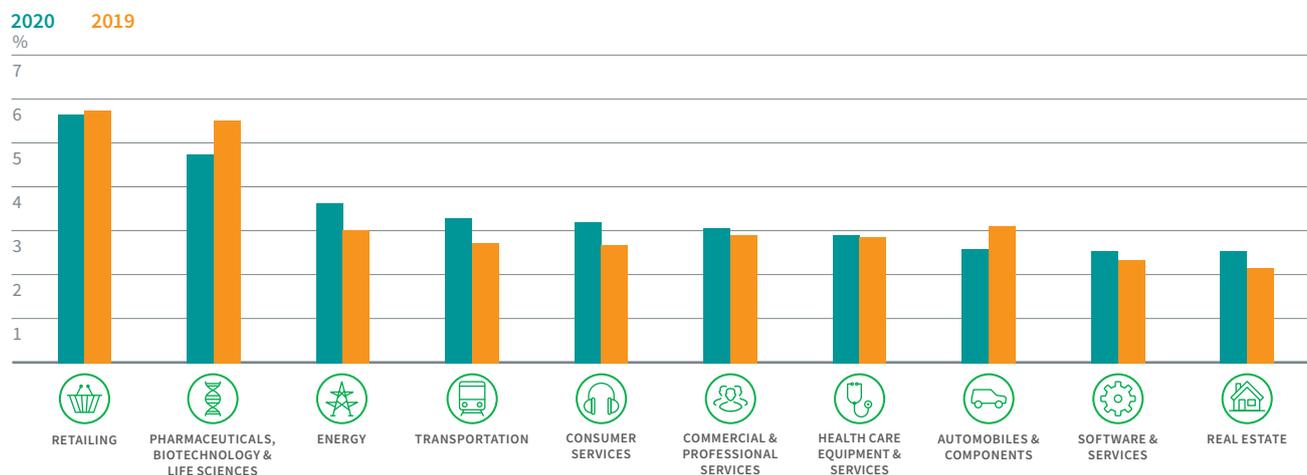
Country	H1 Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilization	YoY Change
USA Equity	1,617.42	35.1%	420.00	-8.0%	0.51%	46%	9,871	11.6%	3.56	-14.6%
Canada Equity	279.32	-2.6%	33.80	-19.0%	1.00%	18%	478	-2.9%	6.01	-13.8%
Brazil Equity	1.93	-36.4%	0.30	-32.0%	0.97%	-8%	1	-45.2%	4.03	-41.3%
Mexico Equity	1.15	-41.3%	0.50	-43.0%	0.28%	-8%	24	-11.4%	2.03	-25.1%
American Depository Receipts	120.31	-43.2%	21.90	-50.0%	1.03%	102%	264	22.3%	6.65	-54.7%

TOP 10 REVENUE GENERATING STOCKS

Instrument Name	Ticker	Sector	Country	Revenue Generated (\$)
Match Group Inc	MTCH	Media and Entertainment	US Equity	122
Canopy Growth Corp	WEED	Pharmaceuticals, Biotechnology & Life Sciences	CA Equity	94
Nikola Corporation	NKLA	Capital Goods	US Equity	76
SmileDirectClub Inc	SDC	Health Care Equipment & Services	US Equity	48
Aurora Cannabis Inc	ACB	Pharmaceuticals, Biotechnology & Life Sciences	CA Equity	41
Gamestop Corp	GME	Retailing	US Equity	37
Tilray Inc	TLRY	Pharmaceuticals, Biotechnology & Life Sciences	US Equity	37
Inovio Pharmaceuticals Inc	INO	Pharmaceuticals, Biotechnology & Life Sciences	US Equity	36
American Airlines Group Inc	AAL	Transportation	US Equity	34
Carnival Corp	CCL	Consumer Services	US Equity	34



AVERAGE % OF SHARES ON LOAN



Exchange Traded Funds

HY ETF borrow demand soars, then evaporates

The first half of 2020 was particularly strong for ETF revenues, with Q1 returns up 10%, followed by a stellar Q2 in which returns increased 50% YoY. March was far and away the most revenue generating month, as the COVID crash increased borrow demand for ETFs. The increased demand was driven by increased hedging demand (seen in increased short interest) as well as a decrease in broker-dealer's internal supply of in-demand shares fell (seen in ratio of borrowed shares to short interest). Those factors contributed to the demand for high-yield funds, which helped drive \$53m in March revenues, more than doubling the March 2019 return. The demand credit funds declined following the Federal Reserve intervention in late March, with fees for HY funds such as HYG and JNK pushed back down to general collateral.

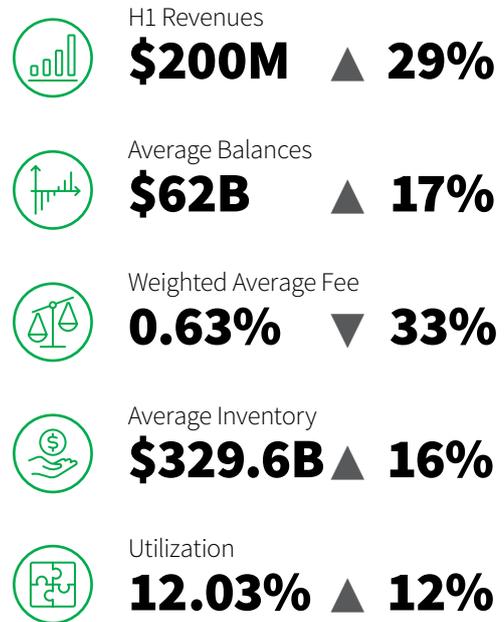
The 2nd quarter was characterized by a sustained increase in demand for equities which carried into the April rally and onward. ETF on-loan balances and fees declined in Q2 relative to March, however both remained substantially elevated YoY.

The overall result of the distinct time segments of 2020 was \$200m in H1 revenues, a 29% YoY increase which was driven mostly by increased average balances, however the sharp increase in March fees at the same time balances spiked was also a factor.

While still a relatively small part of overall ETF revenues, the growth in Asia listed fund revenue is notable, having more than doubled YoY, primarily the result of increasing fees for funds with Hong Kong listed constituents or China A-Shares.

Global ETF AUM first reached \$6T in Q4 2019 and ended the year with \$6.2T, before dipping to \$5.2T at the end of Q1 2020 and subsequently increasing with the global markets to end Q2 back at \$6.2T. The increase use of the products by institutional investors is reflected by the growth of

Overview

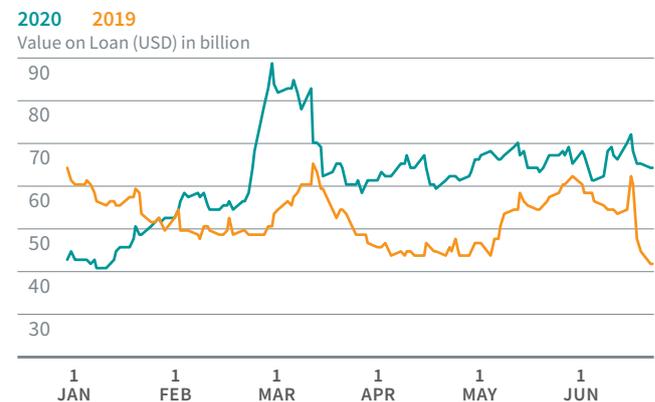


lendable assets in securities lending. Global ETF lendable assets averaged \$360bn in January and February 2020, the highest level on record, before dipping with the market and recovering to \$334bn at the end of Q2 2020. The utilization of ETFs averaged 12% in H1 compared with 10.3% in H1 2019.

H1 FEE TREND



H1 BALANCE TREND



OVERVIEW

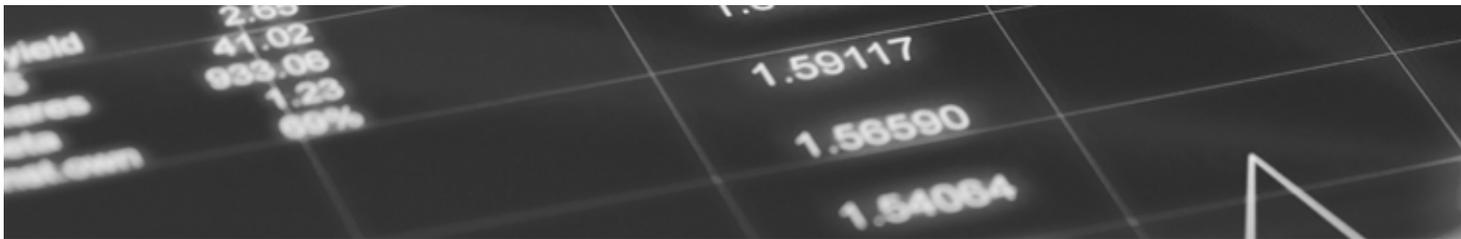
ETF lending revenues increase in all regions	Borrow demand for high-yield funds surged in March	Equity funds deliver 71% of H1 revenue	Asia listed ETF demand increases, improving all key metrics
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COUNTRY DETAILS

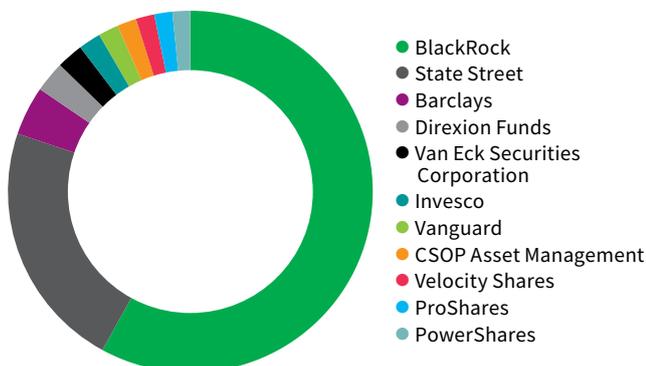
Country	H1 Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilization	YoY Change
Americas ETF	141.61	23.6%	54.40	15.0%	0.31%	-18%	219.60	24.3%	16.26	1.9%
European ETF	37.53	28.9%	5.20	32.0%	0.97%	-2%	56.03	6.5%	5.46	33.5%
Asian ETF	13.88	117.1%	1.10	19.0%	1.66%	73%	2.30	20.6%	17.11	10.3%

TOP 10 REVENUE GENERATING FUNDS

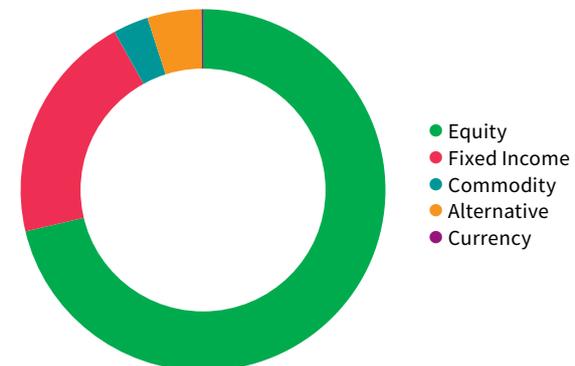
Instrument Name	Ticker	Listing Country	Asset Class	Q4 Revenue Generated (\$)
Ishares Iboxx \$ High Yield Corporate Bond Fund	HYG	US	Fixed Income	\$12.0
Spdr S&P 500 Etf Trust	SPY	US	Equity	\$11.0
Xtrackers Hvst Csi 300 China A-Shs Etf	ASHR	US	Equity	\$10.6
Ishares Russell 2000 Etf	IWM	US	Equity	\$8.6
Invesco Senior Loan Etf	BKLN	US	Alternative	\$5.8
Chinaamc Csi 300 Index Etf Rmb	3188	HK	Equity	\$5.3
Invesco Qqq Trust Series 1	QQQ	US	Equity	\$4.7
Ishares Ftse A50 China Etf Hkd	2823	HK	Equity	\$3.8
Ishares Msci Emerging Markets Etf	EEM	US	Equity	\$3.5
Spdr Bloomberg Barclays High Yield Bond Etf	JNK	US	Fixed Income	\$3.4



LENDING REVENUES BY ISSUER



LENDING REVENUES BY ASSET CLASS



Corporate Bonds

Supply > Demand

Revenues from lending corporate bonds continue the long run decline from the post-GFC peak in 2018. The cause of the decline is mainly lower fees, though balances have also declined. Global corporate on-loan balances started 2020 at the lowest level observed since February 2018. From that low starting point, on-loan balances steadily increased over the course of Q1, culminating in the first two weeks of March reflecting YoY balance growth. Following the announcement of the Federal Reserve program to support corporate debt on-loan balances fell sharply as corporate bond valuations rebounded. Fee-based revenue from corporate bond lending totaled \$226m for H1 2020, the lowest H1 return since 2011. While the spread income has been underwhelming YTD, despite what would have seemed a fertile ground for credit short demand in Q1, it's worth considering the proportion of corporate loan balances collateralized with cash and the return generated by reinvestment portfolios when interest rates were cut. Looking at the agency lending data we see total returns for corporate bond lenders, including reinvestment, increased 11.8% YoY.

USD denominated corporates continue to be the most revenue generating, with \$110m in H1 revenues, however that reflects a 33% YoY decline. USD issues accounted for 49% of H1 2020 revenue, down from 58% in 2018 and 52% in 2019. Average daily loan balances for USD credits were \$102bn in H1, a 7% decline YoY.

Euro denominated corporates, the most revenue generating apart from USD, delivered \$74.5m in H1 revenue, a 26% YoY decline. The Wirecard 0.5% 2024 note was the most revenue generating corporate globally in H1, with the average fee reaching 2,000bps in January. Prior to the firm's collapse in June it was the first issuer to have both its equity and debt among the most revenue generating securities within respective asset classes.

Overview



H1 Revenues

\$226M ▼ **29%**



Average Balances

\$180.7B ▼ **8%**



Weighted Average Fee

0.25% ▼ **20%**



Average Inventory

\$4.0T ▲ **16%**



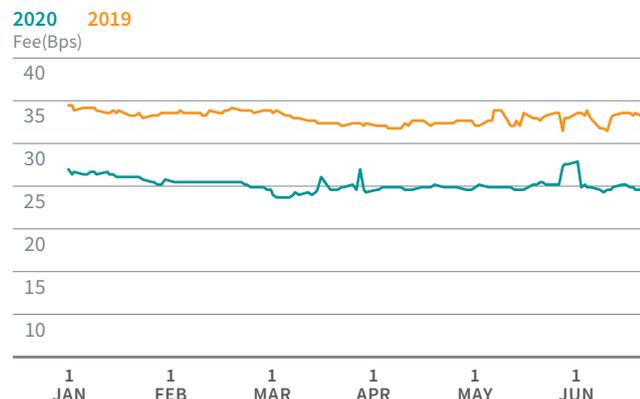
Utilization

4.03% ▼ **19%**

H1 investment grade bond lending revenues fell 12% YoY compared with a 35% decline for non-Investment grade credit. NIG credits generated 51% of H1 corporate bond revenue, down from 58% in H1 2019.

Convertible bond lending revenues continue to decline with \$10m in H1 revenue representing a 52% YoY decline. Convertible issuance has been substantial however, representing just over 26% of H1 equity and equity-linked issuance; Many of the convertible notes have been issued with relatively low conversion prices, which in turn drives increased equity short demand from convertible arbitrageurs, for example Carnival Cruise Lines.

H1 FEE TREND



H1 BALANCE TREND



OVERVIEW

Borrow demand slid after Federal Reserve intervention

Few hard to borrow issues

NIG credits deliver 51% of H1 revenue

Most lendable assets on record

ISSUE TYPE DETAILS

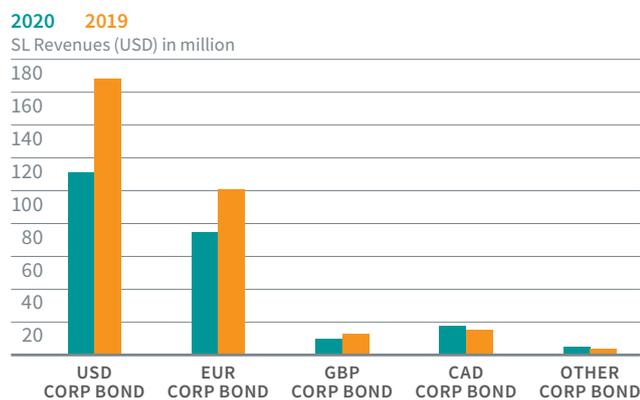
Issue Type	H1 Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilization	YoY Change
Conventional Bonds	216	-28%	190.2	-6.6%	0.25%	-20%	3,588.2	14%	4.46%	-17%
Convertible Bonds	10	-52%	3.7	-34%	0.52%	-22%	48.7	4%	6.16%	-28%
Asset Backed Securities	0.03	-77%	0.4	-69%	0.20%	-45%	417.1	35%	0.08%	-49%

TOP 10 REVENUE GENERATING BONDS

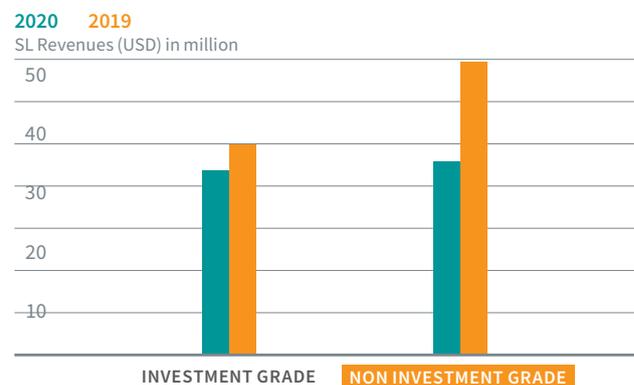
Top Earning Assets	Cusip	Denomination	Aseet Class	Revenue Generated (\$)
Wirecard Ag (0.5% 11-Sep-2024)	WDIG	EUR	Non-Investment Grade	\$1.8
Diamond Sports Group Llc (6.625% 15-Aug-2027)	SBGI	USD	Non-Investment Grade	\$1.6
Teva Pharmaceutical Finance Netherlands Iii Bv (6.75% 01-Mar-2028)	TEVA	USD	Non-Investment Grade	\$1.6
Range Resources Corp (4.875% 15-May-2025)	RRC	USD	Non-Investment Grade	\$1.5
Canada Housing Trust No 1 (1.25% 15-Jun-2021)	CMHT	CAD	Non-Investment Grade	\$1.3
Ppg Industries Inc (3.75% 15-Mar-2028)	PPG	USD	Investment Grade	\$1.3
K&S Ag (3.25% 18-Jul-2024)	SDFG	EUR	Non-Investment Grade	\$1.2
Sappi Papier Holding Gmbh (3.125% 15-Apr-2026)	SAPJ	EUR	NON-INVESTMENT GRADE	\$1.2
Gestamp Automocion Sa (3.25% 30-Apr-2026)	GEST	EUR	Non-Investment Grade	\$1.1
Diamond Bc Bv (5.625% 15-Aug-2025)	CNTLI	EUR	Non-Investment Grade	\$1.1



Q4 SECURITIES LENDING REVENUES BY DENOMINATION



Q4 SECURITIES LENDING REVENUES BY RATINGS CATEGORY



Government bonds

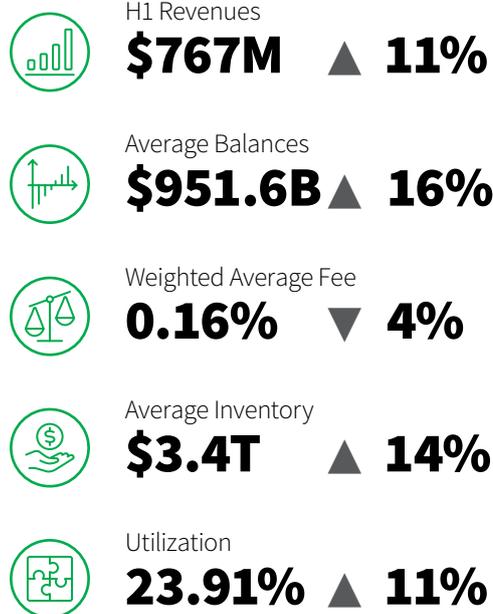
US Treasury demand increases

Government bond lending delivered \$766m in H1 revenues, an 11% YoY increase. That marks an impressive turnaround from Q4 2019, which was the lowest revenue generating quarter over three years. H1 spread returns were well below the post-crisis peak of \$900m, delivered in the first half of 2018. Similar to corporate bonds, it's worth considering the proportion of sovereign loan balances collateralized with cash and the return generated by reinvestment portfolios when interest rates were cut. Looking at the agency lending data we see total returns for government bond lenders, including reinvestment, increased by more than 50% YoY. Increased on-loan balances in Q1 and wider spreads in Q2 helped to support the increasing fee income, while the sharp decline in interest rates pushed boosted reinvestment returns, the perfect combination for lenders with cash collateral reinvestment programs.

US Treasuries were the primary driver of record government bond lending revenues in the first half of 2018 and stepped back onto center-stage in the first half of 2020. Returns for lending US debt came in at \$468m in H1, a 29% YoY increase. Overall, the increased returns were the result of increased loan balances, however, average fees also reflected a YoY increase in the second quarter. The upswing in demand was the result of a reversal of trends from the preceding 18 months, namely an increased available return for foreign owners on a currency adjusted basis, increased HQLA demand and increased opportunities for relative value trades in rates instruments.

European government bond lending revenues came in at \$227m for H1, a 12% YoY decline. The shortfall was primarily the result of declining borrow demand for Italian debt. The decline was primarily result of lower fees; however, balances also declines YoY. Asia government bond revenue held up better, increasing 1% YoY for H1.

Overview



H1 FEE TREND



H1 BALANCE TREND



OVERVIEW

US Treasury demand drives revenue growth

Top 10 bonds all issued by UST

Italian debt revenues declined sharply YoY

UST securities generate 61% of H1 revenue

REGIONAL DETAILS

Country	H1 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	520	26%	607.8	28%	0.17%	-13%	2,378.8	17%	23.29%	20%
Asia	19	1%	24.5	26%	0.15%	18%	78.5	8%	15.22%	48%
Europe	228	-12%	319.3	-2%	0.14%	-16%	1,036.6	8%	25.93%	-4%
Emerging Market Bonds	23	-8%	17.6	0%	0.26%	-7%	305.0	21%	5.48%	-15%

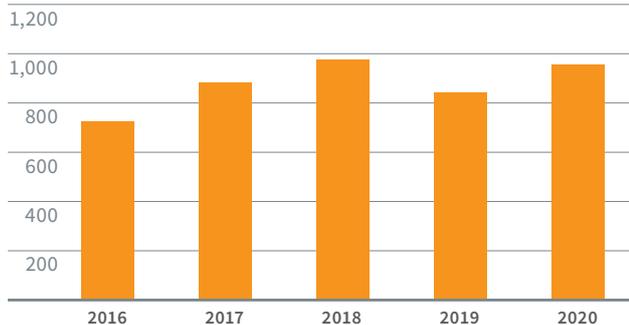
TOP 10 REVENUE GENERATING BONDS

Instrument Name	ISIN	Currency	Issuer	Revenue Generated (\$)
United States Treasury (2.75% 15-Nov-2023)	912828WE6	USD	USA	4.09
United States Treasury (1.75% 15-Nov-2029)	912828YS3	USD	USA	4.08
United States Treasury (1.875% 31-May-2022)	912828XD7	USD	USA	3.95
United States Treasury (2.5% 15-Feb-2022)	9128286C9	USD	USA	3.66
United States Treasury (2% 31-Jul-2022)	912828XQ8	USD	USA	3.63
United States Treasury (1.625% 15-Nov-2022)	912828TY6	USD	USA	3.47
United States Treasury (1.5% 15-Aug-2026)	9128282A7	USD	USA	3.44
United States Treasury (2.375% 15-May-2029)	9128286T2	USD	USA	3.31
United States Treasury (2.625% 15-Jul-2021)	912828Y20	USD	USA	3.25
United States Treasury (2.125% 31-May-2021)	9128286V7	USD	USA	3.11



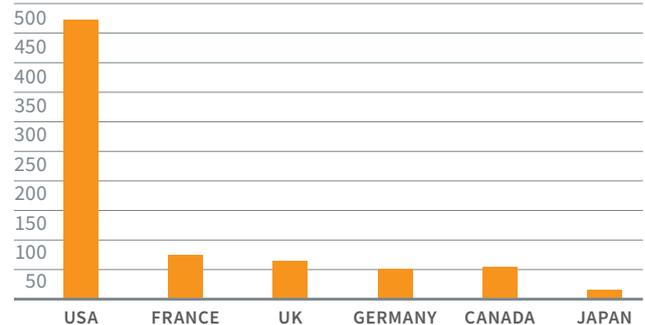
GOVERNMENT BOND BALANCE TREND

Loan Balances in USD (Billions)

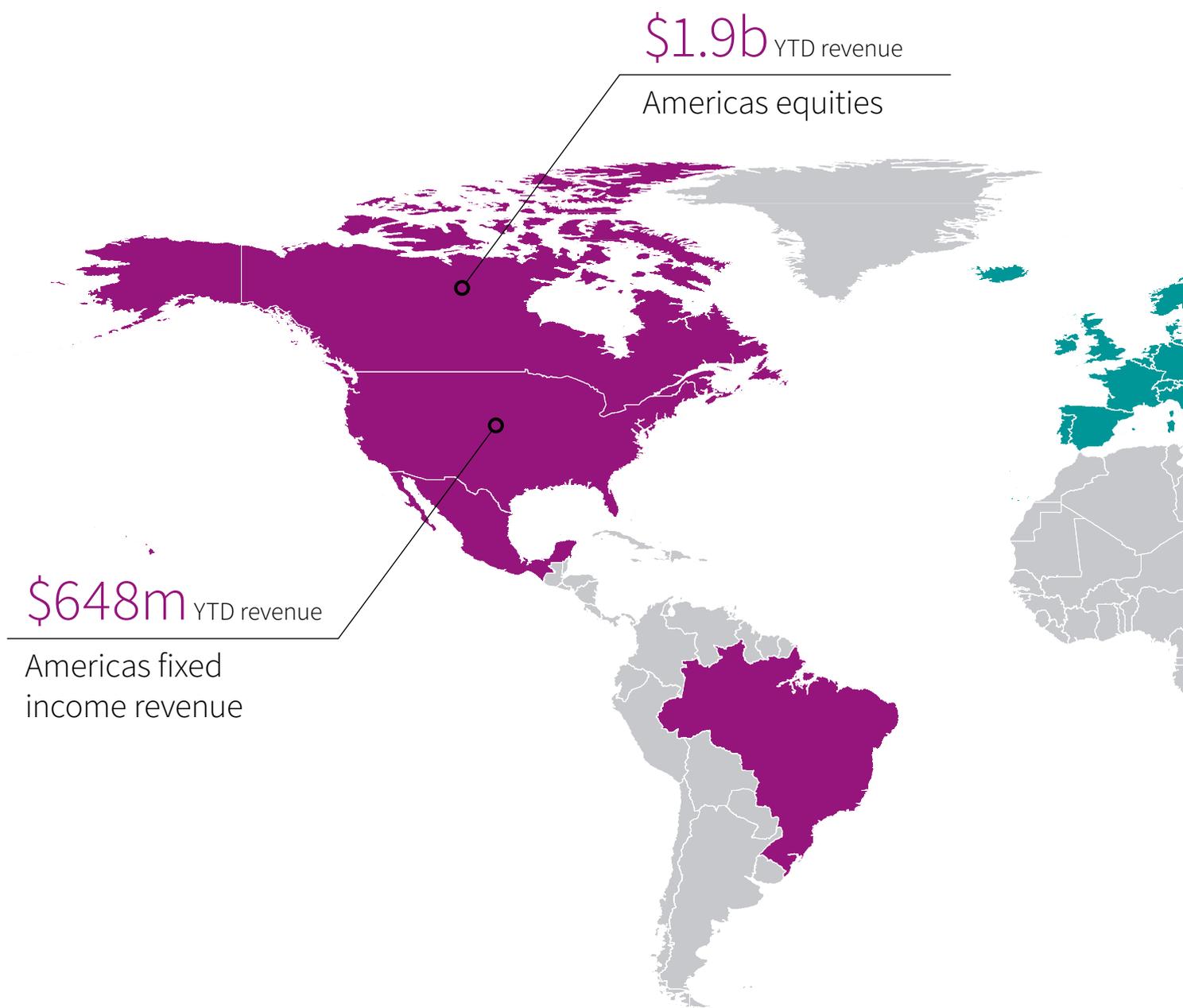


Q4 REVENUES BY ISSUER

Securities Lending Revenue in USD (Millions)



Global snapshot



Asset Class	Lendable Assets (\$T)	Loan Balance (\$T)	% Non-Cash	Utilization (%)	SL Fee
All Securities	23.63	2.1	0.741335178	7	0.0079
Government Bonds	3.4	0.9	0.929247296	23.1	0.0015
Corporate Bonds	4.2	0.2	0.488999426	3.7	0.0025
Equities	15.1	0.9	0.640283853	4.3	0.0156
Depository Receipts	0.3	0	0.454007816	7	0.0077
Exchange Traded Funds	0.3	0.1	0.448057321	11.4	0.0071

\$698m YTD revenue

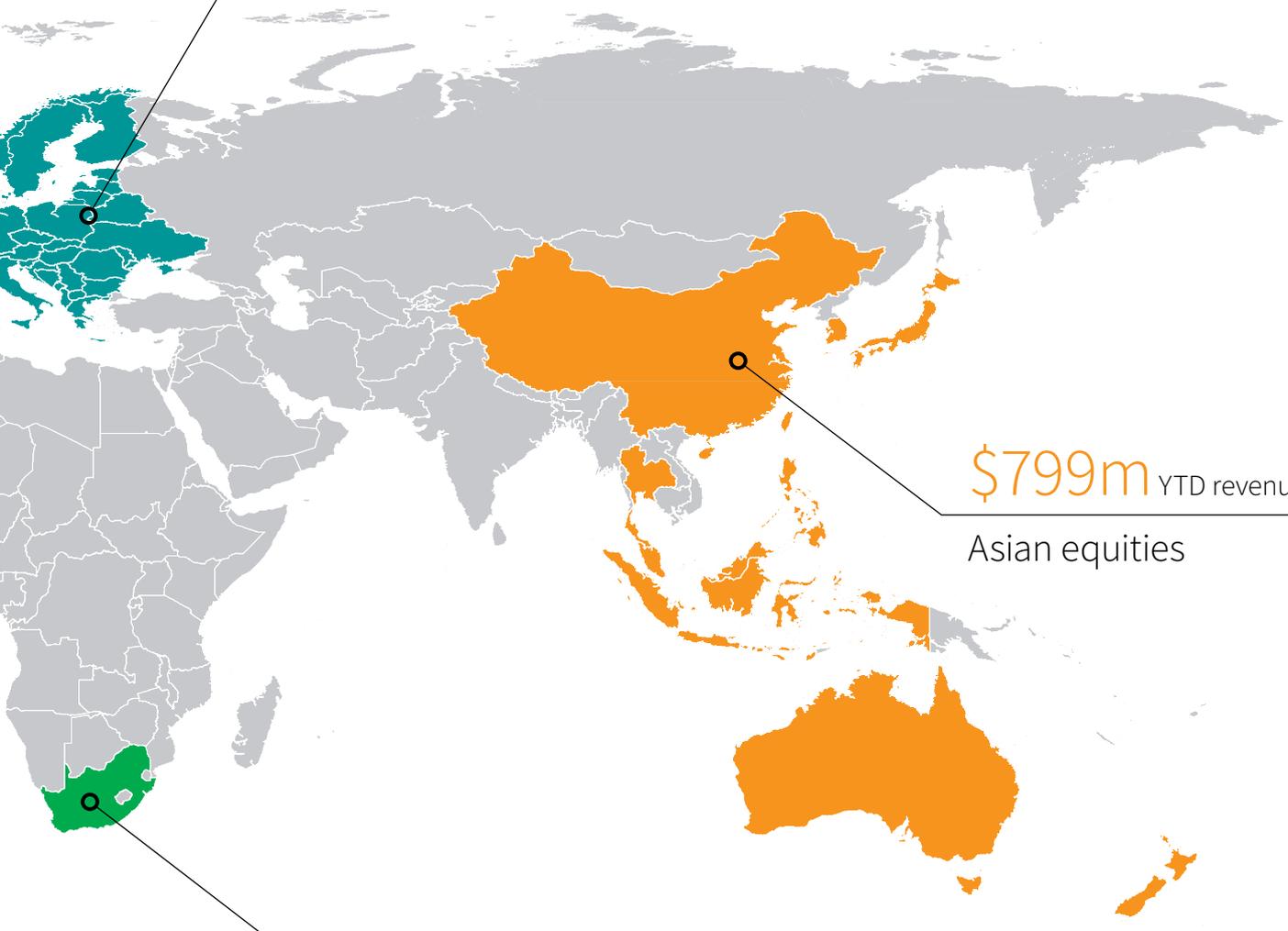
European Equities

\$799m YTD revenue

Asian equities

\$24m YTD Revenue

South Africa Equity



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