



Securities Finance Quarterly Review



Q4 2017



Happy New Year, and welcome to our 2017 Year in Review special issue. In this, the fourth installment of our quarterly review series, we reflect on the trends and themes that shaped the previous year, and examine what may lie ahead for 2018.

In hindsight, 2017 proved to be somewhat better than originally imagined, ending on a positive note in Q4 by beating its comparable 2016 quarter. Although lacking the stellar specials-fueled returns recorded in 2016, 2017 proved to be better than 2014 and 2015, which were considered respectable years at the time. In our feature on global revenue trends, we highlight last year's bright and not-as-bright spots, including outperformance of Asia equities, the accelerating pace of inventory build-up – over \$20 trillion at present – new sources of specials demand, and the continued strength of government and corporate debt lending.

In addition to our regional asset class commentary, we showcase a global dividend preview, which provides color on forecasted dividends for 2018, where our analysts predict a 10% increase compared with 2016.

While no one can fully predict how the interplay of regulatory, technological and market forces will shape our industry in the year ahead, rest assured we will continue to report on what we observe.

We would love to hear your feedback and ideas for future features. Please drop us an email at MSF-media@markit.com and let us know what you think.

Regards,

Pierre Khemdoudi & Ed Marhefka

Managing directors and global co-heads of Securities Finance and Delta One products, IHS Markit

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Global Revenue Trends: 2017 ends on a positive note

A year which started with the worst Q1 revenue since 2014 concluded with the best post-crisis Q4. Revenue headwinds from declining equity special demand, general oversupply of lendable inventory, and regulatory uncertainty broke the trend of annual revenue increases, which had been running since 2013. As mentioned in the opening, it's worth noting that 2017 was still better than 2014 and 2015.

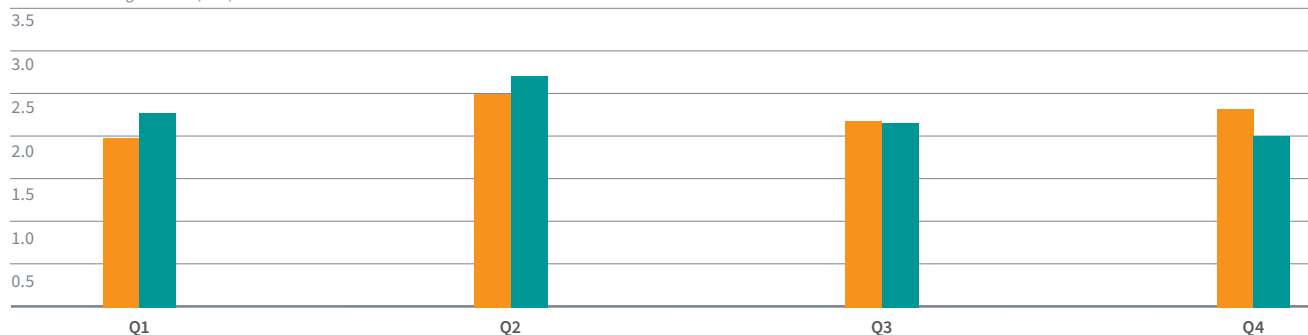
As we'll discuss in the asset class-specific portions of this report, government bond lending revenue was the standout in terms of growth, posting a 16% gain compared with 2016. Corporate bonds also performed well, with revenue growing 5% in 2017. Equity revenue was subdued by a number of factors that we'll discuss below, resulting in a revenue decline of 13% compared with 2016. Equity

contribution to total securities lending revenue was only 76%, extending the downward trend from the peak of more than 90% in 2009. Although overall equity returns failed to build on 2016 momentum, there were pockets of outperformance, particularly in Asia.

While a number of perceived market risks at the outset of 2017 failed to materialize, equity lending revenue was fairly resilient. In fact, momentum appears to be building, as Q4 equities revenue proved to be the only quarter better than 2016. Retail was a key driver of specials in 2017, and this appears to be persistent in 2018, as shoppers continue to move online. Given the meteoric rise of cryptocurrencies, it is no surprise that borrow demand spiked in Q4 for businesses linked, sometimes by name only, to the so-

SECURITIES LENDING REVENUE BY QUARTER

2017 2016
Securities Lending Revenue (USD) in Billions





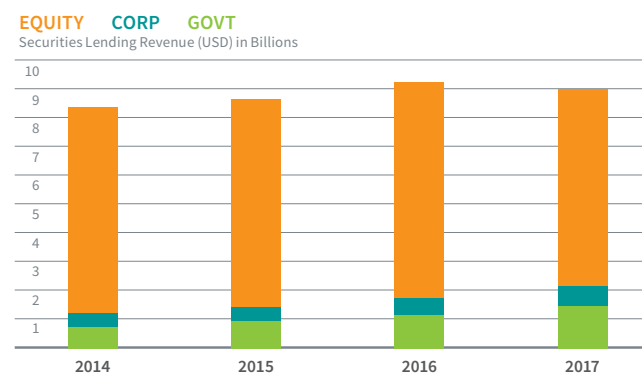
called crypto-mania. Biotech and pharma were also global demand drivers for equities. Other potential equity revenue drivers for 2018 include marijuana and shale in the Americas, and semi-conductors in Asia. The last section of this report will provide a deep dive on trends in equity specials.

Specials demand and corresponding revenue will typically get the headlines, but equity revenues have recently been bolstered by GC lending. For 2017, overall GC stocks posted a marginal revenue gain, which is in stark contrast to the overall revenue decline for equities referenced above. Supporting the relative outperformance in Q4, revenues from stocks lent for less than 50 basis points rose 6% globally compared with the 4th quarter of 2016. One driver has been a reaction to strong returns in the tech sector, as

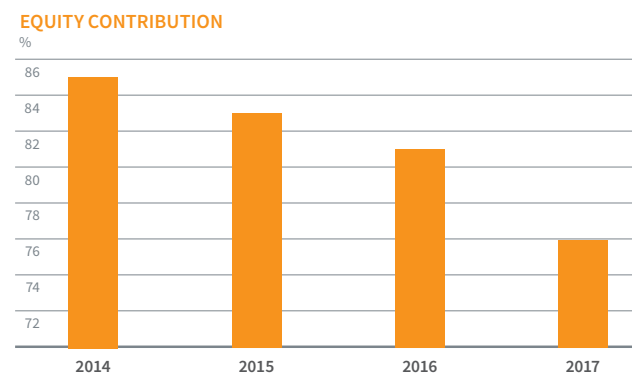
borrow demand for each of the FAANG stocks increased over 40% during 2017, with Google and Facebook demand more than tripling. The loan balance for those five stocks currently stands just north of \$6 billion, up from \$3 billion at the start of 2017.

With equity revenue starting to come out of the shadow of 2016, along with drivers of government and corporate debt borrowing remaining intact, there appear to be tailwinds at the back of the industry going into 2018.

GLOBAL SECURITIES LENDING REVENUE TREND



EQUITY % CONTRIBUTION TO TOTAL LENDING REVENUE



2018 Global Dividend Outlook

\$1.64tr

the total amount of dividends
predicted to be declared in 2018
by 7,500 global firms



This represents a **10%**
increase compared from the total
declared by the same firms in 2017

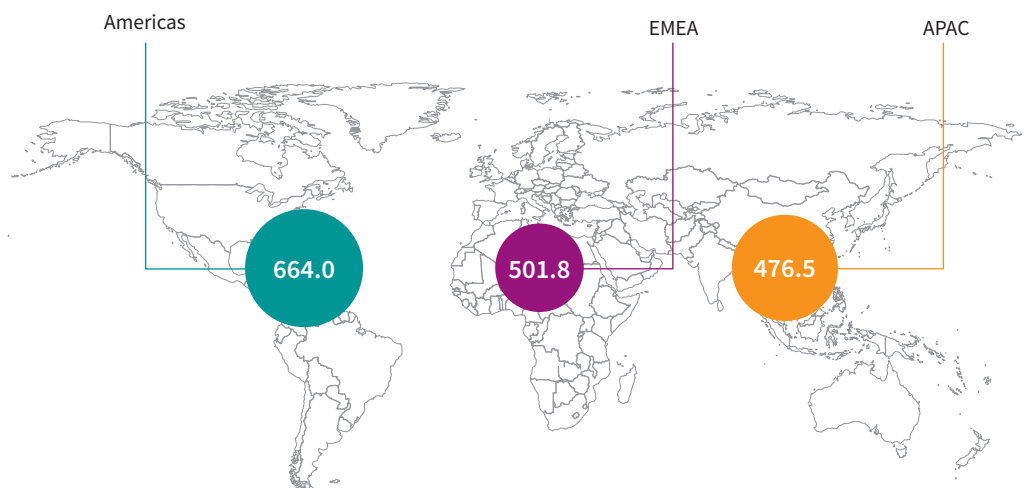


This is the
largest increase
in payments in over three years

REGIONAL BREAKDOWN

The Americas is the largest
region for dividends,
accounting for 40 percent
of the global total.

We expect the largest
dividend growth in EMEA
(12 percent), followed by
APAC (11 percent) and the
Americas (8 percent).



TOP 5 FORECAST PAYERS IN 2018

We expect Oil & Gas behemoth Royal Dutch Shell to
declare the largest dividend in 2018, paying \$1.7bn
more than Apple.

Company name	Sector	2018 (USD bn)	Forecast yield
Royal Dutch Shell	Oil & Gas	\$15.6	5.6%
Apple Inc.	Technology	\$13.9	1.6%
Microsoft Corp	Technology	\$13.7	2.1%
Exxon Mobil Corporation	Oil & Gas	\$13.4	3.8%
Industrial & Commercial Bank of China	Banks	\$12.8	4.4%

FORECAST YIELDS BY SECTOR

Telecommunications is the top sector ranked by forecast
yield, offering a prospective yield close to 4%; however it has
been a perennial laggard in terms of dividend growth and we
think it could be most vulnerable to dividend cuts in 2018.

Sector	Forecast yield	Sector	Forecast yield
Telecommunications	3.90%	Consumer Goods	2.32%
Utilities	3.81%	Industrials	1.86%
Oil & Gas	3.58%	Health Care	1.74%
Financials	3.02%	Consumer Services	1.66%
Basic Materials	2.47%	Technology	1.36%

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Asian Equities

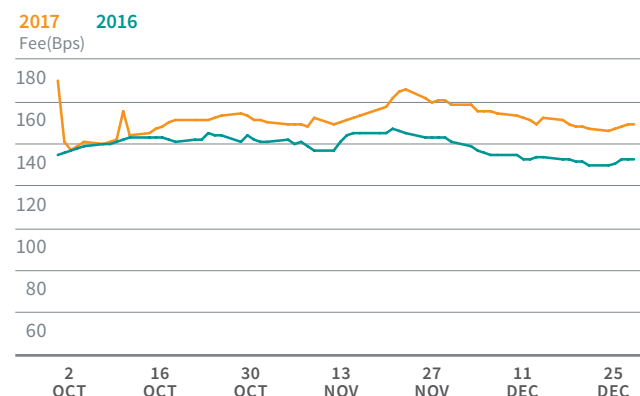
2017 ends with a BANG!

2017 was another solid year for Asian equities, with total revenue up 10% compared with 2016. In Q4, revenues built on the solid 9% YOY increase registered in Q3, delivering a 30% increase versus Q4 2016. The strong quarter arrived on the back of increasing fees and loan balances, and five of the nine countries in the region (with securities lending markets) registered greater than 20% growth compared with Q4 2016.

The largest contribution to the Q4 revenue upswing was Japan, which pulled in more than \$130 million in during Q4, bringing the total to just over \$450 million for 2017. The Q4 revenue is an astounding 58% YOY increase, which moves Japan ahead of Canada as the third highest revenue grossing equity lending market in 2017. The year ended with the best quarterly return for Japanese equities as the result of increases in demand, utilization and fees.

Hong Kong continued to shine in Q4, with revenues increasing by more than 30% compared with Q4 2016. After a relatively flat revenue trend during the first three quarters, the Q4 surge was primarily driven by increasing loan balances, but fees posted modest gains as well. Increased specials revenue was driven by a surge in fees for Semiconductor Manufacturing International Corp., as well as a spike in fees and balances for Kingston Financial Group Ltd. The returns for South Korean equities were somewhat lackluster in 2017, down 28% versus the 2016 total; Q4 represented the nearest miss versus the 2016 comparison. The underperformance was driven by a lack of specials, as loan balances were higher, but fees were 25% lower than Q4 2016. One special that continued to deliver is Celltrion, which earned more than 10% of the country's Q4 revenue.

Q4 FEE TREND



Overview



Quarterly Revenues

\$317M ▲ **29%**



Average Balances

\$150B ▲ **6%**



Weighted Average Fee

1.67% ▲ **11%**



Average Inventory

\$1.6T ▲ **37%**

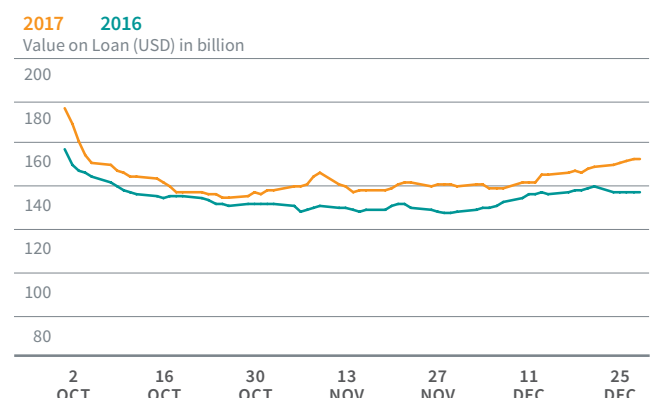


Utilisation

5.08% ▼ **8%**

As we've seen elsewhere for equities – despite increasing fees and borrow demand – the impact for lenders is somewhat muted by growth in lendable assets, which have moved with equity market valuations to all-time highs. Australia, Taiwan and Singapore registered double digit Q4 percentage declines in utilization compared with 2016. The notable exception is Japan, which notched a marginal increase in utilization.

Q4 BALANCE TREND



OVERVIEW

Australia extended Q3 revenue gains

Japan was the largest contributor to revenue gains

Fewer specials drove down avg fees in South Korea

Retail shorting has increased markedly YoY

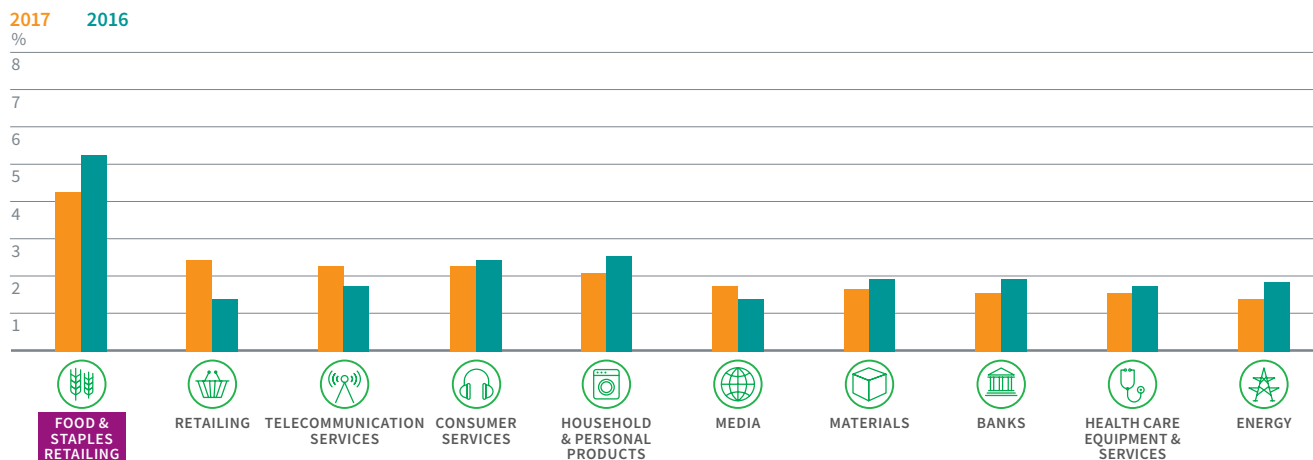
COUNTRY DETAILS

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
Australia	21.18	25.9%	19.94	-5.2%	0.74%	57%	230.62	24.5%	5.24	-23.8%
Hong Kong	70.14	32.7%	30.52	19.9%	1.52%	4%	345.91	41.3%	5.80	-2.7%
Japan	132.18	58.4%	74.09	4.9%	1.57%	22%	782.97	37.7%	4.73	0.3%
Malaysia	6.44	-1.3%	0.85	-18.8%	4.14%	15%	12.11	28.5%	5.65	-29.0%
New Zealand	0.55	-2.1%	0.49	74.4%	0.63%	-44%	6.00	8.4%	5.77	66.0%
Singapore	5.41	2.5%	2.14	-28.6%	1.50%	56%	51.21	31.6%	3.00	-44.9%
South Korea	53.01	-6.2%	12.61	11.7%	3.48%	-28%	125.99	49.1%	5.28	-8.2%
Taiwan	25.75	21.8%	8.91	10.5%	3.00%	10%	53.43	33.8%	7.03	-12.5%
Thailand	2.56	36.7%	0.77	10.2%	2.23%	48%	14.44	29.2%	3.50	-22.8%

TOP 10 REVENUE GENERATING STOCKS

Instrument Name	Ticker	Sector	Country	Revenue Generated (\$)
Sharp Corp	6753	Consumer Durables & Apparel	Japan	19,610,088
Cyberdyne Inc	7779	Materials	Japan	6,288,339
Fullshare Holdings Ltd	607	Real Estate	Hong Kong	6,206,616
Celltrion Inc	068270	Telecommunication Services	Korea	5,920,541
Byd Co Ltd	1211	Diversified Financials	Hong Kong	5,808,264
Sillajen Inc	215600	Food & Staples Retailing	Korea	4,869,863
Semiconductor Manufacturing International Corp	981	Banks	Hong Kong	4,661,983
Japan Display Inc	6740	Capital Goods	Japan	3,159,319
Toshiba Corp	6502	Diversified Financials	Japan	2,944,975
Kingston Financial Group Ltd	1031	Materials	Hong Kong	2,819,908

AVERAGE % OF SHARES ON LOAN



European Equities

A challenging year concludes on positive note

After a challenging start to the year, there is some reason for optimism for lenders of European equities: Q4 was the only quarter of 2017 to record greater revenue than its comparable quarter in 2016. At the end of a year in which regional revenue declined 17%, we will first review the markets which managed to increase annual revenue.

The Netherlands continued the positive trend from Q3, with Q4 revenue outperforming Q4 2016 by 47%. Telecom firm Altice was the big marginal contributor, earning nearly 10% of total Q4 revenue. Belgium also posted YOY gains in Q4, extending a winning streak across each quarter of 2017, with higher revenue than comparable quarters in 2016. Greece posted the largest revenue percentage gain in 2017 (over 50%) driven by increased demand for financials. The other two European nations to post greater YOY revenue in 2017 were Poland and Ireland.

Elsewhere in the EU, the equity revenue trend was less upbeat for much of 2017. Finland, France, Germany, Italy, Norway and Sweden were the largest contributors to the revenue decline, with Sweden alone having \$100 million less in revenue compared with 2016. Sweden's revenue decline is particularly stark when you consider the increase in revenue from retailer H & M, which contributed nearly 20% to Q4 revenue. In percentage terms, Portugal fared the worst in 2017, with 55% less revenue than 2016, followed by Finland, whose equities generated 47% less revenue. While those annual comparison numbers are disappointing for lenders, the relative YOY increase in Q4 revenue is cause for some optimism. For example, German and UK equities both

Overview



Quarterly Revenues

\$252M ▲ **2%**



Average Balances

\$221B ▲ **12%**



Weighted Average Fee

0.84% ▼ **1%**



Average Inventory

\$2.5T ▲ **30%**



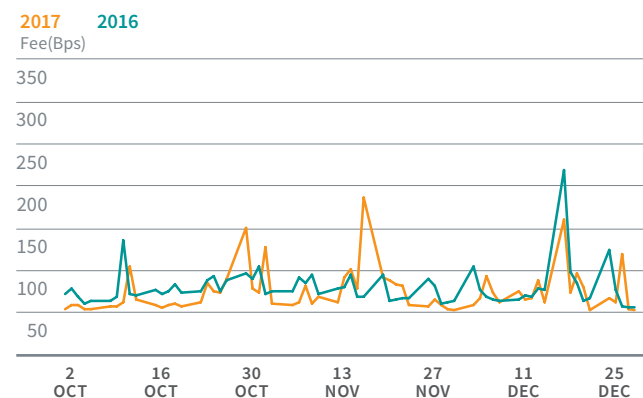
Utilisation

5.14% ▼ **15%**

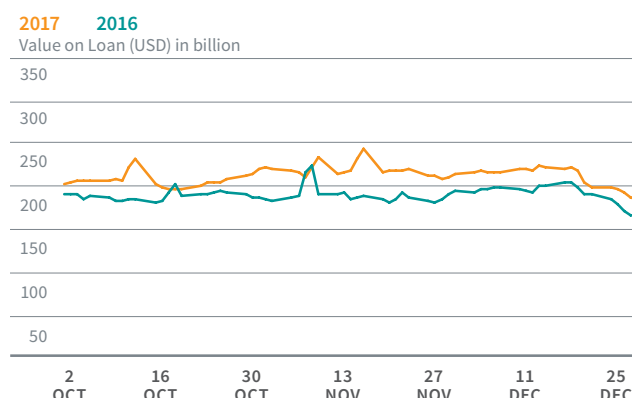
had double digit increases in revenue compared with Q4 2016, which helped offset the underperformance earlier in the year.

As we noted in Asia, the relentless pace of inventory buildup has put downward pressure on utilization and fees in Europe. The total value of European equities in lending programs set another record high in Q4 at \$2.5 trillion. Once again, each of the region's 17 largest markets registered an increase in lendable inventory compared with Q4 2016.

Q4 FEE TREND



Q4 BALANCE TREND



OVERVIEW

Altice drove revenue in the Netherlands

UK revenue continues to bounce back

Short sellers target retailers

Lendable grew across every single European market

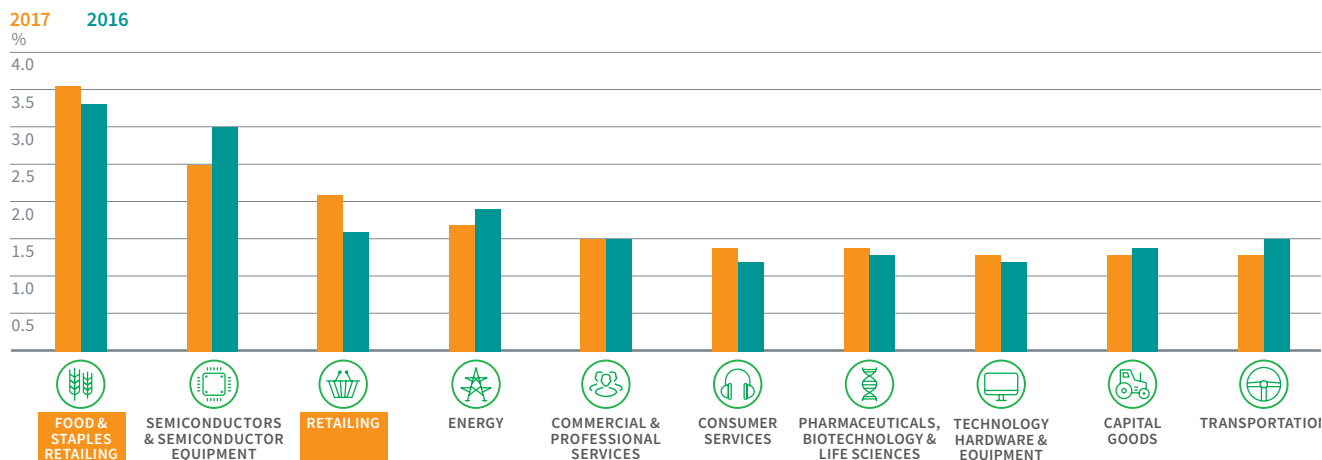
COUNTRY DETAILS

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
Austria	1.23	49.5%	1.35	2.6%	0.79%	77%	14.60	72.6%	4.58	-46.9%
Belgium	17.37	11.8%	6.54	1.4%	1.91%	3%	69.63	16.6%	5.77	-0.5%
Denmark	3.70	1.0%	6.49	34.9%	0.36%	-27%	68.53	43.7%	6.29	2.5%
Finland	2.57	-34.0%	4.91	-17.9%	0.34%	-10%	41.14	31.6%	7.58	-39.6%
France	52.44	-1.7%	44.56	11.8%	0.92%	-6%	372.84	39.8%	6.59	-19.8%
Germany	22.94	13.5%	29.19	6.8%	0.68%	28%	374.13	28.6%	3.89	-24.4%
Greece	0.92	289.2%	0.05	167.5%	11.01%	7%	1.77	44.8%	2.07	165.7%
Italy	13.36	1.3%	14.67	25.5%	0.73%	-13%	105.66	67.6%	7.46	-25.0%
Netherlands	10.05	47.7%	11.53	16.9%	0.65%	28%	135.61	55.6%	4.94	-18.3%
Norway	19.31	1.0%	5.20	-3.6%	2.80%	-2%	31.93	45.2%	9.37	-26.3%
Poland	2.16	-28.5%	1.11	-6.6%	1.02%	-27%	11.68	70.2%	7.76	-37.1%
Portugal	0.43	-75.0%	1.05	109.9%	0.33%	-86%	7.57	32.4%	7.17	38.4%
Spain	10.06	-14.3%	9.60	16.0%	0.85%	-17%	109.11	41.9%	4.49	-23.4%
Sweden	23.42	-37.4%	16.38	13.6%	1.04%	-43%	122.80	40.7%	7.93	-19.2%
Switzerland	11.69	-14.6%	19.56	-0.5%	0.41%	-9%	312.22	17.8%	3.95	-12.1%
Turkey	5.81	2.8%	0.98	6.6%	3.48%	-1%	10.66	44.3%	6.91	-22.5%
UK	53.39	50.5%	47.41	18.3%	0.76%	44%	694.12	18.9%	4.44	-5.7%

TOP 10 REVENUE GENERATING STOCKS

Instrument Name	Ticker	Sector	Country	Revenue Generated (\$)
Total Sa	FP	Energy	France	16,403,010
Royal Dutch Shell Plc	RDSA	Capital Goods	United Kingdom	14,906,202
Engie Sa	ENGI	Telecommunication Services	Belgium	7,773,182
Orkla Asa	ORK	Utilities	Norway	6,044,777
Orange Sa	ORA	Media	France	5,879,628
Statoil Asa	STL	Semiconductors & Semiconductor Equipment	Norway	5,717,136
H & M Hennes & Mauritz Ab	HM B	Automobiles & Components	Sweden	5,044,490
Vallourec Sa	VK	Commercial & Professional Services	France	4,226,457
Telenor Asa	TEL	Health Care Equipment & Services	Norway	3,972,814
Eutelsat Communications Sa	ETL	Technology Hardware & Equipment	France	3,882,341

AVERAGE % OF SHARES ON LOAN



Americas Equities

It was no 2016, but then neither was most of 2016...

North America was not spared from a decline in equity revenues: the region turned in a slightly worse performance than Europe, with an 18% decline in revenues compared with 2016. The relative underperformance was driven by a dearth of specials balances. Similar to other regions, the upward march in equity market valuations has resulted in a glut of oversupply for lendable inventory in North America. That trend continued unabated in Q4, with a 22% increase versus Q4 2016, causing utilization to decline in the US and Canada.

The comparison to 2016 is largely about the absence of significant revenue from Tesla, which generated 11% of US equity revenue for that year. Snapchat was the largest contributor in 2017, delivering less than 5% of the total. There was also less revenue generated through special situation trades than in 2016 though CBS' spin-off of their radio division put them in the top ten Q4 revenue earners.

Given the lack of specials in the first three quarters of 2017, US equities declined in revenue (as compared with 2016) by at least 20% each quarter. The pace of the decline appears to be slowing however, with Q4 delivering a revenue decline of only 5% YOY. As we'll note below, special balances have finally exceeded the 2016 comparable in Q4.

Revenue from lending Canadian equities was 7% lower in 2017 and Q4 offered little relief with 10% less revenue YOY. With marijuana legalization looming, there might be better days on the horizon for specials revenue, with related stocks Canopy Growth Corp., Aphria Inc. and Aurora

Overview



Quarterly Revenues

\$683M ▼ **6%**



Average Balances

\$551B ▲ **4%**



Weighted Average Fee

0.65% ▲ **18%**



Average Inventory

\$8.2T ▲ **22%**



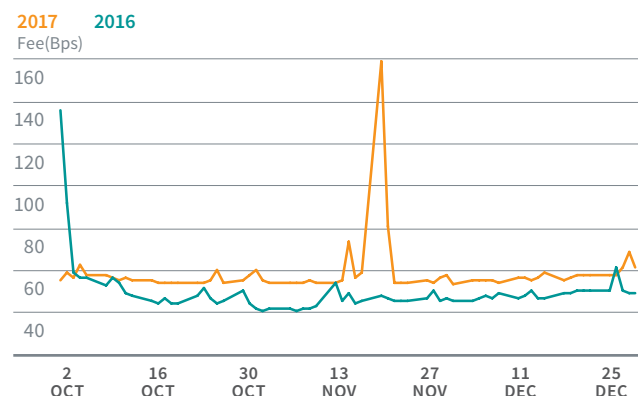
Utilisation

4.74% ▼ **18%**

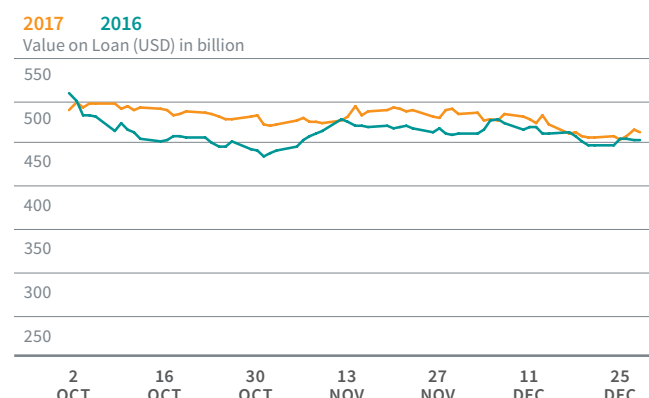
Cannabis Inc. all in the top 12 revenue generating Canadian equities at the start of 2018.

The revenue generated from lending out ADRs was a bright spot for lenders in 2017; each quarter improved on its comparable quarter from 2016 for an overall annual increase of 10%. Increasing demand overcame a marginal decline in Q4 fees, a result primarily driven by surging demand for Alibaba, which currently has the highest loan balance (approximately \$30 billion) for any global security but still has a low borrow fee.

Q4 FEE TREND



Q4 BALANCE TREND



OVERVIEW

US equity revenue decline continues

ADR demand increase was driven by Alibaba

AAOI moved to top revenue earner

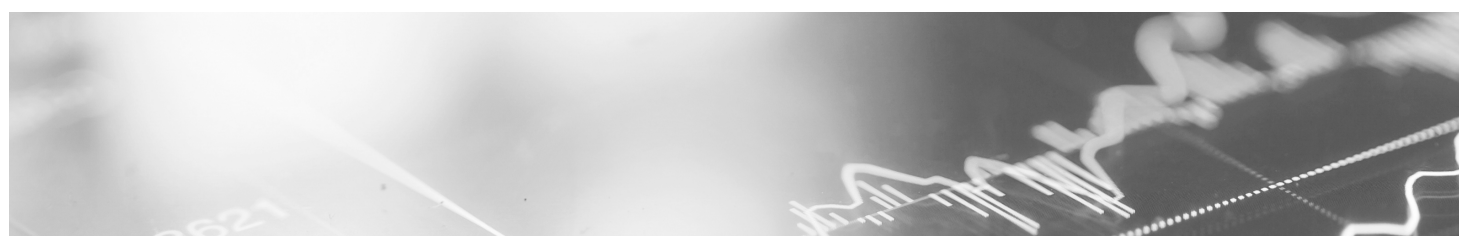
Retailing moves to most shorted sector

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
Brazil	0.61	80.8%	0.69	190.4%	1.48%	-81%	3.01	46.3%	6.18	323.2%
Canada	71.50	-12.6%	42.72	-25.7%	0.91%	21%	500.00	16.7%	6.77	-32.3%
Mexico	1.26	-4.5%	1.03	36.3%	0.48%	-21%	25.63	12.8%	3.32	14.9%
USA	609.27	-5.2%	506.67	7.4%	0.62%	19%	7,677.02	22.3%	4.61	-15.7%
ADRs	47.93	21.9%	53.00	53.3%	0.46%	-6%	209.61	41.0%	18.63	10.0%

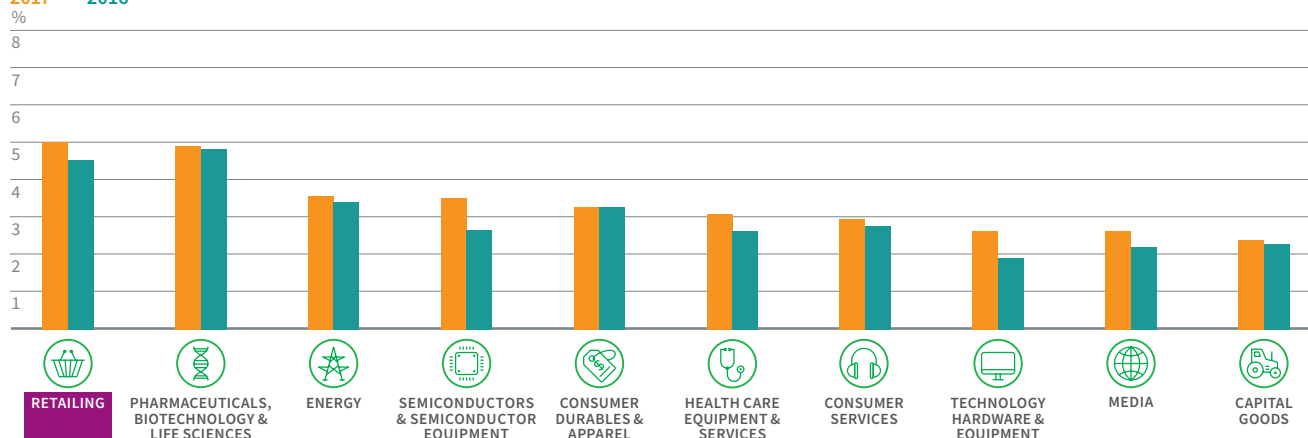
TOP 10 REVENUE GENERATING STOCKS

Instrument Name	Ticker	Sector	Country	Revenue Generated (\$)
Applied Optoelectronics Inc	AAOI	Technology Hardware & Equipment	USA	38,842,470
Cbs Corp	CBS	Media	USA	15,463,908
Ubiquiti Networks Inc	UBNT	Technology Hardware & Equipment	USA	15,473,653
Diamond Offshore Drilling Inc	DO	Energy	USA	12,090,507
Acacia Communications Inc	ACIA	Technology Hardware & Equipment	USA	11,311,789
Frontier Communications Corp	FTR	Telecommunication Services	USA	10,202,710
Under Armour Inc	UAA	Consumer Durables & Apparel	USA	9,431,251
Snap Inc	SNAP	Software & Services	USA	9,189,969
Carvana Co	CVNA	Retailing	USA	8,269,370



AVERAGE % OF SHARES ON LOAN

2017 2016



Exchange Traded Funds

ETF lending revenue stalls in Q4 after a strong year

In 2017, ETFs continued to deliver the goods, with total lending revenues slightly up from 2016. The outperformance relative to 2016 primarily occurred in the first three quarters, as Q4 generated 17% less revenue than its counterpart in 2016. The decline in revenue was mostly driven by falling fees, though it's worth noting that fees did pick up on the margins in late December 2017.

European and Asian ETFs delivered higher revenue in Q4, and for 2017 as a whole. Unfortunately, the same can't be said for the US ETF market, whose Q4 revenue declined by 25% YOY. That makes Q4 the worst quarter of 2017 for exchange traded funds.

ETFs based on high yield debt have continued to drive revenue, with three related products among the top 10 revenue generators. The iShares iBoxx USD High Yield Corporate Bond Fund, the largest fee generating ETF globally, generated more than 10% of Q4 ETF revenue.

The growth in ETF adoption, combined with the appreciation of many underlying asset classes, has driven inventory of to an all-time high that is north of \$250 billion. The surging inventory has caused utilization to decline in Q4, however, at 9%, ETF utilization remains well above the average of 5% for common equities.

Overview



Quarterly Revenues

\$37M ▼ **18%**



Average Balances

\$47B ▼ **1%**



Weighted Average Fee

0.63% ▼ **9%**



Average Inventory

\$257B ▲ **48%**

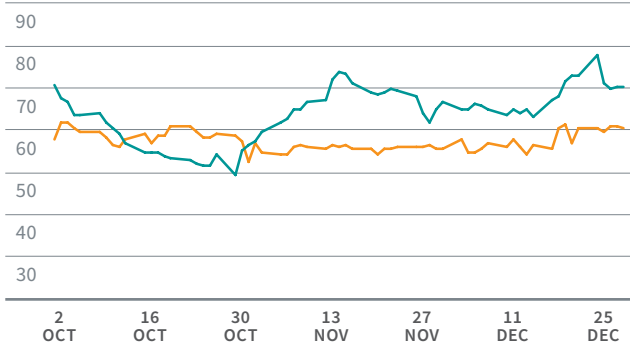


Utilisation

8.99% ▼ **32%**

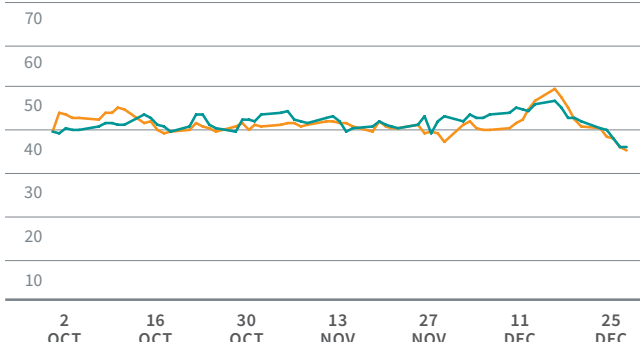
Q4 FEE TREND

2017 2016
Fee(Bps)



Q4 BALANCE TREND

2017 2016
Value on Loan (USD) in billion



OVERVIEW

Americas drove the YoY revenue decline

European revenues continued to increase

Lendable inventory surged across regions

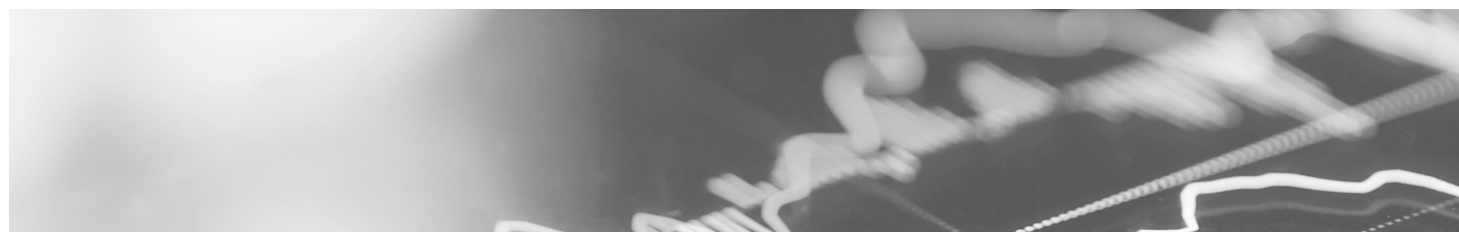
High yield products drive revenue

COUNTRY DETAILS

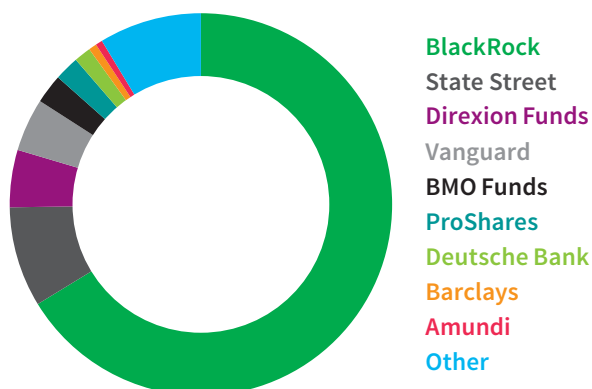
Country	Quarterly Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilisation	YoY Change
North America	30.23	-25.6%	41.44	-1.8%	0.56%	-13%	160.95	42.6%	8.93	-32.8%
Europe	5.16	31.5%	0.72	18.3%	1.31%	-12%	48.65	46.5%	14.27	2.2%
Asia	0.86	29.8%	0.72	-30.1%	1.55%	13%	1.73	22.3%	13.18	-32.2%

TOP 10 REVENUE GENERATING FUNDS

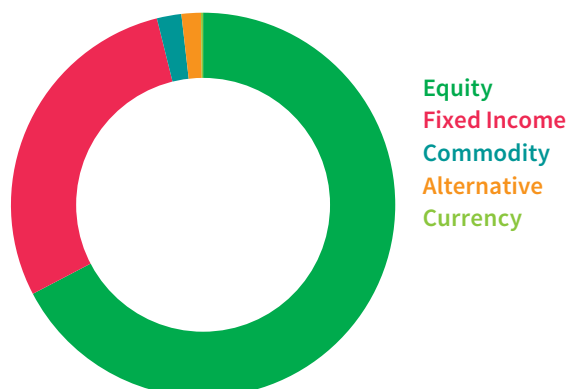
Instrument Name	Ticker	Listing Country	Asset Class	Q3 Revenue Generated (\$)
Ishares Iboxx \$ High Yield Corporate Bond Fund	HYG	USA	Fixed Income	4,658,435
Ishares Msci Emerging Markets Etf	EEM	USA	Equity	1,801,696
Ishares Msci Mexico Etf	EWX	USA	Equity	1,087,392
Ishares China Large-Cap Etf	FXI	USA	Equity	839,384
Ishares Russell 2000 Etf	IWM	USA	Equity	602,838
Ishares Core Ftse 100 Ucits Etf (Dist)	ISF	Ireland	Equity	559,359
Direxion Daily Gold Miners Index Bear 3X Shares Etf	DUST	USA	Commodity	510,618
Spdr Bloomberg Barclays High Yield Bond Etf	JNK	USA	Fixed Income	463,434
Ishares High Yield Corp Bond Ucits Etf Eur(Dist)	IHYG	Ireland	Fixed Income	382,419
Chinaamc Csi 300 Index Etf	3188	Hong Kong	Equity	382,635



LENDING REVENUES BY ISSUER



LENDING REVENUES BY ASSET CLASS



Corporate Bonds

More supply? No problem.

Once again, corporate bonds gave a positive boost to 2017 revenue. An increase in balances and lender fees caused lenders to reap 2% more revenue in Q4 2017 compared with Q4 2016. Total revenue for 2017, \$734 million, was up 5% YOY, and revenue for non-investment grade bonds exceeded investment grade for the first time post-crisis, partly driven by demand for ETF creation.

While lending revenues for convertible bond trading strategies are generally realized on the related equity, the bonds themselves contributed more than 6% of corporate bond lending revenue in 2017. The \$12 million in Q4 revenue represented a 40% increase as compared with Q4 2016.

Lending revenues from asset-backed securities were challenged once again – these securities saw aggregate lending revenue fall by 5% in Q4.

What makes the corporate bond lending returns all the more impressive is that they are occurring against a backdrop of inventory increasing by nearly \$300 billion in 2017, currently totaling \$3.1 trillion. Despite the increased supply, extraordinary demand growth caused utilization to remain elevated as compared with 2016. Corporate bond lending revenue increased during each quarter of 2017, and Q4 was the 2nd consecutive quarter where revenue, loan balances, fees, inventory and utilization all increased.

Overview



Quarterly Revenues

\$185M ▲ **2%**



Average Balances

\$183B ▲ **17%**



Weighted Average Fee

0.40% ▲ **5%**



Average Inventory

\$3.1T ▲ **9%**

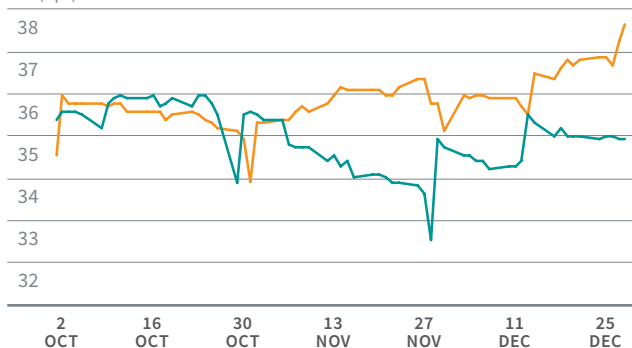


Utilisation

5.11% ▲ **8%**

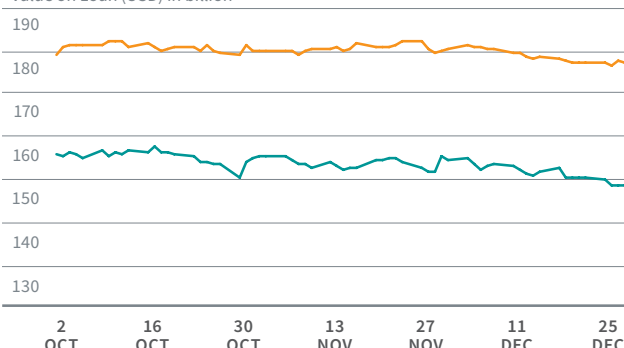
Q4 FEE TREND

2017 2016
Fee(Bps)



Q4 BALANCE TREND

2017 2016
Value on Loan (USD) in billion



OVERVIEW

Convertible bonds drove revenue growth

Demand increased across issue types

Utilization increased despite increasing supply

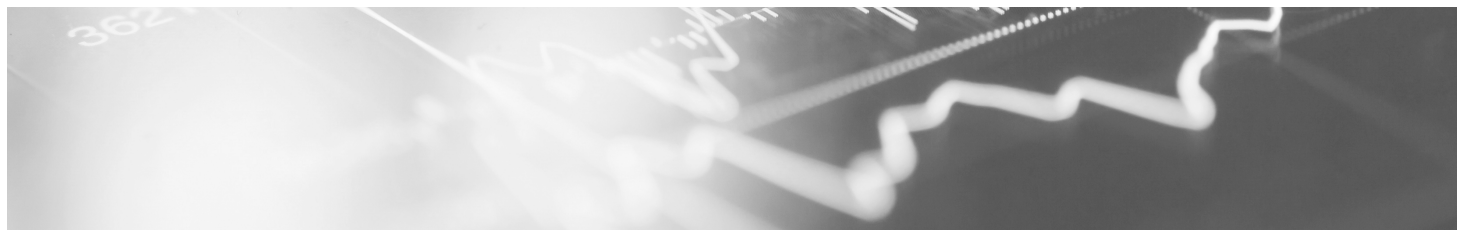
Energy related bonds continue to see strong demand to borrow

ISSUE TYPE DETAILS

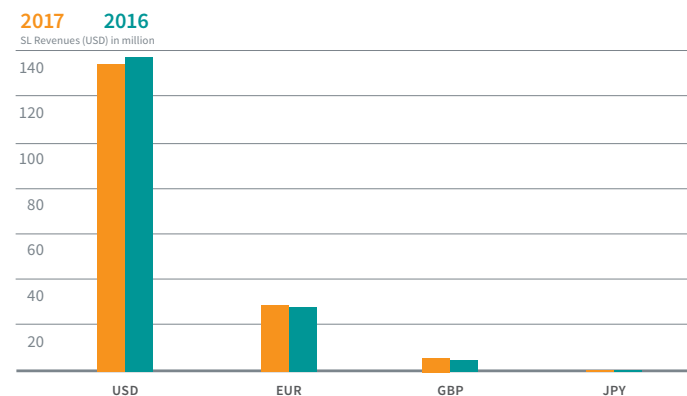
Issue Type	Quarterly Securities Lending Income (USD M)	YoY Change	Average Value on Loan (USD Bn)	YoY Change	Weighted Fees	YoY Change	Average Lendable (USD Bn)	YoY Change	Average Utilisation	YoY Change
Conventional Bonds	173.11	0.0%	175.20	16.9%	0.38%	4%	2,872.05	9.9%	5.41	7.4%
Convertible Bonds	12.00	40.9%	7.28	26.7%	0.87%	15%	51.19	11.2%	10.53	21.8%
Asset Backed Securities	0.14	-4.8%	0.26	15.4%	0.20%	-14%	222.47	0.6%	0.11	15.9%

TOP 10 REVENUE GENERATING BONDS

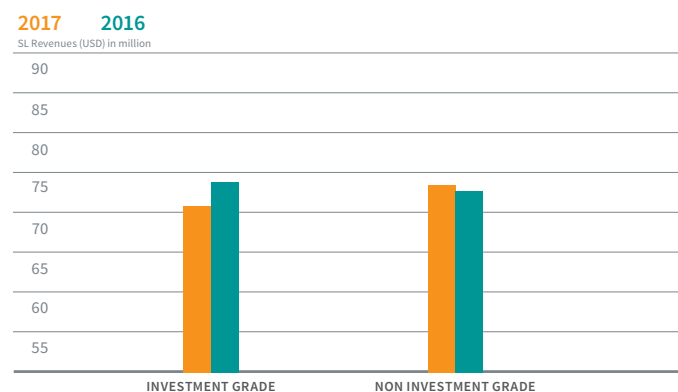
Instrument Name	ISIN	Listing Currency	Rating	Revenue Generated (\$)
Tenet Healthcare Corp (6.75% 15-Jun-2023)	88033GCN8	USD	Investment Grade	1,878,769
Whiting Petroleum Corp (5.75% 15-Mar-2021)	966387AH5	USD	Non-Investment Grade	1,773,312
Chesapeake Energy Corp (8% 15-Jan-2025)	165167CT2	USD	Priv Placement	1,486,192
Chs/Community Health Systems Inc (7.125% 15-Jul-2020)	12543DAQ3	USD	Non-Investment Grade	1,412,627
Priceline Group Inc (0.9% 15-Sep-2021)	741503AX4	USD	Non-Investment Grade	1,295,729
Teva Pharmaceutical Finance Netherlands Iii Bv (3.15% 01-Oct-2026)	88167AAE1	USD	Investment Grade	1,245,401
Anadarko Petroleum Corp (5.55% 15-Mar-2026)	032511BN6	USD	Non-Investment Grade	988,744
Oasis Petroleum Inc (6.875% 15-Mar-2022)	674215AG3	USD	NON-INVESTMENT GRADE	970,355
Resolute Forest Products Inc (5.875% 15-May-2023)	76117WAB5	USD	Non-Investment Grade	912,328
Noble Holding International Ltd (7.75% 15-Jan-2024)	65504LAP2	USD	Non-Investment Grade	846,409



Q4 SECURITIES LENDING REVENUES BY DENOMINATION



Q4 SECURITIES LENDING REVENUES BY RATINGS CATEGORY



Government bonds

Another banner year for HQLA

Government bonds' emergence as a driver of securities lending returns continued in 2017, contributing more than 20% of total revenue in 2017, up from 17% in 2016. The shifting revenue composition is driven by advances in fixed income lending and declines in equity revenue.

Driven by regulation, the demand for high quality liquid assets has shown no signs of slowing, with YOY loan balances up 28% in Q4 2017. Increasing short term interest rates and flattening yield curves have also led to greater trading in government issues. American bonds once again generated nearly three quarters of the total revenue.

While demand has been robust, revenues fell slightly in Q4 compared with Q4 2016. That was mainly driven by increased fees ahead of year-end 2016, a demand driver which failed to emerge in 2017. Utilization remains elevated at just over 30%, the highest for a major asset class, despite inventory continuing its uptrend.

As the result of declining fees, bonds issued by Asian and emerging market issuers once again failed to match the revenues earned over the same period in 2016. Similar to what we've seen in equity markets, increasing inventory has lowered utilization and fees, more than offsetting relatively strong demand when compared with 2016.

Overview



Quarterly Revenues

\$408M ▼ **6%**



Average Balances

\$1.1T ▲ **28%**



Weighted Average Fee

0.13% ▼ **6%**



Average Inventory

\$2.7T ▲ **8%**

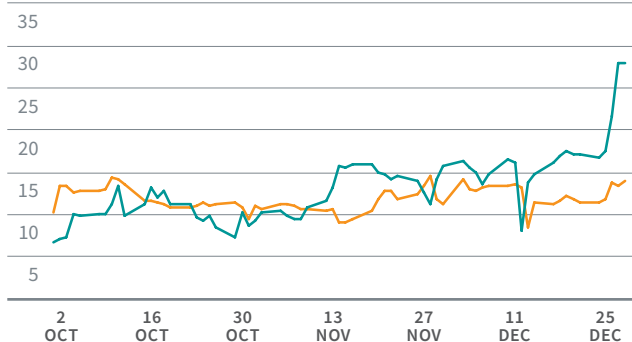


Utilisation

31.51% ▲ **17%**

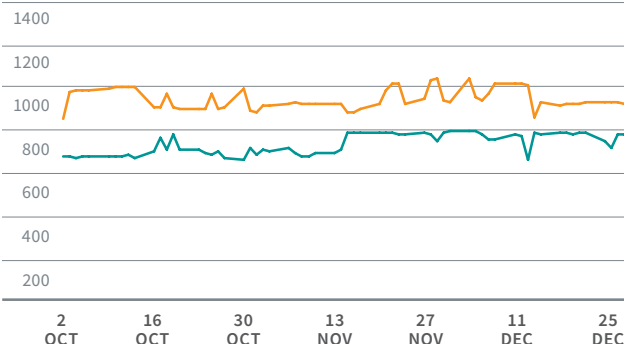
Q3 FEE TREND

2017 2016
Fee(Bps)



Q4 BALANCE TREND

2017 2016
Value on Loan (USD) in billion



OVERVIEW

Only YoY decline in 2017 quarterly revenue

Emerging market bonds continued under performance relative to 2016

Germany only European issuer to feature among top specials

Demand increased globally

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	308.45	-8.7%	668.00	36.7%	0.11%	-6%	1,717.33	11.7%	32.56	17.5%
Asia	1.15	-6.7%	40.22	39.8%	0.03%	-39%	48.19	0.9%	9.50	-22.6%
Europe	98.84	5.2%	363.34	16.6%	0.16%	-4%	886.30	1.3%	30.67	15.0%
Emerging Market Bonds	19.41	-14.8%	18.00	18.0%	0.41%	-28%	210.57	28.6%	7.82	-1.0%

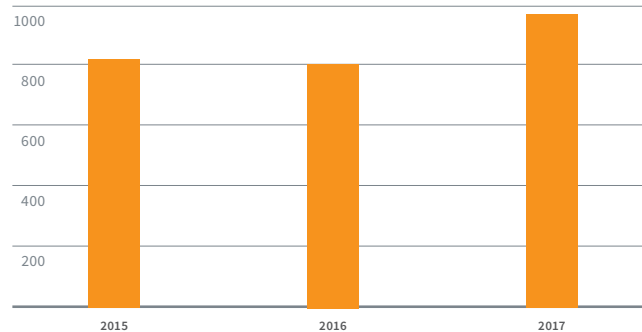
TOP 10 REVENUE GENERATING BONDS

Instrument Name	ISIN	Currency	Issuer	Revenue Generated (\$)
United States Treasury (2.25% 15-Nov-2027)	9128283F5	USD	USA	6,219,635
United States Treasury (1.375% 15-Sep-2020)	9128282V1	USD	USA	6,215,968
United States Treasury (2% 31-Oct-2022)	9128283C2	USD	USA	5,471,419
United States Treasury (2.25% 15-Aug-2027)	9128282R0	USD	USA	3,461,654
Federal Republic of Germany (4.75% 04-Jul-2040)	D20659KP8	EUR	Germany	2,301,832
Federal Republic of Germany (Government) (0% 15-Aug-2026)	D2R8H4BP3	EUR	Germany	2,298,179
Federal Republic of Germany (Government) (0.25% 15-Feb-2027)	D2R8H4CA5	EUR	Germany	2,164,016
Federal Republic of Germany (0.5% 15-Feb-2026)	D2R8H4AV1	EUR	Germany	2,148,675
Federal Republic of Germany (1.5% 15-May-2023)	D20658T97	EUR	Germany	2,103,169
United States Treasury (2% 15-Feb-2023)	912828UN8	USD	USA	1,985,283



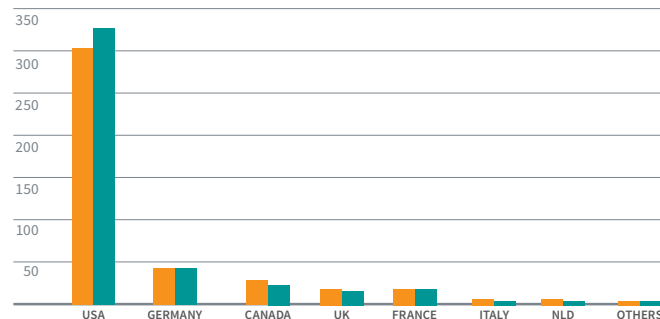
GOVERNMENT BOND BALANCE TREND

Loan Balances in USD (Billions)



Q4 REVENUES BY ISSUER

2017 2016
SL Revenues (USD) in million



Global Equity Specials Update

Despite the rise of fixed income lending, equity specials still account for more than 75% of global lending revenue. Q4 2017 was slightly better than 2016 for special balances which, unsurprisingly given the preceding sections of this report, was the only such quarter of 2017. Overall, the percentage of equity loan balances with a fee above 100bps was steady throughout the year, hovering around 8% of total balances, trending down from low double digits in February 2016. We'll use the 100bps fee as a "special" threshold for the remainder of this section.

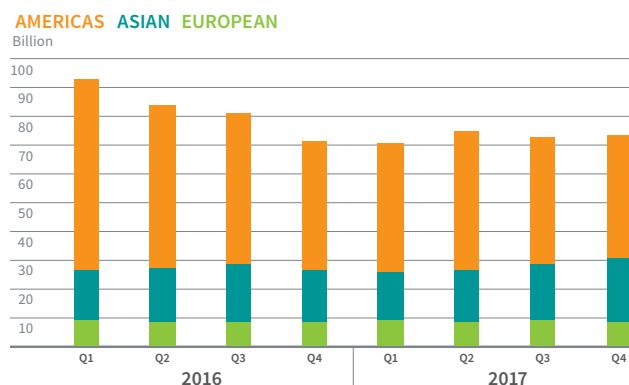
As noted above, Asian equities posted another post-crisis high annual revenue, so it's no surprise that specials demand improved throughout the year, with Q4 balances more than 20% higher YOY. Europe remained relatively flat for equity specials, with balances down less than 1% YOY. Demand for specials in the Americas cooled toward the end of the year, but held steady at levels above those seen in Q4 2016. SNAP provided a boost mid-year, but that was short-lived, as the lockup expiry in August brought enough supply to dramatically ease rates. That was the general theme for US and Canada, where long running specials yielded less than in previous years, and new specials that emerged generally lacked scale or staying power.

When we aggregate specials demand to global sectors, we see a marked increase in healthcare and information technology special balances. The decline in consumer discretionary is the result of Tesla no longer trading special, and indeed, the sector has a higher demand balance than 2016 ex-Tesla. It's encouraging to see that, compared with a

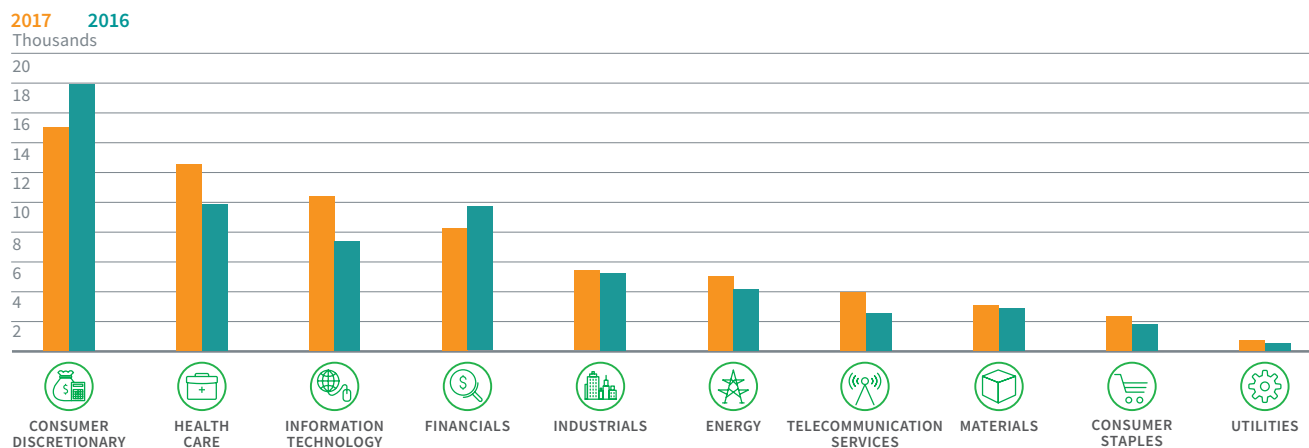
year ago, 8 out of 10 sectors have greater specials balances than they did at the end of 2016. Excluding the impact of the Tesla comparison, financials was the only other sector with declining specials balances during 2017.

As we noted in the regional top securities tables above, within the healthcare sector, the biotechnology and pharmaceuticals industry group drove demand, which maintained the highest special balances for any industry group. The struggles that global retailers faced in competing with online merchants was a popular narrative in 2017, as mall operators and their tenants came under pressure from short sellers. The two retail industry groups notched a combined 75% increase in specials balances in 2017 compared with the 2016 average. One interesting impact is the real estate sector, which includes a number of mall REITs, actually declined in 2017, but that was largely the result valuations declining for the group. Similar to the

QUARTERLY EQUITY SPECIAL BALANCES



GLOBAL EQUITY SPECIAL BALANCES



sector level, 16 of 24 industry groups posted increasing specials demand, suggesting that while there are areas of focus, the demand for specials is improving broadly.

Breaking out the sector balances by region, we see that Asia has more than 50% of special balances in four of ten sectors (information technology, industrials, telecom and utilities). The increases in telecoms and IT were largely driven by the expanded balances in Asia.

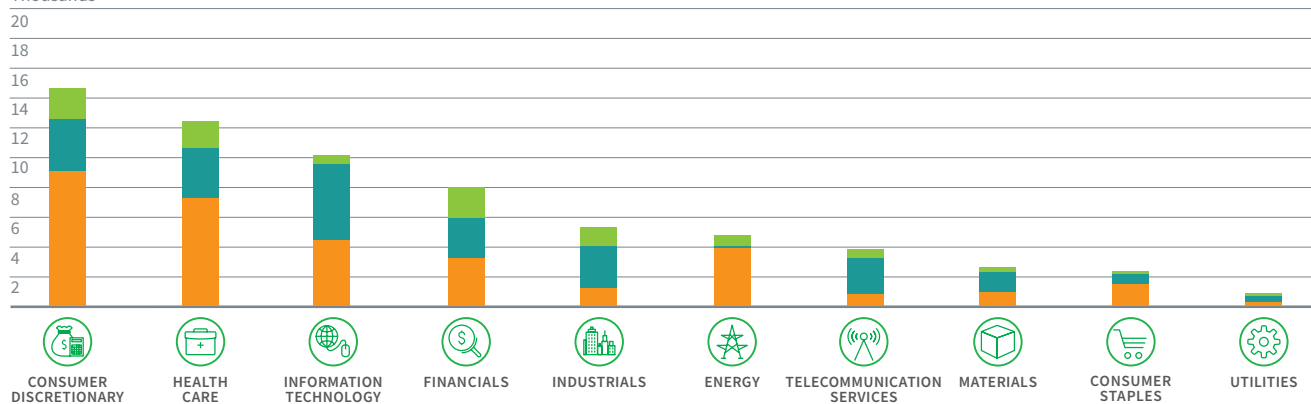
Given the unprecedented strength of the first quarter of 2016, it's not surprising that 2017 failed to improve the trend of special balances and revenues, which started in 2010. Considering the diversification of increasing demand across sectors, against a backdrop of all-time highs in equity valuations, demand for equity specials is impressive, and will only increase if the macro risks that failed to emerge in 2017 come back to the fore in 2018. While Tesla is no longer counted as a "special" it is still the 2nd most shorted stock globally, with borrow demand increasing 20% in 2017. Thus far, supply has kept pace with borrow demand as the share price has risen, but it's worth noting that demand has tripled since the start of 2014 while the share price has "only" doubled. Tesla reflects the overall story for equities in 2017, where increasing supply has kept the fee down, but price appreciation did not chill borrow demand and there are many reasons for lenders to be optimistic looking ahead to 2018.



REGIONAL EQUITY SPECIALS BY SECTOR

AMERICAS ASIAN EUROPEAN

Thousands





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