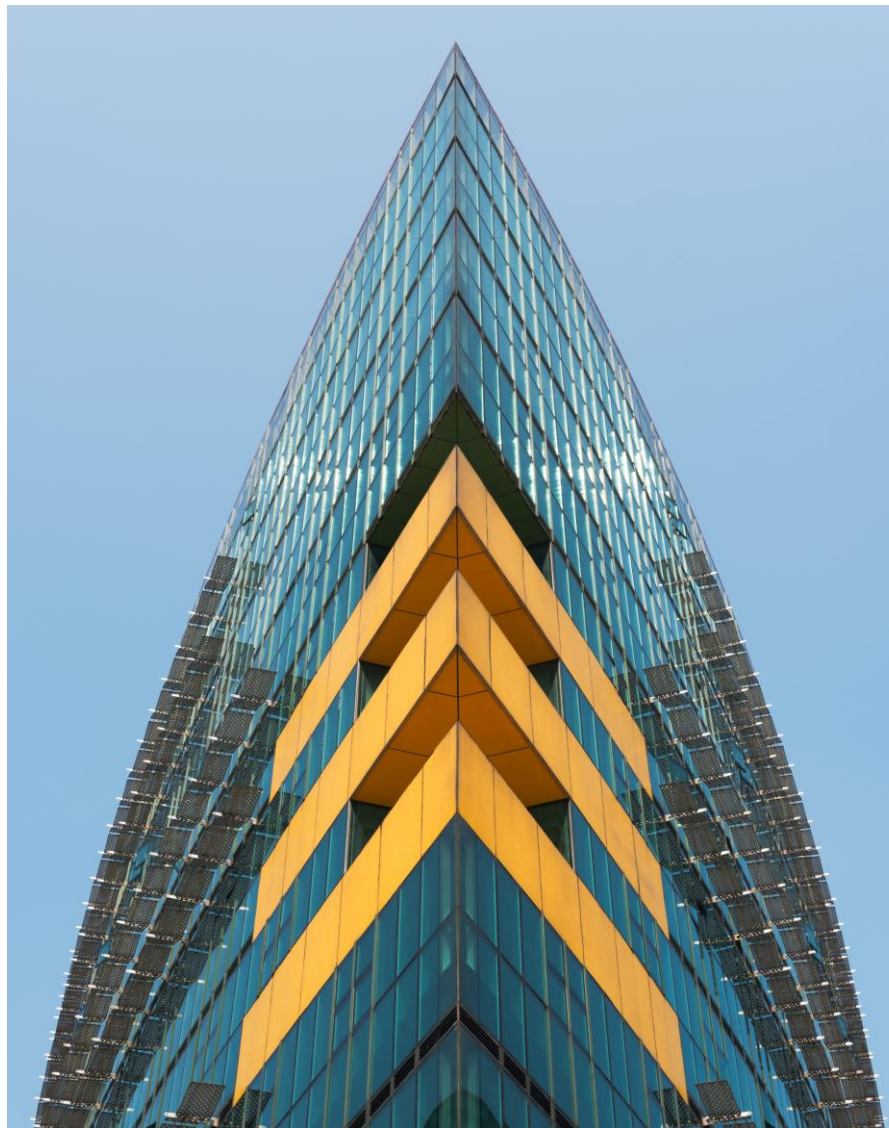


Securities Finance Q4 2023 Snapshot



Data that drives markets



Paul Wilson

Managing Director

Head of ETF & Benchmark Solutions (EBS), Prime One and Securities Finance

2023 has been a year like no other. After a prolonged period of low growth, low interest rates and relative calm, the markets reawakened, and volatility returned. Over the year, interest rates moved to levels not seen since pre-global financial crisis, bond yields experienced more volatility in the space of a few months than they saw for several years prior, equities moved significantly higher following their Q4 2022 dip, and securities lending markets thrived once more, generating important returns for asset owners. Given this level of change and opportunity, 2023 proved to be an exceptionally busy year for all securities finance market participants.

Not only was 2023 a busy year for the markets, but it was also an extremely active year for all of us at S&P Global Market Intelligence. Throughout the last twelve months we have continued to develop new solutions to support the financing markets, such as our **ETF Collateral List 3.0**, our **Repo Data Analytics** product, and our **Onboarding Accelerator Tool**. By improving transparency, leveraging the universe of data points available within our organization, and developing products to support our clients, we have continued to drive the securities financing markets forward to the benefit of all members of the value chain.

Whilst 2023 produced near record revenues once again for the securities lending market, not all members of this value chain were able to benefit to the same degree. 2023 was the year of fixed income and US specials lending as both corporate events and the new interest rate environment produced lucrative opportunities across those segments of the market. Specials-dominated markets only increases the need for effective data analytics. Risk can only be managed correctly when it is quantifiable and transaction value can only be assessed when the risk vs reward can be accurately calculated. Whilst we are well known for our market leading securities finance portal, with this market dynamic in mind, our team has also been working hard to produce and develop a range of tools for beneficial owners to help them upgrade their daily workflows and improve their ability to measure securities lending programs. We have also been working hard in the interests of the market to adhere to our responsibilities under the Securities Lending Performance Management guidelines, published by the International Securities Lending Association, and are pleased to state that we already meet or exceed all of the standards agreed upon.

As we look towards 2024, we are excited about the roadmap we have laid out ahead of us. Much of this has been agreed in partnership with our clients as we look to support the market in bringing new or enhanced functionality. We have a raft of new or enriched data sets planned for release, including ESG scores, additional public disclosure information, investor flow data, swap data and expanded intraday analytics capabilities. We also have further new innovations and products to complement our suite of existing securities finance solutions in development.

We could not provide these services without the trust and confidence of our clients. I offer a sincere thank you for your continued loyalty and partnership and I look forward to collaborating with you all throughout the new year to come. As always, your feedback remains very welcome, as it is essential to our future product development, so please feel free to reach out to me with your thoughts and suggestions.

With my best wishes for the new year and beyond,

Paul. R Wilson

A year of product development



Kabin George

Executive Director
Head of Product Management
Securities Finance

As we start a new year, I wanted to share the incredible journey we've had in product development over the past 12 months. It's been a year filled with challenges, triumphs and most importantly, innovation.

The focus for this past year has been to continue to provide our clients with the broadest, deepest, and most complete securities finance dataset, to continue to diversify to new datasets and to add new solution-based products that benefit the securities lending and repo community.

We started the year by launching the **ETF Collateral screening Web tool** which helps collateral and risk managers identify Equity and Fixed Income ETFs that can be eligible as collateral, tailored to their risk parameters. We continued with our commitment to build robust performance measurement improvements. As a direct result of this commitment, we became the first data provider to adhere to industry guidelines, which is something that we are immensely proud of.

This year has also seen a continued push to onboard new Intraday contributors, and as a result, we have witnessed our intraday dataset grow dramatically. Our 2024 roadmap includes an exciting number of new **intraday analytics** at instrument and market/sector level.

The enhancements made across our product suite were driven by strong collaboration, using client insights, to ensure that each update is a step closer to providing our users with a seamless and rewarding experience. Client engagement in our community initiatives and collaborative efforts have truly made this journey special.

As we look ahead to the new year, the product team have an exciting roadmap planned and will continue to push the boundaries of what is possible and deliver unparalleled value to our customers.

I extend my deepest appreciation for your partnership. Your trust and feedback have been the driving force behind our success and remain a critical component in the formation of our roadmap, which I am very excited about.

With my very best wishes for the year ahead,

Kabin George

In support of Beneficial Owners

No two securities lending programs are the same. As the composition of a beneficial owner's asset pool, size and allocations are unique to their institution, so is their risk appetite and their corporate stewardship obligations when lending securities. As this is the case, having the ability to view the market through multiple data points ensures that each beneficial owner's program can be treated as both unique and distinct. This approach is essential for analyzing performance, for calibrating lending strategies and for effectively monitoring and managing liquidity requirements and constraints.

2023 was a year that was dominated by specials activity, especially in the US, and by the lending of fixed income assets. Short-dated government bonds traded special as a hawkish interest rate environment dominated market movements. Corporate bonds experienced record high average fees as a result of the increase in interest rates and their associated impact on the economy. For a beneficial owner, in a specials dominated market, numerous considerations in regards to revenue, recall risk and asset liquidity need to be reflected upon. When making decisions regarding these issues, data often holds the key to building an enhanced understanding of a program's performance and potential.

By embracing the value that data can bring to a beneficial owner's program, the decision-making process is improved. In a market where regulatory change is directly impacting securities lending flows, knowing the true economic value of adjusting collateral parameters, changing buffer limits or re-rating on loan positions is essential. For a securities lending program to generate optimal returns, fund boards must remain confident in a program's ability to effectively manage its risk vs reward profile whilst performing its most important role of putting otherwise idle assets to work, and generating risk adjusted incremental returns for asset holders.

As we look towards 2024, we eagerly await enhancements to numerous tools that have been specifically tailored to assist asset owners in their decision-making processes:

- **Compliance Check Tool** - Our compliance check tool continues to provide beneficial owners and fund boards confidence in a program's ability to work within a defined set of parameters. We have plans to include non-cash collateral capabilities and to provide additional Mark to Market checks in the new year.
- **Performance portal** - This tool provides beneficial owners with the opportunity to input program specific criteria that enables true market comparisons and revenue attribution.
- **Loan Evaluator Tool (LET)** - The goal of the tool is to help lenders make informed and timely decisions when looking to fulfil their fiduciary and stewardship responsibilities. With the growing complexity of environmental, social and governance concerns and heightened geopolitical risk, our team will be incorporating S&P Global Sustainable 1 data to assist beneficial owners in monitoring a number of ESG specific indicators. LET will help institutional investors and securities lenders assess whether to recall open securities loans in advance of a shareholder vote. It will also provide data on upcoming company meetings, the liquidity profile of the underlying securities, the current loan revenue, and ESG scores.

As the new year begins, we look forward to continuing our ongoing partnership with the beneficial owner community. We remain committed to supporting asset owners in achieving their goals and in amplifying their influence across the securities finance markets.

We wish you all a very prosperous new year.



Monica Damas-Shaw

Director
Product Management
Americas



Robert Nunn

Director
Product Management
EMEA



Stewart Cowan

Executive Director
Product
Management APAC

2023 was the year of interest rates, inflation and banner securities lending revenues

- 2023 produced the highest revenues since 2008
- US equity specials generated the highest annual revenues on record
- Fixed income assets performed well, as interest rates increased
- EMEA equity lending slowed considerably during Q4

Global Securities Finance Snapshot - 2023

Asset Class	2023 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee %	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Utilization	Util YoY % Change
All Securities	\$12,856	3%	\$2,565	-9%	0.50%	12%	\$32,311	2%	6.1%	-12%
All Equity	\$9,738	1%	\$1,199	-7%	0.81%	9%	\$23,847	3%	3.6%	-11%
Americas Equity	\$5,098	7%	\$648	-5%	0.78%	12%	\$17,058	3%	2.9%	-7%
Asia Equity	\$2,183	6%	\$218	2%	1.00%	4%	\$2,530	5%	5.0%	-5%
EMEA Equity	\$1,373	-8%	\$203	-20%	0.64%	11%	\$3,449	2%	4.6%	-23%
ADR	\$328	8%	\$29	-2%	1.15%	8%	\$237	-4%	8.7%	-1%
ETP	\$635	-25%	\$96	-13%	0.66%	-15%	\$464	3%	10.5%	-14%
Government Bond	\$1,888	2%	\$1,078	-11%	0.18%	14%	\$4,162	5%	20.6%	-17%
Corporate Bond	\$1,117	16%	\$265	-3%	0.42%	19%	\$3,990	-3%	5.7%	1%

Note: Includes only transactions with positive fees

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Source: S&P Global Market Intelligence Securities Finance

Q1 2023

Q1 2023 was one of the most financially tumultuous quarters since the end of the global financial crisis in 2008. The quarter started with market participants believing that the end of the interest rate hiking cycle across most major world economies was very close to coming to an end. This was reflected in government bond markets where positive sentiment led to bond yields declining.

Equity markets started to recover from their Q4 2022 lows. This was particularly evident within the tech sector, with mega cap tech stocks leading the charge, recovering the majority of any losses from the previous quarter. Growth stocks did particularly well over the quarter outpacing any recovery seen in value stocks.

Throughout the period, economic data showed that inflation was stickier than anticipated and as a result, central banks continued their tightening cycle. Benchmark interest rates continued to rise, albeit in smaller increments than previous increases. The Bank of England, Federal Reserve Bank and the European Central Bank all voted to raise rates twice over the quarter,

making it clear that reducing inflation down to 2% was their ultimate goal.

Heading into March, events within the finance sector unfolded at an unprecedented speed with the collapse of Silicon Valley Bank and Signature Bank in the US. Credit Suisse also agreed to a buyout by UBS as a result of financial pressures on its balance sheet. The issues in the banking sector once again focused market participants' minds on credit risk and a flight to quality was seen with deposits being drawn out of regional banks in the US and placed into USD Money market vehicles en-masse.

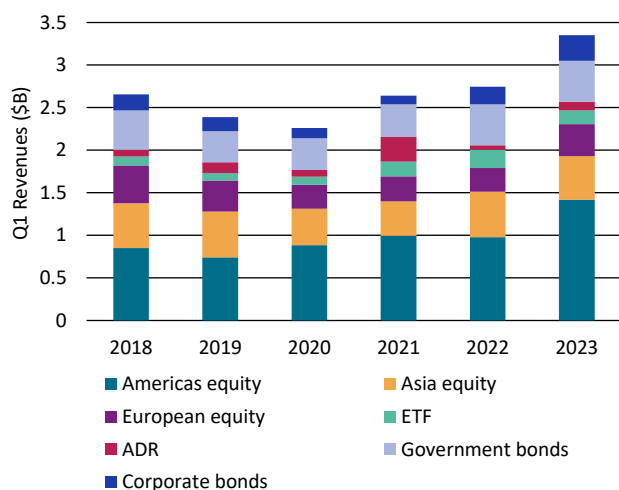
In the securities lending markets, participants generated a massive **\$3.415B** in revenues which was 24% higher than during Q1 2022. This was split \$2.6B in equities and just under \$800M in fixed income revenues.

The majority of asset classes experienced double digit increases when compared with Q1 2022. Equity revenues increased 24% overall (American equities +45% and EMEA equities +36%, APAC equity revenues declined slightly when compared with Q1 2022 by 4%). Average fees increased across the board apart from a small decrease across APAC equities and a 9% decrease across Exchange Traded Products (ETPs). Americas

equities was the standout asset class with a 47% increase in average fees when compared with Q1 2022. ADRs had a good quarter with average fees increasing 107% to 138bps, and revenues growing 94% when compared with Q1 2022 to \$102M.

Fixed income fees moved higher over the period. The momentum that the asset class built up during 2022 continued to grow with government bond fees increasing 35% on Q1 2022 and corporate bond fees increasing a massive 60% YoY. Average fees for corporate bonds reached an incredible 46bps during the quarter.

Q1 Securities Finance revenues By Asset Class (USD)



Source: S&P Global Market Intelligence Securities Finance

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Q2 2023

Global economies remained glued to economic data throughout the quarter as central banks continued to fight inflation with higher interest rates. In the US, interest rates finished the quarter at a 16-year high, following the fastest hiking cycle in four decades. The Bank of Canada was the first central bank to pause its hiking cycle, awaiting further economic data, but concluded that further increases were necessary during June. In Europe, the European Central Bank raised rates to a twenty-two-year high and the Bank of England, despite being one of the first central banks to start hiking, carried along its path to a higher-than-expected terminal rate, as core inflation remained stubbornly high.

Across the APAC region, despite inflation being less of an issue, the general tightening cycle was also reflected. The only two outliers to this were the Bank of Japan, which maintained its yield curve controls and loose monetary policy throughout the quarter, and the People's Bank of China, which cut its main policy rate for the first time in ten months, as economic data raised concerns about a weakening post-COVID rebound in the country's economy. The second quarter marked a point of divergence for global central banks and the fight against

inflation as economies increasingly started to move to local rhythms.

Debt ceiling discussions in the US made their way into the headlines towards the end of the quarter as market participants started to position their portfolios for what was expected to be one of the biggest showdowns between Republicans and Democrats to date. Despite an increase in the borrowing of T-Bills expiring towards the infamous X-date in both the repo and securities lending markets, an agreement was reached with little to no impact upon the broader financial sector.

The second half of the quarter experienced an explosion of interest in artificial intelligence. The arrival of Chat GPT and other similar large language models led to a significant desire to understand more about the impact that generative AI could bring to company profits and workflows. As a result, technology companies such as microchip and semiconductor manufacturers and information technology firms saw their share prices rally. The NASDAQ experienced its best opening six months of the year ever. Likewise, the S&P 500 gained circa 13% during H1, helping it recoup any losses incurred since the Fed started raising interest rates in March 2022. The index moved into bull market territory following a 20% increase when compared with its most recent low on October 12th, 2022.

Across the globe, a similar story took place. The Nikkei in Japan reached a 33-year high as the country benefited from recent changes to its corporate governance policy and acted as a beneficiary of divestment from China. Across Europe, many stock markets marched higher and the German DAX reached an all-time high. In the securities lending markets this led to short covering and a reduction in balances.

In the securities finance markets, revenues of **\$3.605B** were generated over the quarter. Marking the best Q2 period since 2008. This was split \$2.8B in equities and just under \$800M in fixed income revenues.

Over the first half of the year **\$7.020B** was generated, representing a 16% increase on what was a near record year during 2022. Q2 revenues were some of the highest seen within recent history, second only to those earned during 2008 when \$8.4B was generated during the first half of the year.

The majority of asset classes experienced increased revenues when compared with Q2 2022. Equity revenues increased 5% YoY (American equities +13% and EMEA equities +3%, APAC equity +4%) and fixed income assets continued on their impressive run. Government bond revenues increased 9% YoY to \$484M and corporate bond revenues increased by an incredible 28% YoY to \$296M.

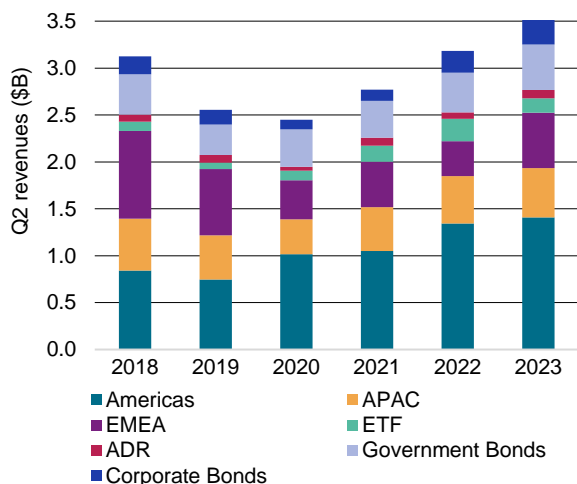
When compared quarter-on-quarter, slight decreases in revenues across Americas equities (-1%), ETPs (-4%)

and corporate bonds (-1%) were seen, as all other asset classes experienced gains.

Average fees continued to increase across the board except for ETPs. Comparatively high average fees were one of the most important contributors to revenue growth throughout the quarter. Balances continued to decline across all asset classes, except Asian equities, and utilization declined across the board. The boost to returns during the quarter was attributable to the ongoing strength seen across average fees. This was particularly true for fixed income assets which experienced some of the largest increases in average fees YoY. In comparison to Q1 2023, fees for both corporate and government bonds remained flat, but this was contrary to what had been seen during previous quarters.

Borrowing activity continued to decline across ETPs over the quarter. Average fees declined 22% YoY, utilization was down 17% YoY and balances fell by 17% YoY. Revenues were impacted as a result and declined 35% to \$155M over the quarter.

Q2 Securities Finance revenues By Asset Class (USD)



Source: S&P Global Market Intelligence Securities Finance

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Q3 2023

With the U.S. debt ceiling and bank solvency concerns in the rear-view mirror, financial markets reverted to the familiar themes of growth, inflation and central bank decision making during Q3. Across most developed markets, inflation moderated, and investor focus moved towards peak rates and the end of tightening policy.

The pace of interest rate increases started to slow across major economies. Towards the end of the quarter, the majority of central banks chose to pause rather than continue increasing interest rates, as data started to reflect the impact of the most recent rises on economic activity.

The US was stripped of its top-tier sovereign credit grade by Fitch Ratings during the quarter, shrinking the world's AAA debt options. The agency criticized the country's ballooning deficit and "erosion of governance" that led to repeated debt ceiling clashes over the past two decades.

The bullish sentiment that lifted shares out of a bear market towards the end of 2022 started to fade. The idea that interest rates would be staying higher for longer and that central bank rate pivots may not be triggered until mid to late 2024 started to impact equity valuations. The term "higher for longer" became popular amongst market analysts and bond yields surged to multi-year highs. Prices in both equity and fixed income assets fell in tandem, even across the AI inspired tech stocks that were responsible for triggering the US equity market rally experienced throughout the year.

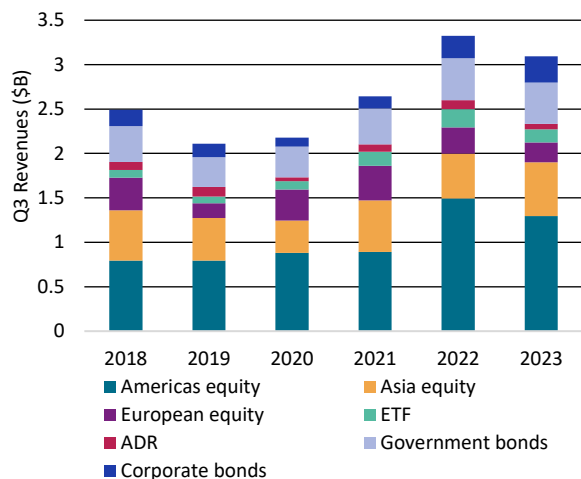
In the securities finance markets, revenues started to decline. Q3 produced **\$3.131B** in revenues. This represented a 7% decrease YoY - but it's important to remember that Q3 2022 was one of the highest revenue generating quarters on record.

In the equity markets, revenues declined pretty much across the board. APAC equities were the standout asset class, experiencing a 20% increase in revenues YoY, along with increases in balances and average fees. Americas equities were affected by a fall in specials revenues throughout the month of September and EMEA equities experienced two significantly poor performing months during August and September. Over the quarter there was also a significant decline of 27% YoY in EMEA equity balances.

ETP's continued to experience a reduction in both revenues and demand, following a banner year during 2022. ADRs suffered a strong decline in both average fees and revenues.

In the fixed income markets, the changing interest rate environment continued to enhance the performance for both government and corporate bonds alike. Government bonds experienced a 2% decrease in revenues YoY to \$464M but benefitted from a 9% YoY increase in average fees, which helped to offset the 10% YoY decline in balances. Corporate bonds continued to see double digit increases in revenues. Balances remained flat, but average fees increased 13% YoY to 42bps.

Q3 Securities Finance revenues By Asset Class



Source: S&P Global Market Intelligence Securities Finance

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Q4 2023

Q4 commenced with markets suggesting that the Fed may need to raise interest rates once more during 2023 before holding them at the increased level for an extended period of time. Other central banks moved from a pause to a hold in their hiking cycles as economic data started to point to a marked slowdown in inflationary pressures.

Central bankers reinforced their message of “higher for longer”, however, which sent bond prices falling once again. The US 10-year Treasury reached a 5% yield for the first time in years (since 2007) as traders braced themselves for an extended period of elevated rates. This was replicated around the globe as German 10-year yields reached their highest levels since 2011, as investors started to demand greater compensation for holding debt in a “higher for longer” environment.

Throughout the quarter, US plans to tighten measures restricting China’s access to advanced semiconductor and chipmaking gear and renewed tensions in the Middle East, increased geopolitical risk. This proved to be an on-going theme throughout 2023.

Across Asia, pressure on the central Bank of Japan continued to grow as the JPY continued to weaken against the USD. As the Bank of Japan maintained its stance of negative interest rates, despite a prolonged period of inflation, the widening interest rate gap between the JPY, EUR and USD continued to intensify.

Despite the tightening conditions within the bond market, spreads across US investment grade and high yield bonds remained below their 20-year averages.

Heading into the second half of the quarter, an extension to the interest rate pauses by the Bank of England, the European Central Bank, and the US Federal Reserve, coupled with a continued disinflationary theme across both the Europe and the US, sent bond yields tumbling. Traders started to price in multiple rate cuts for 2024 - despite warnings from central bankers. This led to a further surge in growth stocks, and the “magnificent seven”, which were close to topping a collective 100% return for the year.

Across Asia, South Korea implemented a short selling ban, stating that big banks had been breaking naked short selling rules, whilst the Philippines introduced the practice in a bid to attract international capital flows. Across Japan, the Nikkei reached a new year high, as corporate governance reforms, a weaker yen, disinvestment from China and strong earnings continued to push the index higher.

In the Securities lending markets, revenues during Q4 were much lower than those experienced by all asset classes during Q4 2022. Quarterly revenues of **\$2.705B** were generated, -11% YoY. In the equity markets, revenues across the Americas and EMEA fell YoY. EMEA equities experienced one of their worst performing quarters for many years. Revenues declined by 47% YoY as average fees also fell. Across Americas equities, revenues declined 8% YoY. A rebound in activity and higher valuations during December helped monthly revenues recover towards year-end. Across APAC, a number of headwinds started to impact revenues. The economic slowdown in China affected Hong Kong and other Southeast Asian markets, slowing borrowing activity. The imposition of the short sale ban in South Korea also impacted the strong revenues previously generated in the country. Revenues slowed QoQ, declining from the year high seen during Q3.

Revenues from fixed income assets slowed when compared YoY but still performed well in relative terms. Average fees remained high across corporate and government bonds and revenues performed well given the opportunities provided by heightened market volatility and further interest rate uncertainty.

2023 was a year defined by both geopolitical and macro-economic themes. Despite another year of near record revenues, the concentration of securities lending specials activity means that not all investors have felt the benefit of these banner revenues to the same degree.

Heading into 2024, volatility and uncertainty remain key considerations for securities finance markets. Despite a slowdown in revenues, a higher interest rate environment, volatility in yields and robust equity markets are all likely to produce fertile ground for another great year for securities lending activity in 2024.

APAC Equities data table for 2023

Country	2023 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Util	Util YoY % Change
APAC Equities	\$2,183	6%	\$218	2%	1.00%	4%	\$2,530	5%	5.0%	-5%
Japan Equity	\$644	24%	\$127	6%	0.50%	17%	\$1,091	7%	6.0%	-2%
Taiwan Equity	\$555	1%	\$22	4%	2.51%	-3%	\$141	45%	7.1%	-30%
Hong Kong Equity	\$413	0%	\$28	-16%	1.50%	20%	\$535	-3%	4.1%	-10%
South Korea Equity	\$394	21%	\$19	17%	2.03%	1%	\$162	3%	6.4%	12%
Australia Equity	\$124	-33%	\$19	-7%	0.66%	-29%	\$471	3%	3.3%	-11%
Malaysia Equity	\$21	10%	\$0.49	9%	4.25%	2%	\$11	-9%	3.5%	5%
Singapore Equity	\$16	-13%	\$2	3%	0.67%	-22%	\$63	3%	3.1%	1%
Thailand Equity	\$15	-10%	\$1	-5%	1.95%	-5%	\$19	6%	3.5%	-16%
New Zealand Equity	\$2	-42%	\$0.35	-13%	0.65%	-32%	\$10	0%	3.3%	-7%

Note: Includes only transactions with positive fees
Source: S&P Global Market Intelligence Securities Finance

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EMEA Equities data table for 2023

Country	2023 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Util	Util YoY % Change
EMEA Equities	\$1,373	-8%	\$203	-20%	0.64%	11%	\$3,449	2%	4.6%	-23%
France Equity	\$243	-18%	\$41	-32%	0.50%	12%	\$621	13%	5.3%	-41%
Sweden Equity	\$206	-8%	\$19	-7%	1.03%	-2%	\$170	-5%	8.7%	-2%
Germany Equity	\$204	-19%	\$34	-25%	0.58%	8%	\$386	1%	7.1%	-30%
Switzerland Equity	\$196	37%	\$27	-14%	0.62%	46%	\$497	-3%	4.2%	-16%
UK Equity	\$123	-11%	\$28	-19%	0.43%	10%	\$920	-1%	2.3%	-15%
Norway Equity	\$104	-6%	\$5	-9%	1.74%	0%	\$43	-17%	9.6%	13%
Italy Equity	\$55	-35%	\$10	-14%	0.51%	-26%	\$131	10%	6.1%	-23%
Netherlands Equity	\$55	-25%	\$14	-16%	0.39%	-6%	\$263	3%	4.1%	-23%
South Africa Equity	\$43	-4%	\$4	4%	0.93%	-15%	\$44	-12%	5.2%	12%

Note: Includes only transactions with positive fees
Source: S&P Global Market Intelligence Securities Finance

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Americas Equities data table for 2023

Country	2023 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Util	Util YoY % Change
Americas Equity	\$5,098	7%	\$648	-5%	0.78%	12%	\$17,058	3%	2.9%	-7%
USA Equity	\$4,643	6%	\$583	-6%	0.79%	13%	\$16,344	3%	2.7%	-9%
Canada Equity	\$413	17%	\$61	7%	0.66%	8%	\$669	-7%	7.1%	11%
Brazil Equity	\$34	42%	\$3	36%	1.16%	14%	\$2	6%	11.1%	-36%
Mexico Equity	\$8	46%	\$1	0%	0.98%	45%	\$43	21%	1.9%	-13%
ADR	\$328	8%	\$29	-2%	1.15%	8%	\$237	-4%	8.7%	-1%

Note: Includes only transactions with positive fees
Source: S&P Global Market Intelligence Securities Finance

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Exchange Traded Product data table for 2023

Regional	2023 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY %Chg	Avg Lendable (\$B)	Lendable YoY % Change	Avg Util	Util YoY % Change
ETFs	\$635	-25%	\$96	-13%	0.66%	-15%	\$464	3%	10.5%	-14%
Americas ETFs	\$544	-25%	\$89	-13%	0.61%	-15%	\$314	1%	14.3%	-11%
European ETFs	\$67	-28%	\$5	-25%	1.42%	-5%	\$86	8%	3.3%	-31%
Asia ETFs	\$12	-33%	\$1	22%	0.92%	-43%	\$3	-16%	10.2%	11%

Note: Includes only transactions with positive fees
Source: S&P Global Market Intelligence Securities Finance

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Corporate Bond data table for 2023

Asset Class	2023 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Util	Util YoY % Change
Corporate Bonds	\$1,117	16%	\$265	-3%	0.42%	19%	\$3,990	-3%	5.7%	1%
Conventional Bonds	\$1,062	20%	\$261	-2%	0.41%	21%	\$3,641	-1%	6.2%	-1%
Convertible Bonds	\$51	-23%	\$3	-45%	1.73%	29%	\$36	-22%	5.7%	-24%
Asset Backed Securities	\$0.61	8%	\$0.26	-9%	0.24%	18%	\$307	-18%	0.1%	14%

Note: Includes only transactions with positive fees
Source: S&P Global Market Intelligence Securities Finance

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Government Bond data table for 2023

Region	2023 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Util	Util YoY % Change
Government Bonds	\$1,888	2%	\$1,078	-11%	0.18%	14%	\$4,162	5%	20.6%	-17%
Americas	\$1,138	5%	\$664	-14%	0.17%	21%	\$2,929	4%	19.7%	-19%
Europe	\$651	-5%	\$362	-10%	0.18%	4%	\$1,092	5%	23.7%	-16%
Asia	\$107	11%	\$52	10%	0.21%	1%	\$141	10%	16.5%	12%
Emerging Market	\$105	344%	\$24	-8%	0.44%	18%	\$295	1%	7.0%	-12%

Note: Includes only transactions with positive fees
Source: S&P Global Market Intelligence Securities Finance

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Top 10 Revenue Generating Equities of 2023

Top Earning Assets	Ticker	Sector	Country	Revenue Generated (\$M)
AMC Entertainment Holdings Inc	AMC	North America Media and Entertainment	US	\$661.3
Sirius XM Holdings Inc	SIRI	North America Media and Entertainment	US	\$235.1
Beyond Meat Inc	BYND	North America Food, Beverage & Tobacco	US	\$191.3
Lucid Group Inc	LCID	North America Automobiles & Components	US	\$159.3
Nikola Corp	NKLA	North America Capital Goods	US	\$139.9
Upstart Holdings Inc	UPST	North America Financial Services	US	\$108.4
Fisker Inc	FSR	North America Automobiles & Components	US	\$98.3
Gamestop Corp	GME	North America Consumer Discretionary & Retail	US	\$96.2
C3.AI Inc	AI	North America Software & Services	US	\$93.0
Visa Inc	V	North America Financial Services	US	\$85.1

Source: S&P Global Market Intelligence Securities Finance

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Securities lending revenues slow during Q4, generating \$2.705B

- Quarterly revenues decline as average fees continue to fall
- APAC equities outperform YoY despite headwinds
- EMEA equities suffer one of their worst quarters for many years
- Fixed income revenues start to cool

Global Securities Finance Snapshot - Q4 2023

Asset Class	Q4 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Utilization	Util YoY % Change
All Securities	\$2,705	-11%	\$2,515	-4%	0.43%	-7%	\$33,140	13%	5.8%	-15%
All Equity	\$1,982	-10%	\$1,126	-11%	0.70%	0%	\$24,370	13%	3.3%	-21%
Americas Equity	\$978	-8%	\$627	-8%	0.62%	0%	\$17,666	13%	2.7%	-18%
Asia Equity	\$540	6%	\$206	0%	1.04%	6%	\$2,495	13%	4.6%	-14%
EMEA Equity	\$184	-47%	\$162	-34%	0.45%	-20%	\$3,398	10%	3.7%	-41%
ADR	\$80	0%	\$28	2%	1.12%	-1%	\$230	7%	8.9%	-5%
ETP	\$169	-11%	\$96	-1%	0.69%	-10%	\$470	12%	10.9%	-4%
Government Bond	\$458	-11%	\$1,099	0%	0.16%	-11%	\$4,277	14%	20.8%	-12%
Corporate Bond	\$244	-12%	\$270	7%	0.36%	-17%	\$4,171	11%	5.6%	-2%

Note: Includes only transactions with positive fees
Source: S&P Global Market Intelligence Securities Finance

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Q4 2023 starts to set the scene for 2024

The fourth quarter of the year experienced optimistic markets despite a growing number of uncertainties. An increase in geopolitical risk, slowing global economies (despite strong resilience shown in the face of some of the quickest and most aggressive rate hiking cycles in history) and a market that was engaged in selective hearing regarding the interest rate messaging coming from the Fed (and every other major central bank across the globe), all had no impact upon market performance.

A strong deflationary tone was evident in the economic data throughout the quarter sparking a belief amongst investors that rate cuts would be possible early in the new year. Despite this being the case, central bankers made it clear that they were in no mood to start talking of interest rate cuts just yet. A growing dovish tone did start to shine through, however, as inflation showed signs of falling by more than market expectations had priced in. A lively discussion regarding the conditions that would be needed for central bankers to start cutting rates in the new year quickly ensued. The key question became whether inflation readings in the coming months would allow policymakers to pivot quickly enough to blunt the impact of their past tightening in order to head off a hard landing.

In the equity markets, renewed confidence and growing dovish tones led the Dow Jones index in the US to hit an all-time high. Across Europe, similar scenes were seen, with France's blue-chip CAC 40 closing at a record high, as rising expectations of interest rate cuts in 2024, triggered a brisk year-end rally from the likes of cosmetics giant L'Oréal SA to industrial company Schneider Electric SE. It follows Germany's DAX and Italy's FTSE MIB, which both bounced back fully from a summer correction.

Across the APAC region, equity markets were less jubilant during the quarter, with smaller gains seen across most markets outside of China. Ongoing concerns regarding the Chinese property sector, slower than expected consumer spending, US trade tariffs and lower fiscal government stimulus than expected, continued to weigh heavy on Chinese equity valuations.

Fixed income markets rallied throughout the quarter as the concerns that led to the sell off during the end of Q3 and the beginning of Q4 started to subside. Markets quickly moved from a bearish sentiment, following the message of "higher for longer", to a bullish outlook, as inflation data continued to show greater than expected declines and the likelihood of a soft landing increased

significantly. Multiple rate cuts started to be priced in for 2024, despite the on-going strong words of caution from central bank governors.

Without one single rate cut taking place, a significant easing in financial conditions started to breath further confidence into all areas of financial markets.

In Japan, investors continued to be patient as the Bank of Japan refrained from loosening monetary policy any further. This was despite the pressure that the current level of interest rate was having on the Japanese Yen. Investors continued to watch closely for signals of when a change in policy may occur.

A significant news story for the fixed income markets came during December as the SEC voted 4-1 to require central clearing of more US Treasury trades. "The new rules will reduce risk across a vital part of our capital markets in normal times and stress times," said SEC chair Gary Gensler. "That benefits investors, issuers and the markets connecting them."

In the securities lending markets, revenues started to cool as **\$2.705B** was generated. This marked an 11% decline YoY and a 14% decline QoQ. Large percentage decreases YoY were seen across both revenues and average fees after a volatile Q4 2022 worked to the benefit of securities lending market revenues.

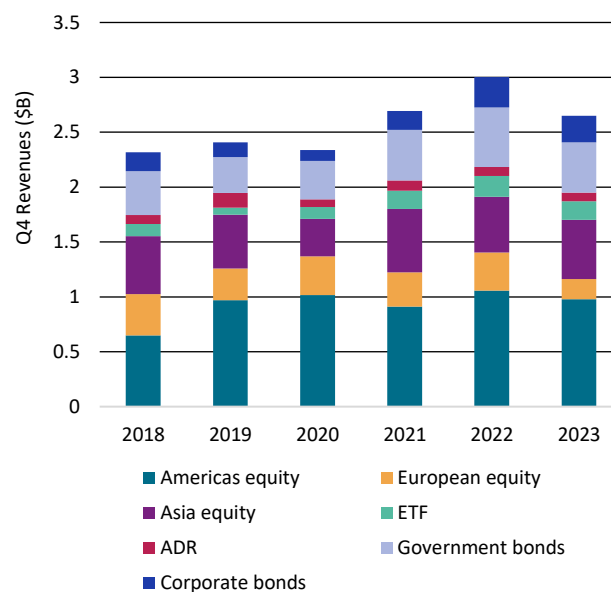
Across equities, APAC was the standout region as revenues grew by 6% YoY. Strong growth in YoY returns across Japan, Taiwan, South Korea, and Malaysia helped push quarterly revenues higher YoY. Strong increases in average fees across these countries and a growth in balances in Japan, Hong Kong, Malaysia, and Thailand also helped to contribute to higher regional revenues. In the Americas YoY revenues declined by 8%. Revenues were pulled lower by USA equities (-9% YoY) as growth was seen across both Canada (+8% YoY) and Brazil (+7% YoY). Canada was the standout market in this region as average fees increased by 10% YoY. EMEA equities suffered one of their worst quarters on record as YoY revenues plummeted by 47%. All markets experienced declines apart from Denmark, Portugal, and Greece. Average fees and balances declined across many countries with some of the larger lending markets such as the UK and Sweden experiencing YoY declines in fees of more than 40%.

In the fixed income markets, following an impressive year for revenues, Q4 earnings started to decline YoY across both corporate and government bonds. Government bond revenues declined 11% YoY as a 27% YoY decline across EMEA government bond revenues weighed on performance. EMEA was a weak spot for the asset class as average fees declined by 24% YoY and balances fell by 3% YoY. Emerging market bonds also

suffered during the quarter with a decline in revenues of 29% YoY and a decline in average fees of 16% YoY, balances also declined by 15% YoY. Activity across Americas government bonds was flat on Q4 2022 with a small YoY decline in revenues of 1%, balances increased by 1% YoY and average fees declined YoY by 2%.

Corporate bond revenues also declined YoY but this is to be expected after a stellar Q4 performance during 2022. Across conventional corporate bonds, revenues declined by 8% YoY and average fees declined by 14% YoY. Balances increased by 8% YoY, however, as moves in interest rate predictions made the asset class more volatile. Convertible bonds suffered the largest declines across the asset class with revenues decreasing 63% YoY to \$7M.

Q4 Securities Finance revenues By Asset Class (USD)



Source: S&P Global Market Intelligence Securities Finance

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Following an impressively strong first half of 2023, Q4 continued the trend of declining revenues and falling average fees, that was seen during Q3. This made Q4 the weakest quarter of the year in terms of performance. All asset classes suffered when compared YoY. As can be seen by the graph above, Q4 2022 was exceptional in terms of revenue generation, so it is important to keep these declines in context. A softening in activity is being seen across all assets, especially across EMEA. Heading into Q1 2024, this may change as markets remain sensitive and increasingly reactive to economic data - especially if it doesn't meet market expectations. Volatility is likely to increase in the first few months of 2024 which is likely to benefit securities lending markets further.

APAC Equities

Japan, South Korea, and Taiwan leave the other markets behind

APAC equity valuations declined during October as global equity markets fell. In China, Hong Kong listed property company shares fell sharply as Country Garden Holdings (2007) failed to make a debt payment and effectively said that it expected to default on its offshore debt obligations, sending shock waves through the property sector.

During November, market trends reversed, and equity indices moved noticeably higher, with the MSCI Asia ex-Japan index increasing by 7%. South Korea, Taiwan and the Philippines all posted the strongest equity market gains during the month, despite the introduction of a short selling ban in South Korea. In the Philippines, short selling debuted, making the country one to watch in 2024.

During the final month of the quarter, the “everything rally” that was sweeping the globe also hit the APAC region, leading to gains across most regional equity markets. De-risking from China continued to be a trend throughout the month, as the country experienced its largest capital outflows since 2016.

Securities lending revenues increased 6% YoY with Japan, Taiwan and South Korea all experiencing strong gains. Despite a number of headwinds, South Korea had an exceptional quarter, the second best of the year, after Q3. Revenues did trend lower throughout December however, as the short sale ban started to impact demand.

Despite experiencing the lowest average fees of any quarter this year, revenues in Taiwan only declined by less than 1% QoQ after Q3 posted the best revenues of 2023. Balances continued to grow in this market,


Overview

Q4 Revenues
 **\$540M** ▲ 6%

Average Balances
 **\$206B** ▲ 0%

Weighted Average Fee
 **1.04%** ▲ 6%

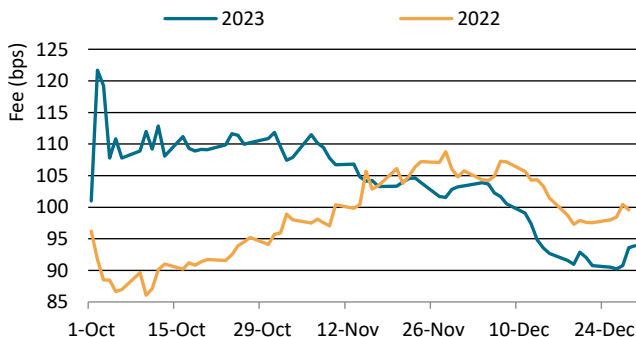
Average Lendable
 **\$2.5T** ▲ 13%

Average Utilization
 **4.6%** ▼ -14%

increasing by an impressive 21% YoY and growing by more than \$6B between January and December.

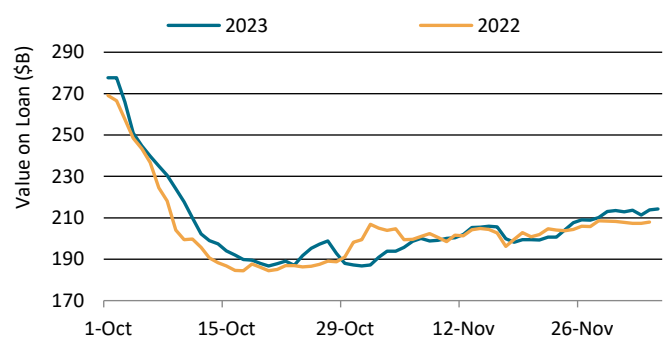
Not all markets fared the same across the region as Hong Kong and Australia continued to disappoint. The slowdown in the Chinese economy continued to impact both markets. Revenues declined by 14% YoY in Hong Kong, despite an increase in specials activity within the market. Balances declined by 22% YoY. In Australia, revenues fell by 43% YoY and balances declined by 18% YoY. Average fees declined by 31% YoY as mining and energy stocks became less attractive to borrowers.

Q4 Fee Trend



Source: S&P Global Market Intelligence Securities Finance © 2024 S&P Global Market Intelligence

Q4 Balance Trend



Source: S&P Global Market Intelligence Securities Finance © 2024 S&P Global Market Intelligence

Revenues in South Korea increased by 39% YoY

Hong Kong continued to disappoint with a 14% YoY decline in revenues

Revenues in Malaysia continued to grow as did average fees

Lendable assets in Taiwan increased by 90% YoY

Country Details

Country	Q4 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Util	Util YoY % Change
Japan Equity	\$151	18%	\$116	4%	0.50%	15%	\$1,120	18%	5.1%	-14%
Taiwan Equity	\$148	16%	\$24	21%	2.42%	-5%	\$157	90%	7.1%	-32%
Hong Kong Equity	\$104	-14%	\$24	-22%	1.72%	12%	\$483	-1%	3.9%	-19%
South Korea Equity	\$96	39%	\$19	28%	1.97%	6%	\$160	16%	6.2%	6%
Australia Equity	\$29	-43%	\$18	-18%	0.62%	-31%	\$449	5%	3.5%	-20%
Malaysia Equity	\$5	56%	\$0.49	2%	4.42%	47%	\$11	-1%	3.7%	-6%
Singapore Equity	\$3	-48%	\$2	-34%	0.47%	-22%	\$60	0%	3.1%	-28%
Thailand Equity	\$4	13%	\$1	-2%	1.99%	14%	\$17	-7%	4.0%	1%
New Zealand Equity	\$0.38	-34%	\$0.33	8%	0.46%	-40%	\$9	0%	3.3%	12%

Note: Includes only transactions with positive fees
Source: S&P Global Market Intelligence Securities Finance

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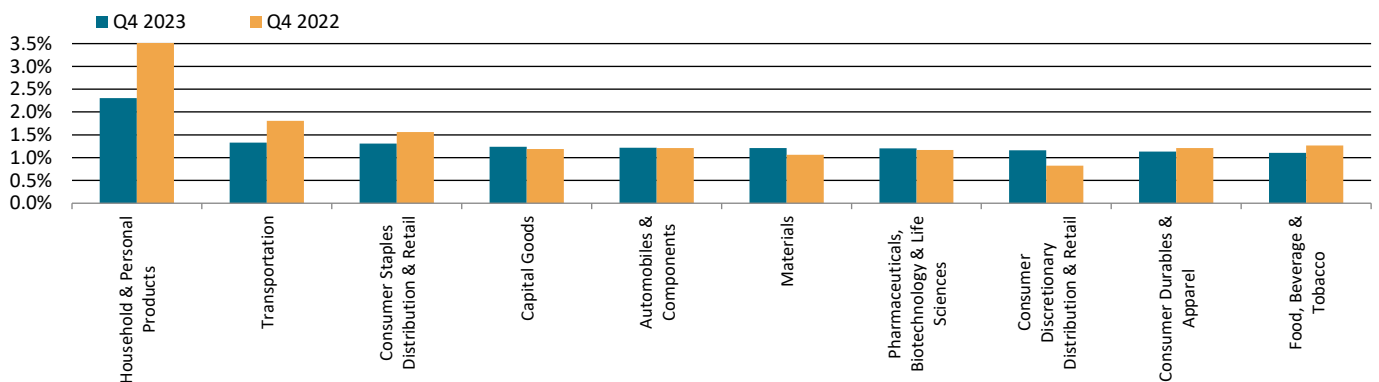
Top 10 Revenue Generating APAC Equities

Top Earning Assets	Ticker	Sector	Country	Revenue Generated (\$M)
Ecopro Co Ltd	086520	Asia Capital Goods	KR	18.2
Sunac China Holdings Ltd	1918	Asia Real Estate Management & Development	HK	14.5
Country Garden Holdings Co Ltd	2007	Asia Real Estate Management & Development	HK	12.0
Posco Dx Co Ltd	022100	Asia Software & Services	KR	6.2
Zhejiang Leapmotor Technology Co Ltd	9863	Asia Automobiles & Components	HK	5.9
East Buy Holding Ltd	1797	Asia Consumer Services	HK	5.7
Alchip Technologies Ltd	3661	Asia Semiconductors & Semiconductor Equipment	TW	5.2
Global Unichip Corp	3443	Asia Semiconductors & Semiconductor Equipment	TW	5.0
Ecopro BM Co Ltd	247540	Asia Capital Goods	KR	4.9
Aozora Bank Ltd	8304	Japan Banks	JP	4.3

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\$ Short Loan Value as a % of Market Cap



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EMEA Equities

One the region's worst quarterly performances ever

The fourth quarter started with European equity performance suffering. A surge in bond yields during October interrupted the 2023 stock rally, leaving investors looking for market signals in economic data to help them predict what may be coming next.

Moving into November, inflation continued to decline across the UK and the Eurozone, encouraging equity markets to shrug off October's move lower. This news sent bond yields lower and European equities higher. European indices finished the month in positive territory with banking stocks outperforming as higher interest rates helped to boost profits.

Strong upward equity market momentum continued throughout December. France's blue-chip CAC 40 index closed at a record high, as rising expectations of interest rate cuts in 2024 triggered a brisk year-end rally. UK inflation numbers came in under expectations during the month boosting both equity and bond markets further. Fears of a Euro-zone Q4 recession increased, however, as the German economy continued to show signs of weakness.

In the securities lending markets, EMEA equities struggled to gain any real momentum during the period. The second half of 2023 was pretty dismal for the asset class, as a lack of specials activity (Q4 experienced the three weakest months of the year) and a general drop in demand led to some of the weakest monthly revenues seen for many years. Revenues declined by 47% YoY and balances fell by 34% YoY. This led to both November and December experiencing 50% declines in revenues (YoY). The most active lending markets all suffered. Sweden, France, Germany, and the UK all experienced significant declines in borrowing activity

Overview



Q4 Revenues

\$184M ▼ -47%



Average Balances

\$162B ▼ -34%



Weighted Average Fee

0.45% ▼ -20%



Average Lendable

\$3.4T ▲ 10%



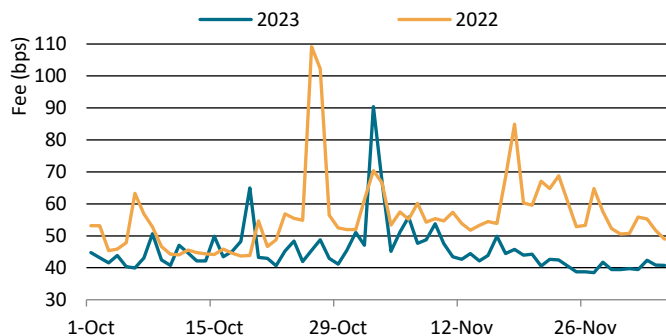
Average Utilization

3.7% ▼ -41%

and balances remained well under those seen both during Q4 2022 and the first half of 2023. Utilization across the region declined by 41% YoY. Again, some of the most active markets experienced the largest declines (Germany -59% YoY, France -64% YoY, Italy -33% YoY).

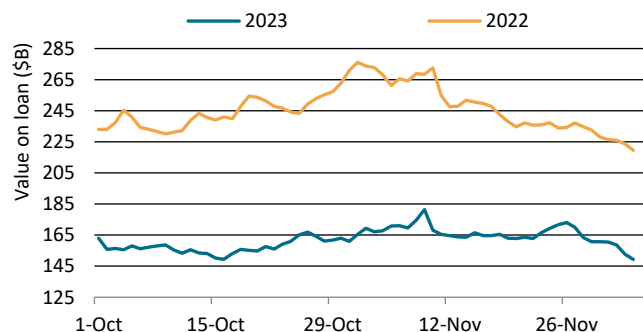
There were some standout markets during the quarter, such as Portugal and Greece, which managed to generate significantly greater revenues YoY, but unfortunately this was not enough to save the asset class from one its worst quarters on record.

Q4 Fee Trend



Source: S&P Global Market Intelligence Securities Finance © 2024 S&P Global Market Intelligence

Q4 Balance Trend



Source: S&P Global Market Intelligence Securities Finance ©2024 S&P Global Market Intelligence

EMEA revenues declined across all major markets

EMEA Equity Volume Weighted Average Fees (VWAF) decreased 20% YoY

EMEA balances declined by 34% YoY

Revenues in France fell 66% YoY

Country Details

Country	Q4 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Util	Util YoY % Change
Sweden Equity	\$29	-49%	\$18	-8%	0.66%	-44%	\$166	6%	8.5%	-13%
Germany Equity	\$28	-43%	\$23	-54%	0.50%	23%	\$378	6%	4.7%	-59%
France Equity	\$22	-66%	\$25	-57%	0.34%	-18%	\$611	18%	3.3%	-64%
UK Equity	\$21	-48%	\$28	-8%	0.28%	-44%	\$904	8%	2.4%	-12%
Switzerland Equity	\$17	-38%	\$19	-34%	0.35%	-6%	\$488	5%	3.0%	-41%
Norway Equity	\$15	-37%	\$5	-7%	1.18%	-30%	\$39	-20%	9.7%	16%
Italy Equity	\$11	-34%	\$10	-9%	0.41%	-28%	\$137	28%	5.4%	-33%
South Africa Equity	\$10	-3%	\$4	26%	0.80%	-27%	\$42	-8%	6.2%	22%
Spain Equity	\$8	-3%	\$7	-7%	0.48%	1%	\$125	23%	4.5%	-21%

Note: Includes only transactions with positive fees

Source: S&P Global Market Intelligence Securities Finance

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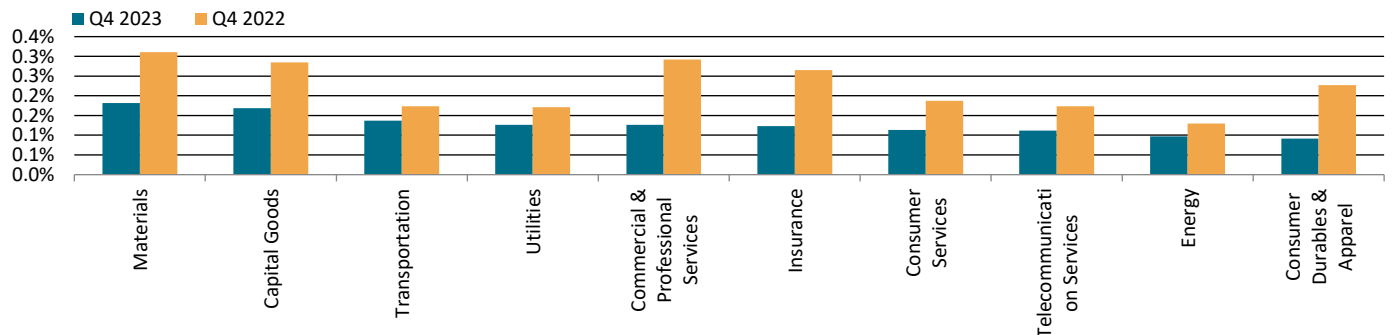
Top 10 Revenue Generating European Equities

Top Earning Assets	Ticker	Sector	Country	Revenue Generated (\$M)
Nagarro SE	NA9	EMEA Software & Services	DE	6.0
Equinor ASA	EQNR	EMEA Energy	NO	5.2
Samhallsbyggnadsbolaget I Norden AB	SBB B	EMEA Real Estate Management & Development	SE	4.2
Idorsia Ltd	IDIA	EMEA Pharmaceuticals, Biotechnology & Life Sciences	CH	3.7
Varta AG	VAR1	EMEA Capital Goods	DE	3.2
AMS Osram AG	AMS	EMEA Semiconductors & Semiconductor Equipment	CH	2.8
Hapag Lloyd AG	HLAG	EMEA Transportation	DE	2.8
National Grid Plc	NG.	EMEA Utilities	UK	2.4
Mediobanca Banca Di Credito Finanziario	MB	EMEA Banks	IT	2.0
H & M Hennes & Mauritz AB	HM B	EMEA Consumer Discretionary Distribution & Retail	SE	1.9

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\$ Short Loan Value as a % of Market Cap



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Americas Equities

Canada had a great Q4 but the regional decline in specials revenues started to show

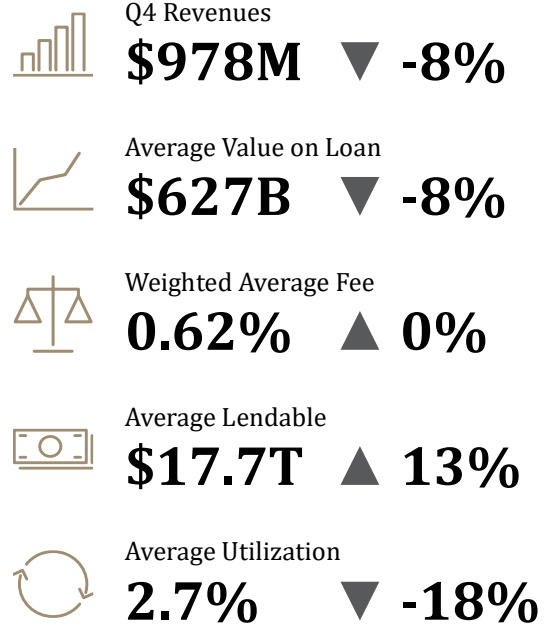
The quarter started with ongoing uncertainty regarding the future path of interest rates across both the US and Canada. A hotter than expected US inflation print led to bond yields climbing and equity markets falling. In the US, the only equity market sector to finish the quarter in positive territory was energy, as geopolitical risk in the Middle East pushed the sector higher. In Canada the TSX60 ended the month 2.8% lower.

Heading into November, following a favorable US GDP print, market jitters started to calm. Traders started to position for 2024 rate cuts as economic data showed that a soft landing was increasingly likely, and the dream of immaculate disinflation was still alive. In the US equity market, the magnificent seven continued to dominate the headlines after producing mammoth returns during the year. November marked the best performance in sixteen months for both the S&P500 and the NASDAQ 100 while in Canada the TSX60 climbed by 6.5%.

During December, all three US equity markets, S&P500, NASDAQ 100 and the S&P Dow Jones Index, hit year highs. Investors continued to position for a soft landing with a growing consensus that the US Federal Reserve would be able to cut rates early in 2024 without pushing the country into a recession or sending unemployment notably higher.

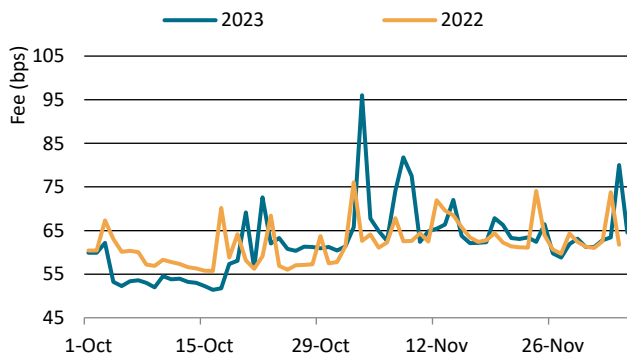
Despite Q4 generating significantly lower revenues than during the first three quarters of the year, securities lending activity in the region remained robust. Canadian equities performed well over the quarter as average fees increased and balances improved on those seen during Q3. When compared on a YoY basis the market performed even better.

Overview



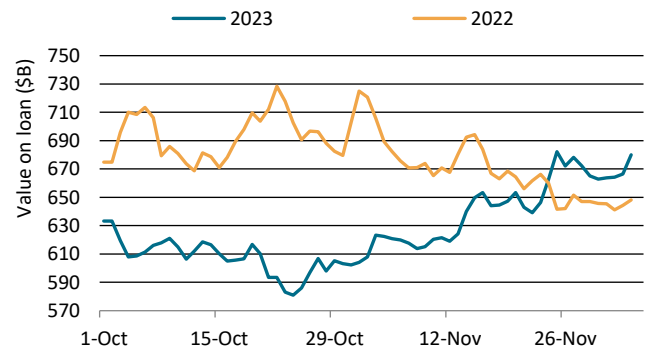
In the US, revenues declined as specials activity could no longer be relied upon to amplify average fees. The country continued to dominate activity within the region and generated 32% of global revenues. All of the top ten revenue generating stocks continued to be dominated by US equities throughout the quarter. Given the softening in demand seen across the other regions, Americas equities fared well in comparison over the Q4 period.

Q4 Fee Trend



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Q4 Balance Trend



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Canada Equity revenues grew by 8% YoY

Average fees declined by 36% YoY in Mexico

Sirius XM Holdings Inc (SIRI) was the highest revenue generating stock of Q4

Lendable in Brazil grew 90% YoY

Country Details

Country	Q4 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Util	Util YoY % Change
USA Equity	\$864	-9%	\$563	-9%	0.61%	-1%	\$16,965	14%	2.5%	-18%
Canada Equity	\$103	8%	\$60	-3%	0.67%	10%	\$656	0%	7.0%	-4%
Brazil Equity	\$10	7%	\$4	27%	0.98%	-10%	\$3	90%	6.0%	-72%
Mexico Equity	\$2	-24%	\$1	19%	0.71%	-36%	\$42	16%	2.1%	6%
ADR	\$80	0%	\$28	2%	1.12%	-1%	\$230	7%	8.9%	-5%

Note: Includes only transactions with positive fees
Source: S&P Global Market Intelligence Securities Finance

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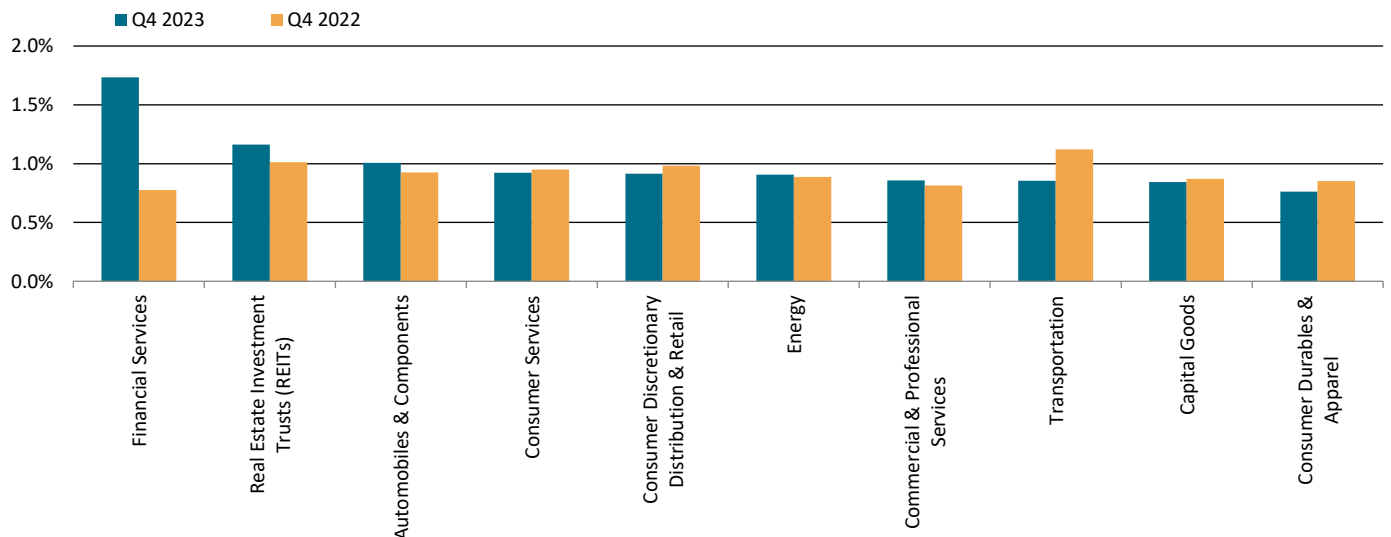
Top 10 Revenue Generating Americas Equities

Top Earning Assets	Ticker	Sector	Country	Revenue Generated (\$M)
Sirius XM Holdings Inc	SIRI	North America Media and Entertainment	US	106.4
Lucid Group Inc	LCID	North America Automobiles & Components	US	37.7
Cassava Sciences Inc	SAVA	North America Pharmaceuticals, Biotechnology & Life Sciences	US	34.0
Beyond Meat Inc	BYND	North America Food, Beverage & Tobacco	US	28.8
Cava Group Inc	CAVA	North America Consumer Services	US	28.7
Fisker Inc	FSR	North America Automobiles & Components	US	24.5
Visa Inc	V	North America Financial Services	US	23.3
Novavax Inc	NVAX	North America Pharmaceuticals, Biotechnology & Life Sciences	US	21.5
Vinfast Auto Ltd	VFS	North America Automobiles & Components	US	21.1
C3.AI Inc	AI	North America Software & Services	US	17.5

Source: S&P Global Market Intelligence Securities Finance

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\$ Short Loan Value as a % of Market Cap



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Exchange Traded Products

Fixed Income ETFs make a comeback to dominate demand during the quarter

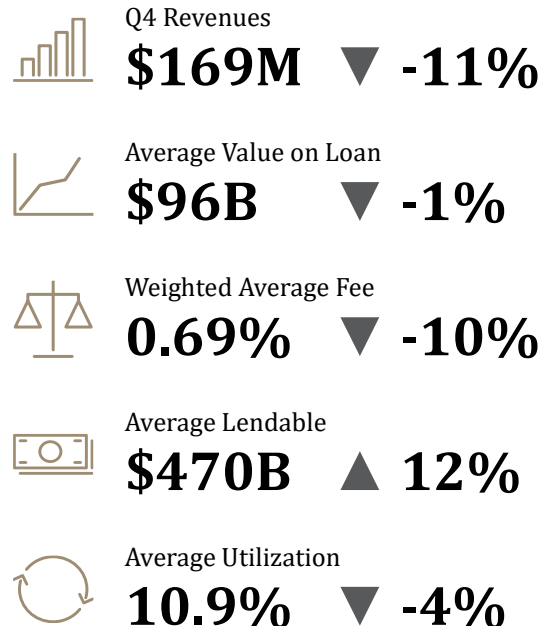
ETF flows were volatile over the quarter as investors looked to take advantage of price movements seen across both bond and equity markets. Some of the largest inflows during October were seen across the S&P500 as well as the 1-3-month T-bill and +20year Treasuries space - as investors looked to execute barbell strategies. High Yield corporate bond ETFs experienced the largest outflows during the month of October as credit spreads narrowed and the impact of higher interest rates across corporate balance sheets remained a concern.

Heading into November, as markets settled, over \$100B flowed into ETFs, almost doubling the inflows experienced during October. Given the influence of the magnificent seven on the performance of the S&P 500, inflows into tracker funds replicating the performance of the index remained popular. The largest outflows were seen across funds replicating the short-dated issues of the US Treasury market.

Discussions regarding the creation of a Bitcoin ETF intensified during December as some of the largest ETF providers reinforced their discussions with the SEC to accelerate the approval process. As the Santa rally continued across equity markets, domestic focused US equity ETFs continued to attract the largest inflows. Mimicking the trend seen during November, longer dated government debt also continued to see large inflows.

Exchange Traded Funds experienced an exceptional 2022. Q4 2022 was no different, making any comparison to last year difficult reading. During the quarter, revenues declined by 11% YoY despite Q4 being the best performing three-month period of 2023 for the asset class. Average fees increased QoQ as demand for fixed income ETFs strengthened once more. LQD and HYG experienced

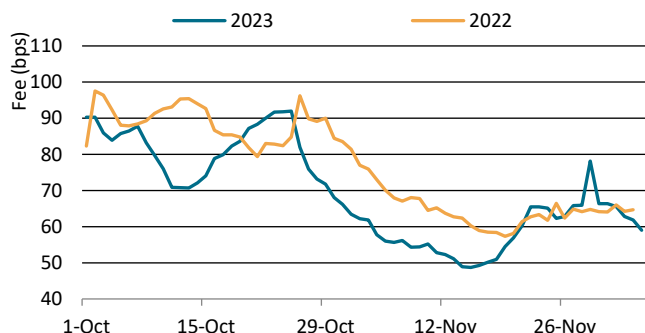
Overview



higher demand, increasing average fees and helping to push revenues higher.

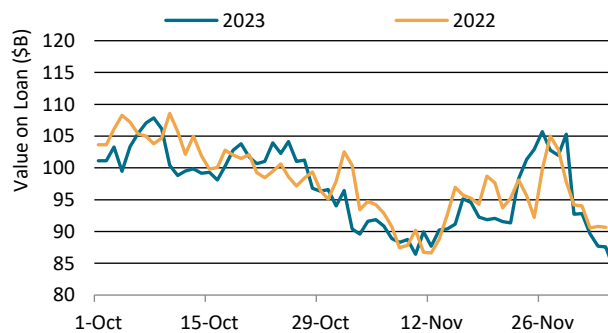
Demand continued to be dominated by US listed assets. In EMEA both balances and utilization declined but across Asian ETFs a 4% YoY increase in revenues was seen as monthly returns steadily increased towards the end of the year. Lendable continued to increase across all regions with an average 12% growth YoY. Liquidity is key to this asset class so any increase in availability is likely to help grow this part of the securities lending market in 2024.

Q4 Fee Trend



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Q4 Balance Trend



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Fixed income ETFs continued to drive revenues

Asia ETF revenues increased by 4% YoY

Asia ETF balances increased by 51% YoY

Lendable ETF supply continued to grow across all regions

Regional Details

Regional	Q4 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Util	Util YoY % Change
Americas ETFs	\$147	-11%	\$90	-1%	0.64%	-10%	\$318	10%	15.0%	0%
European ETFs	\$15	-20%	\$4	-17%	1.38%	-4%	\$89	19%	3.1%	-31%
Asia ETFs	\$4	4%	\$2	51%	0.93%	-31%	\$3	6%	11.5%	32%

Note: Includes only transactions with positive fees

Source: S&P Global Market Intelligence Securities Finance

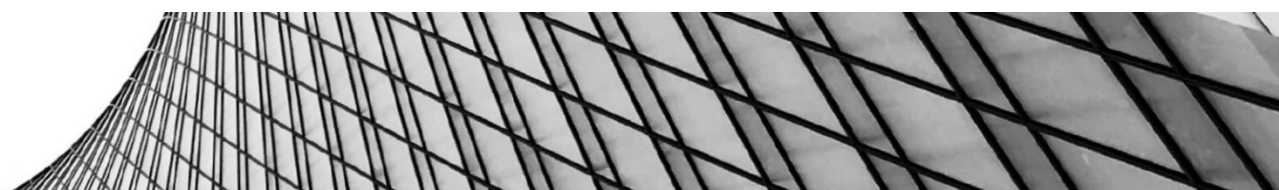
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Top 10 Revenue Generating ETFs

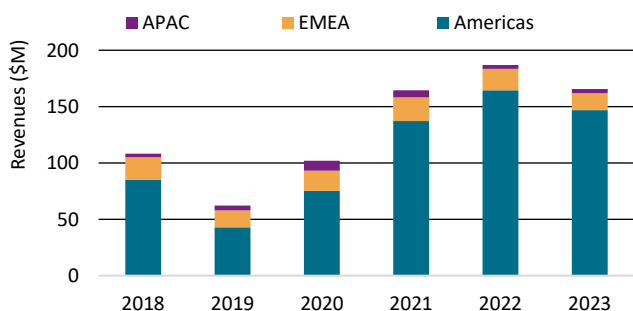
ETF Name	Ticker	Investment type	Country	Revenue Generated (\$M)
iShares IBOXX Investment Grade	LQD	Fixed Income	US	20.3
iShares IBOXX High Yield	HYG	Fixed Income	US	14.3
Ark Innovation	ARKK	Equity	US	4.9
Invesco Senior Loan	BKLN	Fixed Income	US	4.6
SPDR Bloomberg Barclay HY	JNK	Fixed Income	US	4.5
SPDR S&P Biotech	XBI	Equity	US	3.8
iShares Russell 2000	IWM	Equity	US	3.2
SPDR Blackstone Senior Loan	SRLN	Fixed Income	US	3.2
SPDR S&P 500	SPY	Equity	US	2.6
Proshares Ultrapro QQQ	TQQQ	Equity	US	2.1

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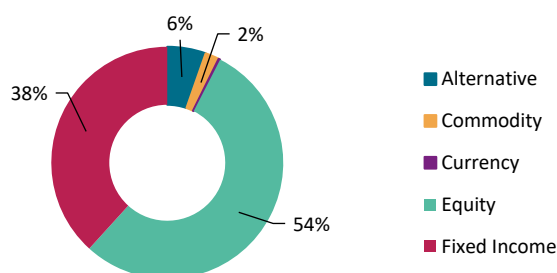


Q4 Lending Revenues by Region



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Q4 Lending Revenues by Asset Class



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Corporate Bonds

Average fees declined as balances continued to grow

Fixed income markets were dominated by a prevailing narrative of “higher for longer” during October. This led to steepening curves, as asset prices fell, and yields increased. Corporate bond spreads widened, with high yield bonds bearing the brunt. Issuance remained low as market volatility pushed issuers to the sidelines.

During November, market conditions improved for corporate bonds. Growing speculation that central banks had reached peak rates and increased talk of the much-anticipated “pivot” helped to inspire a rally across the asset class as prices recovered and inflation data continued to come in lower than expected. This improvement in sentiment led to positive returns for corporate bonds throughout the month as issuance in primary markets also experienced a recovery. News of an improvement in both convertible bond performance and issuance led to an improvement in sentiment, as all corners of the fixed income markets benefited from a strong tailwind of increased valuations.

The “everything rally” that took place during December also appeared in the corporate bond markets. Fixed income investors, now convinced that peak rates had been reached, started pricing in multiple rate cuts for 2024 across all major currencies. 2024 investment strategies started to list corporate bonds as an important part of any portfolio heading into the new year as yields remained attractive and default rates remained low.

Demand to borrow corporate bonds remained strong during the last quarter of the year as increased uncertainty regarding the future of interest rate moves

Overview



Q4 Revenues

\$244M ▼ **-12%**



Average Balances

\$270B ▲ **7%**



Weighted Average Fee

0.36% ▼ **-17%**



Average Lendable

\$4.2T ▲ **11%**



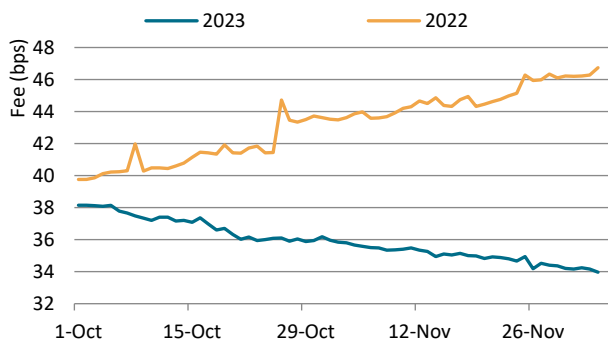
Average Utilization

5.6% ▼ **-2%**

continued to dominate the headlines. Balances increased by 7% YoY as a result and while average fees did decline both YoY and QoQ they remained elevated when looking at historical averages. USD denominated investment grade credit dominated demand as a number of long-term specials remained popular borrows over the period.

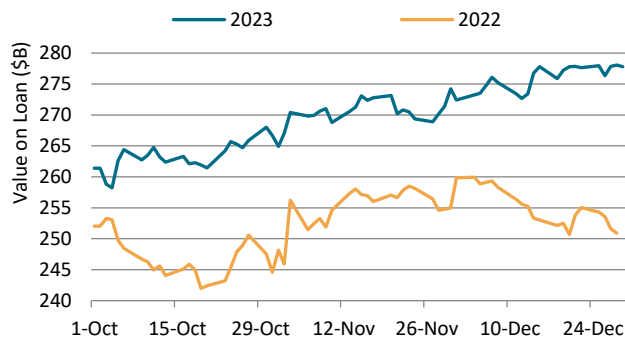
Asset Backed Securities experienced strong increases over the quarter with average fees growing by 26% YoY and utilization increasing by 25%.

Q4 Fee Trend



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Q4 Balance Trend



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Revenues continued to trend lower YoY

Convertibles Bonds experienced a 63% decline in revenues YoY

USD denominated corporate bonds continued to dominate demand

Volume Weighted Average Fee (VWAF) increased 26% YoY for ABS

Asset Class Details

Asset Class	Q4 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Util	Util YoY % Change
Conventional Bonds	\$236	-8%	\$267	8%	0.35%	-14%	\$3,808	13%	6.1%	-3%
Convertible Bonds	\$7	-63%	\$2	-49%	1.32%	-28%	\$34	-11%	4.7%	-42%
Asset Backed Securities	\$0.1	46%	\$0.31	19%	0.26%	26%	\$326	-5%	0.1%	25%

Note: Includes only transactions with positive fees

Source: S&P Global Market Intelligence Securities Finance

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Top 10 Revenue Generating Corporate Bonds

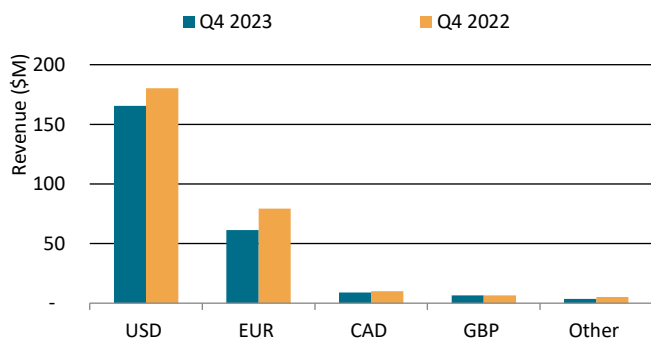
Top Earning Assets	CUSIP	Denomination	Asset Class	Revenue Generated (\$M)
3M Co (4% 14-Sep-2048)	88579YBD2	USD	I.G. Corp Bond (Fixed Rate)	2.6
GM Financial Company Inc (6.4% 09-Jan-2033)	37045XED4	USD	I.G. Corp Bond (Fixed Rate)	2.2
3M Co (2.875% 15-Oct-2027)	88579YAY7	USD	I.G. Corp Bond (Fixed Rate)	1.8
Biomarin Pharmaceutical Inc (1.25% 15-May-2027)	09061GAK7	USD	N.I.G. Conv Bond (Fixed Rate)	1.8
Mph Acquisition Holdings LLC (5.75% 01-Nov-2028)	553283AC6	USD	Priv. Placement Corp Bond (Fixed Rate)	1.6
Microchip Technology Inc (0.125% 15-Nov-2024)	595017AU8	USD	N.I.G. Conv Bond (Fixed Rate)	1.4
HSBC Holdings Plc (8% Undated)	404280DT3	USD	I.G. Corp Bond (Floating Rate)	1.3
Bausch Health Americas Inc (9.25% 01-Apr-2026)	91911XAV6	USD	Priv. Placement Corp Bond (Fixed Rate)	1.1
Newell Brands Inc (6.625% 15-Sep-2029)	651229BD7	USD	N.I.G. Corp Bond (Fixed Rate)	1.1
Owens & Minor Inc (6.625% 01-Apr-2030)	690732AG7	USD	Priv. Placement Corp Bond (Fixed Rate)	0.9

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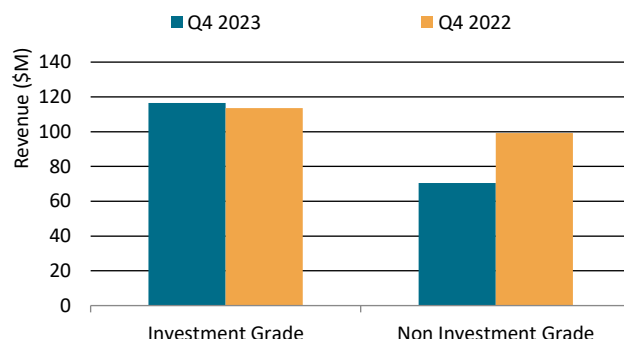


Q4 Revenues by Denomination



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Q4 Revenues by Ratings Category



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Government Bonds

Revenues and fees trend lower during Q4

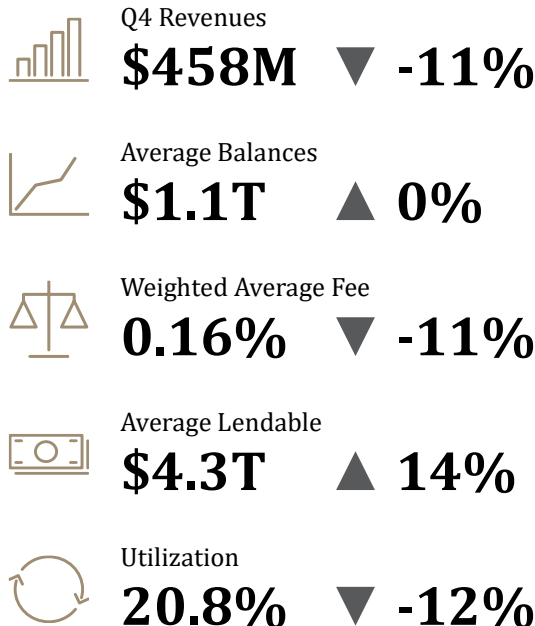
The quarter started with a period of volatility that has not been seen across the government bond markets for many years. In the US, the 30-year Treasury surpassed 5% for the first time since 2007, the 10-year Treasury reached 4.91% and the 2-year Treasury reached 5.1%. Government bond yields increased across the globe as the repricing in the Treasury market was replicated throughout other global markets. Data remained key to government bond valuations throughout October as small differences either side of consensus led to outsized moves. Across Asia, focus remained on the Bank of Japan. The continuation of negative interest rates, despite prolonged inflation and a widening interest rate gap with the US and Europe, intensified pressure on the bank to adjust their strategy.

Sentiment changed during November and government bonds rallied as investors speculated about central banks reaching peak rates. Moody's, the rating agency, announced a change to the US rating outlook from stable to negative due to increased fiscal risks, but this didn't impact the increases seen across Treasury prices. Across Europe, the Bank of England kept interest rates on hold and Gilts also joined in the global rally. The European Central Bank celebrated the fact that inflation fell more than expected, to just above their 2% target, but remained cautious on the possibility of imminent rate cuts.

The "everything rally" continued during December with bond prices continuing to climb. Bond markets became increasingly confident that the interest tightening cycle was over and started to position for rate cuts heading into 2024.

Government bond revenues started to feel the impact of traders positioning for the upcoming change in interest

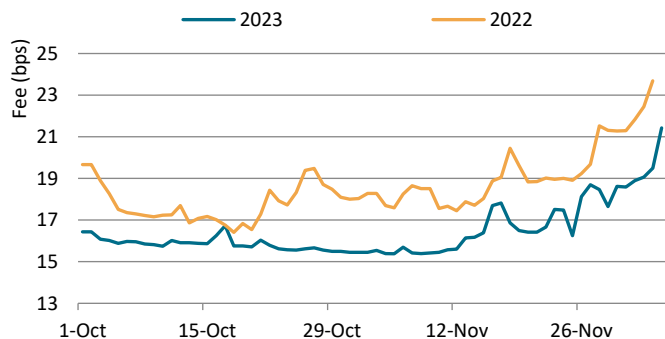
Overview



rate policy throughout the quarter. Average fees declined by 11% YoY, with the largest decline being seen across EMEA and Asian government bonds (-24% YoY). EMEA suffered the largest YoY fall in revenues (-27% YoY), as specific pockets of demand helped to support both fees and returns across the US.

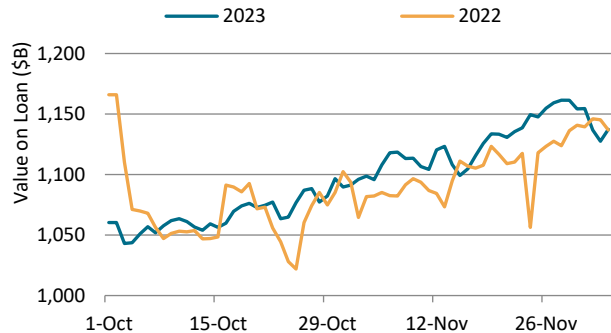
Balances did increase over the quarter as markets approached year-end but remained aligned with those seen during the same period in 2022. Lendable supply increased throughout the year, impacting utilization during the quarter which fell 12% YoY to 20.8%.

Q4 Fee Trend



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Q4 Balance Trend



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Revenues declined YoY across all regions

Asian government bond balances increased by 26%

EMEA lendable increased by 37%

Volume Weighted Average Fee (VWAF) decreased YoY across all regions

Issuer Region Details

Region	Q4 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Util	Util YoY % Change
Americas	\$288	-1%	\$684	1%	0.17%	-2%	\$2,900	6%	20.6%	-7%
Europe	\$143	-27%	\$359	-3%	0.16%	-24%	\$1,242	37%	21.4%	-27%
Asia	\$26	-5%	\$56	26%	0.19%	-24%	\$134	11%	20.3%	44%
Emerging Market	\$22	-29%	\$20	-15%	0.43%	-16%	\$294	9%	5.9%	-25%

Note: Includes only transactions with positive fees
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Top 10 Revenue Generating Government Bonds

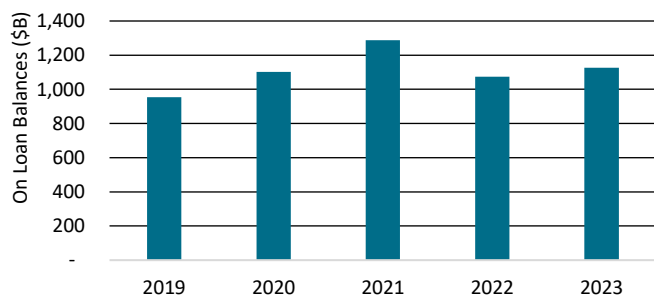
Top Earning Assets	CUSIP	Denomination	Country	Revenue Generated (\$M)
United States Treasury (4.75% 15-Nov-2043)	912810TW8	USD	US	13.5
United States Treasury (1.875% 15-Feb-2032)	91282CDY4	USD	US	3.1
United States Treasury (1.125% 15-Feb-2031)	91282CBL4	USD	US	3.0
United States Treasury (0% 11-Jul-2024)	912797GB7	USD	US	2.9
United States Treasury (3.5% 15-Feb-2033)	91282CGM7	USD	US	2.7
United States Treasury (2.875% 15-May-2032)	91282CEP2	USD	US	2.7
United States Treasury (2.75% 15-Aug-2032)	91282CFF3	USD	US	2.4
United States Treasury (4% 15-Nov-2042)	912810TM0	USD	US	2.4
United States Treasury (0.125% 15-Jan-2024)	91282CBE0	USD	US	2.3
United States Treasury (1.75% 15-Mar-2025)	91282CED9	USD	US	2.3

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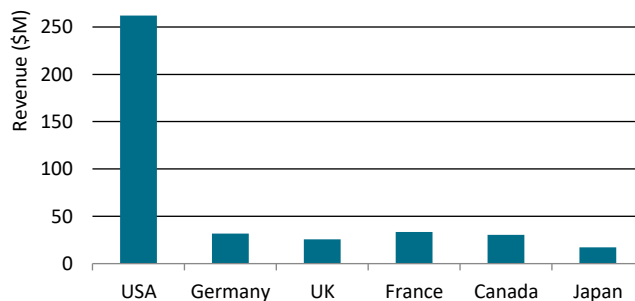


Q4 On loan balances



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Q4 Revenues by country



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Author Biography



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Matt Chessum is a director within the securities finance team at S&P Global Market Intelligence and is responsible for all market commentary, thought leadership and media relations. Previously, Matt was an Investment Director at abrtn where his main responsibilities included overseeing the securities lending activity and the management of GBP denominated Money Market mandates.

Matt is a former member of the Bank of England's securities lending committee and a former board member of the International Securities Lending Association (ISLA).

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Previous quarterly Securities Finance Snapshots from 2023 can be found here:

Q1 2023

Q2 2023

Q3 2023

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