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Quantitative Portfolio Strategy
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#virus

Quant Insights

Equity Short Sales in Times of COVID19 – Business as Usual?

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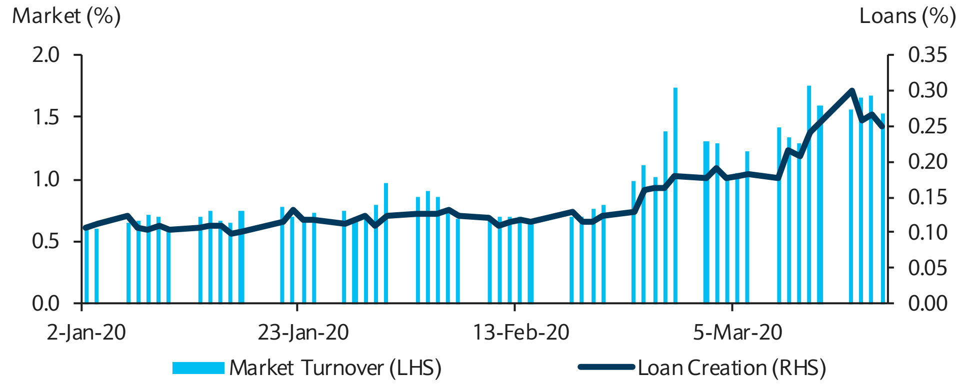
- **The recent market turmoil related to the COVID-19 outbreak has led to liquidity strains in a number of markets, including those for short-term funding, and offered various opportunities for stock short sellers. We analyse the most recent lending activity in the US equity market and find that both lending fees and lending volumes have remained fairly stable for single stocks but increased significantly for broader equity market ETFs.**
- **As overall trading volume in the US stock market has almost tripled over the past 20 trading days, lending activity has followed closely. This means that the fraction of short selling in overall trading has remained stable and moves around its 2019 average.**
- **Lending supply in single stocks is still about 10 times larger than actual stock lending activity. Except for March 12 and 13, we find that recent lending fees for US large caps are in line with usual values around 50bp, and 110-130bp for the average US stock currently on loan.**
- **For large equity ETFs, lending activity has increased significantly. Lending fees for the SPDR S&P 500 ETF have more than tripled recently to around 140bp and demand has risen to around 90% of lending supply. Both investors positioning for a falling equity market and hedging demand are likely to have driven up demand in this environment.**
- **Lending activity in the current environment is remarkably different than during the outbreak of the financial crisis in 2008, when short selling bans had unintended consequences for the overall equity market.**

We document the recent dynamics in the US stock lending market. While the market for short-term funding has faced severe liquidity strains, we find that the lending market has remained resilient and is functioning well.

Lending activity and market turnover in 2020 have moved closely together. The correlation between the creation of new loans and market turnover is 0.85 year-to-date, which is high compared to the 2019 average correlation of 0.23. As turnover in recent weeks is mostly due to the strong sell-off in equity assets, an increased need for short selling for hedging purposes might be a potential driver of this increased correlation.

FIGURE 1

Market Turnover and Loan Creation, January – March 2020



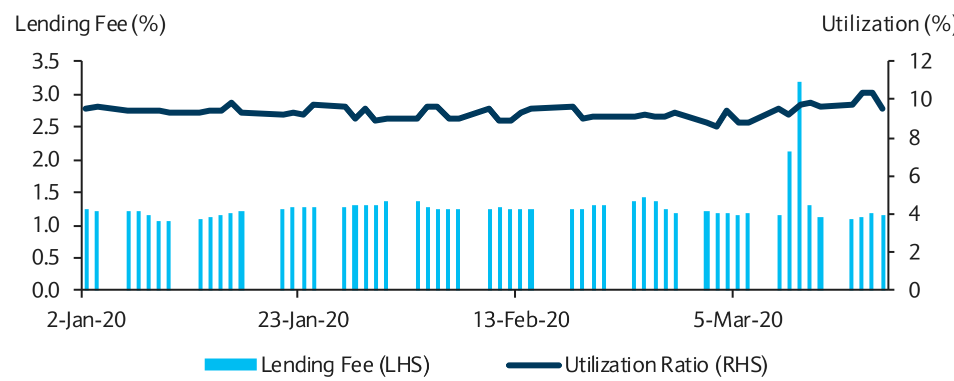
Note: Loan creation is expressed as a fraction of total equity market value in new loans. Market turnover is expressed as a fraction of total equity market value in trades. We report statistics for all stocks traded on NYSE and NASDAQ between January 1, 2020 and March 20, 2020 that are in lending transactions reported by FIS Astec Analytics. On an average day, we find lending activity reports for 3,807 companies.

Source: Bloomberg, Compustat, FIS Astec Analytics, Barclays Research

While about 19% of the overall US stock market is available for lending lately (and 18% on average in 2019), only about 10% of the available market value is indeed in lending transactions, close to the 2019 average of 11%. Figure 2 shows the utilization ratio, which measures how much of the lending capacity is taken by short sellers. Thus, considering the large imbalance between supply and demand, it is not surprising that average lending fees have barely changed. In times of scarce short-term funding, though, we find occasional spikes in lending fees, such as on March 12 and 13, 2020, or several days in early October 2008.

FIGURE 2

Average Lending Fees and Utilization Ratio, January – March 2020



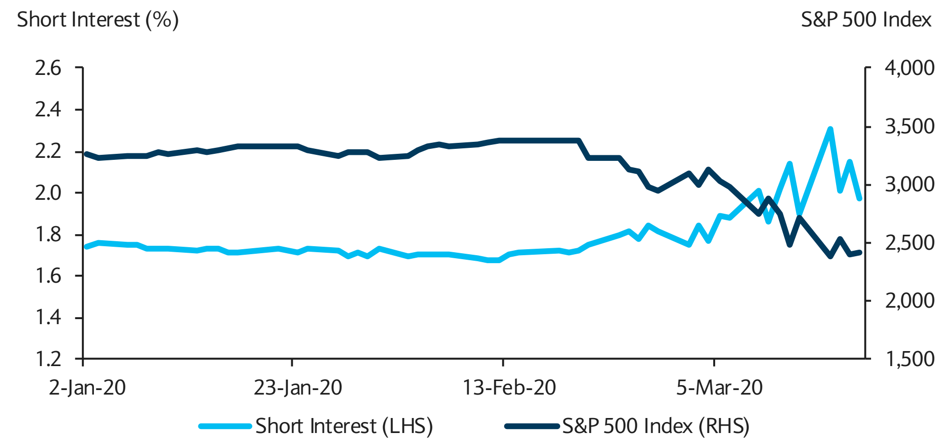
Note: For each company, we obtain daily updates on the average retail loan rate on all outstanding stock loans. We report the value-weighted average of these company-level estimates as the lending fee. Utilization ratio measures the fraction of a stock's market value in outstanding lending transactions versus the market value available for lending and is a proxy for the supply and demand imbalance.

Source: Bloomberg, Compustat, FIS Astec Analytics, Barclays Research

Figure 3 shows the recent decline in the S&P 500 index, arguably starting on February 20, 2020, and the simultaneous rise in short interest. Short interest measures the fraction of total market value in outstanding lending transactions, which contains existing and newly created loans. The contemporaneous correlation between these two is -0.95 year-to-date, whereas the average 2019 correlation was -0.71. Both numbers suggest that short interest tends to increase with a falling equity market value. There are various potential explanations, such as increased hedging demand with falling prices, for this inverse relationship. Yet, while the S&P 500 is down 28% year-to-date, we find that short interest has increased by 13%.

FIGURE 3

Co-movement between S&P 500 Index and Overall Short Interest, January – March 2020

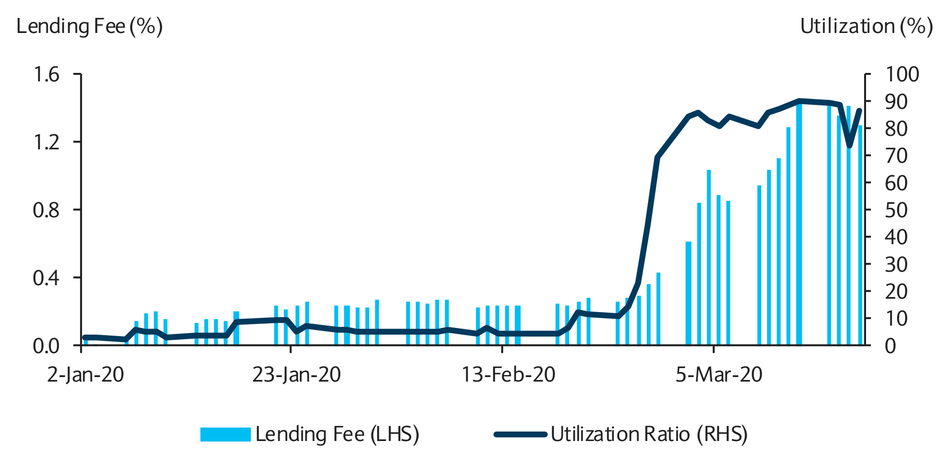


Note: Short interest is calculated as the ratio between the market value of all outstanding lending transactions and the overall equity market value at business close. We report overall short interest for all stocks traded on NYSE and NASDAQ between January 1, 2020 and March 20, 2020 that are in lending transactions reported by FIS Astec Analytics. Source: Bloomberg, Compustat, FIS Astec Analytics, Barclays Research

While lending fees for single stocks have remained stable, fees for the SPDR S&P 500 ETF have surged. Recently, lending fees for the ETF are up from 40-50bp at the end of February to 130-140bp during the third week in March. This surge in lending fees is related to the fact that around 90% of shares available for lending are currently on loan, compared to an average of 41% throughout 2019.

FIGURE 4

Average Lending Fees and Utilization Ratio (SPDR S&P 500 ETF), January – March 2020



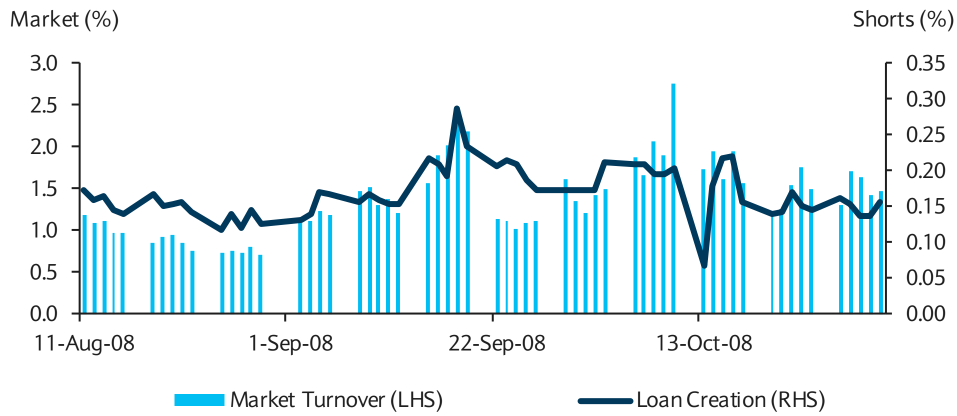
Source: Bloomberg, Compustat, FIS Astec Analytics, Barclays Research

Differences to the Outbreak of the Financial Crisis in 2008

The comparison to the financial crisis in 2008, where we focus on the period between August and October 2008 with a 35% drop in the S&P 500, is centred around three short-selling bans imposed by the SEC. The SEC halted naked short selling on a few financial stocks in July 2008, then on all US stocks as of September 18, and any form of short selling[1] in 799 financial institutions as of September 19. The impact of these bans can be observed in form of a drop in new loans on September 22, 2008. Even stronger was the reaction in overall trading activity, which dropped by 48% from Friday to Monday. The ban effectively disrupted the co-movement between overall market turnover and loan creation for the duration of the third short selling ban. Such a pattern cannot be found yet in the current crisis.

FIGURE 5

Market Turnover and Loan Creation, August – October 2008

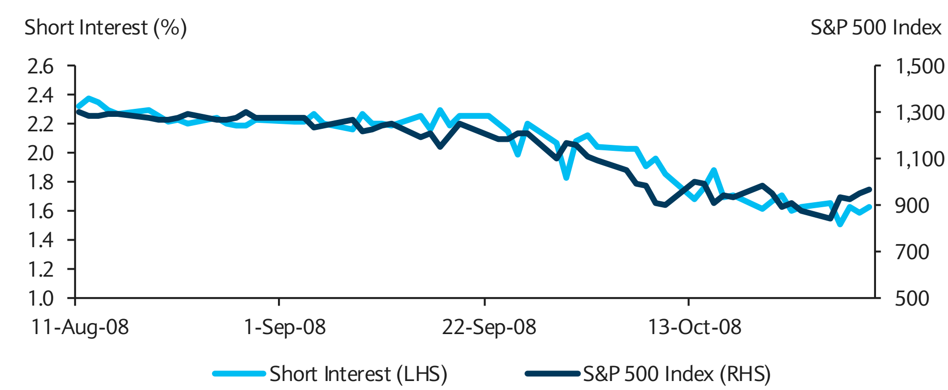


Note: We report statistics for all stocks traded on NYSE and NASDAQ between August 11, 2008 and October 31, 2008 that are in lending transactions reported by FIS Astec Analytics. On an average day during this period, we find lending activity reports for 2,959 companies. Source: Bloomberg, Compustat, FIS Astec Analytics, Barclays Research

Another key difference is the overall positive correlation of 0.90 between short interest and the S&P 500 index during this three-month period. To which extent this positive correlation is driven by the overall decline in short interest due to the various short-selling restrictions imposed by the SEC, deteriorating market liquidity or short sellers deleveraging their portfolios is not clear, but it is possible that all three have contributed to this difference.

FIGURE 6

Co-movement between S&P 500 Index and Aggregate Short Interest, August – October 2008



Note: We report overall short interest for all stocks traded on NYSE and NASDAQ between August 11, 2008 and October 31, 2008 that are in lending transactions reported by FIS Astec Analytics.
Source: Bloomberg, Compustat, FIS Astec Analytics, Barclays Research

[1] With a limited exception for market makers to sell short as part of their market making and hedging activity.

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