Research Quarterly

Third Quarter 2018

November 2018

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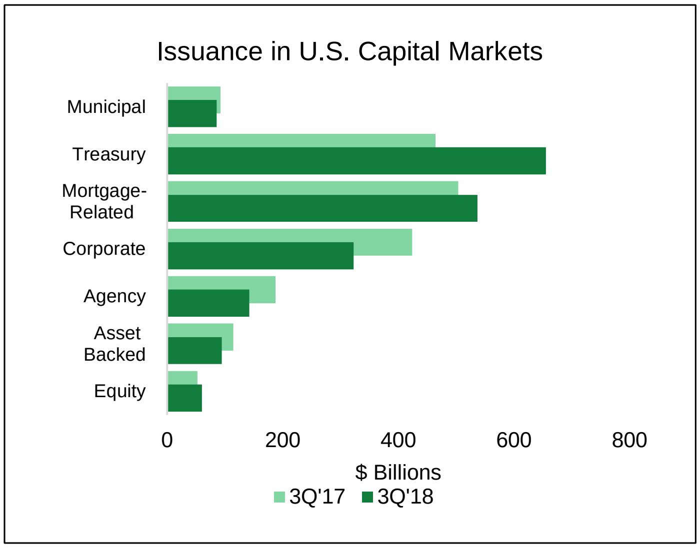
SIFMA is the leading trade association for broker-dealers, investment banks and asset managers operating in the U.S. and global capital markets. On behalf of our industry's nearly 1 million employees, we advocate on legislation, regulation and business policy, affecting retail and institutional investors, equity and fixed income markets and related products and services. We serve as an industry coordinating body to promote fair and orderly markets, informed regulatory compliance, and efficient market operations and resiliency. We also provide a forum for industry policy and professional development. SIFMA, with offices in New York and Washington, D.C., is the U.S. regional member of the Global Financial Markets Association (GFMA). For more information, visit http://www.sifma.org.

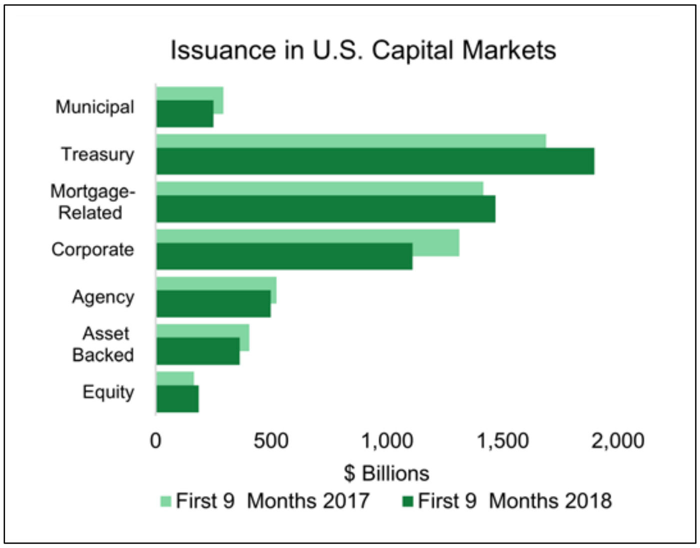
Capital Markets Overview

Total Capital Markets Issuance

Long-term securities issuance totaled $1.90 trillion in 3Q'18, an 6.4 percent decrease quarter-over-quarter (q-o-q) from $2.03 trillion in 2Q'18 but a 3.2 percent increase year-over-year (y-o-y) from $1.84 trillion in 3Q'17. Issuance decreased q-o-q across all asset classes except mortgage-related, while y-o-y issuance decreased across all asset classes except Treasury, mortgage-related and equity.



Note: Includes long-term issuance only
Sources: Bloomberg, Refinitiv, US Treasury, US Federal Agencies



Note: Includes long-term issuance only
Sources: Bloomberg, Refinitiv, US Treasury, US Federal Agencies

Long-term public municipal issuance volume including private placements for 3Q'18 was $85.8 billion, down 13.6 percent from $99.3 billion in 2Q'18 and down 6.8 percent from $92.1 billion in 3Q'17.

The U.S. Treasury issued $654.9 billion in coupons, Floating Rate Notes and Treasury Inflation Protected Securities in 3Q'18, down 1.1 percent from $662.5 billion in the prior quarter but 41.2 percent above $463.9 billion issued in 3Q'17.

Issuance of mortgage-related securities, including agency and non-agency passthroughs and collateralized mortgage obligations, totaled $536.8 billion in the third quarter, a 10.7 percent increase from 2Q'18 ($485.1 billion) and a 6.7 percent increase y-o-y ($503.3 billion).

Corporate bond issuance totaled $322.3 billion in 3Q'18, down 18.7 percent from $396.5 billion issued in 2Q'18 and down 23.9 percent from 3Q'17's issuance of $423.7 billion. Of the 3Q'18 corporate bond issuance total, investment grade (IG) issuance was $277.7 billion (86.2 percent of total) while high yield (HY) was $44.6 billion (13.8 percent of total).

Long-term federal agency debt issuance was $142 billion in the third quarter, down 21.4 percent from $180.6 billion in 2Q'17 and down 24.3 percent from $187.6 billion issued in 3Q'17.

Asset-backed securities issuance totaled $94.5 billion in the third quarter, a decrease of 17.3 percent q-o-q ($114.2 billion) but a 1.6 percent increase y-o-y ($93.0 billion).

Equity underwriting declined by 2.4 percent to $60.1 billion in 3Q'18 from $61.6 billion in 2Q'18 but increased 15.0 percent from $52.3 billion issued in 3Q'17. Of the total, "true" initial public offerings (IPOs) accounted for $12.1 billion, down 16.3 percent from $14.5 billion in 2Q'18 but up 159.6 percent from $4.7 billion in 3Q'17.

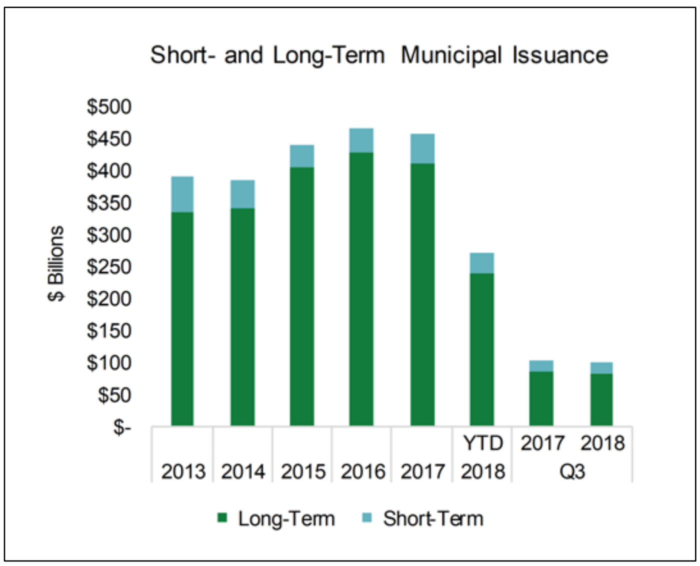
$ Billions	2018:Q3	2018:Q2	2017:Q3	QoQ Change	YoY Change
Municipal Bonds	85.8	99.3	92.1	-13.6%	-6.8%
Treasury Securities	654.9	662.5	463.9	-1.1%	41.2%
Mortgage-Related Securities	536.8	485.1	503.3	10.7%	6.7%
Corporate Bonds	322.3	396.5	423.7	-18.7%	-23.9%
Federal Agency Debt	142.0	180.6	187.6	-21.4%	-24.3%
Asset-Backed Securities	94.5	140.9	114.6	-32.9%	-17.6%
Equity Securities	60.1	61.6	52.3	-2.4%	15.0%

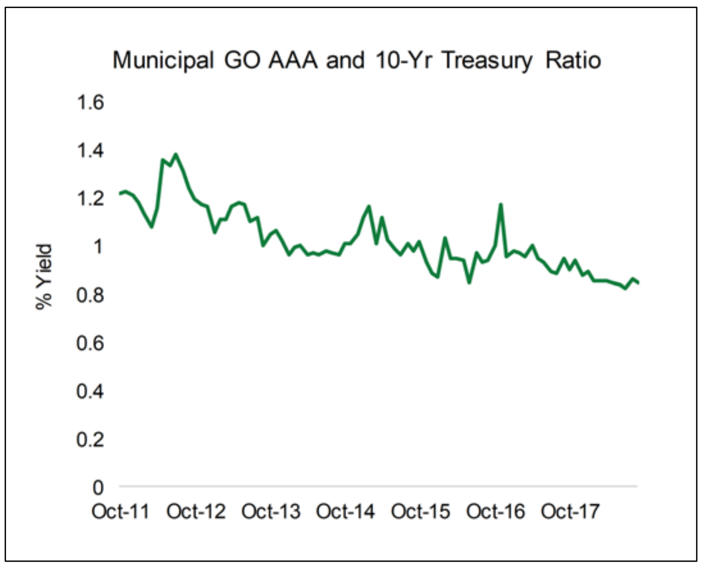
Note: Includes long-term issuance only.
Sources: Bloomberg, Refinitiv, US Treasury, US Federal Agencies

Municipal Bond Market

Long-term public municipal issuance volume totaled $82.1 billion in the third quarter of 2018, a decrease of 12.8 percent from the prior quarter ($94.1 billion) and a decline of 3.3 percent y-o-y ($84.8 billion). Including private placements[1], long-term municipal issuance for 3Q'18 was $85.8 billion. Year to date issuance totaled $183.6 billion, inclusive of private placements.

Tax-exempt municipal issuance totaled $71.6 billion in 3Q'18, a decrease of 10.0 percent q-o-q and a decline of 5.2 percent y-o-y. Year-to-end September, tax-exempt issuance totaled $206.5 billion, compared with $239.4 billion in 1-3Q'17. Taxable municipal issuance totaled $7.2 billion in 3Q'18, a decrease of 10.5 percent q-o-q but an increase of 21.8 percent, y-o-y. Year-to-end September, taxable issuance totaled $19.9 billion, compared with $22.7 billion in 1-3Q'17. Alternative minimum tax (AMT) issuance was $4.1 billion in 3Q'18, a decrease of 36.2 percent q-o-q but an increase of 19.6 percent y-o-y. Year-to-end September, AMT issuance totaled $12.8 billion, compared with $10.0 billion in 1-3Q'17.





Source: Refinitiv

Source: MMA

By use of proceeds, general purpose led issuance totals in 3Q'18 ($21.3 billion), followed by education ($17.8 billion), transportation ($12.2 billion), utilities ($11.5 billion) and healthcare ($8.6 billion).

Yields, Inflows and Total Return

The ratio between 10-year tax-exempt AAA GOs yields and similar-maturity Treasuries increased slightly in the third quarter on a q-o-q basis, averaging 84.1 percent in 3Q'18 from 84.0 percent in 2Q'18.

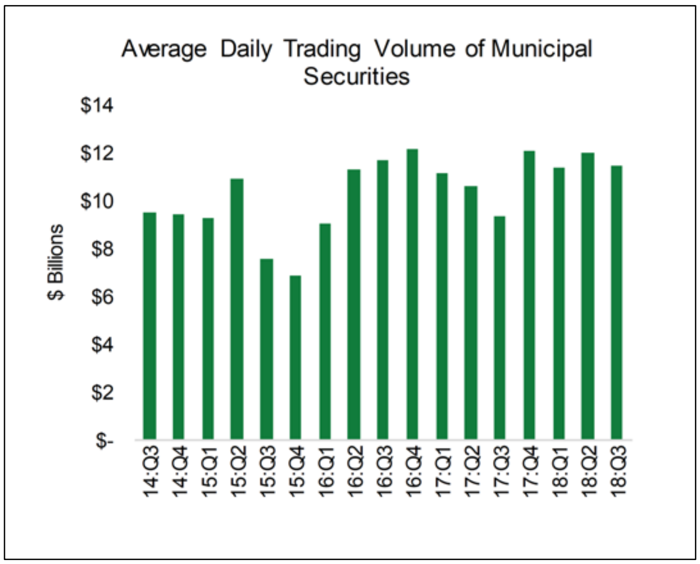
[1] Private placement figures are excluded in charts, tables, and texts unless otherwise noted.

According to the Investment Company Institute (ICI), third quarter net flow into long-term tax-exempt mutual funds and exchange-traded funds (ETFs) were positive: there was $5.0 billion of net inflow in 3Q'18 to mutual funds (from $144 million in 2Q'18) and $490 million of net inflow into ETFs (from $2.0 billion in 2Q'18).

According to the ICE BofAML indices, municipals lost 0.2 percent in the third quarter of 2018, down from the 1.2 percent gain in 3Q'17. For the third quarter, pollution control and leasing/rental sectors outperformed among the individual municipal sectors (a gain of 0.2 percent and 0.04 percent respectively) while education, hospital, and airport underperformed (a loss of 0.54 percent, 0.49 percent, and 0.45 percent, respectively). Build America Bonds (BABs) also lost 0.5 percent in 3Q'18, underperforming similarly-rated corporate bonds (total return of 0.7 percent).

Trading Activity

Trading activity declined q-o-q to $11.4 billion daily in 3Q'18, a 4.8 percent decrease from 2Q'18 ($12.0 billion) and was a 22.1 percent increase from 3Q'17 ($9.3 billion). By number of trades, however, trading activity declined 6.2 percent on a q-o-q basis but rose 4.7 percent on a y-o-y basis.

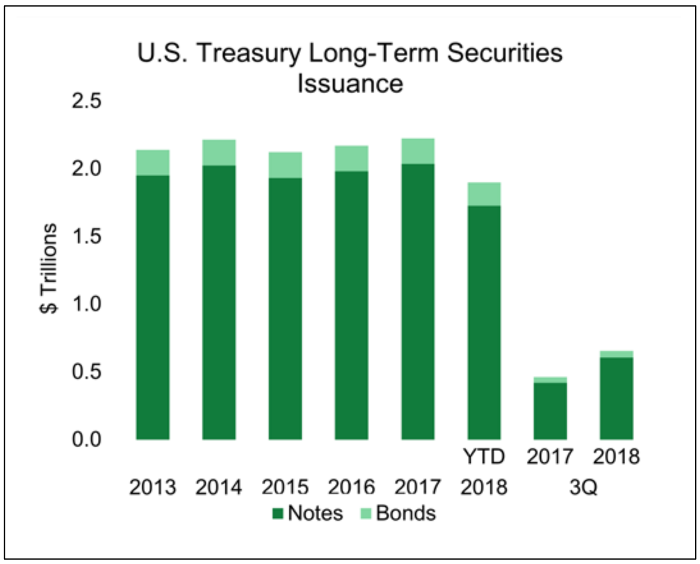


Source: EMMA MSRB

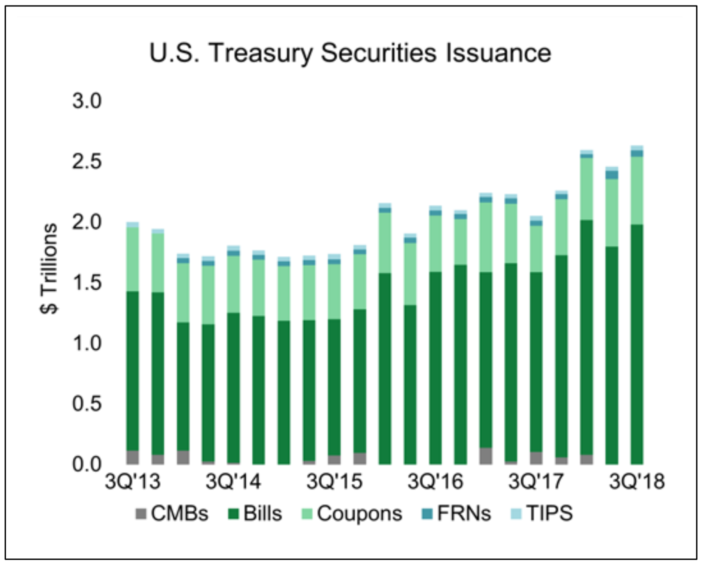
Treasury Market

Gross Issuance of U.S. Treasury Securities

Total gross issuance of U.S. Treasury bills and coupons, including cash management bills (CMBs), Floating Rate Notes (FRNs) and Treasury Inflation-Protected Securities (TIPS), was $2.63 trillion in 3Q'18, up 7.1% percent from $2.46 trillion in 2Q'18 and up 35.3% percent from $1.95 trillion in 3Q'17. Treasury net issuance, including CMBs, raised to $287.1 billion in 3Q'18, up tenfold from $24.1 billion in 2Q'18 and up 52.1% from $188.7 billion in 3Q'17. Third quarter net issuance fell short of the U.S. Treasury's net issuance estimates of $329.0 billion.[2]



Note: Gross issuance of marketable U.S. coupon securities
Source: U.S. Department of the Treasury



Source: TreasuryDirect

No CMBs were issued in 3Q'18 compared to also no issuance in 2Q'18 but down from $105.0 billion issued in 3Q'17.

The U.S. Treasury issued $654.9 billion in coupons, FRNs and TIPS in 3Q'18, down 1.1 percent from $662.5 billion in 2Q'18 but 41.2% up from $463.9 billion issued in 3Q'17.

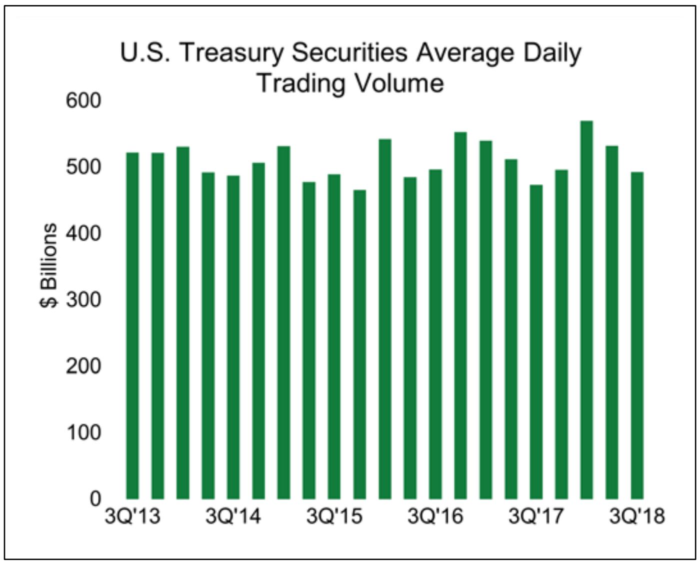
Excluding TIPS and FRNs, total gross issuance of Treasury marketable coupon securities was $561 billion, up 0.5 percent from $557.7 billion issued in 2Q'18 and up 38.7 percent from $381.6 billion issued in 3Q'17. Net coupon issuance was $205.2 billion in 3Q'18, a 32.3 percent increase from the $155.1 billion in 2Q'18 and up 95.9 percent from $104.8 billion in 3Q'17.

[2] Treasury's October borrowing estimates can be found here.

In 3Q'18, $54.2 billion in FRNs were issued, down 21.3 percent from $68.8 billion in 2Q'18 but up 27.4 percent from $42.5 billion in 2Q'17.

Trading Activity

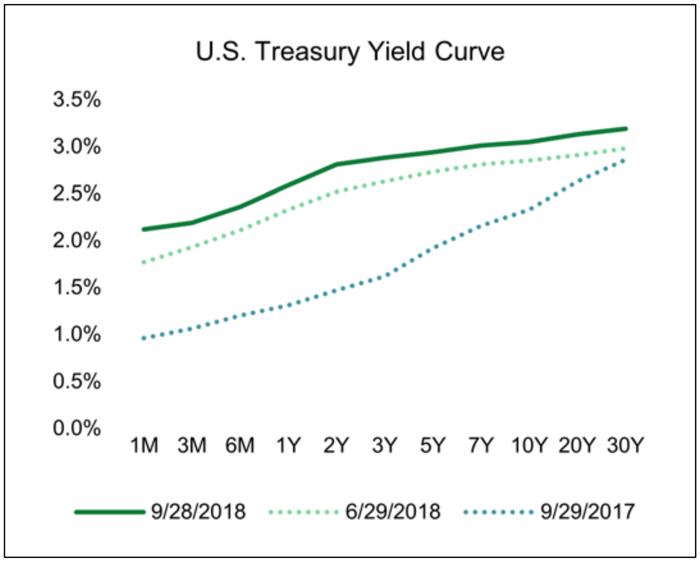
The daily trading volume of Treasury securities by primary dealers averaged $492.7 billion in 3Q'18, a 7.4 percent decrease from $532.3 billion in 2Q'18 but a 4.1 percent increase from $473.2 billion traded daily in 3Q'17.



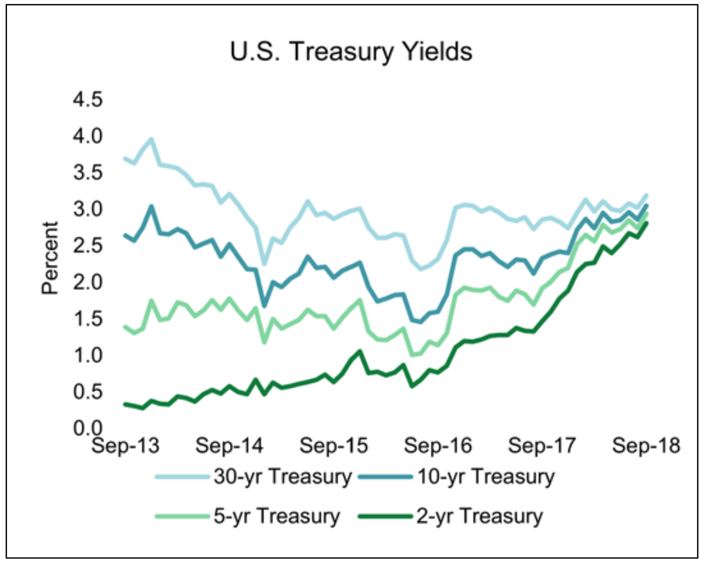
Note: Includes primary dealer activity only.
Source: Federal Reserve Bank of New York

Treasury Yield Curve

In 3Q'18 U.S. Treasury yields increased for short-, medium- and long-term securities. Two-year rates increased to 2.81 percent in 3Q'18, up from 2.52 percent in 2Q'18 and from 1.47 percent in 3Q'17. Five-year yields increased to 2.94 percent in 3Q'18, up from 2.73 percent in 2Q'18 and from 1.92 percent in 3Q'17. Ten-year yields increased to 3.05 percent in 3Q'18, up from 2.85 percent in 2Q'18 and up from 2.33 percent in 3Q'17. Thirty-year yields ended 3Q'18 at 3.19 percent, up from 2.98 percent in 2Q'18 and up from 2.86 percent in 3Q'17.



Source: U.S. Department of the Treasury



Source: U.S. Department of the Treasury

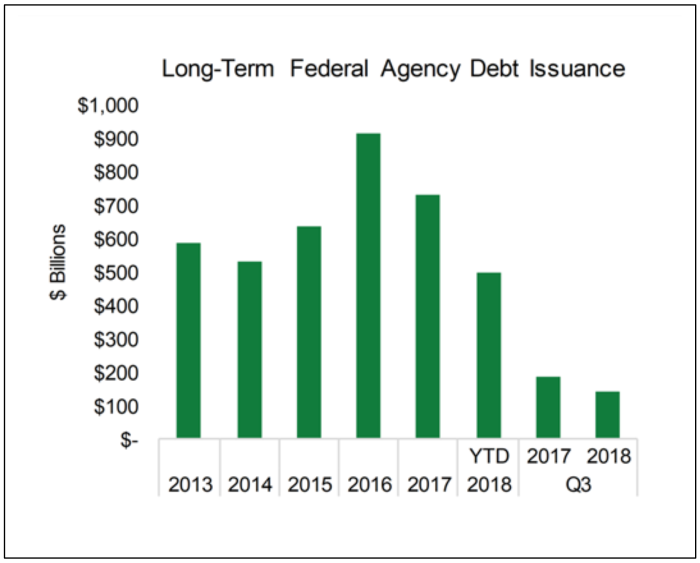
FOMC Meeting Summary

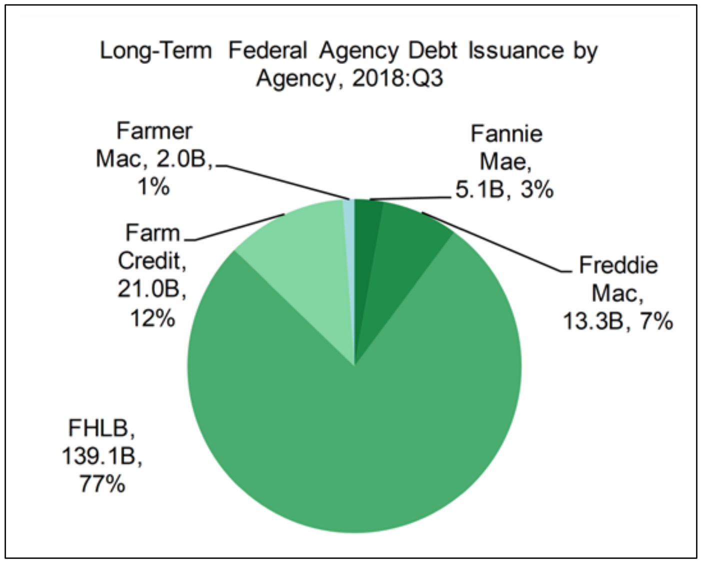
During its September 25-26, 2018 meeting, the Federal Reserve's Federal Open Market Committee (FOMC) raised the target range for the federal funds rate from 1.75-2.00 percent to 2.00-2.25 percent.[3] At the most recent meeting on November 7-8, 2018, there were no further changes to the target range for the federal funds rate.[4] The FOMC went on to say that they expect a further gradual increase in the target range for the federal funds rate, consistent with sustained economic growth. The GDP growth is forecasted by SIFMA's Mid-Year 2018 Economic Outlook to increase to 2.9% in 2018.[5]

[3] Statement from the FOMC Meeting, September 26, 2018.
[4] Statement from the FOMC Meeting, November 8, 2018.
[5] SIFMA Mid-Year 2018 Economic Outlook, June 11, 2018.

Federal Agency Debt Market

Federal agency long-term debt (LTD) issuance was $142.0 billion in the third quarter, a 21.4 percent decline from $180.6 billion in 2Q'18 and a 24.3 percent decline from $187.6 billion issued in 3Q'17.





Source: Federal Agencies

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Fannie Mae's 3Q'18 gross debt issuance, both short term debt (STD) and LTD, totaled $109.2 billion, a 13.3 percent decline from $125.9 billion in 2Q'18 and a 45.6 percent decline from $200.7 billion in 3Q'17. STD issuance decreased to $105.2 billion in 3Q'18 compared with $120.8 billion in 2Q'18 while LTD issuance declined to $4.0 billion in 3Q'18 from $5.1 billion in 2Q'18. Fannie Mae had $28.3 billion STD and $218.8 billion LTD outstanding at the end of 3Q'18, up 9.8 percent and down 2.9 percent, respectively, from the previous quarter.

Freddie Mac's gross debt issuance totaled $123.6 billion in 3Q'18, an increase of 12.8 percent from $109.6 billion in 2Q'18 and an increase of 16.1 percent from $106.5 billion in 3Q'17. STD issuance increased slightly q-o-q to $102.9 billion (a 6.9 percent increase) while LTD jumped to $20.7 billion (an increase of 55.6 percent). As of 3Q'18, Freddie Mac had $40.8 billion STD and $230.3 billion LTD outstanding, up 17.2 percent and down 0.6 percent, respectively, from the prior quarter.

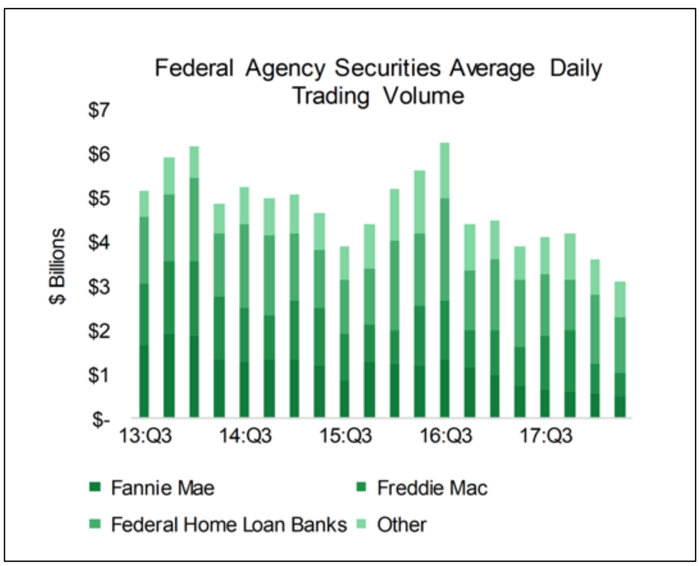
The 12 Federal Home Loan Banks (FHLB) issued $1.8 trillion in gross debt in the third quarter, a decline of 17.4 percent ($2.2 trillion) and an increase of 4.1 percent ($1.7 trillion), respectively, q-o-q and y-o-y. STD issuance declined 16.4 percent q-o-q to $1.7 trillion, while LTD declined 32.0 percent q-o-q to $94.5 billion. Total FHLB LTD outstanding was $615.2 billion at the end of September, down 2.4 percent from $646.1 billion outstanding in 2Q'18. Discount notes outstanding declined as well to $425.1 billion in 3Q'18 from $413.7 billion in 2Q'18.

Farm Credit issued $81.6 billion in gross debt in the third quarter, an increase of 0.9 percent q-o-q ($80.9 billion in 2Q'18) and a decline of 29.0 percent y-o-y ($63.3 billion in 3Q'17). STD issuance rose 1.7 percent q-o-q to $60.9 billion, while LTD debt issuance declined 1.7 percent q-o-q to $20.7 billion. Total Farm Credit LTD debt outstanding was $249.6 billion, an increase of 0.4 percent q-o-q, while STD outstanding declined 6.4 percent to $19.9 billion.

Farmer Mac issued $11.9 billion in gross debt in the third quarter, a decline of 4.6 percent q-o-q ($12.5 billion) and a decline of 18.7 percent y-o-y ($14.7 billion in 3Q'17). STD debt issuance declined 5.2 percent q-o-q to $9.9 billion, while LTD debt issuance declined by 1.8 percent q-o-q to $2.0 billion. Total Farmer Mac LTD debt outstanding was $14.7 billion, an increase of 0.5 percent q-o-q, while STD outstanding declined 28.3 percent to $1.2 billion.

Trading Activity

In aggregate, average daily trading volume of agency securities was $3.5 billion in the third quarter, an increase of 11.5 percent from $3.1 billion in 2Q'18 but a 15.7 percent decline from $4.1 billion in 3Q'17. The third quarter trading volume increase was driven largely by an increase in FHLB trading, which rose 25 percent q-o-q, followed by Freddie Mac (8.8 percent) and Fannie Mae (5.4 percent). The remaining agencies collectively declined by 3.6 percent in the third quarter.

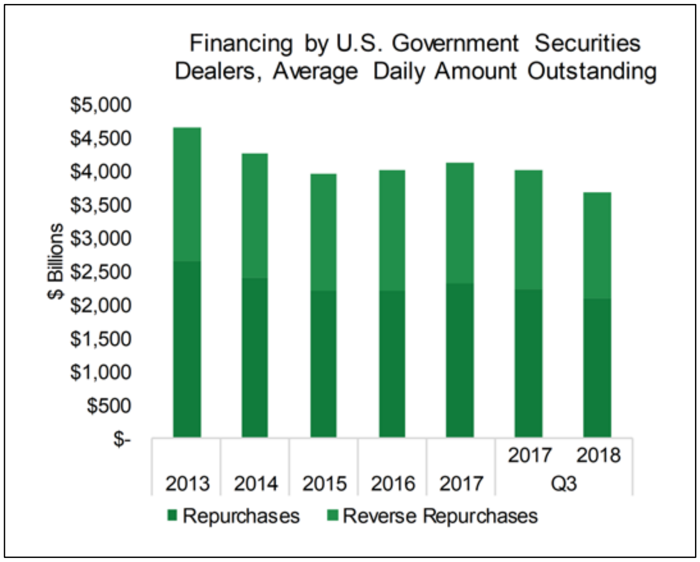


Source: FINRA Trace

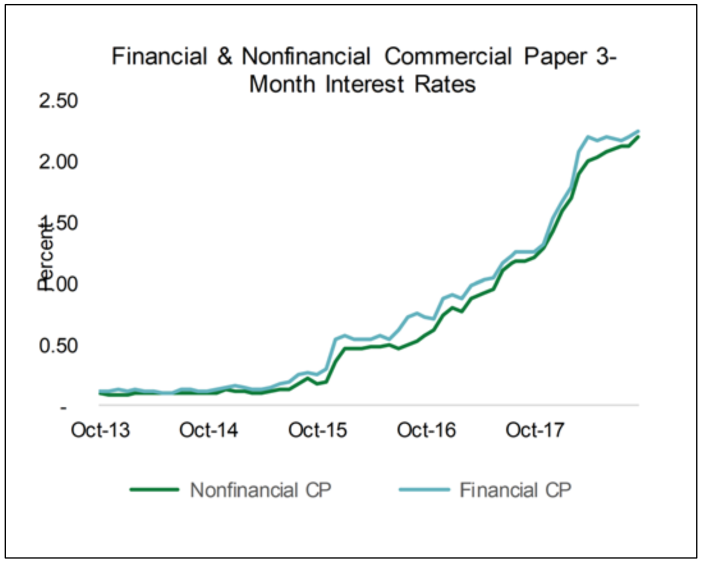
Funding and Money Market Instruments

Repurchase Activity

The average daily amount of total repurchase (repo) and reverse repo agreement contracts outstanding was $3.68 trillion in 3Q'18, a decrease of 2.6 percent from 2Q'18's $3.78 trillion and a decline of 8.0 percent y-o-y.



Source: Refinitiv

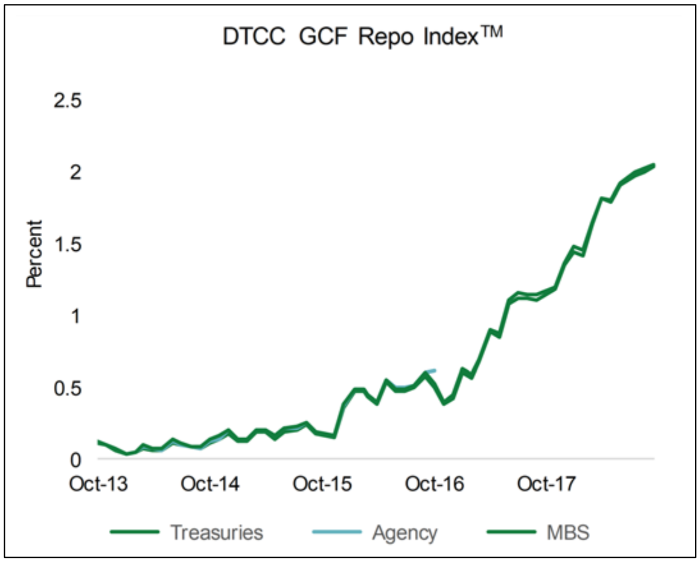


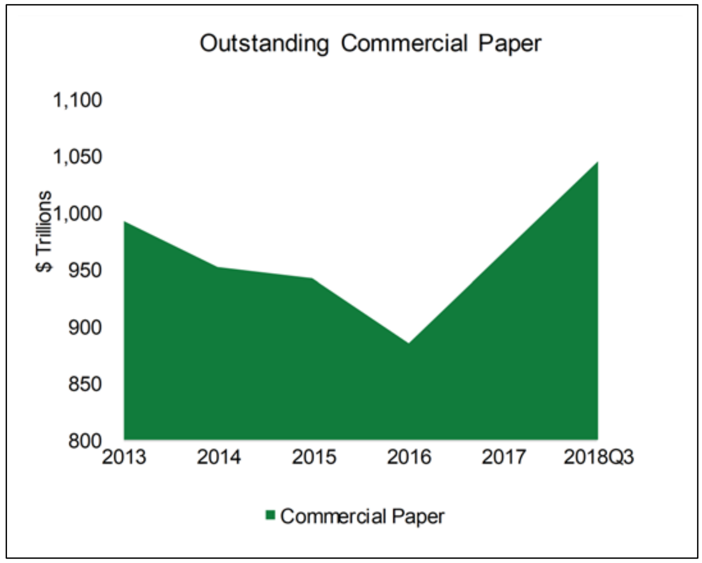
Source: Refinitiv

Average daily outstanding repo transactions totaled $2.08 trillion in 3Q'18, a decline of 2.7 percent q-o-q and a decline of 6.8 percent y-o-y. Reverse repo transactions in 3Q'18 averaged $1.60 trillion daily outstanding, a decrease of 2.4 q-o-q and 9.5 percent y-o-y.

GCF Repo Rates

General collateral finance (GCF) repo rates increased for Treasuries and MBS in 3Q'18 q-o-q and y-o-y: the average repo rate for Treasuries (30-year and less) rose to 199.9 basis points (bps) from 183.2 bps in 2Q'18 and 111.4 bps in 3Q'17. The average MBS repo rate rose to 202.5 bps from 184.4 bps in the previous quarter and 114.2 bps in 3Q'17.





Source: Refinitiv

Source: Refinitiv

Total Commercial Paper Outstanding

Preliminary outstanding volume of commercial paper (CP) stood at $1.045 trillion at the end of the third quarter, down 0.6 percent from the prior quarter ($1.051 trillion) and an increase of 6.4 percent y-o-y ($982.4 billion).

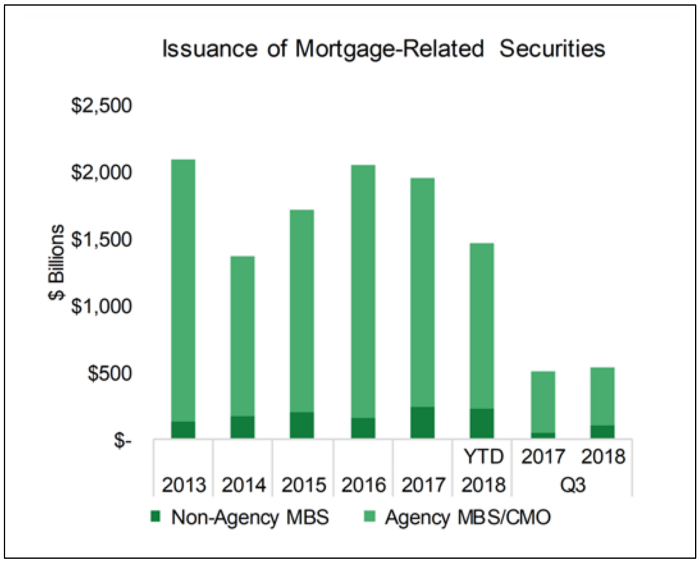
Financial and Nonfinancial 3-Month Commercial Paper Interest Rates

Interest rates for nonfinancial CP rose to 219 bps at end-September 2018 from 212 bps end-June 2018 and 118 bps end-September 2017. Financial CP increased to 224 bps end-September 2018 from 219 bps end-June 2018 and from 125 bps end-September 2017.

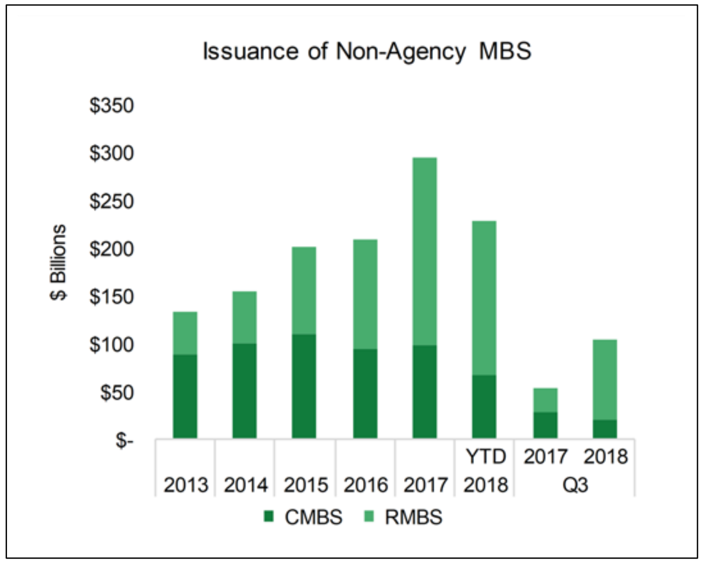
Mortgage-Related Securities

Mortgage-Related Issuance and Outstanding

Issuance of mortgage-related securities, including agency and non-agency passthroughs and collateralized mortgage obligations (CMOs), totaled $536.8 billion in the third quarter, a 10.7 percent increase q-o-q ($485.1 billion) and a 6.7 percent increase y-o-y ($503.3 billion). The rise was primarily due to increases in non-agency MBS issuance volumes. The agency share of total issuance declined to 80.7 percent in 3Q'18 from 84.1 percent in the previous quarter.



Source: Federal Agencies, Bloomberg, Refinitiv



Source: Bloomberg, Dealogic, Refinitiv

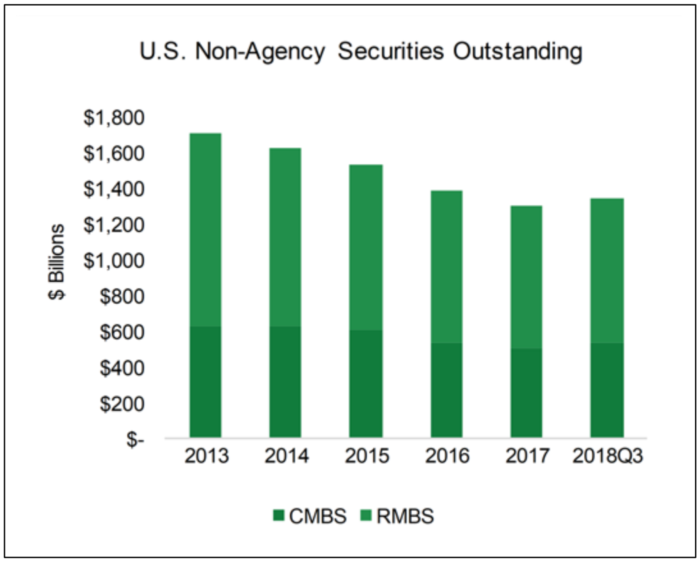
Agency mortgage-related outstanding totaled $8.3 trillion as of the end of the third quarter, a 1.2 percent increase from the prior quarter and a 4.9 percent increase y-o-y.

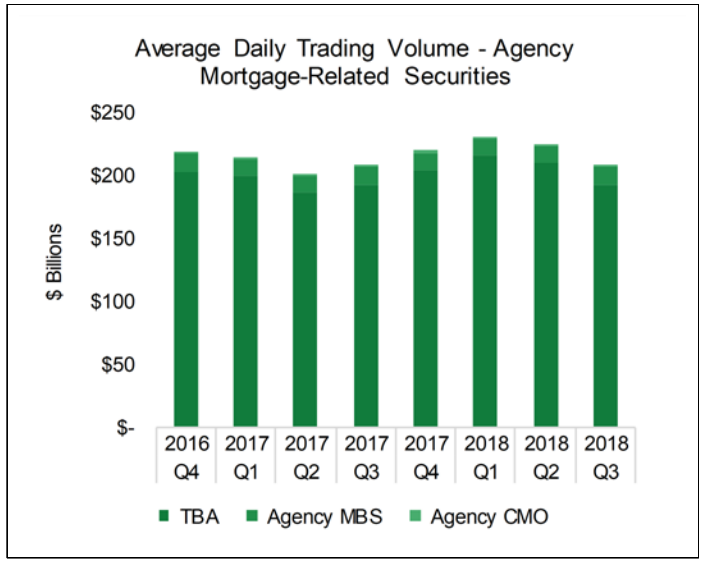
Agency Issuance and Outstanding

Agency mortgage-related issuance totaled $433.3 billion in 3Q'18, an increase of 6.2 percent q-o-q ($408.2 billion) but a decrease of 3.6 percent y-o-y ($449.7 billion). Agency MBS outstanding totaled $7.2 trillion, a 1.2 percent increase from the prior quarter and a 5.2 percent increase y-o-y, while agency CMO outstanding totaled $1.1 trillion, a 1.0 percent decrease from the prior quarter but up 0.5 percent increase y-o-y.

According to Freddie Mac, average conventional 30-year mortgage rates rose in the third quarter to 4.83 percent, up 26 basis points from 4.57 percent in the prior quarter.

Mortgage-Related Securities





Source: FINRA TRACE

Source: Bloomberg, Refinitiv, SIFMA

Non-Agency Issuance and Outstanding

Non-agency issuance totaled $103.4 billion in 3Q'18, an increase of 34.4 percent from 2Q'18 ($76.9 billion) and a 93.1 percent increase y-o-y ($53.6 billion). Non-agency residential MBS (RMBS) issuance was $82.3 billion (up 50.6 percent q-o-q and 219.8 percent y-o-y), while commercial MBS (CMBS) issuance was $21.1 billion (down 5.3 percent q-o-q and 24.2 percent y-o-y). Non-agency outstanding was $1.3 trillion as of the end of the third quarter, a 2.7 percent rise from the prior quarter and a 3.6 percent increase y-o-y. RMBS outstanding was $815.2 billion, a 3.7 percent increase q-o-q and a 1.3 percent increase y-o-y, while CMBS outstanding was $533.0 billion, a 1.3 percent increase q-o-q and a 7.4 percent increase y-o-y.

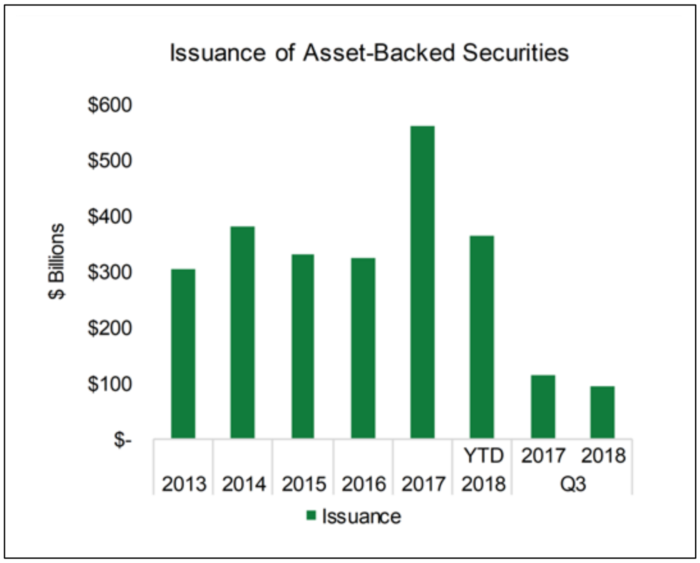
Trading Activity

Both non-agency and agency mortgage related daily trading volumes declined in the third quarter, with specified MBS pools the only subsector with increased trading volumes in the third quarter. Average daily trading volume of agency mortgage-related securities, including passthroughs, CMOs and TBAs, was $207.2 billion in 3Q'18, down 7.2 percent from 2Q'18 and down 0.1 percent y-o-y. Average daily trading volumes of non-agency securities declined to $2.0 billion daily in 3Q'18, down 33.9 percent q-o-q and 10.7 percent y-o-y.

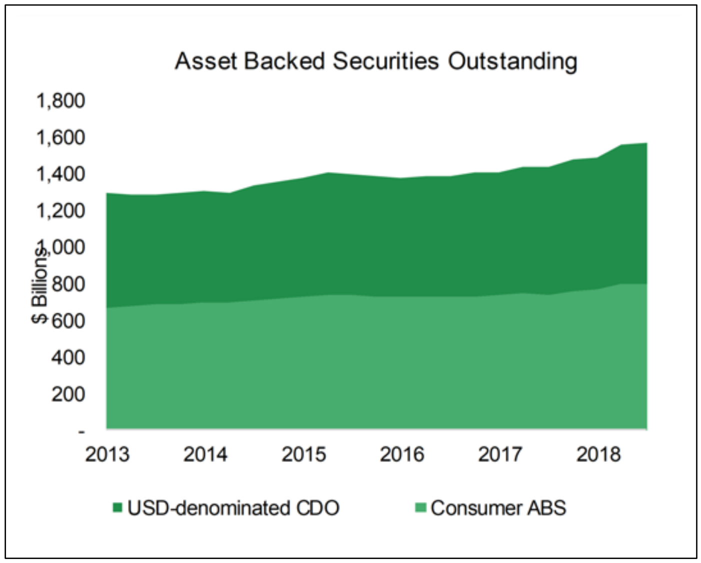
Asset-Backed Securities

Asset-Backed Securities Issuance

Asset-backed securities (ABS) issuance totaled $94.5 billion in the third quarter, a decline of 32.9 percent q-o-q and a decline of 17.6 percent y-o-y. The CDO and auto sectors led issuance totals for the third quarter with $40.3 billion (representing 42.6 percent of total issuance) and $24.4 billion (25.8 percent of total issuance), respectively. Year to date, ABS issuance totaled $363.9 billion



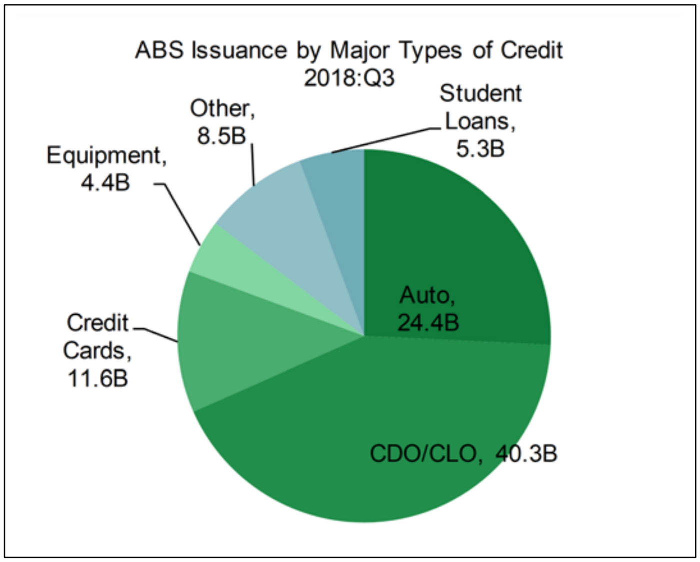
Source: Bloomberg, Refinitiv



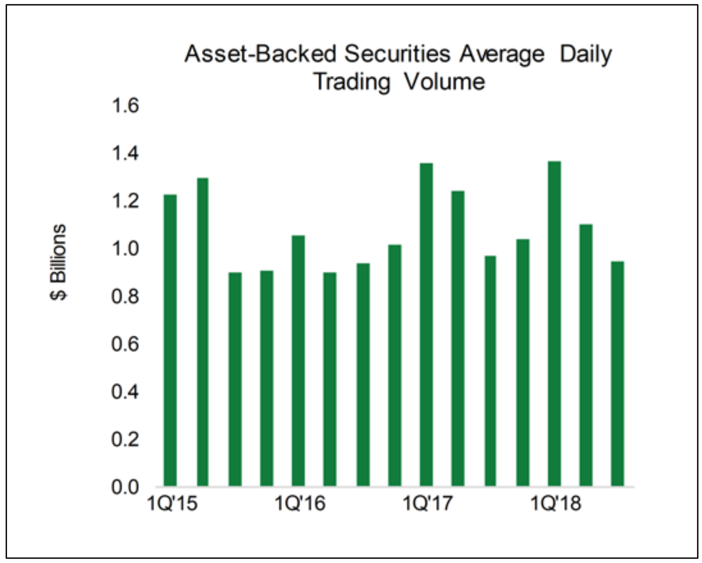
Source: Bloomberg, Refinitiv, SIFMA

On a q-o-q basis, most major types of credit experienced a decline in issuance volumes in the third quarter, with the largest percentage decline in the esoteric/other sector, which was down 60.8 percent, followed by equipment (55 percent decline), CDO (43 percent decline), and auto (7.8 percent decline). The credit cards and student loan asset categories experienced q-o-q increases of 55.7 percent and 11.2 percent respectively.

Outstanding volumes ended the third quarter at $1.56 trillion, up 0.7 percent q-o-q and 1.0 percent y-o-y. All categories outside of student loans experienced q-o-q increases in outstanding values. Notable subcategories experiencing y-o-y growth were: auto fleet lease (20.8 percent), truck (264.2 percent), consumer loans (27.3 percent), solar (128.9 percent), tax liens (16.7 percent), and timeshare (15.2 percent).



Source: Bloomberg, Refinitiv



Source: FINRA TRACE

Trading Activity

Daily average trading activity in ABS and CDOs decreased to $1.18 billion in 3Q'18, down 13.0 percent from $1.36 billion in 2Q'18 and 2.5 percent from $1.15 billion 3Q'17. Trading activity decreased in both ABS and CDO markets, down 14.0 percent and 2.5 percent q-o-q, respectively.

U.S. Collateralized Loan Obligations[6]

Widening whisks market back to 2017

Collateralized loan obligation (CLO) volumes remain robust and the list of active managers is steadily growing. But with CLO liability spreads reverting to where they were a year ago, some issuers are a little nervous.

Spread widening plagued the CLO market globally over the third quarter. Triple-A notes in broadly syndicated loan CLOs priced, on average, at 116.2 basis points in the third quarter — 9.3 percent wider from 2Q'18. Similarly, mid-market CLO triple As are 8.27 percent wider from 2Q'18 levels and European CLO triple-As are 10.8 percent wider.

Effectively, U.S. CLO triple-As fell back to November 2017 levels, while European senior CLO tranches returned to where they were in July last year.

In the U.S., the trend that started in the second quarter continued apace in the third quarter as several CLO managers adopted a senior-junior split on CLO triple-A tranches. Presumably, a large triple-A investor has entered the market demanding extra protection for its investments in first-pay CLO notes, resulting in the creation of senior triple A notes.

$70.8 billion of U.S. issuance

That retreat in spreads could have been considered a serious setback, but CLO managers simply rolled up their sleeves and persevered with $70.8 billion of US issuance in Q3 and €12.6 billion in Europe.

This healthy issuance may have contributed to CLO spreads shifting wider and James Damron, who is responsible for US CLO management at PPM America, feels that this is not sustainable.

"The current spread widening on CLO liabilities is not constructive, particularly when there is no corresponding spread widening on the loan assets," he says. "It feels like something needs to give to keep investors and issuers in the market."

Compression in loan spreads could be the catalyst for CLO liability spreads to begin rapidly tightening. Several loan industry experts have forecast a benign default environment over the next 18 months and, according to New York-based Damron, that could fuel demand for loans from non-CLO vehicles, such as 40 Act funds. "I am hopeful that CLO liability spreads will tighten a bit by next year, particularly at the triple A level," he adds.

Looking at new issue CLO production, the U.S. saw $33.1 billion of issuance (including mid-market deals), while issuance hit €7.8 billion in Europe. Broadly syndicated loan CLO issuance has dropped off by 21.1 percent in the U.S., whereas European CLO issuance increased by 10 percent from Q2 to Q3.

Into the fourth quarter, CLO spreads have refused to budge tighter, with a few CLOs pricing their triple-A debt wide of 125 bps in the US, and north of 95 bps in Europe. With that in mind, some firms may be taking a prudent approach.

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[6] The author of the CLO section is Tanvi Gupta, Creditflux. For any questions, please contact Tanvi Gupta at tanvi.gupta@acuris.com.

Carlyle Group's head of fixed income sales Sebastiano Riva says: "Current conditions in the market, such as equity arbitrage being too tight and the difficulty in ramping up portfolios, are a trigger for a few managers to carry forward their new issues from this year to next year, when liabilities are expected to be tighter."

Ten new managers in 2018

Nevertheless, the manager base has been growing steadily this year with eight debut managers in the US, including three debutants in middle market CLO management, and two managers in Europe.

"The CLO market has low barriers to entry and new managers bring a lot to the table," says New York-based Riva. "Most of them bring their own equity, which could be from their balance sheet or a captive CLO equity fund, making warehousing and CLO execution easier."

In Q3, Hayfin Capital Management got off the mark to price its first European CLO. The London-based manager took an innovative approach, creating Euribor caps on some of its triple A-rated debt.

Also in the third quarter, Bain Capital Credit, GSO Capital Partners and Vista Credit Opportunities ventured into U.S. middle market CLOs for the first time. Vista took the unusual step of focusing exclusively on software loans for its CLO.

Ending an 11-year absence

The return of PPM America also swelled the ranks of managers. The firm priced its first CLO since 2007 with PPM CLO 2018-1 printing on July 2 via Goldman Sachs.

A regular CDO issuer pre-crisis, the manager redeemed its outstanding 1.0 transactions but continued to manage its 2007 deal PPM Grayhawk CLO until it was called last year. PPM's Damron says that, after the crisis when asset values recovered, PPM redirected resources to loan strategies through mutual funds distributed by its affiliates in the US and South Korea.

In December 2017, PPM opened its CLO 2.0 warehouse as it set in motion the plan to revive its CLO business. Damron says: "We ramped the portfolio primarily through the new issue market to just north of 50 percent by the end of June. We then priced on July 2, purchased the remaining $175 million of bank loan paper in the secondary market during the first two weeks of July and closed on August 3."

The variety of managers now involved in the CLO market almost leaves investors spoilt for choice. But there's also more competition for CLO paper.

"We have seen an increasing number of large asset managers and medium-sized insurance companies enter the CLO tranche market this year," says Edwin Wilches, portfolio manager at PGIM in New Jersey.

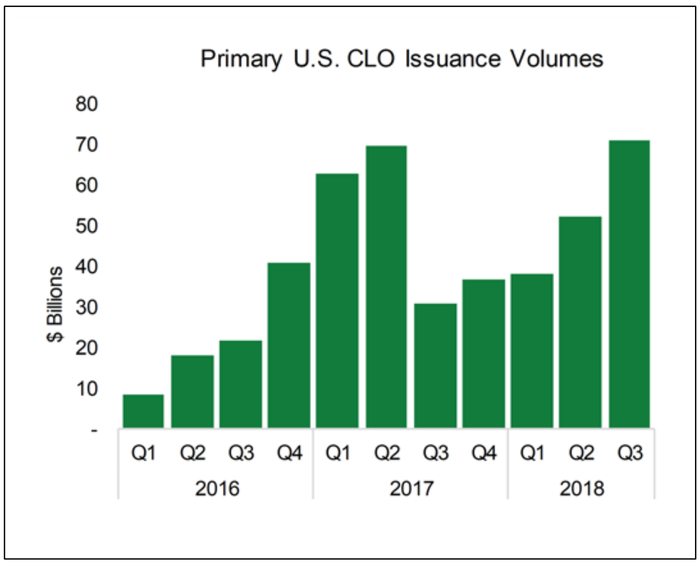
"In the coming quarters, we expect even stronger interest from the asset management community as spreads remain relatively wide and all-in yields remain attractive," he says.

Growth in the mid market

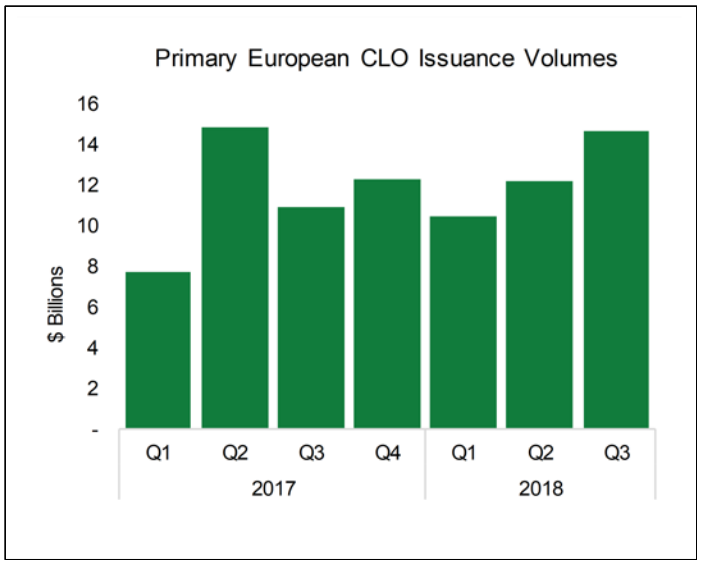
Regulation governing business development companies has been loosened this year, with business development companies (BDCs) now able to take on twice as much leverage. This has had an impact on mid market CLO issuance, according to Carlyle's Riva, especially as BDCs are now able to hold risk retention, which makes it easier to execute CLOs.

However, investors looking to move from broadly syndicated CLOs to mid-market deals need to be mindful of material differences between the two products, according to Wilches. "We perceive MM [middle market] CLO debt covenants to be weaker and the conflicts of interest between some of the managers, especially those who own the equity, and the debt investors, as more acute," he says.

Wilches also believes that the overcollateralisation tests on mid-market CLOs are hampered by non-public ratings and the lack of an active secondary loan market.



Source: Creditflux, CLO-i



Source: Creditflux, CLO-i

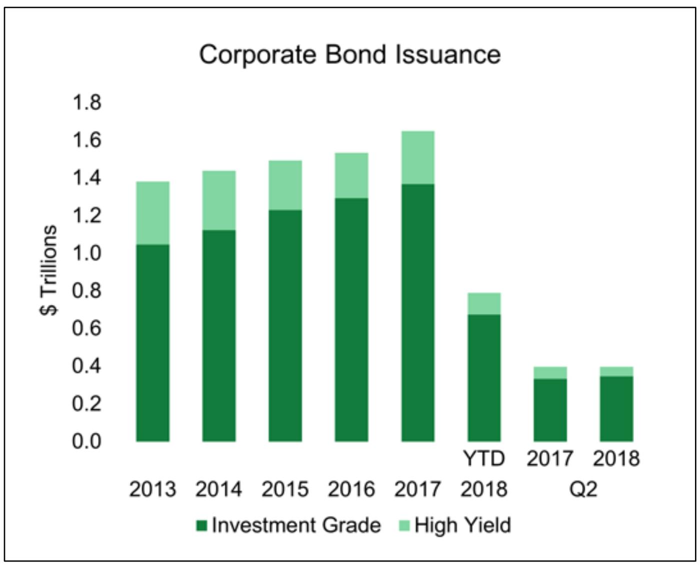
Corporate Bond Market

Corporate Bond Issuance

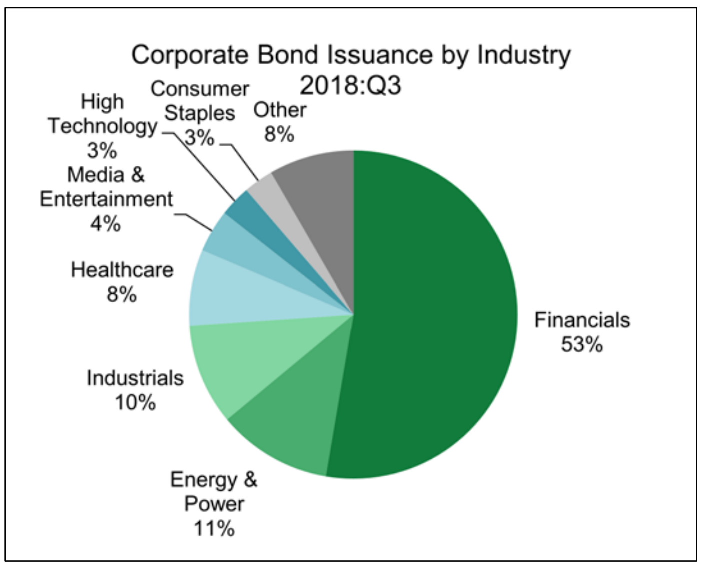
Corporate bond issuance totaled $322.3 billion in 3Q’18, down 18.7 percent from $396.5 billion issued in 2Q’18 and down 23.9 percent from $423.7 billion in 3Q’17. Most of the bonds issued in the third quarter were for general corporate purposes (43.4 percent of total issuance), followed by indebtedness reduction (25.2 percent) and acquisition financing (6.2 percent).

Investment grade (IG) bond issuance decreased to $277.7 billion, down 19.9 percent from $346.5 billion in 2Q’18 and down 23.4 percent from $362.7 billion in 3Q’17. The top three industries accounted for more than three quarters of 3Q’18 IG issuance: financial companies remained the leading IG issuance sector, accounting for 55.4 percent ($153.8 billion) of the total, followed by industrials with 11.1 percent ($30.7 billion) and energy & power with 9.6 percent ($26.7 billion).

Issuance of high yield (HY) bonds decreased to $44.6 billion in 3Q’18, 10.6 percent below the 2Q’18’s $49.9 billion and down 26.8 percent from $61.0 billion in 3Q’17. The top three sectors made up over two thirds of total HY issuance in 3Q’18: financials (35.7 percent, $15.9 billion), energy & power (21.8 percent, $9.8 billion), and high technology (12.1 percent, $5.4 billion).



Note: Excludes short-term debt, convertibles, and CDs
Source: Refinitiv



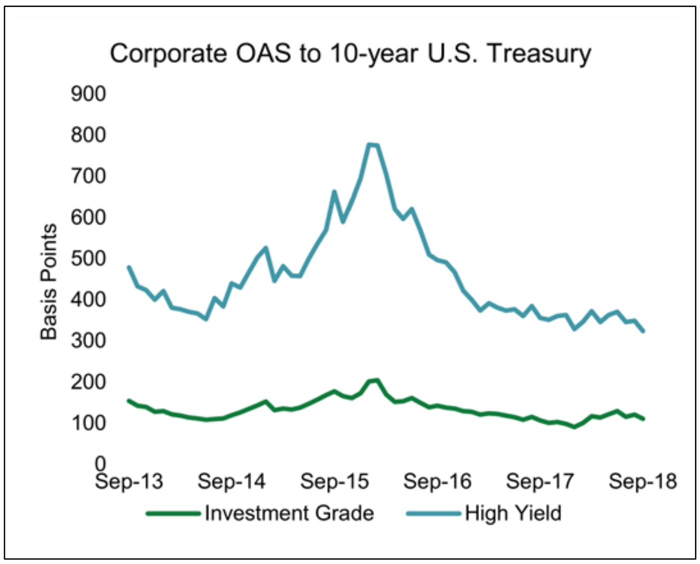
Note: Excludes short-term debt, convertibles, and CDs
Source: Refinitiv

Bond Spreads and U.S. Default Rate

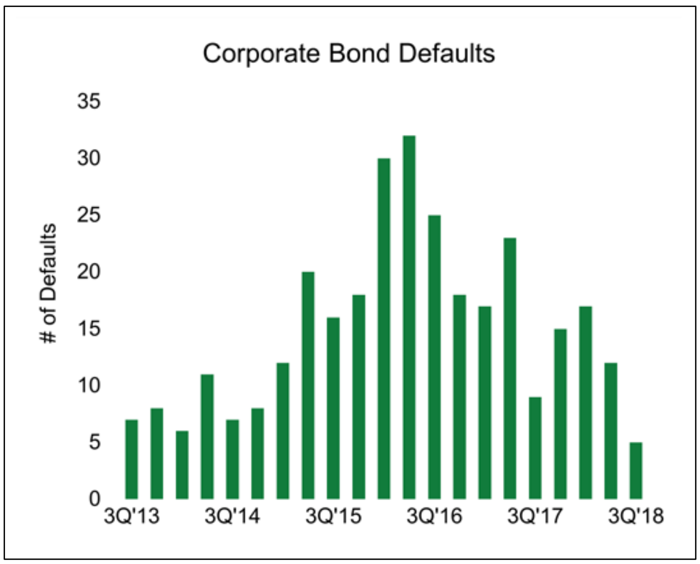
The option adjusted spread for both IG and HY bonds tightened in 3Q'18. The option adjusted spread for IG bond stood at 111 bps at the end of 3Q'18, down 19 bps from 130 bps in 2Q'18 but up 4 bps from 107 bps in 3Q'17. HY bond option adjusted spread ended 3Q'18 at 324 bps, down 47 bps from 371 bps in 2Q'18 and down 32 bps from 356 bps in 3Q'17.

S&P's Global Fixed Income Research reported the number of U.S. defaulted issuers decreased to 5 in 3Q'18 from 12 in 2Q'18 and from 9 in 3Q'17. The U.S. trailing 12-month speculative-grade corporate default rate decreased to 2.7 percent in 3Q'18, down from 3.0 percent in 2Q'18 and from 3.1 percent in 3Q'17. The default rate is expected to fall further to 2.3 percent by 2Q'19.[7]

In 3Q'18, S&P Ratings Services downgraded 56 and upgraded 44 U.S. issuers, a ratio of downgrades to upgrades of 1.3. This was a decrease from the previous quarter when there were 121 downgrades versus 87 upgrades (downgrade/upgrade ratio of 1.4).



Source: ICE Data Indices



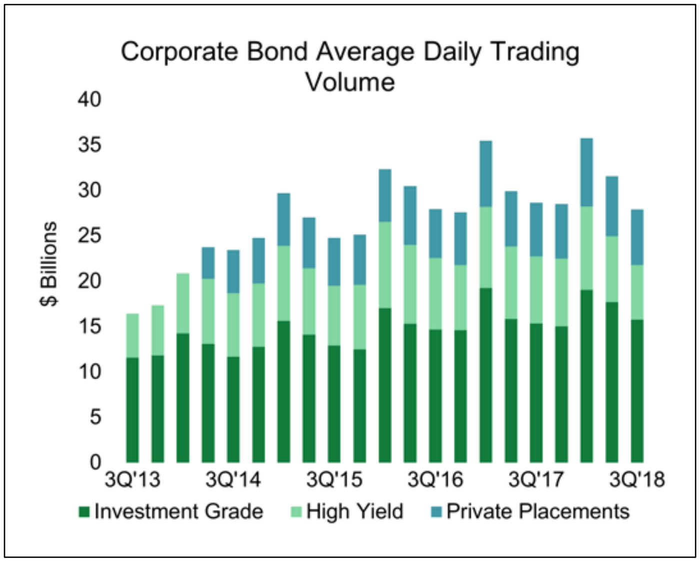
Source: S&P Global Ratings

Trading Activity

According to the FINRA TRACE data, average daily trading volume of non-convertible corporate bonds was $27.9 billion in 3Q'18, down 11.7 percent from $31.6 billion in 2Q'18 and down 2.6 percent y-o-y. Public IG corporate bonds average daily trading volume decreased to $15.8 billion in 3Q'18, down 11.0 percent from $17.7 billion in 2Q'18 but up 2.8 percent from $15.3 in 3Q'17. Public HY corporate bonds average daily trading volume was $6.0 billion in 3Q'18, down 16.9

[7] Standard & Poor's Global Ratings, The US Speculative-Grade Corporate Default Rate Decreased To 2.7% In September, 10/1/2018.

percent from $7.2 billion in 2Q’18 and down 18.6 percent from $7.4 billion in 3Q’17. Private placements’ average daily trading volume decreased to $6.1 billion in 3Q’18, down 8.1 percent from $6.7 billion in 2Q’18 but up 3.3 percent from $5.9 billion in 3Q’17.



Note: Includes nonconvertible corporate bonds only; private placements trading volume only available from 2Q'14.
Source: FINRA TRACE

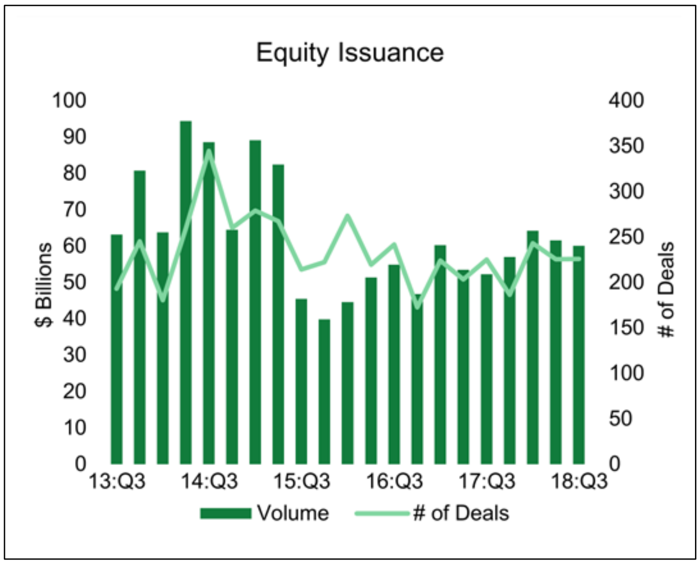
Equity and Other Markets

Equity Issuance

Equity underwriting decreased by 2.4 percent to $60.1 billion in 3Q'18 from $61.6 billion in 2Q'18 but was up 15.0 percent from $52.3 billion in 3Q'17. Equity underwriting volume in 3Q'18 remained 4.3 percent below the five-year average of $62.8 billion.

IPO Volume

"True" initial public offerings (IPOs), which exclude closed-end mutual funds, decreased to $12.1 billion on 52 deals in 3Q'18, a 16.3 percent decrease from $14.5 billion on 61 deals in 2Q'18 but up almost threefold from $4.7 billion on 35 deals in 3Q'17. The top three 3Q'18 IPO issuance sectors by dollar volume were: high technology ($4.5 billion on 16 deals), consumer products and services ($2.0 billion on 3 deals) and healthcare ($1.9 billion on 20 deals), which together accounted for over two thirds of the quarter's total volume.



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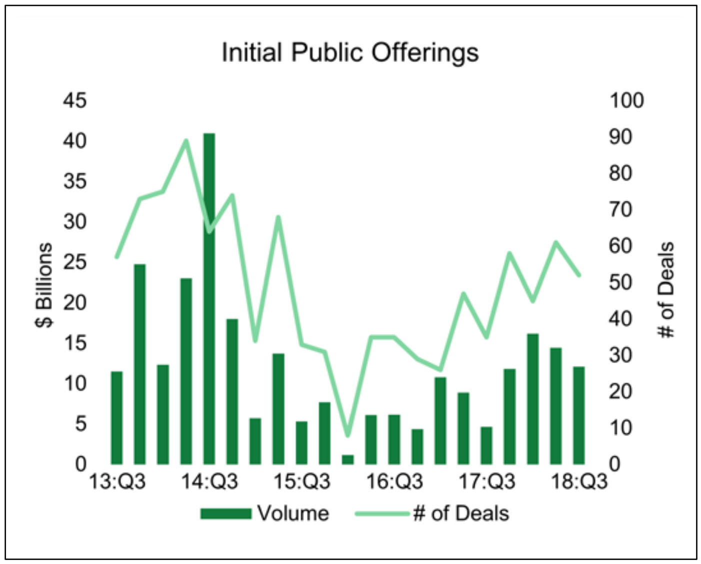


Note: Excludes closed-end funds.
Source: Refinitiv

Secondary Offerings Volume

Secondary market issuance stood at $42.1 billion on 197 deals in 3Q'18, almost unchanged from $42.2 billion on 195 deals in 2Q'18 but an increase of 6.6 percent from $39.5 billion on 164 deals in 3Q'17.

Stock Market Performance

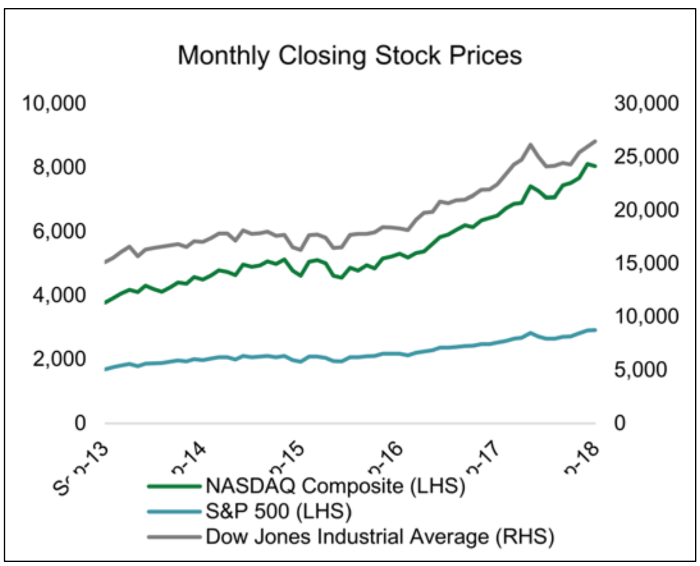
The U.S. stock market posted gains single digit gains in 3Q'18. The S&P 500 closed 3Q'18 at 2,913.98, up 7.2 percent the prior quarter and 15.7 percent y-o-y. The NASDAQ Composite Index closed 3Q'18 at 8,046.35, up 7.1 percent q-o-q and 23.9 percent y-o-y. The Dow Jones Industrial Average (DJIA) ended 3Q'18 at 26,458.31, up 9.0 percent q-o-q and 18.1 percent y-o-y.

S&P P/E Ratio

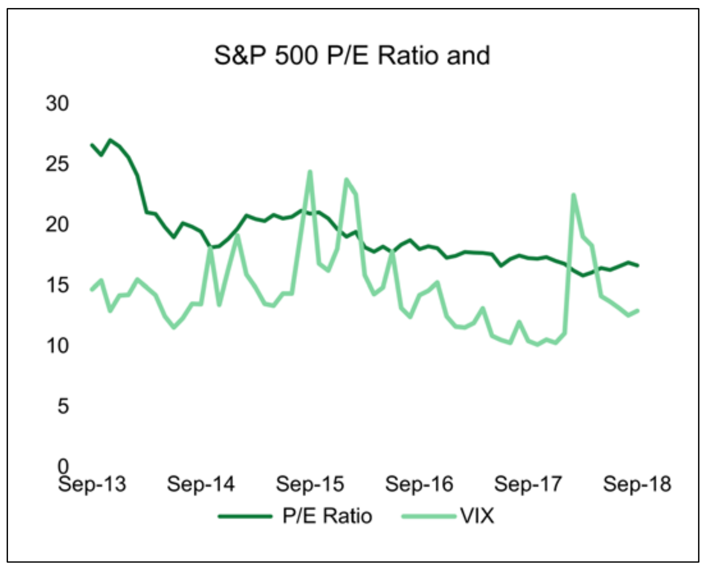
The S&P 500's P/E ratio averaged 20.7 in 3Q'18, unchanged from 2Q'18 but down 1.8 percent from 21.0 in 3Q'17. The S&P P/E ratio stood 6.7 percent above the 5-year average of 19.4 but was 30.0 percent below the all-time high of 29.5 in 2Q'99.

CBOE VIX Index

The Chicago Board Options Exchange Volatility Index (VIX) decreased to an average of 12.9 in 3Q'18, down 16.2 percent from 15.3 in 2Q'18 but up 17.5 percent from 10.9 in 3Q'17. The index was bouncing between a low of 10.85 to a high of 16.14 the whole quarter, however the spread between high and low values for the VIX was 5.29 in 3Q'18, much tighter than 11.98 in 2Q'18 and 6.68 spread in 3Q'17.



Source: Yahoo! Finance

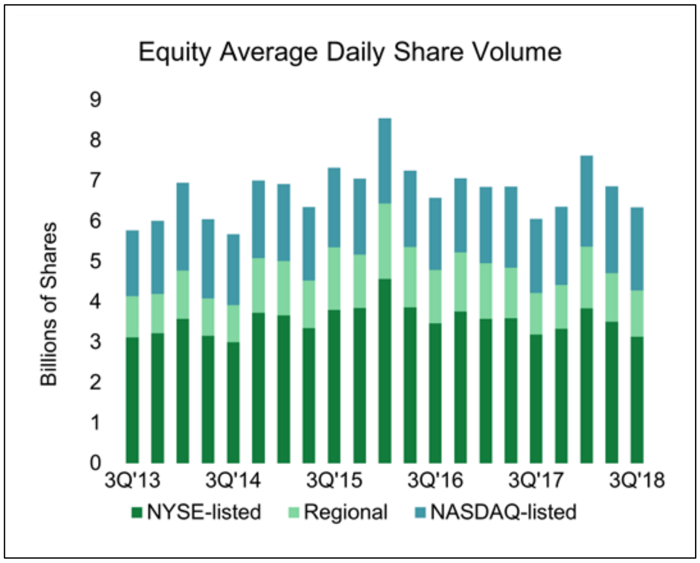


Sources: Bloomberg, Chicago Board of Options Exchange

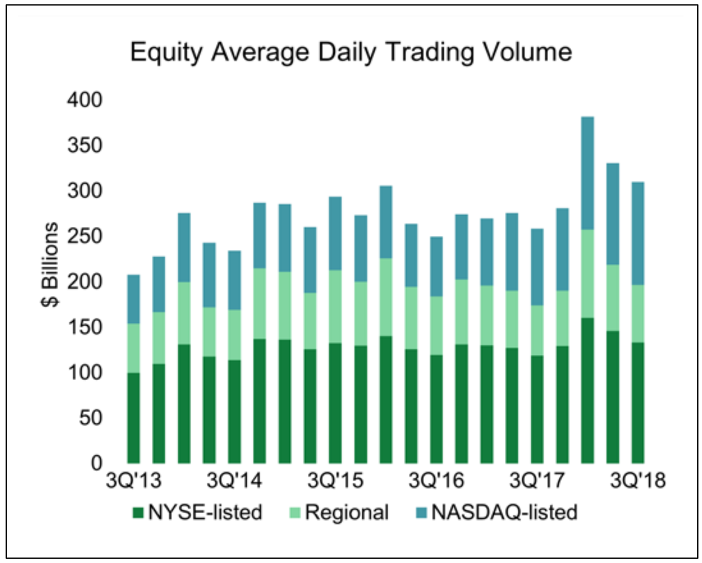
Average Daily Share and Dollar Volume

Equity market average daily share volume was 6.3 billion shares in 3Q'18, a decrease of 7.4 percent from 6.9 billion shares in 2Q'18 but a 4.8 percent increase from 6.1 billion shares in 3Q'17. The largest quarterly percentage decline was observed in stocks listed on NYSE exchange, which average daily share volume decreased by 10.5 percent in 3Q'18 q-o-q (3.1 billion shares in 3Q'18). Average daily share volume of stocks listed on regional exchanged and NASDAQ-listed stocks also decreased by 4.8 percent (1.1 billion shares) and 4.0 percent (2.1 billion shares) q-o-q, respectively.

Equity market average daily dollar volume decreased by 6.4 percent to $309.7 billion in 3Q'18 from $330.8 billion in 2Q'18 but was up 19.9 percent from $258.3 billion in 3Q'17. The largest quarterly percentage decline in dollar volume was observed in regional-listed stocks (down 12.7 percent, or $63.5 billion), followed by NYSE-listed (down 8.7 percent, $133.2 billion) while trading of NASDAQ-listed stocks was up slightly in 3Q'18 up 0.8 percent, $113.0 billion).



Source: Cboe Exchange, Inc.



Source: Cboe Exchange, Inc.

NYSE Short Interest

The number of shares sold short on the NYSE averaged 15.7 billion in 3Q'18, down 3.6 percent from 16.3 billion in 2Q'18 and down 5.7 percent from 16.6 billion in 3Q'17. NYSE short interest was 1.6 percent below the five-year average of 16.0 billion. Out of approximately 6,100 stocks listed on NYSE, a short position was shown in 4,911 issues at the end of 3Q'18 and 3,997 issues showed a short position of 5,000 shares or more.[8]

[8] NYSE Group Consolidated Short Interest Reports.

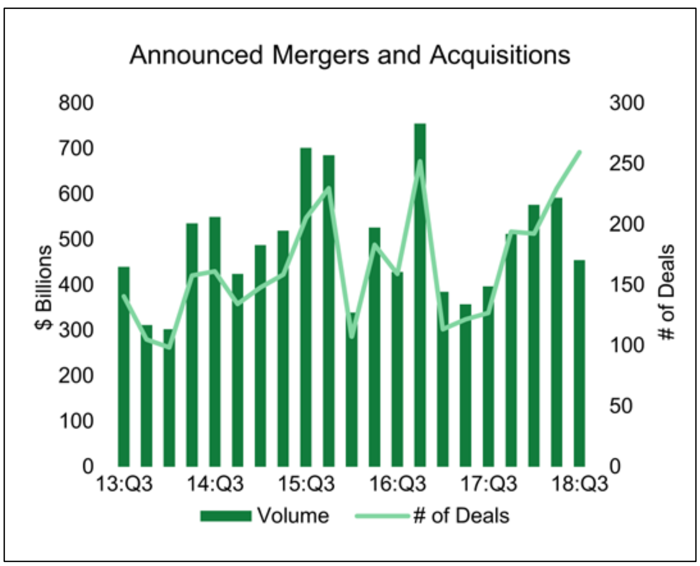
M&A Volume

Announced U.S. mergers and acquisitions (M&A) volume decreased to $454.7 billion in 3Q'18, a 23.2 percent decrease from $592.2 billion in 2Q'18 but a 14.4 percent increase from $397.4 billion in 3Q'17. M&A volume was 7.6 percent below the five-year quarterly average of $492.3 billion.

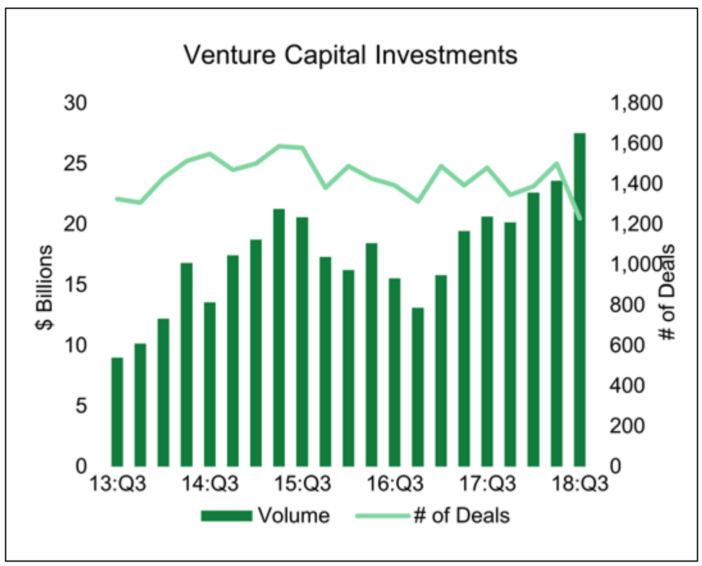
According to data from Dealogic, the amount of money invested in U.S. companies by those outside the U.S. through M&A increased to $81.6 billion in 3Q'18, up 48.9 percent from $54.8 billion in 2Q'18 and up 58.8 percent from $51.4 billion in 3Q'17. The dollar amount U.S. companies invested in other countries through M&A decreased to $53.9 billion in 3Q'18, down 8.0 percent from $58.6 billion in 2Q'18 but up 5.0 percent from $51.4 billion invested in 3Q'17.

Venture Capital Volume

Venture capitalists invested $27.5 billion in 1,229 deals in the 3Q'18, according to the MoneyTree™ Report from PricewaterhouseCoopers LLP (PwC) and the National Venture Capital Association (NVCA), based on data provided by Refinitiv. Quarterly venture capital (VC) investment activity increased by 16.7 percent in dollar terms but decreased by 18.1 percent in the number of deals compared to 2Q'18 ($23.6 billion in 1,501 deals). The internet sector continued to receive the highest level of funding of all industries with $10.7 billion in 3Q'18, up 16.9 percent from $9.1 billion in 2Q'18. The healthcare sector received second largest amount of funding with $5.4 billion (up 1.6 percent q-o-q) followed by the mobile & telecommunications sector with $4.1 billion (up 19.2 percent q-o-q).[9]



Source: Dealogic



Source: Pricewaterhouse/Venture Economics/NVCA MoneyTree Survey

[9] U.S. MoneyTree Report, 3Q 2018.

Credits

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Managing Director, Head of Derivatives & Director of Research

SIFMA Research

Sharon Sung

Vice President, Research

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