

September 2017 Highlights	
Loan Growth <ul style="list-style-type: none"> Bilateral loans up +0.3% month over month Participations down -0.3% month over month 	↔
New/Renewed Volume <ul style="list-style-type: none"> Aggregate new/renewed bilateral volume down from prior month Aggregate new/renewed participation volume down from prior month 	↓
Spread Pricing <ul style="list-style-type: none"> Spreads on new/renewed bilateral loans down from prior month Spreads on new/renewed participations down from prior month 	↓
Fee Performance <ul style="list-style-type: none"> Upfront fee levels up from prior month for new bilateral loans and down for renewed bilateral loans 	↔

Bilateral Balances Continue to Gain, Participations Decline

Bilateral loan balances continued to increase in September, keeping pace with the positive growth seen in August. Conversely, participation balances declined in September, although the drop was less pronounced than seen last month. Spread pricing for new/renewed loans declined in September from a year ago, a trend seen for both bilateral loans and participations. However, the decline in spread was matched by improvements in credit risk.

- Loan Growth:** Bilateral balances displayed modest but broad-based increases in September, while participation balances fell from the prior month. The Finance & Management sector remained a primary growth driver for both bilateral loans and participations, **p. 1-3, & 6.**
- New/Renewed Volume:** Aggregate new/renewed bilateral volume was down in September when compared to both last month and September of the prior year. A similar trend was seen for new/renewed participations. For both bilateral loans and participations, the decline in new/renewed volume was driven predominantly by loans risk rated 05 (average), **p. 4-6.**
- Spread Pricing:** For both bilateral loans and participations, September's year-over-year decline in spread for new/renewed loans was commensurate with improvements in credit risk. From a regional standpoint, the top 5 states in terms of GDP displayed higher pricing and higher credit risk compared with averages for all other states in 3Q17, **p. 4-6, & 8.**
- Fee Performance:** From August to September, the average Upfront fee level for new bilateral loans increased while the average Upfront fee level for bilateral renewals declined, **p. 7.**

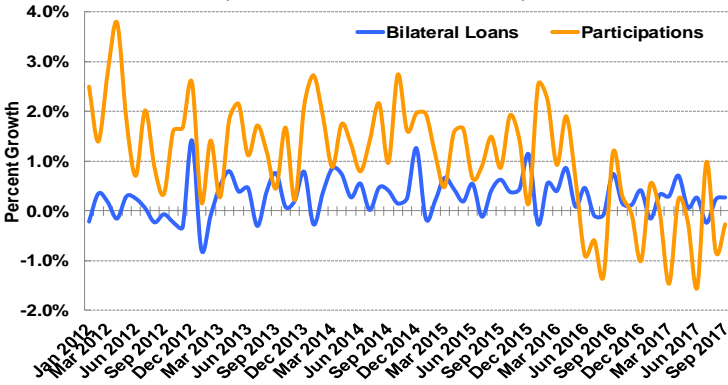
John H. Shain
President

Automated Financial Systems, Inc.

This newsletter presents monthly reporting on commercial loan characteristics. The information is derived from the AFS Pricing Dashboard, which contains approximately \$1 trillion in Commercial Banking commitments. Note: The charts below reflect total loan outstandings for participating banks.

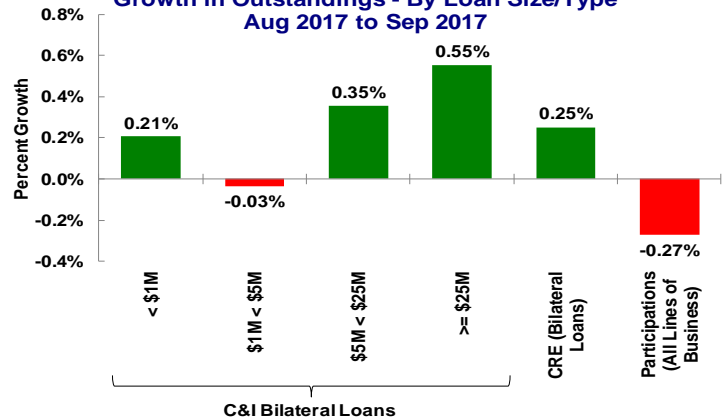
Loan Growth

Growth in Outstandings - Monthly Trend
(Month-over-Month Growth Rates)



- M/M Growth:** +0.3% Bilateral, -0.3% Participations
- Historical Perspective:** Balance growth for both bilateral loans and participations in September lagged the growth rates seen in the same month a year earlier.

Growth in Outstandings - By Loan Size/Type
Aug 2017 to Sep 2017



- M/M Growth:** Bilateral loans displayed more broad-based increases in September compared to August's results, with a rebound seen for C&I bilateral loans in the <\$1M range. CRE bilateral balances also continued to grow this month.

AFS Continues to Lead in the Fintech Space

50 BEST
Companies To Watch
SR 2017

Banking TOP 10
CIO CLOUD BANKING
Outlook SOLUTION PROVIDERS-2017

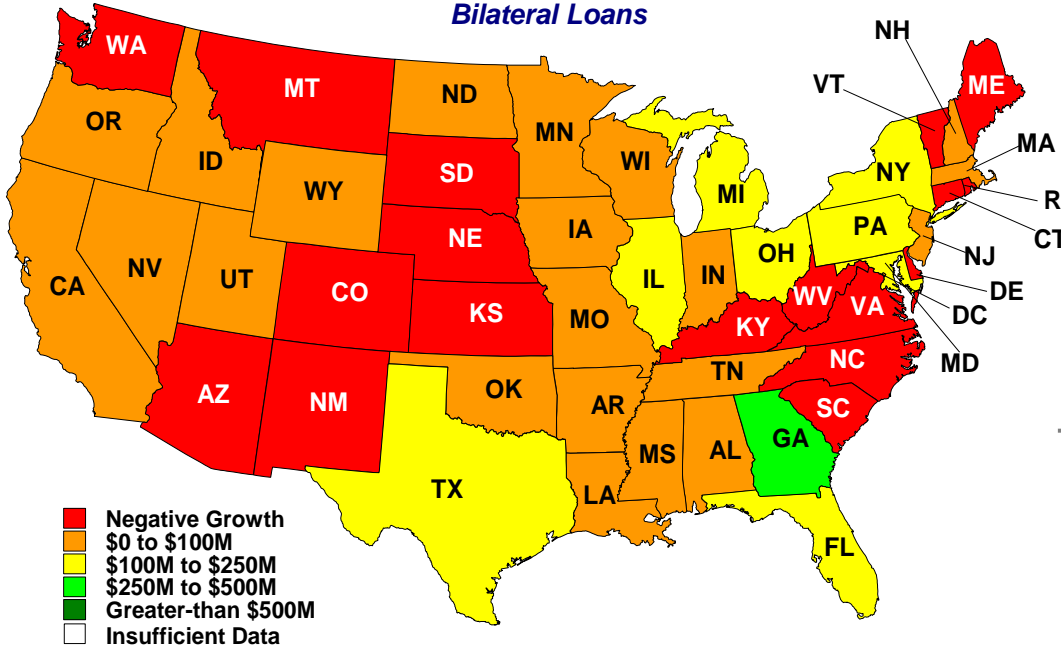
CIO 20 MOST PROMISING
FINANCIAL SERVICES
Review TECHNOLOGY SOLUTION PROVIDERS - 2017



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Loan Growth Dynamics – Aug 2017 vs. Sep 2017 – Bilateral Loans

**Growth in Outstandings
Aug 2017 vs. Sep 2017
Bilateral Loans**



Bilateral loan balances were up in September from the prior month across the majority of states.

- Bilateral balance growth accelerated this month in **Georgia** (+1.7%).
- In September, **Arizona** (-2.9%) experienced a sharp overall decrease in bilateral balances, with the largest decline seen for the Management Consulting subsector.

\$ Change in Outstandings

Top 5 States

1. Georgia
2. Maryland
3. Florida
4. Texas
5. New York

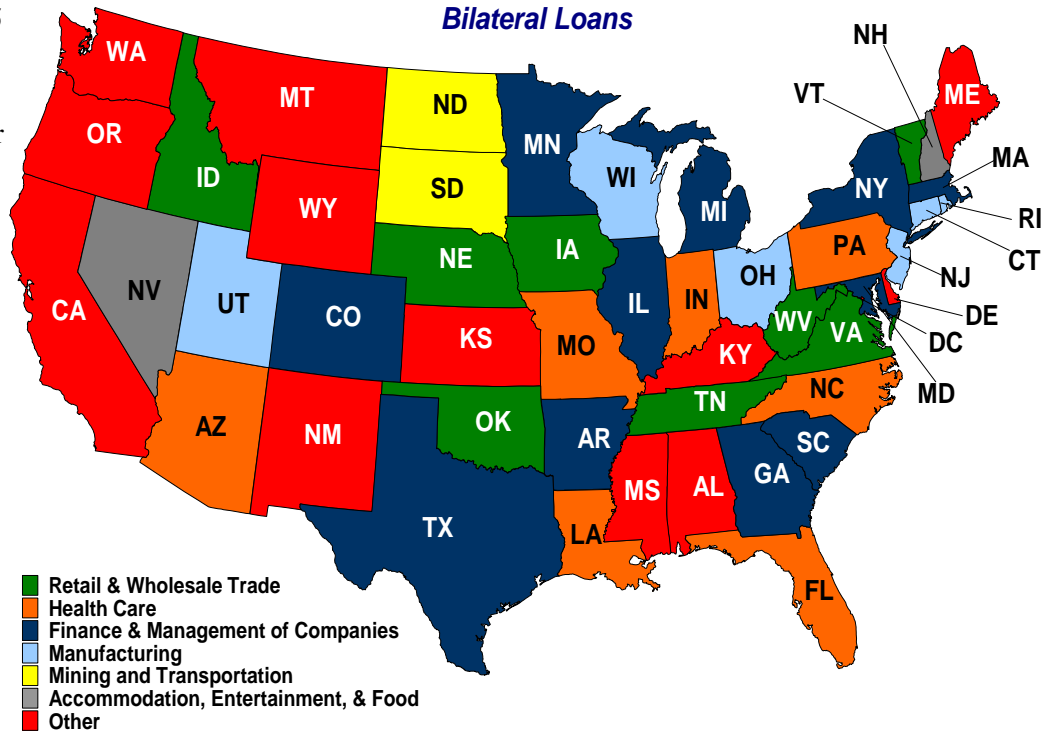
Bottom 5 States

1. Arizona
2. South Carolina
3. South Dakota
4. North Carolina
5. Montana

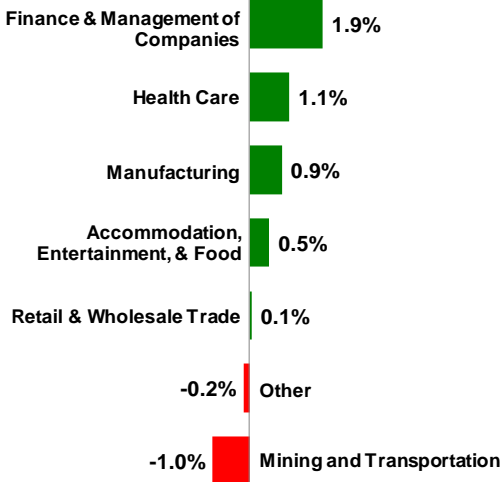
■ The **Finance & Management** sector remained the primary engine for bilateral balance growth in September, with this industry driving growth in 4 of the top 5 states for bilateral loans.

■ For the **Health Care** sector, bilateral balance growth rebounded in September from the decline seen last month.

**Growth in Outstandings - Predominant C&I Industries*
Aug 2017 vs. Sep 2017
Bilateral Loans**



**Growth in Outstandings* - By Industry
Bilateral Loans**



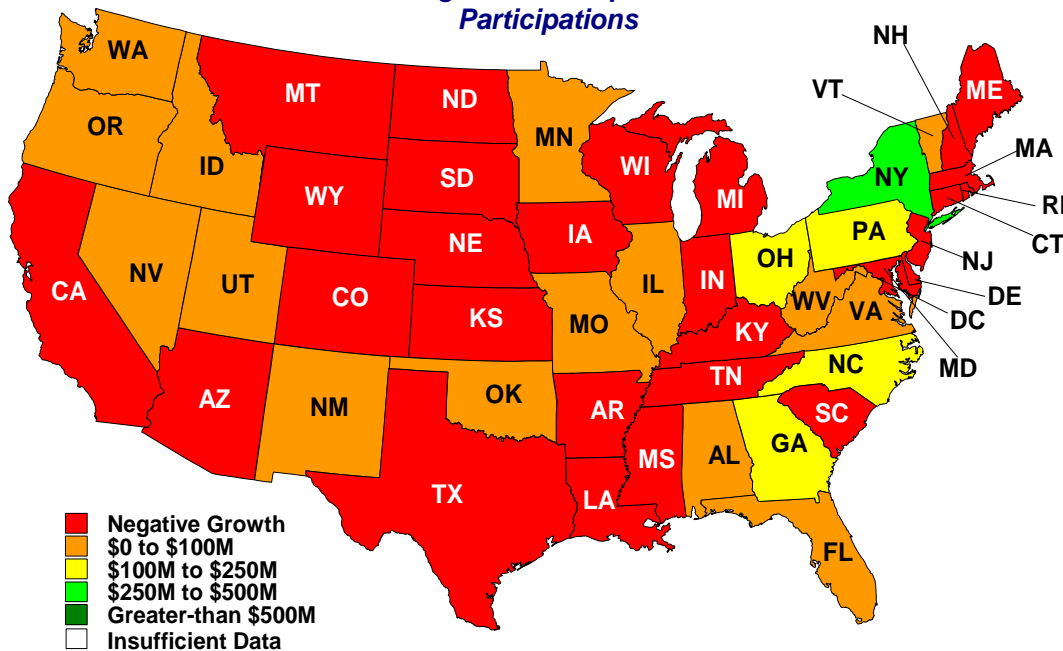
*Based on grouping of similar 2-digit NAICS codes.

"Other" includes Agriculture, Utilities, Information, Professional Services, Educational Services, Admin & Waste Mgmt, Public Administration, and Other Services.

* Growth in outstandings in Sep 2017 from Aug 2017
Excludes CRE Loans

Loan Growth Dynamics – Aug 2017 vs. Sep 2017 – Participations

Growth in Outstandings Aug 2017 vs. Sep 2017 Participations



In September, growth in participation balances was concentrated in a small number of states.

- **New York** (+1.9%) led the market for participation balance growth in September.
- **California** (-1.7%), last month's top ranked state for participation balance growth, reported a large decline in September. The decrease was focused in the Professional, Scientific, & Tech subsector.

\$ Change in Outstandings

Top 5 States

1. New York
2. Ohio
3. Pennsylvania
4. Georgia
5. North Carolina

Bottom 5 States

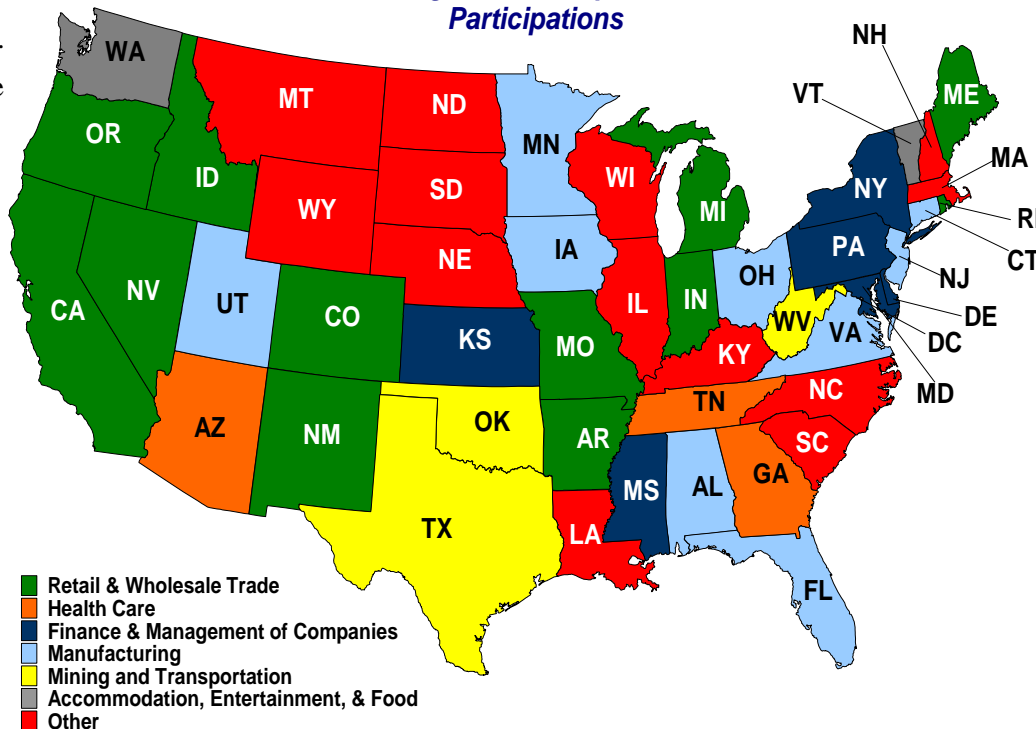
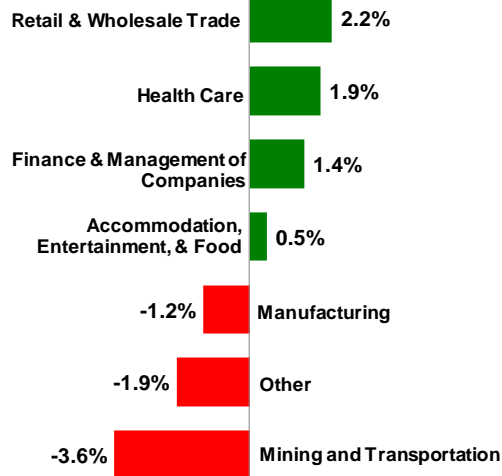
1. California
2. Texas
3. Connecticut
4. Washington DC
5. Colorado

■ For participations, the **Retail & Wholesale Trade** sector displayed the fastest pace of balance growth in September, a trend reflected across a large number of states.

■ A large decrease in participations for the **Mining and Transportation** sector weighed down overall balance growth in September.

Growth in Outstandings - Predominant C&I Industries* Aug 2017 vs. Sep 2017 Participations

Growth in Outstandings* - By Industry Participations



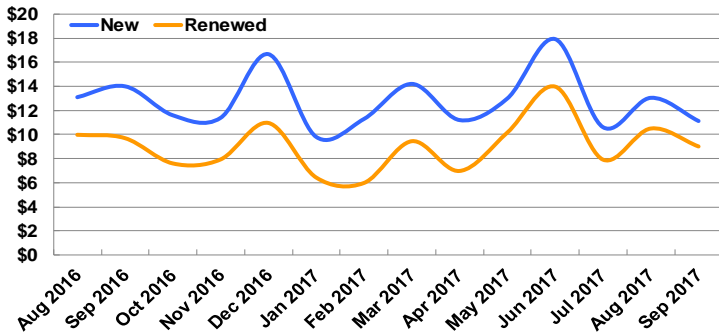
*Based on grouping of similar 2-digit NAICS codes.

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* Growth in outstandings in Sep 2017 from Aug 2017
Excludes CRE Loans

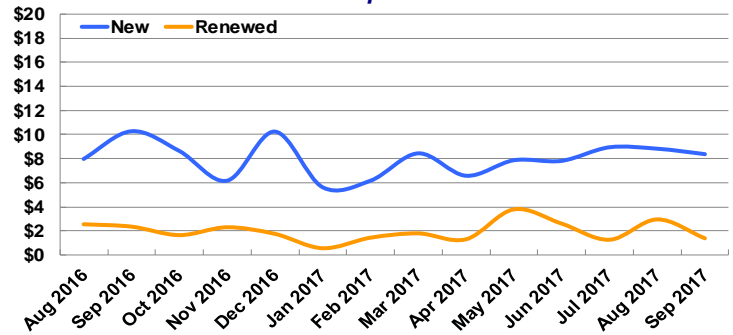
Portfolio Mix – New and Renewed Loans

New and Renewed Loans Trend (\$ Billions)
Bilateral Loans



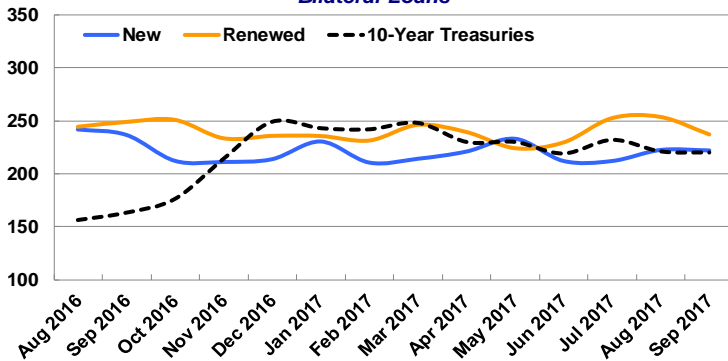
- Volume for both new and renewed bilateral loans decreased in September from the prior month.
- Aggregate new/renewed bilateral volume in September was down from a year ago, led by lower levels of new loans.

New and Renewed Loans Trend (\$ Billions)
Participations



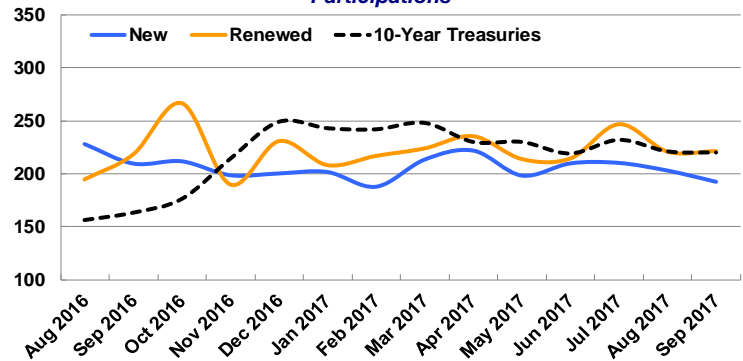
- New participation volume declined slightly in September, falling beneath the levels seen in the same period a year ago.
- Renewed participation volume was down in September relative to both last month and September of the prior year.

LIBOR-Equivalent Spread (in BPS) Trend
Bilateral Loans



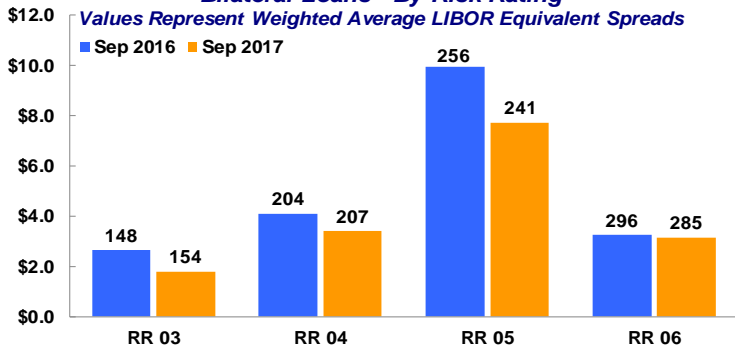
- The average spread for new bilateral loans held steady in September from last month but was down from a year ago.
- For bilateral renewals, spread pricing was down in September from both last month and the same month a year earlier.

LIBOR-Equivalent Spread (in BPS) Trend
Participations



- Spread pricing for new participations continued to fall in September, trending beneath the average seen a year ago.
- The spread for renewed participations held steady in September and was on par with the average seen a year ago.

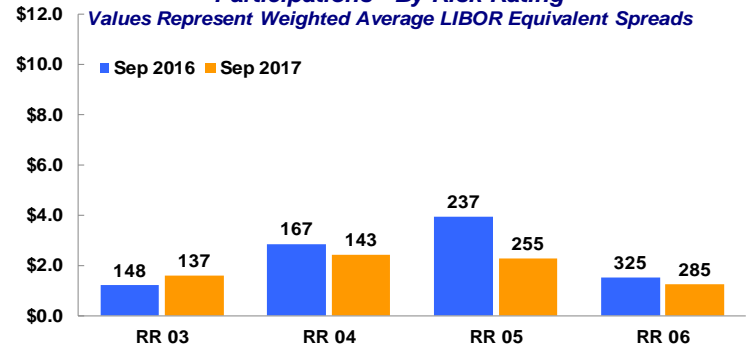
Year-over-Year New & Renewed Volume (\$ Billions)
Bilateral Loans - By Risk Rating



- September's year-over-year decline in new/renewed bilateral volume was driven mainly by loans risk rated 05 (avg. risk).
- Over the last year, spreads increased for bilateral loans risk rated 03 and 04 and declined for loans risk rated 05 and 06.

Risk Ratings based on the RMA 10-point obligor risk rating scale.

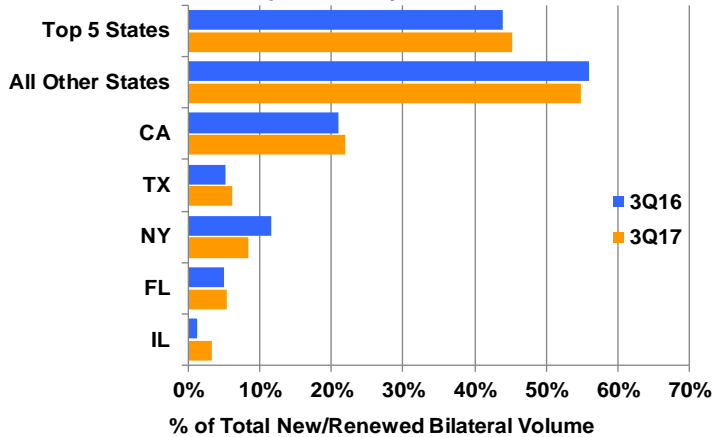
Year-over-Year New & Renewed Volume (\$ Billions)
Participations - By Risk Rating



- For new/renewed participations, volume was up slightly in September from a year ago for loans risk rated 03.
- Spread pricing for new/renewed participations risk rated 06 (low pass) was down sharply in September from a year ago.

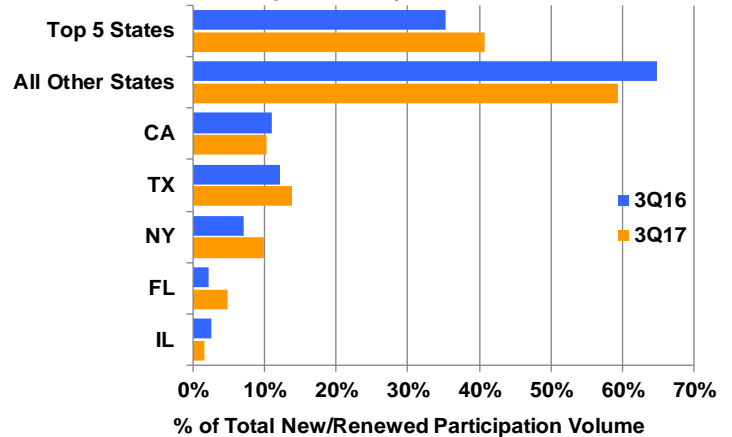
Regional Analysis – Top 5 States*

**Share of New/Renewed Volume
Bilateral Loans
Top 5 States by GDP**



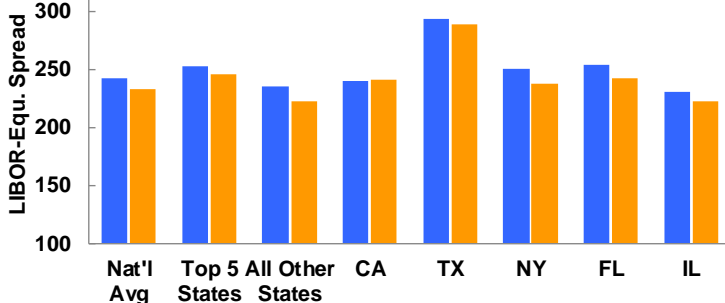
- The percentage of total new/renewed bilateral loan volume focused in the top 5 states increased in 3Q17 from a year ago.

**Share of New/Renewed Volume
Participations
Top 5 States by GDP**



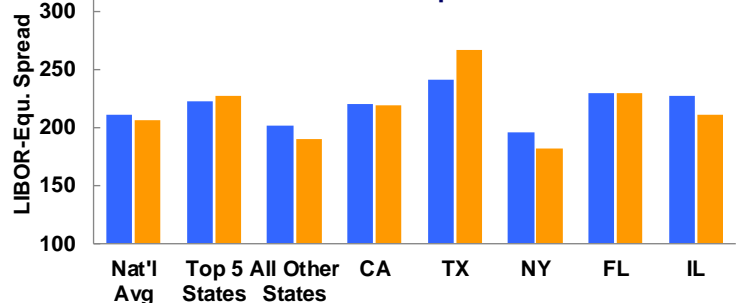
- The top states for GDP captured over one-third of the total new/renewed participation volume in 3Q17.

**LIBOR-Equivalent Spread (in BPS) Trend
New/Renewed Bilateral Loans**



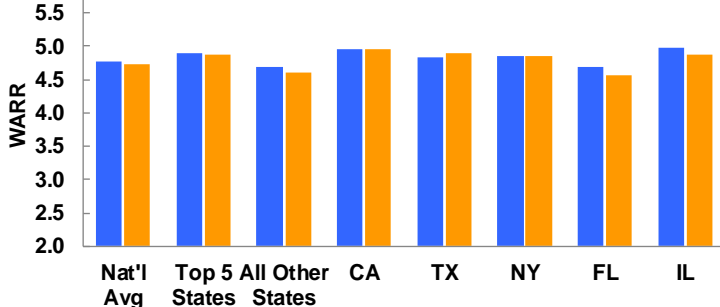
- For new/renewed bilateral loans, spread pricing for the top 5 states exceeded the average for all other states in 3Q17.

**LIBOR-Equivalent Spread (in BPS) Trend
New/Renewed Participations**



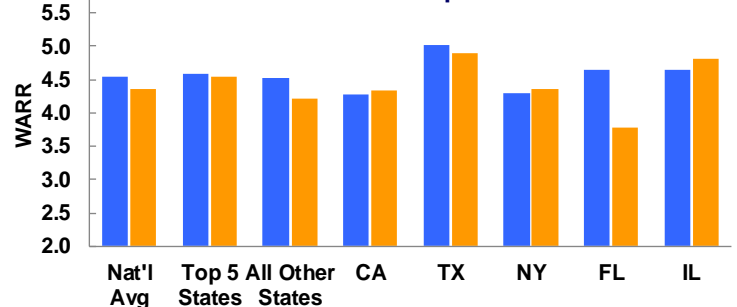
- Spreads on new/renewed participations widened year over year in 3Q17 for the top 5 states, led by the increase in *Texas*.

**Wtd Avg Risk Rating (WARR) Trend
New/Renewed Bilateral Loans**



- The above-average spread pricing seen for bilateral loans across the top 5 states was matched by a higher wtd avg risk rating.

**Wtd Avg Risk Rating (WARR) Trend
New/Renewed Participations**

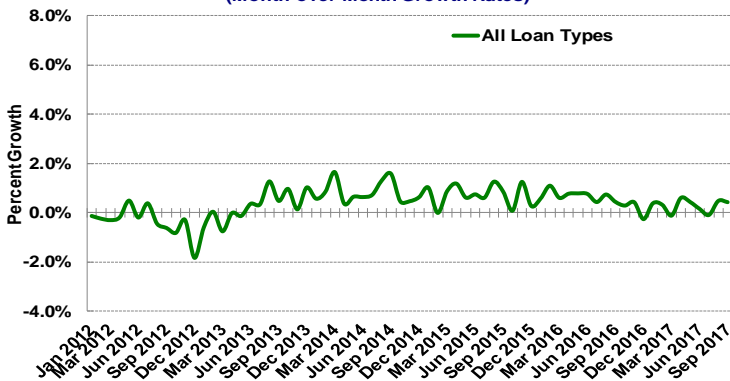


- The top 5 states displayed a less pronounced improvement in participation credit risk versus the trend for all other states.

*Top 5 States based on 2016 U.S. GDP. Bureau of Economic Analysis.
Risk Ratings based on the RMA 10-point obligor risk rating scale.

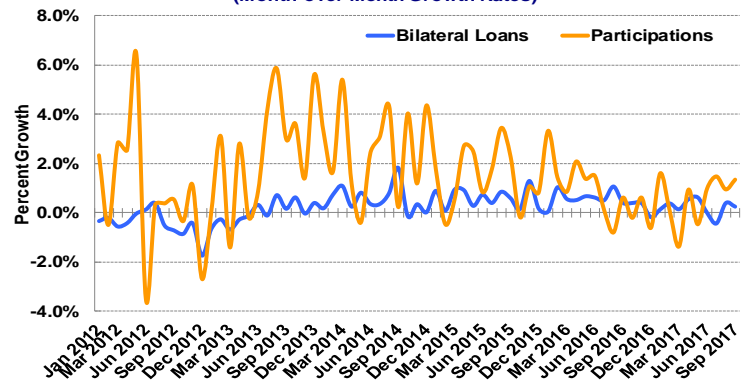
Commercial Real Estate (CRE) – Growth and Pricing Dynamics

Growth in Outstandings - Monthly Trend - CRE
(Month-over-Month Growth Rates)



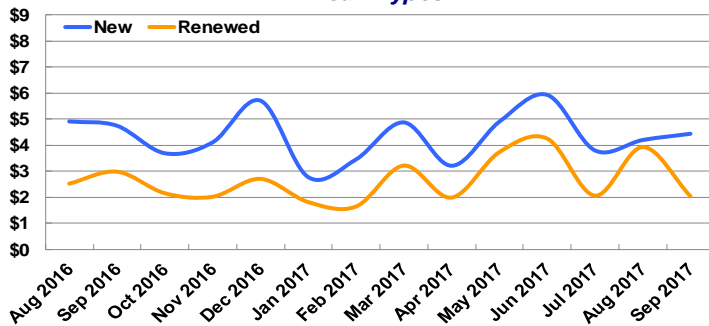
- Total CRE balances increased +0.4% month over month in September, a slightly slower pace than seen in August.
- September's growth rate for CRE loan balances was nearly identical to the rate seen in the same month a year earlier.

Growth in Outstandings - Monthly Trend - CRE
(Month-over-Month Growth Rates)



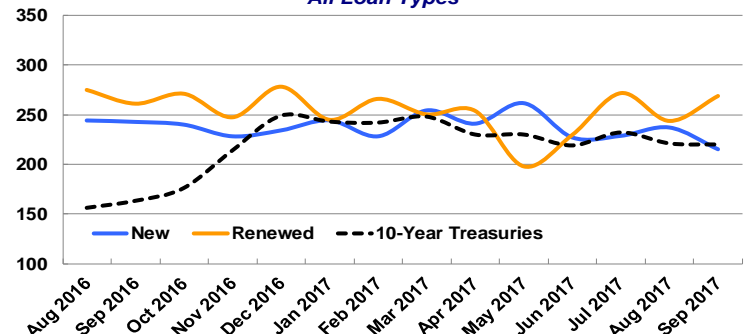
- CRE bilateral loan balances continued to grow in September, (+0.3%), though at a slower pace than seen last month.
- Growth in CRE participations accelerated in September, reaching a far higher growth rate than seen a year ago.

New and Renewed CRE Loans Trend (\$ Billions)
All Loan Types



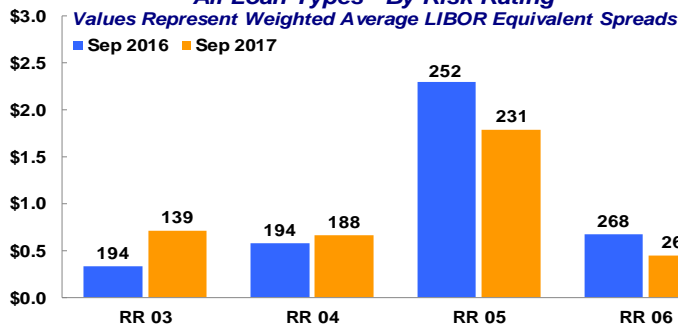
- New CRE volume continued to rise in September but fell beneath the levels seen in September of the prior year.
- Renewed CRE volume was down sharply in September when compared to both last month and September of the prior year.

LIBOR-Equivalent Spread (in BPS) Trend - CRE
All Loan Types



- The average spread for new CRE loans declined in September, falling to the lowest level seen over the last year.
- For CRE renewals, spread pricing was up in September when compared to both last month and September of the prior year.

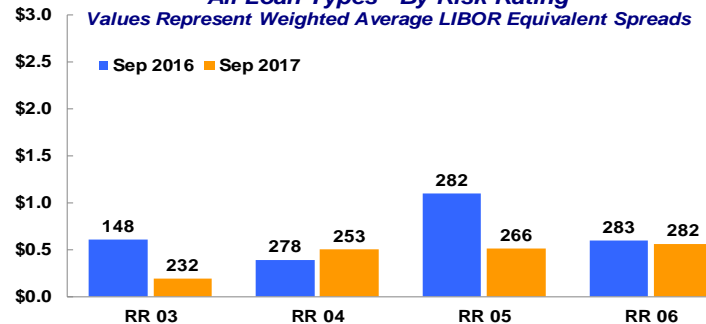
Year-over-Year New Volume (\$ Billions) - CRE
All Loan Types - By Risk Rating



- In September, growth in new CRE volume on a year-over-year basis was driven predominantly by loans risk rated 03.
- The year-over-year increase in volume for new CRE loans risk rated 03 was matched by a large decline in spread.

Risk Ratings based on the RMA 10-point obligor risk rating scale.

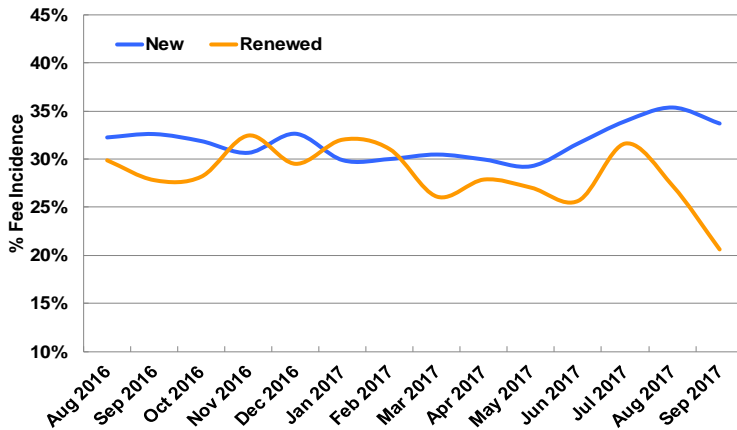
Year-over-Year Renewed Volume (\$ Billions) - CRE
All Loan Types - By Risk Rating



- Renewed CRE volume was down sharply in September from a year ago for CRE renewals risk rated 03 and 05.
- Pricing for CRE renewals was up year over year for loans risk rated 03 but was down across the other risk segments.

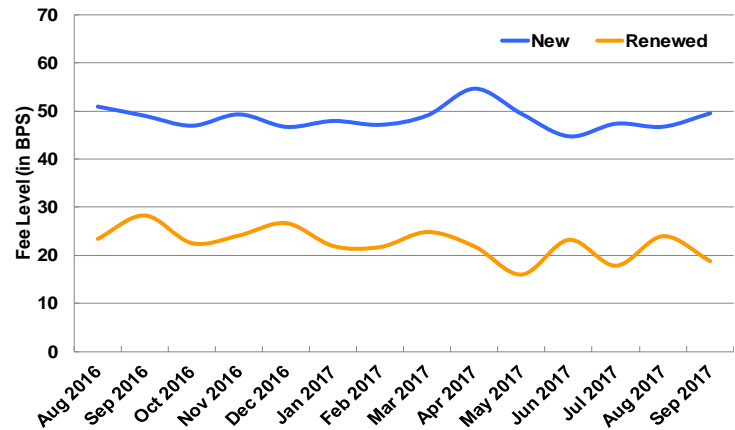
Upfront Fee Performance – Bilateral Loans

**Upfront Fee Incidence Trend
New and Renewed Bilateral Loans**



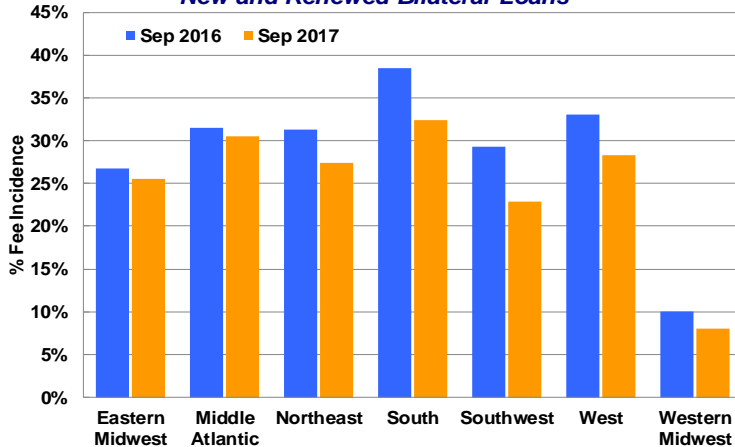
- The Upfront fee incidence for new bilateral loans declined in September but remained above the level seen a year ago.
- The Upfront fee incidence for bilateral renewals continued to trend downwards in September, falling to the lowest level seen over the last year.

**Upfront Fee Level (in BPS) Trend
New and Renewed Bilateral Loans**



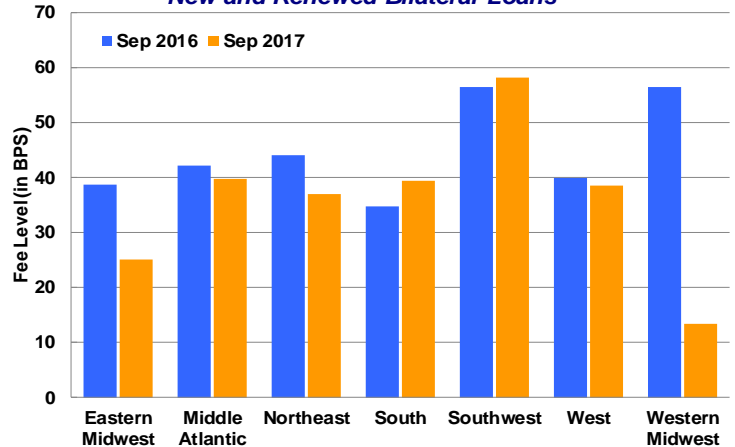
- The Upfront fee level for new bilateral loans edged higher in September and was on par with the level seen a year ago.
- The Upfront fee level for bilateral renewals was down in September when compared to both last month and September of the prior year.

**Upfront Fee Incidence by Geographic Region
New and Renewed Bilateral Loans**



- Across every geographic region, Upfront fee incidence was down in September from the same month a year earlier.
- Upfront fee incidence rates for new/renewed bilateral loans continue to vary widely across geographic regions, with the **South** reporting the highest rate in September.

**Upfront Fee Level (in BPS) by Geographic Region
New and Renewed Bilateral Loans**



- For new/renewed loans in September, the **Southwest** ranked highest across the regions for Upfront fee level.
- On a year-over-year basis, Upfront fee levels were up in September for the **South** and **Southwest** regions and down across the other geographic markets.

Footnotes

1. The LIBOR-equivalent spread for Prime- and LIBOR-based loans is calculated by subtracting the one-month LIBOR rate (as of the last business day of the month) from the actual interest rate.
2. The LIBOR-equivalent spread for fixed-rate loans is calculated by subtracting the Federal Reserve swap rate in effect on the day that the loan was originated or renewed from the actual interest rate.
3. A bilateral loan is a one bank, one borrower lending relationship.
4. Geographic data refers to the location of the borrower, not necessarily the bank booking the loan.
5. CRE loans are investor real estate loans for the purpose of construction, land development, and other land loans; multifamily residential properties; and loans secured by other nonfarm nonresidential properties. Owner occupied is not included.
6. Risk Ratings based on the RMA 10-point obligor risk rating scale. This scale contains 6 "Pass" gradations, and the standard regulatory classification gradations of Special Mention, Substandard, Doubtful, and Loss (grades 7-10, respectively).
7. Upfront Fee Incidence represents the number of obligations with Upfront fees as a percentage of all obligations.
8. Upfront Fee Level (in BPS) represents the amount of Upfront fees assessed as a percentage of the original/last renewed amount for only those deals with Upfront fees.

Rates by Loan Size: New – Bilateral Loans

	Loan Size < \$1M			Loan Size \$1M < \$5M			Loan Size \$5M < \$25M			Loan Size >= \$25M		
	Sep 2016	Aug 2017	Sep 2017	Sep 2016	Aug 2017	Sep 2017	Sep 2016	Aug 2017	Sep 2017	Sep 2016	Aug 2017	Sep 2017
FIXED-RATE LOANS												
Interest Rate	3.77	4.26	4.25	3.63	4.14	4.16	2.98	3.78	3.02	3.13	N/A	N/A
LIBOR-Equivalent Spread	2.52	2.38	2.34	2.31	2.19	2.15	1.64	1.81	1.20	1.86	N/A	N/A
WARR	4.8	4.7	4.7	4.8	4.9	5.0	4.5	4.7	4.6	3.1	N/A	N/A
LIBOR-RATE LOANS												
Interest Rate	2.98	3.63	3.62	2.70	3.47	3.53	2.71	3.44	3.44	2.72	2.98	2.91
LIBOR-Equivalent Spread	2.45	2.40	2.39	2.17	2.24	2.30	2.18	2.21	2.21	2.19	1.75	1.67
WARR	4.5	4.5	4.6	4.6	4.6	4.7	4.7	4.9	4.7	4.3	4.4	3.8
PRIME-RATE LOANS												
Interest Rate	4.55	5.20	5.15	4.13	4.83	4.84	3.67	4.13	4.52	3.96	3.90	4.49
LIBOR-Equivalent Spread	4.02	3.97	3.92	3.60	3.60	3.61	3.14	2.89	3.28	3.43	2.67	3.26
WARR	5.1	5.1	5.1	5.1	5.1	5.1	5.0	4.9	5.2	4.7	5.0	5.1

Rates by Loan Size: Renewed – Bilateral Loans

	Loan Size < \$1M			Loan Size \$1M < \$5M			Loan Size \$5M < \$25M			Loan Size >= \$25M		
	Sep 2016	Aug 2017	Sep 2017	Sep 2016	Aug 2017	Sep 2017	Sep 2016	Aug 2017	Sep 2017	Sep 2016	Aug 2017	Sep 2017
FIXED-RATE LOANS												
Interest Rate	4.43	4.64	4.61	4.61	4.35	4.38	3.96	3.71	3.76	N/A	N/A	N/A
LIBOR-Equivalent Spread	3.29	2.90	2.86	3.53	2.68	2.61	2.77	2.09	1.93	N/A	N/A	N/A
WARR	5.6	5.4	5.4	5.6	5.3	5.2	4.6	4.3	5.6	N/A	N/A	N/A
LIBOR-RATE LOANS												
Interest Rate	3.48	3.98	3.89	3.11	3.68	3.60	2.72	3.39	3.45	2.32	3.29	3.00
LIBOR-Equivalent Spread	2.95	2.75	2.66	2.58	2.45	2.37	2.19	2.15	2.21	1.79	2.06	1.77
WARR	5.4	5.2	5.3	5.4	5.2	5.2	4.9	5.1	5.1	4.7	4.9	4.4
PRIME-RATE LOANS												
Interest Rate	4.48	5.28	5.25	4.00	4.62	4.53	4.15	4.51	4.87	3.96	4.33	N/A
LIBOR-Equivalent Spread	3.95	4.04	4.02	3.46	3.39	3.30	3.62	3.28	3.63	3.43	3.10	N/A
WARR	5.5	5.4	5.3	5.5	5.3	5.3	5.3	4.6	5.6	3.7	2.6	N/A

Weighted Average Risk Rating (WARR) based on the RMA 10-point obligor risk rating scale.



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