

## TYCHOS SECTOR RISK REPORT

		2017	2018	2019	2020	2021 Q1
Total Private Debt	Debt to GDP	156%	155%	156%	171%	165%
	5 year % change	1%	1%	2%	12%	8%
	\$ in billions	\$30,494	\$31,967	\$33,381	\$35,738	\$36,302
Business Debt	Debt to GDP	79%	80%	81%	91%	88%
	5 year % change	13%	12%	11%	22%	16%
	\$ in billions	\$15,463	\$16,462	\$17,370	\$19,099	\$19,395
	Bond Default Rate	0.3%	0.6%	1.0%	1.9%	0.3%
Household Debt	Debt to GDP	77%	75%	75%	79%	77%
	5 year % change	-8%	-8%	-6%	3%	0%
	\$ in billions	\$15,032	\$15,506	\$16,011	\$16,638	\$16,907
	*Delinquency Rate	3.1%	3.1%	3.2%	2.3%	2.3%

\* Business and Private Debt totals include private placement securities.

\* 90+ Day delinquency rate

## Areas of Concern

Corporate Sectors		2017	2018	2019	2020	2021 Q1
Communication Services	Debt to GDP	7.2%	6.9%	7.4%	7.6%	7.4%
	5 year % change	23%	17%	24%	22%	19%
	\$ in billions	\$1,401	\$1,421	\$1,584	\$1,598	\$1,632
	Default Rate	0.0%	0.0%	0.1%	5.2%	2.2%
Consumer Discretionary	Debt to GDP	6.2%	6.0%	7.4%	8.0%	7.4%
	5 year % change	19%	11%	31%	44%	28%
	\$ in billions	\$1,208	\$1,242	\$1,578	\$1,671	\$1,634
	Default Rate	1.4%	1.6%	0.7%	1.2%	0.0%
Healthcare	Debt to GDP	6.1%	6.4%	6.8%	7.0%	6.0%
	5 year % change	30%	39%	35%	15%	3%
	\$ in billions	\$1,197	\$1,321	\$1,462	\$1,456	\$1,330
	Default Rate	0.1%	2.2%	2.2%	2.3%	0.0%
Information Technology	Debt to GDP	5.3%	5.0%	5.4%	5.9%	5.4%
	5 year % change	71%	52%	57%	47%	32%
	\$ in billions	\$1,032	\$1,033	\$1,161	\$1,227	\$1,199
	Default Rate	0.3%	0.0%	0.0%	0.2%	0.0%
Automotive	Debt to GDP	2.4%	2.4%	2.5%	2.6%	2.4%
	5 year % change	38%	27%	27%	31%	12%
	\$ in billions	\$468	\$497	\$526	\$539	\$520
	Default Rate	0.0%	0.0%	0.0%	0.7%	0.0%

Private Placements		2017	2018	2019	2020	2021 Q1
Private Placement Securities	to GDP	4.9%	4.8%	5.4%	6.7%	6.8%
	5 year % change	45%	33%	37%	54%	59%
	\$ in billions	\$949	\$997	\$1,158	\$1,394	\$1,495

Household Sectors		2017	2018	2019	2020	2021 Q1
Margin Debt	Debt to GDP	3.3%	2.7%	2.7%	3.7%	3.7%
	5 year % change	50%	-6%	-4%	32%	42%
	\$ in billions	\$643	\$554	\$579	\$778	\$823

▲ High Concern  
 ▲ Concern  
 ▲ Low Concern  
 ▲ Current or recent crisis  
 + No Current Concern

HY: High-Yield (BB or Lower)

n/a: Data Not Available

## Areas of Concern Continued

Private Debt Lenders		2017	2018	2019	2020	2021 Q1
Federal Government (Student & other loans)	Debt to GDP	6.7%	6.8%	7.0%	8.4%	8.1%
	5 year % change	39%	14%	21%	37%	30%
	\$ in billions	\$1,305	\$1,403	\$1,497	\$1,749	\$1,785
Credit Unions	Debt to GDP	4.7%	4.9%	5.0%	5.3%	5.0%
	5 year % change	34%	34%	29%	28%	22%
	\$ in billions	\$921	\$1,004	\$1,063	\$1,115	\$1,110
Rest of World (Foreign Loans to US Businesses)	Debt to GDP	1.9%	3.6%	3.9%	4.3%	4.2%
	5 year % change	116%	327%	298%	280%	266%
	\$ in billions	\$376	\$733	\$831	\$906	\$936
Margin Accounts	Debt to GDP	3.3%	2.7%	2.7%	3.7%	3.7%
	5 year % change	50%	-6%	-4%	35%	42%
	\$ in billions	\$643	\$554	\$579	\$778	\$823

Securities Market		2017	2018	2019	2020	2021 Q1
Asset-Backed Securities: CLO	Debt to GDP	2.8%	3.0%	3.2%	3.2%	n/a
	5 year % change	60%	63%	45%	29%	n/a
	\$ in billions	\$541	\$617	\$686	\$662	n/a

• CLO - Collateralized Loan Obligations

Derivative Activity by Contract Type		2017	2018	2019	2020	2021 Q1
Equities	Debt to GDP	15.8%	16.4%	17.7%	18.0%	18.2%
	5 year % change	30%	35%	20%	37%	32%
	\$ in billions	\$3,080	\$3,374	\$3,796	\$3,775	\$4,005

Derivative Activity by Product		2017	2018	2019	2020	2021 Q1
Total Options	Debt to GDP	198.8%	184.4%	168.5%	152.8%	167.6%
	5 year % change	6%	-4%	-9%	-10%	64%
	\$ in billions	\$38,841	\$38,009	\$36,117	\$31,992	\$36,975
Total Swaps	Debt to GDP	483.7%	475.1%	450.8%	460.6%	488.3%
	5 year % change	-43%	-48%	-42%	-22%	39%
	\$ in billions	\$94,524	\$97,923	\$96,614	\$96,423	\$107,718

Refinance Statistics		2017	2018	2019	2020	2021 Q1
Total Combined Cash-out and Second Mortgages/HELOC Consolidation Volume	to GDP	0.5%	0.5%	0.6%	1.1%	1.5%
	5 Year % Change	21%	39%	164%	206%	188%
	\$ in billions	\$94	\$101	\$138	\$228	\$261

▲ High Concern    ▲ Concern    ▲ Low Concern    ▲ Current or recent crisis    + No Current Concern

HY: High-Yield (BB or Lower)

n/a: Data Not Available

## Corporate Debt Summary

Debt by Industry		2017	2018	2019	2020	2021 Q1	
CRE	Debt to GDP	22.1%	22.2%	22.7%	24.5%	23.5%	
	5 year % change	9%	10%	12%	17%	12%	
	\$ in billions	\$4,316	\$4,566	\$4,857	\$5,124	\$5,174	⚠
	Default Rate	n/a	n/a	n/a	n/a	n/a	
	HY Debt to GDP	n/a	n/a	n/a	n/a	n/a	
Utilities	Debt to GDP	7.5%	7.1%	7.5%	8.1%	7.5%	
	5 year % change	-7%	-10%	-5%	2%	0%	+
	\$ in billions	\$1,461	\$1,467	\$1,615	\$1,698	\$1,663	
	Default Rate	0.0%	0.3%	0.4%	0.3%	0.0%	
	HY Debt to GDP	0.41%	0.30%	0.31%	0.68%	0.65%	
Communication Services	Debt to GDP	7.2%	6.9%	7.4%	7.6%	7.4%	
	5 year % change	23%	17%	24%	22%	19%	⚠
	\$ in billions	\$1,401	\$1,421	\$1,584	\$1,598	\$1,632	
	Default Rate	0.0%	0.0%	0.1%	5.2%	2.2%	
	HY Debt to GDP	1.02%	0.85%	0.93%	0.89%	0.89%	
Industrials	Debt to GDP	9.4%	9.3%	9.5%	10.4%	8.1%	
	5 year % change	-13%	-7%	3%	15%	-3%	+
	\$ in billions	\$1,828	\$1,917	\$2,043	\$2,180	\$1,785	
	Default Rate	0.1%	0.2%	0.1%	2.7%	0.0%	
	HY Debt to GDP	0.88%	0.90%	1.10%	1.27%	1.23%	
Consumer Discretionary	Debt to GDP	6.2%	6.0%	7.4%	8.0%	7.4%	
	5 year % change	19%	11%	31%	44%	28%	⚠
	\$ in billions	\$1,208	\$1,242	\$1,578	\$1,671	\$1,634	
	Default Rate	1.4%	1.6%	0.7%	1.2%	0.0%	
	HY Debt to GDP	1.40%	1.28%	1.44%	2.05%	1.99%	
Healthcare	Debt to GDP	6.1%	6.4%	6.8%	7.0%	6.0%	
	5 year % change	30%	39%	35%	15%	3%	⚠
	\$ in billions	\$1,197	\$1,321	\$1,462	\$1,456	\$1,330	
	Default Rate	0.1%	2.2%	2.2%	2.3%	0.0%	
	HY Debt to GDP	0.61%	0.64%	0.58%	0.55%	0.51%	
Information-Technology	Debt to GDP	5.3%	5.0%	5.4%	5.9%	5.4%	
	5 year % change	71%	52%	57%	47%	32%	⚠
	\$ in billions	\$1,032	\$1,033	\$1,161	\$1,227	\$1,199	
	Default Rate	0.3%	0.0%	0.0%	0.2%	0.0%	
	HY Debt to GDP	0.76%	0.78%	0.66%	0.62%	0.59%	
Energy	Debt to GDP	6.4%	5.9%	6.1%	6.1%	5.1%	
	5 year % change	5%	-8%	-13%	-15%	-28%	+
	\$ in billions	\$1,243	\$1,212	\$1,311	\$1,268	\$1,132	
	Default Rate	0.7%	0.4%	3.0%	3.6%	0.4%	
	HY Debt to GDP	1.21%	0.90%	0.80%	1.00%	0.94%	
Real Estate	Debt to GDP	3.7%	3.5%	3.7%	3.8%	3.8%	
	5 year % change	10%	3%	5%	3%	3%	+
	\$ in billions	\$712	\$716	\$800	\$798	\$798	
	Default Rate	0.0%	0.0%	0.0%	1.0%	0.8%	
	HY Debt to GDP	0.42%	0.40%	0.36%	0.41%	0.42%	
Consumer Staples	Debt to GDP	3.7%	3.7%	3.8%	4.1%	3.4%	
	5 year % change	15%	9%	11%	16%	3%	+
	\$ in billions	\$727	\$770	\$816	\$847	\$748	
	Default Rate	0.4%	0.3%	2.5%	1.7%	0.0%	
	HY Debt to GDP	0.27%	0.29%	0.30%	0.46%	0.43%	
Materials	Debt to GDP	2.5%	2.4%	2.4%	2.4%	2.2%	
	5 year % change	1%	-6%	-6%	-9%	-17%	+
	\$ in billions	\$494	\$500	\$516	\$498	\$473	
	Default Rate	0.3%	0.0%	0.1%	0.2%	0.0%	
	HY Debt to GDP	0.52%	0.48%	0.47%	0.46%	0.42%	
Memo: Automotive	Debt to GDP	2.4%	2.4%	2.5%	2.6%	2.4%	
	5 year % change	38%	27%	27%	31%	12%	⚠
	\$ in billions	\$468	\$497	\$526	\$539	\$520	
	Default Rate	0.0%	0.0%	0.0%	0.0%	0.0%	
	HY Debt to GDP	0.19%	0.14%	0.16%	0.70%	0.67%	
Memo: Agriculture	Debt to GDP	2.0%	2.0%	2.0%	2.1%	2.0%	
	5 year % change	9%	4%	-1%	6%	0%	+
	\$ in billions	\$390	\$402	\$419	\$432	\$442	
	*Delinquency Rate	1.5%	1.7%	1.8%	1.9%	1.9%	
	HY Debt to GDP	n/a	n/a	n/a	n/a	n/a	
Memo: Corporate Sector High-Yield Debt	Debt to GDP	7.5%	6.8%	6.9%	8.4%	8.1%	
	5 year % change	-6%	-12%	-12%	10%	7%	+
	\$ in billions	\$1,467	\$1,408	\$1,488	\$1,754	\$1,782	

• Corporate sector refers to non-financial corporations and does not include financial institutions

\* Delinquent Commercial Bank loans (30+ Days) as a percentage of total outstanding loans

⚠ High Concern   ⚠ Concern   ⚠ Low Concern   ⚠ Current or recent crisis   + No Current Concern

HY: High-Yield (BB or Lower)   n/a: Data Not Available

## Other Non-Financial Corporate Liabilities

Private Placements		2017	2018	2019	2020	2021 Q1
Private Placement Securities	to GDP	4.9%	4.8%	5.4%	6.7%	6.8%
	5 year % change	45%	33%	37%	54%	59%
	\$ in billions	\$949	\$997	\$1,158	\$1,394	\$1,495



- A Private Placement is a sale of stock shares or bonds to pre-selected investors and institutions rather than on the open market.

## Commercial Real Estate Debt Summary

CRE Debt		2017	2018	2019	2020	2021 Q1
Multi-Family Residential Mortgages	Debt to GDP	7.0%	7.2%	7.6%	8.4%	8.1%
	5 year % change	27%	29%	32%	37%	31%
	\$ in billions	\$1,363	\$1,488	\$1,623	\$1,756	\$1,785
Commercial Mortgages	Debt to GDP	14%	14%	14%	15%	14%
	5 year % change	1%	2%	3%	9%	4%
	\$ in billions	\$2,717	\$2,832	\$2,967	\$3,089	\$3,108
Farm Mortgages	Debt to GDP	1.2%	1.2%	1.2%	1.3%	1.3%
	5 year % change	13%	8%	11%	16%	10%
	\$ in billions	\$236	\$246	\$267	\$279	\$281
Total CRE Debt	Debt to GDP	22.1%	22.2%	22.7%	24.5%	23.5%
	5 year % change	9%	10%	12%	17%	12%
	\$ in billions	\$4,316	\$4,566	\$4,857	\$5,124	\$5,174
Memo: Construction and Land Development Loans	Debt to GDP	1.7%	1.7%	1.7%	1.8%	1.8%
	5 year % change	38%	36%	24%	22%	14%
	\$ in billions	\$338	\$350	\$362	\$386	\$388
Commercial Real Estate Bank Loans	Charge-Off Rates	0.0%	0.0%	0.0%	0.2%	0.1%
	Delinquency Rates	0.8%	0.7%	0.7%	1.1%	1.0%



- Multi-Family Residential Mortgages are loans secured by housing units in structures with five or more units.
- Commercial Mortgages are loans secured by non-farm non-residential properties, such as office buildings, retail stores, and industrial facilities, as well as construction and land development loans associated with commercial properties.
- Farm mortgages are loans secured by farm properties. In terms of residential real estate, a farm is on a property that generates at least \$1,000 in income from agricultural products. Farm mortgage debt is considered a liability of the non-financial corporate and non-financial non-corporate business sectors.
- Construction and Land Development - Represents loans secured by real estate with maturities of 60 months or less made to finance land development or the on-site construction of industrial, commercial, residential or farm buildings. Includes new construction, additions or alterations to existing structures and razing existing structures to make way for new structures.

## Household Debt Summary

Household debt by type		2017	2018	2019	2020	2021 Q1	
<b>Mortgage Debt</b>	Debt to GDP	50.8%	49.5%	48.9%	52.2%	50.2%	
	5 year % change	-14%	-12%	-9%	0%	-3%	
	\$ in billions	\$9,929	\$10,204	\$10,482	\$10,925	\$11,071	+
	*Delinquency Rate	1.3%	1.1%	1.1%	0.6%	0.6%	
	**CB Delinquency Rate	3.6%	2.8%	2.4%	2.7%	2.8%	
<b>Student Loans</b>	Debt to GDP	7.6%	7.6%	7.7%	8.1%	7.8%	
	5 year % change	17%	12%	9%	9%	7%	
	\$ in billions	\$1,489	\$1,571	\$1,646	\$1,705	\$1,730	+
	*Delinquency Rate	11.0%	11.4%	11.1%	6.5%	6.2%	
	***Alt Delinquency Rate	26.7%	28.1%	28.1%	n/a	n/a	
<b>Auto Loans</b>	Debt to GDP	6.3%	6.2%	6.2%	6.6%	6.3%	
	5 year % change	29%	20%	14%	6%	8%	!
	\$ in billions	\$1,221	\$1,274	\$1,331	\$1,374	\$1,382	
	*Delinquency Rate	4.1%	4.5%	4.9%	4.8%	4.8%	
<b>Credit Cards</b>	Debt to GDP	4.3%	4.2%	4.3%	3.9%	3.5%	
	5 year % change	2%	4%	8%	-6%	-9%	
	\$ in billions	\$834	\$870	\$927	\$819	\$770	+
	*Delinquency Rate	7.6%	7.8%	8.4%	9.4%	10.0%	
<b>Margin Debt</b>	Debt to GDP	3.3%	2.7%	2.7%	3.7%	3.7%	
	5 year % change	50%	-6%	-4%	32%	42%	!
	\$ in billions	\$643	\$554	\$579	\$778	\$823	

\* Delinquent loans (90+ Days) as a percentage of total outstanding loans

\*\* Commercial Bank residential real estate loans secured by one-to-four family properties (30+ days delinquent) as a percentage of total outstanding loans

\*\*\* Delinquent loans (90+ Days) as a percentage of outstanding loans in repayment status

▲ High Concern  
 ▲ Concern  
 ▲ Low Concern  
 ▲ Current or recent crisis  
 + No Current Concern  
 HY: High-Yield (BB or Lower)      n/a: Data Not Available

## Student Loan Summary

Total Student Loans		2017	2018	2019	2020	2021 Q1
Student Loans	Debt to GDP	7.6%	7.6%	7.7%	8.1%	7.8%
	5 year % change	17%	12%	9%	9%	7%
	\$ in billions	\$1,489	\$1,571	\$1,646	\$1,705	\$1,730
	*Delinquency Rate	11.0%	11.4%	11.1%	6.5%	6.2%
	***Alt Delinquency Rate	26.7%	28.1%	28.1%	n/a	n/a
Repayment Status	Debt to GDP	3.7%	4.0%	4.0%	4.1%	n/a
	\$ in billions	\$671	\$740	\$784	\$848	n/a



Private Student Loans		2016	2017	2018	2019	2020 Q3
Private Student Loans	Debt/GDP	0.3%	0.3%	0.3%	0.3%	0.5%
	5 Year % Change	-9%	-12%	-13%	-16%	-32%
	\$ in Billions	\$64	\$63	\$65	\$64	\$65
	Delinquent Loans Bil \$	\$1	\$1	\$1	\$1	\$0
	**Delinquency Rate	2.08%	1.56%	1.67%	1.32%	0.66%
Repayment Status	Debt to GDP	0.3%	0.2%	0.2%	0.2%	0.2%
	\$ in billions	\$49	\$48	\$50	\$49	\$47
Deferment Status	Debt to GDP	0.1%	0.1%	0.1%	0.1%	0.1%
	\$ in billions	\$12	\$12	\$12	\$12	\$12
Grace Status	Debt to GDP	0.0%	0.0%	0.0%	0.0%	0.0%
	\$ in billions	\$1	\$2	\$2	\$2	\$4
Forbearance Status	Debt to GDP	0.0%	0.0%	0.0%	0.0%	0.0%
	\$ in billions	\$1	\$2	\$2	\$2	\$2



Federally Managed Student Loan Portfolio		2017	2018	2019	2020	2021 Q1
Federal Student Loans	Debt/GDP	7.0%	7.0%	7.0%	7.5%	7.1%
	5 Year % Change	19%	13%	9%	13%	7%
	\$ in Billions	\$1,367	\$1,439	\$1,510	\$1,566	\$1,565
	Delinquent Loans Bil \$	\$178	\$198	\$215	n/a	n/a
	**Delinquency Rate	28.8%	30.1%	29.9%	n/a	n/a
In-School Status	Debt to GDP	0.7%	0.7%	0.6%	0.6%	0.5%
	\$ in billions	\$139	\$138	\$132	\$125	\$118
Repayment Status	Debt to GDP	3.0%	3.2%	3.4%	0.1%	0.1%
	\$ in billions	\$587	\$661	\$719	\$15	\$16
Deferment Status	Debt to GDP	0.6%	0.6%	0.6%	0.6%	0.5%
	\$ in billions	\$120	\$129	\$132	\$117	\$108
Grace Status	Debt to GDP	0.3%	0.2%	0.2%	0.2%	0.1%
	\$ in billions	\$49	\$44	\$45	\$44	\$24
Forbearance Status	Debt to GDP	0.6%	0.6%	0.6%	4.4%	4.4%
	\$ in billions	\$122	\$119	\$130	\$927	\$969
Other Status	Debt to GDP	0.1%	0.1%	0.1%	0.0%	0.0%
	\$ in billions	\$10	\$10	\$10	\$9	\$8



- Federally managed student loan portfolio Includes outstanding principal and interest balance of Direct Loans and ED-held FFEL Program Loans; Total Federal Loans include Direct Loans, FFEL and Perkins Loans.

\* Delinquent loans (90+ Days) as a percentage of total outstanding loans

\*\* Delinquent loans (90+ Days) as a percentage of outstanding loans in repayment status

• Delinquency Demographics for Federal Loans have been delayed until March 31, 2021, the first quarter for which borrowers can be delinquent

High Concern
 Concern
 Low Concern
 Current or recent crisis
 No Current Concern  
 HY: High-Yield (BB or Lower)      n/a: Data Not Available

Fixed Income

Securities Market		2017	2018	2019	2020	2021 Q1	
Total Securities	Debt to GDP	205.1%	203.2%	204.1%	238.5%	n/a	
	5 year % change	-4%	-4%	-2%	16%	n/a	⚠
	\$ in billions	\$40,077	\$41,879	\$43,735	\$49,929	n/a	
Municipal Securities	Debt to GDP	20.0%	18.7%	18.0%	18.9%	18.0%	+
	5 year % change	-18%	-19%	-17%	-10%	-13%	
	\$ in billions	\$3,902	\$3,844	\$3,865	\$3,950	\$3,977	
Marketable Treasury Securities	Debt to GDP	74.0%	75.7%	77.8%	100.2%	96.9%	⚠
	5 year % change	9%	7%	9%	39%	31%	
	\$ in billions	\$14,469	\$15,608	\$16,673	\$20,973	\$21,381	
Mortgage Related Securities	Debt to GDP	47.6%	47.2%	47.7%	53.6%	n/a	+
	5 year % change	-13%	-9%	-5%	10%	n/a	
	\$ in billions	\$9,305	\$9,732	\$10,229	\$11,214	n/a	
Memo: Mortgage Related Securities: Agency MBS	Debt to GDP	35.4%	35.3%	36.0%	40.3%	n/a	⚠
	5 year % change	1%	0%	5%	18%	n/a	
	\$ in billions	\$6,924	\$7,269	\$7,711	\$8,439	n/a	
Memo: Mortgage Related Securities: Agency CMO	Debt to GDP	5.5%	5.4%	5.2%	6.7%	n/a	+
	5 year % change	-31%	-21%	-25%	6%	n/a	
	\$ in billions	\$1,081	\$1,103	\$1,117	\$1,395	n/a	
Memo: Mortgage Related Securities: Non-Agency CMBS	Debt to GDP	2.6%	2.6%	2.8%	2.9%	n/a	+
	5 year % change	-34%	-29%	-22%	-14%	n/a	
	\$ in billions	\$509	\$543	\$596	\$596	n/a	
Memo: Mortgage Related Securities: Non-Agency RMBS	Debt to GDP	4.1%	4.0%	3.8%	3.7%	n/a	+
	5 year % change	-47%	-38%	-34%	-26%	n/a	
	\$ in billions	\$791	\$817	\$805	\$784	n/a	
Corporate Debt Securities	Debt to GDP	46.1%	44.8%	44.7%	50.4%	48.3%	+
	5 year % change	2%	-2%	-3%	11%	4%	
	\$ in billions	\$9,008	\$9,238	\$9,581	\$10,560	\$10,651	
Federal Agency Securities	Debt to GDP	9.9%	8.9%	8.1%	8.1%	7.3%	+
	5 year % change	-23%	-27%	-30%	-26%	-30%	
	\$ in billions	\$1,935	\$1,842	\$1,726	\$1,694	\$1,615	
Money Market Securities (Commercial Paper)	Debt to GDP	4.9%	4.8%	4.9%	4.7%	5.0%	+
	5 year % change	-16%	-15%	-8%	-9%	6%	
	\$ in billions	\$966	\$996	\$1,045	\$987	\$1,105	
Asset-Backed Securities	Debt to GDP	7.5%	7.8%	7.8%	7.3%	n/a	+
	5 year % change	-6%	2%	1%	-3%	n/a	
	\$ in billions	\$1,458	\$1,616	\$1,664	\$1,536	n/a	
Memo: Asset-Backed Securities: Automobile	Debt to GDP	1.0%	1.1%	1.1%	1.0%	n/a	⚠
	5 year % change	19%	13%	8%	-5%	n/a	
	\$ in billions	\$203	\$223	\$236	\$206	n/a	
Memo: Asset-Backed Securities: Credit Card	Debt to GDP	0.7%	0.6%	0.5%	0.3%	n/a	+
	5 year % change	-17%	-19%	-40%	-54%	n/a	
	\$ in billions	\$129	\$124	\$101	\$68	n/a	
Memo: Asset-Backed Securities: Equipment	Debt to GDP	0.3%	0.4%	0.4%	0.3%	n/a	⚠
	5 year % change	11%	42%	15%	10%	n/a	
	\$ in billions	\$56	\$84	\$75	\$67	n/a	
Memo: Asset-Backed Securities: Other	Debt to GDP	0.9%	1.0%	1.1%	1.1%	n/a	⚠
	5 year % change	34%	35%	46%	36%	n/a	
	\$ in billions	\$179	\$206	\$235	\$225	n/a	
Memo: Asset-Backed Securities: Student Loans	Debt to GDP	0.9%	0.8%	0.7%	0.7%	n/a	+
	5 year % change	-38%	-40%	-40%	-38%	n/a	
	\$ in billions	\$177	\$171	\$159	\$144	n/a	
Memo: Asset-Backed Securities: CLO	Debt to GDP	2.8%	3.0%	3.2%	3.2%	n/a	⚠
	5 year % change	60%	63%	45%	29%	n/a	
	\$ in billions	\$541	\$617	\$686	\$662	n/a	
Memo: Asset-Backed Securities: CDO/SF/Other	Debt to GDP	0.9%	0.9%	0.8%	0.8%	n/a	+
	5 year % change	-58%	-46%	-42%	-32%	n/a	
	\$ in billions	\$173	\$191	\$172	\$165	n/a	

- MBS - Mortgage Backed Securities
- CMO - Collateralized Mortgage Obligation
- CMBS - Commercial Mortgage Backed Securities
- RMBS - Residential Mortgage Backed Securities
- CDO - Collateralized Debt Obligation
- CLO - Collateralized Loan Obligation
- SF - Structured Finance

⚠ High Concern   ⚠ Concern   ⚠ Low Concern   ⚠ Current or recent crisis   + No Current Concern

HY: High-Yield (BB or Lower)

n/a: Data Not Available



### Private Debt by Lender/Holder

Private Debt Lenders		2017	2018	2019	2020	2021 Q1	
US Chartered Depository Institutions	Debt to GDP	45.1%	44.7%	44.4%	46.6%	43.8%	+
	5 year % change	3%	5%	3%	6%	-0%	+
	\$ in billions	\$8,808	\$9,214	\$9,525	\$9,747	\$9,666	
Non-Financial Corporations, Debt Securities	Debt to GDP	36.4%	35.4%	36.1%	41.3%	40.3%	!
	5 year % change	16%	9%	8%	19%	15%	!
	\$ in billions	\$7,119	\$7,301	\$7,731	\$8,651	\$8,882	
Government Sponsored Enterprises	Debt to GDP	26.6%	25.9%	25.7%	29.3%	28.8%	+
	5 year % change	-11%	-11%	-8%	9%	8%	+
	\$ in billions	\$5,197	\$5,337	\$5,507	\$6,143	\$6,353	
Agency/GSE backed Mortgage Pools	Debt to GDP	10.9%	11.1%	11.2%	11.6%	11.0%	!
	5 year % change	22%	19%	19%	19%	13%	!
	\$ in billions	\$2,125	\$2,291	\$2,405	\$2,427	\$2,431	
Federal Government (Student & other loans)	Debt to GDP	6.7%	6.8%	7.0%	8.4%	8.1%	!
	5 year % change	39%	14%	21%	37%	30%	!
	\$ in billions	\$1,305	\$1,403	\$1,497	\$1,749	\$1,785	
Credit Unions	Debt to GDP	4.7%	4.9%	5.0%	5.3%	5.0%	!
	5 year % change	34%	34%	29%	28%	22%	!
	\$ in billions	\$921	\$1,004	\$1,063	\$1,115	\$1,110	
Issuers of Asset-Backed Securities	Debt to GDP	4.8%	4.5%	4.5%	4.7%	4.5%	+
	5 year % change	-50%	-38%	-31%	-22%	-24%	+
	\$ in billions	\$929	\$931	\$971	\$993	\$984	
Finance Companies	Debt to GDP	4.8%	4.5%	4.3%	4.4%	4.1%	+
	5 year % change	-28%	-30%	-31%	-18%	-19%	+
	\$ in billions	\$929	\$931	\$924	\$912	\$912	
Rest of World (Foreign Loans to US Businesses)	Debt to GDP	1.9%	3.6%	3.9%	4.3%	4.2%	!
	5 year % change	116%	327%	298%	280%	266%	!
	\$ in billions	\$376	\$733	\$831	\$906	\$936	
Margin Accounts	Debt to GDP	3.3%	2.7%	2.7%	3.7%	3.7%	!
	5 year % change	50%	-6%	-4%	35%	42%	!
	\$ in billions	\$643	\$554	\$579	\$778	\$823	

• Non-Financial Corporations, Debt Securities include private placement securities.

### Financial Sector Debt

Financial Sector		2017	2018	2019	2020	2021 Q1	
Domestic Financial Sector	Debt to GDP	81.6%	79.0%	77.7%	83.7%	80.3%	+
	5 year % change	-11%	-11%	-11%	0%	-3%	+
	\$ in billions	\$15,949	\$16,282	\$16,645	\$17,533	\$17,707	
Debt Securities	Debt to GDP	71.2%	69.2%	68.5%	74.6%	71.6%	+
	5 year % change	-13%	-12%	-10%	3%	-1%	+
	\$ in billions	\$13,911	\$14,255	\$14,690	\$15,608	\$15,786	
Memo: Debt Securities: Open Market Paper	Bond Default Rate	0.6%	0.2%	0.2%	0.2%	0.2%	
	Debt to GDP	2.0%	2.1%	1.9%	1.9%	2.1%	+
	5 year % change	-47%	-35%	-31%	-21%	-22%	+
Memo: Debt Securities: Agency Securities	\$ in billions	\$397	\$431	\$398	\$391	\$455	
	Debt to GDP	45.3%	44.1%	43.9%	48.1%	46.3%	+
	5 year % change	-3%	-5%	-3%	8%	5%	+
Memo: Debt Securities: Corporate and Foreign Bonds	\$ in billions	\$8,843	\$9,090	\$9,408	\$10,066	\$10,207	
	Debt to GDP	23.9%	23.0%	22.8%	24.6%	23.2%	+
	5 year % change	-24%	-21%	-19%	-4%	-9%	+
Loans	\$ in billions	\$4,671	\$4,734	\$4,884	\$5,151	\$5,125	
	Debt to GDP	10.4%	9.8%	9.1%	9.2%	8.7%	+
	5 year % change	7%	-6%	-17%	-15%	-20%	+
Memo: Loans: Depository Institution Loans	\$ in billions	\$2,038	\$2,027	\$1,955	\$1,925	\$1,921	
	Debt to GDP	1.5%	1.5%	1.4%	1.8%	1.7%	!
	5 year % change	16%	9%	-6%	14%	11%	!
Memo: Loans: Other Loans and Advances	\$ in billions	\$301	\$311	\$305	\$381	\$384	
	Debt to GDP	7.6%	7.2%	6.7%	6.3%	6.0%	+
	5 year % change	5%	-8%	-19%	-21%	-25%	+
Memo: Loans: Equity REIT Mortgages	\$ in billions	\$1,495	\$1,490	\$1,425	\$1,317	\$1,318	
	Debt to GDP	1.2%	1.1%	1.1%	1.1%	1.0%	+
	5 year % change	3%	-14%	-21%	-16%	-24%	+
\$ in billions	\$242	\$226	\$224	\$227	\$220		

• REIT: Real Estate Investment Trust

! High Concern    ! Concern    ! Low Concern    ! Current or recent crisis    + No Current Concern

HY: High-Yield (BB or Lower)    n/a: Data Not Available



## Repurchase Agreements (Primary Dealer) By Security Type

Repurchase Agreements		2017	2018	2019	2020	2021 Q1	
Total	Debt to GDP	11.4%	10.6%	11.9%	12.5%	11.5%	
	5 year % change	-33%	-33%	-13%	3%	-2%	+
	\$ in billions	\$2,223	\$2,191	\$2,552	\$2,607	\$2,531	
Asset Backed Securities	Debt to GDP	0.1%	0.1%	0.1%	0.1%	0.1%	
	5 year % change	n/a	n/a	n/a	-62%	-65%	+
	\$ in billions	\$20	\$18	\$18	\$14	\$10	
Corporate Bonds	Debt to GDP	0.4%	0.3%	0.3%	0.3%	0.3%	
	5 year % change	n/a	-21%	-32%	-15%	-3%	+
	\$ in billions	\$70	\$67	\$62	\$69	\$71	
Equities	Debt to GDP	0.3%	0.3%	0.3%	0.3%	0.4%	
	5 year % change	n/a	-19%	-41%	-42%	59%	!
	\$ in billions	\$54	\$61	\$56	\$53	\$96	
Federal Agency	Debt to GDP	0.2%	0.1%	0.1%	0.1%	0.1%	
	5 year % change	n/a	-80%	-76%	-66%	-53%	+
	\$ in billions	\$30	\$28	\$25	\$24	\$21	
Mortgage Backed Securities	Debt to GDP	1.9%	1.9%	2.2%	2.4%	2.1%	
	5 year % change	n/a	-50%	-24%	9%	8%	+
	\$ in billions	\$380	\$396	\$464	\$499	\$461	
Other	Debt to GDP	0.3%	0.2%	0.2%	0.2%	0.1%	
	5 year % change	n/a	-64%	-65%	-61%	-64%	+
	\$ in billions	\$49	\$43	\$43	\$38	\$29	
Treasury Securities	Debt to GDP	7.5%	7.0%	8.1%	8.4%	7.6%	
	5 year % change	n/a	-23%	1%	15%	-1%	!
	\$ in billions	\$1,472	\$1,434	\$1,729	\$1,748	\$1,671	
Treasury Inflation-Protected Securities	Debt to GDP	0.8%	0.7%	0.7%	0.8%	0.8%	
	5 year % change	n/a	-30%	-24%	-11%	-7%	+
	\$ in billions	\$161	\$141	\$156	\$164	\$173	
Reverse Repurchase Agreements		2017	2018	2019	2020	2021 Q1	
Total	Debt to GDP	9.1%	8.2%	9.1%	9.3%	8.4%	
	5 year % change	-32%	-31%	-13%	-3%	-13%	+
	\$ in billions	\$1,773	\$1,689	\$1,955	\$1,946	\$1,851	
Asset Backed Securities	Debt to GDP	0.1%	0.1%	0.0%	0.0%	0.0%	
	5 year % change	n/a	n/a	n/a	-71%	-76%	+
	\$ in billions	\$12	\$10	\$9	\$7	\$5	
Corporate Bonds	Debt to GDP	0.1%	0.1%	0.1%	0.1%	0.1%	
	5 year % change	n/a	-38%	-48%	-43%	-24%	+
	\$ in billions	\$16	\$15	\$14	\$15	\$16	
Equities	Debt to GDP	0.0%	0.0%	0.0%	0.0%	0.0%	
	5 year % change	n/a	n/a	-92%	-85%	-100%	+
	\$ in billions	\$0	\$0	\$0	\$0	\$0	
Federal Agency	Debt to GDP	0.1%	0.1%	0.0%	0.0%	0.0%	
	5 year % change	n/a	-88%	-83%	-78%	-69%	+
	\$ in billions	\$10	\$9	\$9	\$7	\$6	
Mortgage Backed Securities	Debt to GDP	1.1%	1.1%	1.1%	1.1%	1.0%	
	5 year % change	n/a	-61%	-43%	-30%	-22%	+
	\$ in billions	\$210	\$216	\$242	\$227	\$209	
Other	Debt to GDP	0.2%	0.1%	0.1%	0.1%	0.1%	
	5 year % change	n/a	-67%	-66%	-68%	-74%	+
	\$ in billions	\$29	\$23	\$24	\$20	\$13	
Treasury Securities	Debt to GDP	6.8%	6.2%	7.0%	7.2%	6.5%	
	5 year % change	n/a	-19%	0%	10%	-8%	+
	\$ in billions	\$1,329	\$1,270	\$1,498	\$1,507	\$1,434	
Treasury Inflation-Protected Securities	Debt to GDP	0.9%	0.7%	0.7%	0.8%	0.8%	
	5 year % change	n/a	-10%	-11%	-7%	-12%	+
	\$ in billions	\$170	\$147	\$160	\$163	\$169	

• Amounts are average daily outstanding balances

! High Concern    Concern    ! Low Concern    ! Current or recent crisis    + No Current Concern

HY: High-Yield (BB or Lower)    n/a: Data Not Available

Portfolio Loans & Investment (Total Economy) - U.S. into Foreign Countries

Long Term Debt Security Investment		2016	2017	2018	2019	2020	
United States Holdings of Long Term Foreign Debt Securities	to GDP	13.0%	14.4%	13.9%	14.7%	16.1%	
	5 year % change	-5%	1%	-1%	3%	26%	⚠
	\$ in billions	\$2,431	\$2,822	\$2,873	\$3,144	\$3,373	
Cayman Islands	to GDP	1.8%	2.0%	2.0%	2.3%	2.5%	
	5 year % change	2%	51%	41%	51%	56%	⚠
	\$ in billions	\$339	\$398	\$421	\$502	\$531	
United Kingdom	to GDP	1.5%	1.7%	1.8%	1.9%	2.2%	
	5 year % change	-19%	-10%	1%	10%	33%	⚠
	\$ in billions	\$285	\$328	\$370	\$412	\$453	
Canada	to GDP	1.8%	1.9%	1.8%	1.8%	2.0%	
	5 year % change	-17%	-19%	-19%	-16%	11%	+
	\$ in billions	\$332	\$372	\$374	\$387	\$410	
Long Term Equity Investment		2016	2017	2018	2019	2020	
United States Holdings of Long Term Corporate Stocks	to GDP	37.7%	46.3%	38.2%	44.0%	50.1%	
	5 year % change	30%	40%	-1%	15%	35%	⚠
	\$ in billions	\$7,063	\$9,046	\$7,870	\$9,436	\$10,490	
Cayman Islands	to GDP	5.1%	6.6%	6.0%	6.7%	9.2%	
	5 year % change	65%	91%	46%	42%	85%	⚠
	\$ in billions	\$960	\$1,294	\$1,236	\$1,443	\$1,935	
Japan	to GDP	3.7%	4.6%	3.7%	4.3%	4.9%	
	5 year % change	48%	74%	3%	29%	28%	⚠
	\$ in billions	\$695	\$902	\$766	\$931	\$1,015	
United Kingdom	to GDP	4.6%	5.6%	4.4%	4.7%	4.4%	
	5 year % change	13%	20%	-23%	-9%	-12%	+
	\$ in billions	\$869	\$1,087	\$911	\$1,013	\$912	
Loans		2016	2017	2018	2019	2020	
United States Holdings of Foreign Loans	to GDP	2.7%	2.8%	2.9%	3.2%	3.6%	
	5 year % change	101%	72%	50%	35%	38%	⚠
	\$ in billions	\$511	\$544	\$596	\$690	\$757	
United States Holdings of Foreign Loans: Bank Loans	to GDP	2.5%	2.5%	2.7%	2.9%	3.4%	
	5 year % change	111%	76%	53%	36%	39%	⚠
	\$ in billions	\$475	\$487	\$546	\$632	\$701	
United States Holdings of Foreign Loans: Other Loans	to GDP	0.2%	0.3%	0.3%	0.3%	0.3%	
	5 year % change	22%	42%	19%	26%	30%	⚠
	\$ in billions	\$36	\$56	\$51	\$58	\$56	

- Total Economy includes Financial, Non-Financial and General Government sectors
- Loans include short term and long term

⚠ High Concern   ⚠ Concern   ⚠ Low Concern   ⚠ Current or recent crisis   + No Current Concern

HY: High-Yield (BB or Lower)   n/a: Data Not Available

Portfolio Investment (Total Economy) - Foreign Countries into the U.S.

Long Term Treasury Bond Investment		2016	2017	2018	2019	2020	
Foreign Holdings of United State's Long Term Treasury Securities Bonds	to GDP	28.5%	28.2%	26.8%	28.6%	28.9%	+
	5 year % change	2%	-7%	-12%	-9%	-3%	+
	\$ in billions	\$5,334	\$5,508	\$5,523	\$6,128	\$6,043	
Japan	to GDP	5.5%	5.1%	4.8%	5.1%	5.7%	+
	5 year % change	-13%	-21%	-29%	-24%	-2%	+
	\$ in billions	\$1,034	\$998	\$979	\$1,093	\$1,185	
China	to GDP	5.6%	6.0%	5.4%	5.0%	4.9%	+
	5 year % change	-24%	-19%	-28%	-30%	-28%	+
	\$ in billions	\$1,054	\$1,181	\$1,117	\$1,067	\$1,033	
United Kingdom	to GDP	1.0%	1.1%	1.2%	1.6%	1.8%	!
	5 year % change	64%	62%	47%	81%	85%	!
	\$ in billions	\$182	\$211	\$246	\$334	\$372	
Long Term Agency Bond Investment		2016	2017	2018	2019	2020	
Foreign Holdings of United State's Long Term Agency Bonds	to GDP	5.2%	5.1%	5.2%	5.5%	5.7%	!
	5 year % change	-23%	-16%	2%	13%	18%	!
	\$ in billions	\$968	\$995	\$1,077	\$1,185	\$1,184	
Japan	to GDP	1.2%	1.2%	1.3%	1.4%	1.5%	!
	5 year % change	-29%	-20%	21%	57%	70%	!
	\$ in billions	\$221	\$241	\$272	\$305	\$308	
Taiwan	to GDP	1.1%	1.2%	1.3%	1.2%	1.3%	!
	5 year % change	21%	56%	58%	21%	15%	!
	\$ in billions	\$204	\$234	\$261	\$262	\$262	
China	to GDP	1.0%	0.9%	0.9%	1.1%	1.0%	+
	5 year % change	-35%	-20%	-25%	-9%	-5%	+
	\$ in billions	\$184	\$171	\$189	\$232	\$212	
Long Term Corporate & Other Bond Investment		2016	2017	2018	2019	2020	
Foreign Holdings of United State's Long Term Corporate & Other Bonds	to GDP	19.1%	20.7%	18.2%	19.4%	22.1%	!
	5 year % change	14%	21%	6%	11%	25%	!
	\$ in billions	\$3,585	\$4,040	\$3,758	\$4,161	\$4,616	
Luxembourg	to GDP	3.0%	3.2%	3.0%	3.3%	3.7%	!
	5 year % change	36%	27%	11%	14%	33%	!
	\$ in billions	\$556	\$629	\$624	\$699	\$779	
Belgium	to GDP	2.4%	3.0%	2.6%	2.8%	3.0%	!
	5 year % change	18%	59%	38%	40%	43%	!
	\$ in billions	\$452	\$595	\$530	\$598	\$619	
Cayman Islands	to GDP	2.4%	2.5%	2.4%	2.5%	2.9%	!
	5 year % change	-2%	14%	9%	24%	39%	!
	\$ in billions	\$447	\$482	\$488	\$537	\$600	
Long Term Equity Investment		2016	2017	2018	2019	2020	
Foreign Holdings of United State's Long Term Corporate Stocks	to GDP	35.1%	40.7%	36.7%	42.1%	54.8%	!
	5 year % change	42%	44%	5%	11%	61%	!
	\$ in billions	\$6,576	\$7,958	\$7,573	\$9,026	\$11,481	
Cayman Islands	to GDP	4.5%	5.2%	4.5%	4.9%	6.3%	!
	5 year % change	43%	45%	1%	-1%	33%	!
	\$ in billions	\$844	\$1,018	\$932	\$1,045	\$1,325	
Canada	to GDP	3.9%	4.7%	4.0%	4.8%	6.0%	!
	5 year % change	45%	39%	-9%	5%	59%	!
	\$ in billions	\$725	\$912	\$816	\$1,028	\$1,255	
United Kingdom	to GDP	4.2%	4.9%	4.6%	4.8%	5.9%	!
	5 year % change	49%	54%	15%	1%	44%	!
	\$ in billions	\$794	\$955	\$955	\$1,019	\$1,245	

• Total Economy includes Financial, Non-Financial and General Government sectors

! High Concern    ! Concern    ! Low Concern    ! Current or recent crisis    + No Current Concern

HY: High-Yield (BB or Lower)

n/a: Data Not Available

## Derivative Activity

Notional Amounts by Type		2017	2018	2019	2020	2021 Q1
Dealer (Trading)	Debt to GDP	844.3%	823.0%	767.2%	749.9%	822.4%
	5 year % change	-33%	-37%	-35%	-20%	-17%
	\$ in billions	\$165,002	\$169,636	\$164,441	\$156,997	\$181,420
End User (Non-Trading)	Debt to GDP	14.2%	11.9%	14.4%	18.0%	19.1%
	5 year % change	-50%	-59%	-36%	17%	14%
	\$ in billions	\$2,785	\$2,447	\$3,077	\$3,768	\$4,208
Credit Derivatives	Debt to GDP	21.4%	20.7%	18.4%	14.5%	15.2%
	5 year % change	-74%	-69%	-66%	-62%	-62%
	\$ in billions	\$4,186	\$4,270	\$3,945	\$3,034	\$3,361
Total Notional	Debt to GDP	880.0%	855.6%	800.0%	782.4%	856.7%
	5 year % change	-36%	-39%	-37%	-21%	-18%
	\$ in billions	\$171,973	\$176,353	\$171,462	\$163,799	\$188,988
Derivative Activity by Contract Type		2017	2018	2019	2020	2021 Q1
Interest Rate	Debt to GDP	667.3%	621.8%	583.5%	554.1%	623.0%
	5 year % change	-39%	-46%	-41%	-27%	-22%
	\$ in billions	\$130,417	\$128,166	\$125,056	\$116,001	\$137,432
Foreign Exchange	Debt to GDP	168.4%	190.3%	173.4%	189.1%	193.1%
	5 year % change	-1%	12%	-8%	7%	3%
	\$ in billions	\$32,903	\$39,221	\$37,170	\$39,596	\$42,609
Equities	Debt to GDP	15.8%	16.4%	17.7%	18.0%	18.2%
	5 year % change	30%	35%	20%	37%	32%
	\$ in billions	\$3,080	\$3,374	\$3,796	\$3,775	\$4,005
Commodities	Debt to GDP	7.0%	6.4%	7.0%	6.7%	7.2%
	5 year % change	-19%	-11%	1%	10%	9%
	\$ in billions	\$1,373	\$1,315	\$1,495	\$1,395	\$1,582
Credit Derivatives	Debt to GDP	21.4%	20.7%	18.4%	14.5%	15.2%
	5 year % change	-74%	-69%	-66%	-62%	-62%
	\$ in billions	\$4,186	\$4,270	\$3,945	\$3,034	\$3,361
Total Notional	Debt to GDP	880.0%	855.6%	800.0%	782.4%	856.7%
	5 year % change	-36%	-39%	-37%	-21%	-18%
	\$ in billions	\$171,973	\$176,353	\$171,462	\$163,799	\$188,988
Derivative Activity by Product		2017	2018	2019	2020	2021 Q1
Futures & Forwards	Debt to GDP	176.1%	175.4%	162.3%	154.5%	185.5%
	5 year % change	-31%	-26%	-34%	-21%	-8%
	\$ in billions	\$34,407	\$36,144	\$34,787	\$32,350	\$40,934
Total Options	Debt to GDP	198.8%	184.4%	168.5%	152.8%	167.6%
	5 year % change	6%	-4%	-9%	-10%	64%
	\$ in billions	\$38,841	\$38,009	\$36,117	\$31,992	\$36,975
Total Swaps	Debt to GDP	483.7%	475.1%	450.8%	460.6%	488.3%
	5 year % change	-43%	-48%	-42%	-22%	39%
	\$ in billions	\$94,524	\$97,923	\$96,614	\$96,423	\$107,718
Credit Derivatives	Debt to GDP	21.4%	20.7%	18.4%	14.5%	15.2%
	5 year % change	-74%	-69%	-66%	-62%	-62%
	\$ in billions	\$4,186	\$4,270	\$3,945	\$3,034	\$3,361
Total Notional	Debt to GDP	880.0%	855.6%	800.0%	782.4%	856.7%
	5 year % change	-36%	-39%	-37%	-21%	-18%
	\$ in billions	\$171,973	\$176,353	\$171,462	\$163,799	\$188,988

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## Largest Individual Lenders

Lending Institutions		2017	2018	2019	2020	2021 Q1
JP Morgan	Loans to GDP	4.9%	4.9%	4.8%	5.0%	4.8%
	5 year % change	8%	12%	12%	10%	3%
	\$ in billions	\$954	\$1,003	\$1,024	\$1,053	\$1,058
	Charge-off Rate	0.6%	0.5%	0.6%	0.5%	0.4%
	Criticized Assets (% of Total Loans)	1.6%	1.2%	1.5%	4.0%	4.4%
Citigroup	Loans to GDP	3.4%	3.3%	3.3%	3.2%	3.0%
	5 year % change	-16%	-16%	-11%	-5%	-10%
	\$ in billions	\$668	\$685	\$700	\$677	\$667
	Charge-off Rate	1.1%	1.1%	1.1%	1.1%	1.0%
	Criticized Assets (% of Total Loans)	n/a	n/a	4.4%	10.4%	9.8%
Wells Fargo	Loans to GDP	4.9%	4.6%	4.5%	4.3%	3.9%
	5 year % change	-1%	-6%	-9%	-16%	-24%
	\$ in billions	\$961	\$953	\$965	\$890	\$862
	Charge-off Rate	0.3%	0.3%	0.3%	0.3%	0.2%
	Criticized Assets (% of Total Loans)	2.3%	2.2%	2.1%	3.7%	3.7%
Bank of America	Loans to GDP	4.8%	4.6%	4.6%	4.4%	4.1%
	5 year % change	-14%	-17%	-8%	-10%	-16%
	\$ in billions	\$937	\$947	\$983	\$928	\$903
	Charge-off Rate	0.5%	0.4%	0.4%	0.4%	0.2%
	Criticized Assets (% of Total Loans)	1.5%	1.2%	1.2%	3.9%	3.9%
Fannie Mae	Loans to GDP	16.4%	16.2%	15.7%	15.6%	17.5%
	5 year % change	-12%	-11%	-13%	-10%	6%
	\$ in billions	\$3,077	\$3,174	\$3,242	\$3,334	\$3,659
	Charge-off Rate	n/a	n/a	n/a	n/a	n/a
Freddie Mac	Loans to GDP	9.5%	9.4%	9.2%	9.3%	11.2%
	5 year % change	-16%	-9%	-8%	-4%	18%
	\$ in billions	\$1,785	\$1,838	\$1,887	\$1,987	\$2,352
	Charge-off Rate	n/a	n/a	n/a	n/a	n/a

• Criticized Assets are assets rated special mention, substandard, doubtful, or loss as defined by the agencies' uniform loan classification standards. Includes performing and non-performing criticized assets

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## Real Estate

Total Debt		2017	2018	2019	2020	2021 Q1
Total Residential Mortgage Debt	Debt to GDP	50.8%	49.5%	48.9%	52.2%	50.2%
	5 Year % Change	-14%	-12%	-9%	0%	-3%
	\$ in billions	\$9,929	\$10,204	\$10,482	\$10,925	\$11,071
	Delinquency Rate	1.3%	1.1%	1.1%	0.6%	0.6%
	Forbearance Share	n/a	n/a	n/a	5.5%	3.9%
Home Equity Loans Outstanding	Debt to GDP	2.9%	2.6%	2.3%	2.1%	1.9%
	5 Year % Change	-39%	-38%	-39%	-40%	-44%
	\$ in billions	\$570	\$533	\$501	\$442	\$421
Total Commercial Real Estate Debt	Debt to GDP	22.1%	22.2%	22.7%	24.5%	23.5%
	5 Year % Change	9%	10%	12%	17%	12%
	\$ in billions	\$4,316	\$4,566	\$4,857	\$5,124	\$5,174

• Forbearance share is equal to loans outstanding in forbearance divided by total outstanding loans

Monthly Residential Housing Summary		Oct-2020	Nov-2020	Dec-2020	Jan-2021	Feb-2021	Mar 2021
New Home Sales	Volume	969,000	865,000	943,000	993,000	823,000	886,000
	Annual Change	37.8%	20.5%	28.7%	31.4%	12.7%	42.2%
Existing Home Sales	Volume	6,730,000	6,590,000	6,650,000	6,660,000	6,240,000	6,010,000
	Annual Change	n/a	n/a	n/a	n/a	n/a	n/a
Housing Starts	Volume	1,514,000	1,551,000	1,661,000	1,625,000	1,447,000	1,725,000
	Annual Change	14.9%	14.9%	7.4%	2.3%	-8.9%	35.1%
Home Price Index (Case-Shiller 20 City Composite)	Index (2000=100)	235.74	239.08	242.11	245.16	248.18	252.14
	Annual Change	8.1%	9.2%	10.1%	11.1%	12.0%	13.3%

Refinance Statistics		2017	2018	2019	2020	2021 Q1
Home Equity Cash-out Volume	to GDP	0.4%	0.4%	0.5%	0.7%	0.8%
	5 Year % Change	98%	140%	254%	209%	227%
	\$ in billions	\$71	\$87	\$108	\$153	\$175
Second Mortgages/HELOC Consolidation Volume	to GDP	0.1%	0.1%	0.1%	0.4%	0.3%
	5 Year % Change	-45%	-60%	37%	198%	210%
	\$ in billions	\$23	\$15	\$30	\$75	\$87
Total Combined Cash-out and Second Mortgages/HELOC Consolidation Volume	to GDP	0.5%	0.5%	0.6%	1.1%	1.5%
	5 Year % Change	21%	39%	164%	206%	188%
	\$ in billions	\$94	\$101	\$138	\$228	\$261

- Refinance statistics are for Prime Conventional Loans only.
- Cash-out volume indicates the dollar volume of equity cashed-out through the refinancing of prime, first-lien conventional mortgages. It is calculated using Freddie Mac's estimate of prime, conventional mortgage originations volume, the refi share of originations, and the values in Column 1 of this sheet. We do not estimate how much equity is taken out through the refinance of FHA or VA loans or through refinance loans originated in the subprime market.
- Second Mortgages/HELOC indicates the total increase in the principal balances of refinanced first-lien mortgages due to the consolidation of existing second mortgages or home-equity lines of credit into the first lien, and loan origination costs that are rolled into the principal balances. It is calculated using Freddie Mac's estimate of prime, conventional mortgage originations volume, the refi share of originations, and of the average increase in the principal balance from refinanced loans that were not due to new equity extraction.

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## Additional Data

Public Debt		2017	2018	2019	2020	2021 Q1
Federal Government Debt	Debt to GDP	104.9%	106.6%	108.3%	132.5%	127.5%
	5 year % change	3%	3%	5%	28%	22%
	\$ in billions	\$20,493	\$21,974	\$23,201	\$27,748	\$28,133
Memo: Federal Debt: Held by Public	Debt to GDP	75.8%	78.1%	80.1%	103.3%	99.7%
	5 year % change	6%	6%	8%	38%	32%
	\$ in billions	\$14,815	\$16,102	\$17,170	\$21,632	\$21,987
Memo: Federal Debt: Intragovernmental Holdings	Debt to GDP	19.2%	19.0%	18.7%	17.8%	27.9%
	5 year % change	-3%	-5%	-5%	-9%	-4%
	\$ in billions	\$5,678	\$5,872	\$6,031	\$6,115	\$6,146
State and Local Government Debt	Debt to GDP	16.0%	15.0%	14.4%	15.1%	14.6%
	5 year % change	-18%	-21%	-18%	-11%	-14%
	\$ in billions	\$3,133	\$3,083	\$3,093	\$3,170	\$3,218



Supplementary Data		2017	2018	2019	2020	2021 Q1
Nominal GDP	\$ in billions	\$19,543	\$20,612	\$21,433	\$20,937	\$22,061
	Annual % Change	4.3%	5.5%	4.0%	-2.3%	2.3%
Real GDP	Chained 2012 \$ in Billions	\$18,144	\$18,688	\$19,092	\$18,426	\$19,086
	Annual % Change	2.3%	3.0%	2.2%	-3.5%	0.7%
Consumer Price Index (Inflation)	CPI (2010=100)	112.41	115.16	117.24	118.69	120.68
	Inflation Rate	2.1%	2.5%	1.8%	1.2%	1.9%
Unemployment	Person (Thousands)	6,278	6,029	5,503	10,404	9,378
	Unemployment Rate	3.9%	3.7%	3.4%	6.5%	6.0%
Current Account Balance	\$ in billions	(\$440)	(\$491)	(\$498)	(\$550)	(\$684)
	to GDP	-2.3%	-2.4%	-2.3%	-2.7%	-3.1%

High Concern
 Concern
 Low Concern
 Current or recent crisis
 No Current Concern

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n/a: Data Not Available



## Explanatory Notes

Color Code	Total Private Debt Cell Description
	5 Year % Change > 20%
	5 Year % Change > 13% < 20%
	Residual Risk Period

\* Due to the size of total private debt, five-year percentage growth constitutes greater concern as compared to the individual sector data

Color Code	Sector Data Cell Description
	5 Year % Change > 40%
	5 Year % Change > 40%
	Debt to GDP < 1.5% (immaterial)
	5 Year % Change > 20% < 40%
	5 Year % Change > 20% < 40%
	Debt to GDP < 1.5% (immaterial)
	5 Year % Change > 13% < 20%
	5 Year % Change > 13% < 20%
	Residual Risk Period

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 Concern  
 Low Concern  
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