

TYCHOS SECTOR RISK REPORT

		2016	2017	2018	2019	2020
Total Private Debt	Debt to GDP	150%	151%	150%	150%	164%
	5 year % change	-3%	0%	1%	2%	11%
	\$ in billions	\$28,042	\$29,568	\$30,986	\$32,237	\$34,359
Business Debt	Debt to GDP	72%	74%	75%	76%	85%
	5 year % change	10%	11%	12%	10%	20%
	\$ in billions	\$13,566	\$14,557	\$15,493	\$16,242	\$17,719
	Bond Default Rate	1.4%	0.3%	0.6%	1.0%	1.9%
Household Debt	Debt to GDP	77%	77%	75%	75%	79%
	5 year % change	-12%	-8%	-9%	-6%	3%
	\$ in billions	\$14,476	\$15,011	\$15,494	\$15,995	\$16,640
	*Delinquency Rate	3.3%	3.1%	3.1%	3.2%	2.3%

* 90+ Days Delinquency Rate

Areas of Concern

Corporate Sectors		2016	2017	2018	2019	2020
Communication Services	Debt to GDP	6.8%	7.2%	6.9%	7.4%	7.1%
	5 year % change	24%	25%	17%	24%	13%
	\$ in billions	\$1,273	\$1,406	\$1,423	\$1,590	\$1,479
	Default Rate	0.0%	0.0%	0.0%	0.1%	5.2%
Consumer Discretionary	Debt to GDP	5.9%	6.2%	6.0%	7.1%	7.5%
	5 year % change	6%	6%	6%	27%	36%
	\$ in billions	\$1,104	\$1,201	\$1,226	\$1,530	\$1,578
	Default Rate	0.4%	1.4%	1.6%	0.7%	1.2%
Healthcare	Debt to GDP	6.1%	5.9%	6.0%	6.7%	6.7%
	5 year % change	44%	29%	33%	35%	11%
	\$ in billions	\$1,134	\$1,151	\$1,230	\$1,441	\$1,407
	Default Rate	0.0%	0.1%	2.2%	2.2%	2.3%
Information Technology	Debt to GDP	4.9%	5.3%	5.0%	5.4%	5.4%
	5 year % change	61%	69%	47%	55%	37%
	\$ in billions	\$915	\$1,036	\$1,021	\$1,163	\$1,136
	Default Rate	0.1%	0.3%	0.0%	0.0%	0.2%
Automotive	Debt to GDP	2.2%	2.4%	2.4%	2.4%	2.1%
	5 year % change	31%	38%	26%	27%	6%
	\$ in billions	\$402	\$466	\$494	\$524	\$437
	Default Rate	0.0%	0.0%	0.0%	0.0%	0.7%

Household Sectors		2016	2017	2018	2019	2020
Auto Loans	Debt to GDP	6.2%	6.3%	6.2%	6.2%	6.6%
	5 year % change	31%	29%	20%	14%	6%
	\$ in billions	\$1,157	\$1,221	\$1,274	\$1,331	\$1,374
	*Delinquency Rate	3.8%	4.1%	4.5%	4.9%	4.8%
Margin Debt	Debt to GDP	2.8%	3.3%	2.7%	2.7%	3.7%
	5 year % change	46%	50%	-6%	-4%	32%
	\$ in billions	\$529	\$643	\$554	\$579	\$778

* 90+ Days Delinquency Rate

▲ 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		2016	2017	2018	2019	2020
Federal Government (Student & other loans)	Debt to GDP	6.5%	6.7%	6.8%	7.0%	8.4%
	5 year % change	49%	39%	14%	21%	37%
	\$ in billions	\$1,209	\$1,305	\$1,403	\$1,497	\$1,750
Credit Unions	Debt to GDP	4.4%	4.6%	4.8%	4.9%	5.3%
	5 year % change	25%	30%	32%	27%	29%
	\$ in billions	\$820	\$900	\$992	\$1,047	\$1,105
Rest of World (Foreign Loans to US Businesses)	Debt to GDP	1.1%	1.9%	3.6%	3.9%	4.3%
	5 year % change	-14%	116%	327%	298%	281%
	\$ in billions	\$203	\$376	\$733	\$831	\$908
Margin Accounts	Debt to GDP	1.5%	1.7%	1.5%	1.5%	2.3%
	5 year % change	-4%	-9%	-27%	-28%	45%
	\$ in billions	\$277	\$333	\$302	\$326	\$482

Securities Market		2016	2017	2018	2019	2020
Asset-Backed Securities: CLO	Debt to GDP	2.5%	2.8%	3.0%	3.2%	3.2%
	5 year % change	50%	60%	63%	45%	29%
	\$ in billions	\$477	\$541	\$617	\$686	\$662

• CLO - Collateralized Loan Obligations

Derivative Activity by Contract Type		2016	2017	2018	2019	2020
Equities	Debt to GDP	13.2%	15.8%	16.4%	17.7%	18.0%
	5 year % change	28%	30%	35%	22%	37%
	\$ in billions	\$2,475	\$3,080	\$3,374	\$3,796	\$3,775

▲ 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		2016	2017	2018	2019	2020	
CRE	Debt to GDP	21.6%	22.1%	22.2%	22.7%	24.4%	
	5 year % change	2%	9%	10%	12%	17%	
	\$ in billions	\$4,055	\$4,316	\$4,566	\$4,857	\$5,117	⚠
	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	7.1%	7.3%	7.1%	7.4%	7.2%	
	5 year % change	-5%	-6%	-9%	-4%	-7%	+
	\$ in billions	\$1,331	\$1,432	\$1,454	\$1,592	\$1,518	
	Default Rate	0.1%	0.0%	0.3%	0.4%	0.3%	
	HY Debt to GDP	0.42%	0.41%	0.30%	0.31%	0.68%	
Communication Services	Debt to GDP	6.8%	7.2%	6.9%	7.4%	7.1%	
	5 year % change	24%	25%	17%	24%	13%	⚠
	\$ in billions	\$1,273	\$1,406	\$1,423	\$1,590	\$1,479	
	Default Rate	0.0%	0.0%	0.0%	0.1%	5.2%	
	HY Debt to GDP	0.94%	1.02%	0.85%	0.93%	0.89%	
Industrials	Debt to GDP	8.7%	9.0%	9.0%	9.4%	8.6%	
	5 year % change	-14%	-13%	-8%	3%	-5%	+
	\$ in billions	\$1,624	\$1,765	\$1,845	\$2,025	\$1,790	
	Default Rate	0.3%	0.1%	0.2%	0.1%	2.7%	
	HY Debt to GDP	0.91%	0.88%	0.90%	1.10%	1.27%	
Consumer Discretionary	Debt to GDP	5.9%	6.2%	6.0%	7.1%	7.5%	
	5 year % change	6%	6%	6%	27%	36%	⚠
	\$ in billions	\$1,104	\$1,201	\$1,226	\$1,530	\$1,578	
	Default Rate	0.4%	1.4%	1.6%	0.7%	1.2%	
	HY Debt to GDP	1.47%	1.40%	1.28%	1.44%	2.05%	
Healthcare	Debt to GDP	6.1%	5.9%	6.0%	6.7%	6.7%	
	5 year % change	44%	29%	33%	35%	11%	⚠
	\$ in billions	\$1,134	\$1,151	\$1,230	\$1,441	\$1,407	
	Default Rate	0.0%	0.1%	2.2%	2.2%	2.3%	
	HY Debt to GDP	0.46%	0.61%	0.64%	0.58%	0.55%	
Information-Technology	Debt to GDP	4.9%	5.3%	5.0%	5.4%	5.4%	
	5 year % change	61%	69%	47%	55%	37%	⚠
	\$ in billions	\$915	\$1,036	\$1,021	\$1,163	\$1,136	
	Default Rate	0.1%	0.3%	0.0%	0.0%	0.2%	
	HY Debt to GDP	0.76%	0.76%	0.78%	0.66%	0.62%	
Energy	Debt to GDP	6.9%	6.4%	5.8%	6.1%	5.7%	
	5 year % change	33%	5%	-9%	-13%	-20%	⚠
	\$ in billions	\$1,285	\$1,239	\$1,196	\$1,308	\$1,186	
	Default Rate	8.2%	0.7%	0.4%	3.0%	3.6%	
	HY Debt to GDP	1.39%	1.21%	0.90%	0.80%	1.00%	
Real Estate	Debt to GDP	3.6%	3.7%	3.5%	3.7%	3.8%	
	5 year % change	10%	10%	3%	5%	3%	+
	\$ in billions	\$677	\$712	\$716	\$800	\$798	
	Default Rate	0.0%	0.0%	0.0%	0.0%	1.0%	
	HY Debt to GDP	0.41%	0.42%	0.40%	0.36%	0.41%	
Consumer Staples	Debt to GDP	4.0%	3.8%	3.7%	3.8%	3.8%	
	5 year % change	26%	15%	6%	11%	7%	+
	\$ in billions	\$754	\$732	\$758	\$812	\$785	
	Default Rate	0.1%	0.4%	0.3%	2.5%	1.7%	
	HY Debt to GDP	0.28%	0.27%	0.29%	0.30%	0.46%	
Materials	Debt to GDP	2.5%	2.5%	2.4%	2.4%	2.3%	
	5 year % change	3%	3%	-5%	-6%	-11%	+
	\$ in billions	\$462	\$481	\$484	\$519	\$482	
	Default Rate	1.0%	0.3%	0.0%	0.1%	0.2%	
	HY Debt to GDP	0.59%	0.52%	0.48%	0.47%	0.46%	
Memo: Automotive	Debt to GDP	2.2%	2.4%	2.4%	2.4%	2.1%	
	5 year % change	31%	38%	26%	27%	6%	⚠
	\$ in billions	\$402	\$466	\$494	\$524	\$437	
	Default Rate	0.0%	0.0%	0.0%	0.0%	0.7%	
	HY Debt to GDP	0.17%	0.19%	0.14%	0.16%	0.70%	
Memo: Agriculture	Debt to GDP	2.0%	2.0%	2.0%	2.0%	2.1%	
	5 year % change	5%	9%	4%	-1%	6%	+
	\$ in billions	\$374	\$390	\$402	\$419	\$432	
	*Delinquency Rate	1.2%	1.5%	1.7%	1.8%	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	7.6%	7.5%	6.8%	6.9%	8.4%	
	5 year % change	-1%	-6%	-12%	-12%	10%	+
	\$ in billions	\$1,428	\$1,467	\$1,408	\$1,488	\$1,754	

• 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

Commercial Real Estate Debt Summary

CRE Debt		2016	2017	2018	2019	2020
Multi-Family Residential Mortgages	Debt to GDP	6.6%	7.0%	7.2%	7.6%	8.4%
	5 year % change	19%	27%	29%	32%	37%
	\$ in billions	\$1,236	\$1,363	\$1,488	\$1,623	\$1,754
Commercial Mortgages	Debt to GDP	14%	14%	14%	14%	15%
	5 year % change	-5%	1%	2%	4%	8%
	\$ in billions	\$2,592	\$2,717	\$2,832	\$2,967	\$3,085
Farm Mortgages	Debt to GDP	1.2%	1.2%	1.2%	1.2%	1.3%
	5 year % change	12%	13%	8%	11%	16%
	\$ in billions	\$226	\$236	\$246	\$267	\$279
Total CRE Debt	Debt to GDP	21.6%	22.1%	22.2%	22.7%	24.4%
	5 year % change	2%	9%	10%	12%	17%
	\$ in billions	\$4,055	\$4,316	\$4,566	\$4,857	\$5,117
Memo: Construction and Land Development Loans	Debt to GDP	1.7%	1.7%	1.7%	1.7%	1.8%
	5 year % change	8%	38%	36%	24%	22%
	\$ in billions	\$313	\$338	\$350	\$362	\$386
Commercial Real Estate Bank Loans	Charge-Off Rates	0.0%	0.0%	0.0%	0.0%	0.2%
	Delinquency Rates	0.9%	0.8%	0.7%	0.7%	1.2%

- 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		2016	2017	2018	2019	2020	
Mortgage Debt	Debt to GDP	51.5%	50.8%	49.5%	48.9%	52.2%	
	5 year % change	-18%	-14%	-12%	-9%	0%	
	\$ in billions	\$9,659	\$9,929	\$10,204	\$10,482	\$10,935	+
	*Delinquency Rate	1.6%	1.3%	1.1%	1.1%	0.6%	
	**CB Delinquency Rate	4.2%	3.6%	2.8%	2.4%	2.7%	
Student Loans	Debt to GDP	7.5%	7.6%	7.6%	7.7%	8.2%	
	5 year % change	21%	17%	12%	9%	9%	
	\$ in billions	\$1,405	\$1,489	\$1,571	\$1,646	\$1,707	+
	*Delinquency Rate	11.2%	11.0%	11.4%	11.1%	6.5%	
	***Alt Delinquency Rate	25.3%	26.7%	28.1%	28.1%	n/a	
Auto Loans	Debt to GDP	6.2%	6.3%	6.2%	6.2%	6.6%	
	5 year % change	31%	29%	20%	14%	6%	!
	\$ in billions	\$1,157	\$1,221	\$1,274	\$1,331	\$1,374	
	*Delinquency Rate	3.8%	4.1%	4.5%	4.9%	4.8%	
Credit Cards	Debt to GDP	4.2%	4.3%	4.2%	4.3%	3.9%	
	5 year % change	-8%	2%	4%	8%	-6%	
	\$ in billions	\$779	\$834	\$870	\$927	\$819	+
	*Delinquency Rate	7.1%	7.6%	7.8%	8.4%	9.4%	
Margin Debt	Debt to GDP	2.8%	3.3%	2.7%	2.7%	3.7%	
	5 year % change	46%	50%	-6%	-4%	32%	!
	\$ in billions	\$529	\$643	\$554	\$579	\$778	

* 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		2016	2017	2018	2019	2020
Student Loans	Debt to GDP	7.5%	7.6%	7.6%	7.7%	8.2%
	5 year % change	21%	17%	12%	9%	9%
	\$ in billions	\$1,405	\$1,489	\$1,571	\$1,646	\$1,707
	*Delinquency Rate	11.2%	11.0%	11.4%	11.1%	6.5%
	***Alt Delinquency Rate	25.3%	26.7%	28.1%	28.1%	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		2016	2017	2018	2019	2020
Federal Student Loans	Debt/GDP	6.9%	7.0%	7.0%	7.0%	7.5%
	5 Year % Change	26%	19%	13%	9%	13%
	\$ in Billions	\$1,292	\$1,367	\$1,439	\$1,510	\$1,566
	Delinquent Loans Bil \$	\$152	\$178	\$198	\$215	n/a
	**Delinquency Rate	27.5%	28.8%	30.1%	29.9%	n/a
In-School Status	Debt to GDP	0.8%	0.7%	0.7%	0.6%	0.6%
	\$ in billions	\$143	\$139	\$138	\$132	\$125
Repayment Status	Debt to GDP	2.8%	3.0%	3.2%	3.4%	0.1%
	\$ in billions	\$524	\$587	\$661	\$719	\$15
Deferment Status	Debt to GDP	0.6%	0.6%	0.6%	0.6%	0.6%
	\$ in billions	\$115	\$120	\$129	\$132	\$117
Grace Status	Debt to GDP	0.3%	0.3%	0.2%	0.2%	0.2%
	\$ in billions	\$51	\$49	\$44	\$45	\$44
Forbearance Status	Debt to GDP	0.6%	0.6%	0.6%	0.6%	4.4%
	\$ in billions	\$106	\$122	\$119	\$130	\$927
Other Status	Debt to GDP	0.1%	0.1%	0.1%	0.1%	0.0%
	\$ in billions	\$9	\$10	\$10	\$10	\$9



- 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		2016	2017	2018	2019	2020	
Total Securities	Debt to GDP	207.3%	205.1%	203.2%	204.1%	238.5%	⚠
	5 year % change	-4%	-4%	-4%	-2%	16%	⚠
	\$ in billions	\$38,867	\$40,077	\$41,879	\$43,735	\$49,929	
Municipal Securities	Debt to GDP	20.7%	20.0%	18.7%	18.0%	18.9%	+
	5 year % change	-18%	-18%	-19%	-17%	-10%	+
	\$ in billions	\$3,887	\$3,902	\$3,844	\$3,865	\$3,950	
Marketable Treasury Securities	Debt to GDP	74.2%	74.0%	75.7%	77.8%	100.2%	⚠
	5 year % change	16%	9%	7%	9%	39%	⚠
	\$ in billions	\$13,908	\$14,469	\$15,608	\$16,673	\$20,973	
Mortgage Related Securities	Debt to GDP	48.1%	47.6%	47.2%	47.7%	53.6%	+
	5 year % change	-18%	-13%	-9%	-5%	10%	+
	\$ in billions	\$9,023	\$9,305	\$9,732	\$10,229	\$11,214	
Memo: Mortgage Related Securities: Agency MBS	Debt to GDP	34.8%	35.4%	35.3%	36.0%	40.3%	⚠
	5 year % change	-2%	1%	0%	5%	18%	⚠
	\$ in billions	\$6,530	\$6,924	\$7,269	\$7,711	\$8,439	
Memo: Mortgage Related Securities: Agency CMO	Debt to GDP	5.9%	5.5%	5.4%	5.2%	6.7%	+
	5 year % change	-34%	-31%	-21%	-25%	6%	+
	\$ in billions	\$1,109	\$1,081	\$1,103	\$1,117	\$1,395	
Memo: Mortgage Related Securities: Non-Agency CMBS	Debt to GDP	2.8%	2.6%	2.6%	2.8%	2.9%	+
	5 year % change	-36%	-34%	-29%	-22%	-14%	+
	\$ in billions	\$531	\$509	\$543	\$596	\$596	
Memo: Mortgage Related Securities: Non-Agency RMBS	Debt to GDP	4.6%	4.1%	4.0%	3.8%	3.7%	+
	5 year % change	-51%	-47%	-38%	-34%	-26%	+
	\$ in billions	\$853	\$791	\$817	\$805	\$784	
Corporate Debt Securities	Debt to GDP	46.3%	46.1%	44.8%	44.7%	50.5%	+
	5 year % change	5%	2%	-2%	-3%	11%	+
	\$ in billions	\$8,684	\$9,009	\$9,237	\$9,580	\$10,563	
Federal Agency Securities	Debt to GDP	10.5%	9.9%	8.9%	8.1%	8.1%	+
	5 year % change	-30%	-23%	-27%	-30%	-26%	+
	\$ in billions	\$1,972	\$1,935	\$1,842	\$1,726	\$1,694	
Money Market Securities (Commercial Paper)	Debt to GDP	4.7%	4.9%	4.8%	4.9%	4.7%	+
	5 year % change	-24%	-16%	-15%	-8%	-9%	+
	\$ in billions	\$885	\$966	\$996	\$1,045	\$987	
Asset-Backed Securities	Debt to GDP	7.4%	7.5%	7.8%	7.8%	7.3%	+
	5 year % change	-15%	-6%	2%	1%	-3%	+
	\$ in billions	\$1,392	\$1,458	\$1,616	\$1,664	\$1,536	
Memo: Asset-Backed Securities: Automobile	Debt to GDP	1.0%	1.0%	1.1%	1.1%	1.0%	⚠
	5 year % change	39%	19%	13%	8%	-5%	⚠
	\$ in billions	\$194	\$203	\$223	\$236	\$206	
Memo: Asset-Backed Securities: Credit Card	Debt to GDP	0.7%	0.7%	0.6%	0.5%	0.3%	+
	5 year % change	-34%	-17%	-19%	-40%	-54%	+
	\$ in billions	\$131	\$129	\$124	\$101	\$68	
Memo: Asset-Backed Securities: Equipment	Debt to GDP	0.3%	0.3%	0.4%	0.4%	0.3%	⚠
	5 year % change	15%	11%	42%	15%	10%	⚠
	\$ in billions	\$52	\$56	\$84	\$75	\$67	
Memo: Asset-Backed Securities: Other	Debt to GDP	0.8%	0.9%	1.0%	1.1%	1.1%	⚠
	5 year % change	23%	34%	35%	46%	36%	⚠
	\$ in billions	\$157	\$179	\$206	\$235	\$225	
Memo: Asset-Backed Securities: Student Loans	Debt to GDP	1.0%	0.9%	0.8%	0.7%	0.7%	+
	5 year % change	-34%	-38%	-40%	-40%	-38%	+
	\$ in billions	\$189	\$177	\$171	\$159	\$144	
Memo: Asset-Backed Securities: CLO	Debt to GDP	2.5%	2.8%	3.0%	3.2%	3.2%	⚠
	5 year % change	50%	60%	63%	45%	29%	⚠
	\$ in billions	\$477	\$541	\$617	\$686	\$662	
Memo: Asset-Backed Securities: CDO/SF/Other	Debt to GDP	1.0%	0.9%	0.9%	0.8%	0.8%	+
	5 year % change	-63%	-58%	-46%	-42%	-32%	+
	\$ in billions	\$193	\$173	\$191	\$172	\$165	

- 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		2016	2017	2018	2019	2020	
US Chartered Depository Institutions	Debt to GDP	45.4%	45.2%	44.8%	44.5%	46.6%	+
	5 year % change	2%	4%	5%	4%	6%	+
	\$ in billions	\$8,503	\$8,829	\$9,226	\$9,537	\$9,750	
Non-Financial Corporations, Debt Securities	Debt to GDP	31.2%	31.6%	30.6%	30.7%	34.7%	!
	5 year % change	16%	12%	6%	4%	14%	!
	\$ in billions	\$5,844	\$6,169	\$6,303	\$6,572	\$7,257	
Government Sponsored Enterprises	Debt to GDP	26.8%	26.6%	25.9%	25.7%	29.4%	+
	5 year % change	-15%	-11%	-11%	-8%	9%	+
	\$ in billions	\$5,031	\$5,197	\$5,337	\$5,507	\$6,149	
Agency/GSE backed Mortgage Pools	Debt to GDP	10.3%	10.9%	11.1%	11.2%	11.6%	!
	5 year % change	22%	22%	19%	19%	19%	!
	\$ in billions	\$1,930	\$2,125	\$2,291	\$2,405	\$2,427	
Federal Government (Student & other loans)	Debt to GDP	6.5%	6.7%	6.8%	7.0%	8.4%	!
	5 year % change	49%	39%	14%	21%	37%	!
	\$ in billions	\$1,209	\$1,305	\$1,403	\$1,497	\$1,750	
Credit Unions	Debt to GDP	4.4%	4.6%	4.8%	4.9%	5.3%	!
	5 year % change	25%	30%	32%	27%	29%	!
	\$ in billions	\$820	\$900	\$992	\$1,047	\$1,105	
Issuers of Asset-Backed Securities	Debt to GDP	5.4%	4.9%	4.7%	4.7%	4.8%	+
	5 year % change	-54%	-50%	-39%	-31%	-21%	+
	\$ in billions	\$1,005	\$959	\$959	\$997	\$1,007	
Finance Companies	Debt to GDP	5.0%	4.8%	4.5%	4.3%	4.4%	+
	5 year % change	-27%	-28%	-30%	-31%	-18%	+
	\$ in billions	\$936	\$929	\$931	\$924	\$911	
Rest of World (Foreign Loans to US Businesses)	Debt to GDP	1.1%	1.9%	3.6%	3.9%	4.3%	!
	5 year % change	-14%	116%	327%	298%	281%	!
	\$ in billions	\$203	\$376	\$733	\$831	\$908	
Margin Accounts	Debt to GDP	1.5%	1.7%	1.5%	1.5%	2.3%	!
	5 year % change	-4%	-9%	-27%	-28%	45%	!
	\$ in billions	\$277	\$333	\$302	\$326	\$482	

Financial Sector Debt

Financial Sector		2016	2017	2018	2019	2020	
Domestic Financial Sector	Debt to GDP	83.7%	81.8%	79.1%	77.8%	83.9%	+
	5 year % change	-14%	-11%	-12%	-11%	0%	+
	\$ in billions	\$15,685	\$15,979	\$16,310	\$16,671	\$17,572	
Debt Securities	Debt to GDP	72.7%	71.3%	69.3%	68.7%	74.7%	+
	5 year % change	-16%	-13%	-12%	-10%	3%	+
	\$ in billions	\$13,634	\$13,941	\$14,283	\$14,717	\$15,647	
Memo: Debt Securities: Open Market Paper	Bond Default Rate	0.0%	0.6%	0.2%	0.2%	0.2%	
	Debt to GDP	2.3%	2.0%	2.1%	1.9%	1.8%	+
	5 year % change	-49%	-47%	-35%	-31%	-23%	+
Memo: Debt Securities: Agency Securities	\$ in billions	\$434	\$397	\$431	\$398	\$382	
	Debt to GDP	45.3%	45.3%	44.1%	43.9%	48.2%	+
	5 year % change	-7%	-3%	-5%	-3%	8%	+
Memo: Debt Securities: Corporate and Foreign Bonds	\$ in billions	\$8,496	\$8,843	\$9,090	\$9,408	\$10,094	
	Debt to GDP	25.1%	24.1%	23.1%	22.9%	24.7%	+
	5 year % change	-26%	-24%	-22%	-19%	-4%	+
Loans	\$ in billions	\$4,703	\$4,701	\$4,762	\$4,910	\$5,171	
	Debt to GDP	10.9%	10.4%	9.8%	9.1%	9.2%	+
	5 year % change	10%	7%	-6%	-17%	-15%	+
Memo: Loans: Depository Institution Loans	\$ in billions	\$2,052	\$2,038	\$2,027	\$1,955	\$1,925	
	Debt to GDP	1.6%	1.5%	1.5%	1.4%	1.8%	!
	5 year % change	13%	16%	9%	-4%	15%	!
Memo: Loans: Other Loans and Advances	\$ in billions	\$293	\$301	\$311	\$310	\$382	
	Debt to GDP	8.1%	7.6%	7.2%	6.6%	6.3%	+
	5 year % change	11%	5%	-8%	-19%	-21%	+
Memo: Loans: Equity REIT Mortgages	\$ in billions	\$1,522	\$1,495	\$1,490	\$1,421	\$1,318	
	Debt to GDP	1.3%	1.2%	1.1%	1.1%	1.1%	+
	5 year % change	3%	3%	-14%	-21%	-17%	+
	\$ in billions	\$236	\$242	\$226	\$224	\$225	

• 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		2016	2017	2018	2019	2020
Total	Debt to GDP	11.7%	11.4%	10.6%	11.9%	12.5%
	5 year % change	-34%	-32%	-33%	-13%	3%
	\$ in billions	\$2,200	\$2,236	\$2,188	\$2,552	\$2,607
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	n/a	-62%
	\$ in billions	\$25	\$20	\$18	\$18	\$14
Corporate Bonds	Debt to GDP	0.3%	0.4%	0.3%	0.3%	0.3%
	5 year % change	n/a	n/a	-21%	-32%	-15%
	\$ in billions	\$62	\$70	\$67	\$62	\$69
Equities	Debt to GDP	0.3%	0.3%	0.3%	0.3%	0.3%
	5 year % change	n/a	n/a	-19%	-41%	-42%
	\$ in billions	\$51	\$54	\$61	\$56	\$53
Federal Agency	Debt to GDP	0.2%	0.2%	0.1%	0.1%	0.1%
	5 year % change	n/a	n/a	-80%	-76%	-66%
	\$ in billions	\$37	\$30	\$28	\$25	\$24
Mortgage Backed Securities	Debt to GDP	1.9%	1.9%	1.9%	2.2%	2.4%
	5 year % change	n/a	n/a	-50%	-24%	9%
	\$ in billions	\$361	\$380	\$396	\$464	\$499
Other	Debt to GDP	0.4%	0.3%	0.2%	0.2%	0.2%
	5 year % change	n/a	n/a	-64%	-65%	-61%
	\$ in billions	\$69	\$49	\$43	\$43	\$38
Treasury Securities	Debt to GDP	7.7%	7.5%	7.0%	8.1%	8.4%
	5 year % change	n/a	n/a	-23%	1%	15%
	\$ in billions	\$1,439	\$1,472	\$1,434	\$1,729	\$1,748
Treasury Inflation-Protected Securities	Debt to GDP	0.8%	0.8%	0.7%	0.7%	0.8%
	5 year % change	n/a	n/a	-30%	-24%	-11%
	\$ in billions	\$157	\$161	\$141	\$156	\$164
Reverse Repurchase Agreements		2016	2017	2018	2019	2020
Total	Debt to GDP	9.6%	9.1%	8.2%	9.1%	9.3%
	5 year % change	-32%	-32%	-31%	-13%	-3%
	\$ in billions	\$1,807	\$1,773	\$1,689	\$1,955	\$1,946
Asset Backed Securities	Debt to GDP	0.1%	0.1%	0.1%	0.0%	0.0%
	5 year % change	n/a	n/a	n/a	n/a	-71%
	\$ in billions	\$16	\$12	\$10	\$9	\$7
Corporate Bonds	Debt to GDP	0.1%	0.1%	0.1%	0.1%	0.1%
	5 year % change	n/a	n/a	-38%	-48%	-43%
	\$ in billions	\$18	\$16	\$15	\$14	\$15
Equities	Debt to GDP	0.0%	0.0%	0.0%	0.0%	0.0%
	5 year % change	n/a	n/a	n/a	-92%	-85%
	\$ in billions	\$1	\$0	\$0	\$0	\$0
Federal Agency	Debt to GDP	0.1%	0.1%	0.1%	0.0%	0.0%
	5 year % change	n/a	n/a	-88%	-83%	-78%
	\$ in billions	\$17	\$10	\$9	\$9	\$7
Mortgage Backed Securities	Debt to GDP	1.2%	1.1%	1.1%	1.1%	1.1%
	5 year % change	n/a	n/a	-61%	-43%	-30%
	\$ in billions	\$226	\$210	\$216	\$242	\$227
Other	Debt to GDP	0.2%	0.2%	0.1%	0.1%	0.1%
	5 year % change	n/a	n/a	-67%	-66%	-68%
	\$ in billions	\$44	\$29	\$23	\$24	\$20
Treasury Securities	Debt to GDP	7.1%	6.8%	6.2%	7.0%	7.2%
	5 year % change	n/a	n/a	-19%	0%	10%
	\$ in billions	\$1,323	\$1,329	\$1,270	\$1,498	\$1,507
Treasury Inflation-Protected Securities	Debt to GDP	0.9%	0.9%	0.7%	0.7%	0.8%
	5 year % change	n/a	n/a	-10%	-11%	-7%
	\$ in billions	\$163	\$170	\$147	\$160	\$163

• 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		2016	2017	2018	2019	2020
Dealer (Trading)	Debt to GDP	837.0%	844.3%	823.0%	767.2%	749.9%
	5 year % change	-39%	-33%	-37%	-35%	-20%
	\$ in billions	\$156,901	\$165,002	\$169,636	\$164,441	\$156,998
End User (Non-Trading)	Debt to GDP	16.3%	14.2%	11.9%	14.4%	18.0%
	5 year % change	-45%	-50%	-59%	-36%	17%
	\$ in billions	\$3,057	\$2,785	\$2,447	\$3,077	\$3,768
Credit Derivatives	Debt to GDP	28.2%	21.4%	20.7%	18.4%	14.5%
	5 year % change	-70%	-74%	-69%	-66%	-62%
	\$ in billions	\$5,293	\$4,186	\$4,270	\$3,945	\$3,034
Total Notional	Debt to GDP	881.6%	880.0%	855.6%	800.0%	782.4%
	5 year % change	-41%	-36%	-39%	-37%	-21%
	\$ in billions	\$165,252	\$171,973	\$176,353	\$171,462	\$163,800
Derivative Activity by Contract Type		2016	2017	2018	2019	2020
Interest Rate	Debt to GDP	664.1%	667.3%	621.8%	583.5%	554.1%
	5 year % change	-45%	-39%	-46%	-41%	-27%
	\$ in billions	\$124,488	\$130,417	\$128,166	\$125,056	\$116,001
Foreign Exchange	Debt to GDP	169.3%	168.4%	190.3%	173.4%	189.1%
	5 year % change	3%	-1%	12%	-8%	7%
	\$ in billions	\$31,737	\$32,903	\$39,221	\$37,170	\$39,596
Equities	Debt to GDP	13.2%	15.8%	16.4%	17.7%	18.0%
	5 year % change	28%	30%	35%	20%	37%
	\$ in billions	\$2,475	\$3,080	\$3,374	\$3,796	\$3,775
Commodities	Debt to GDP	6.7%	7.0%	6.4%	7.0%	6.7%
	5 year % change	-22%	-19%	-11%	1%	10%
	\$ in billions	\$1,257	\$1,373	\$1,315	\$1,495	\$1,395
Credit Derivatives	Debt to GDP	28.2%	21.4%	20.7%	18.4%	14.5%
	5 year % change	-70%	-74%	-69%	-66%	-62%
	\$ in billions	\$5,293	\$4,186	\$4,270	\$3,945	\$3,034
Total Notional	Debt to GDP	881.6%	880.0%	855.6%	800.0%	782.4%
	5 year % change	-41%	-36%	-39%	-37%	-21%
	\$ in billions	\$165,252	\$171,973	\$176,353	\$171,462	\$163,800
Derivative Activity by Product		2016	2017	2018	2019	2020
Futures & Forwards	Debt to GDP	182.5%	176.1%	175.4%	162.3%	154.5%
	5 year % change	-24%	-31%	-26%	-34%	-21%
	\$ in billions	\$34,201	\$34,407	\$36,144	\$34,787	\$32,350
Total Options	Debt to GDP	156.7%	198.8%	184.4%	168.5%	152.8%
	5 year % change	-25%	6%	-4%	-9%	-10%
	\$ in billions	\$29,373	\$38,841	\$38,009	\$36,117	\$31,992
Total Swaps	Debt to GDP	514.2%	483.7%	475.1%	450.8%	460.6%
	5 year % change	-45%	-43%	-48%	-42%	-22%
	\$ in billions	\$96,384	\$94,524	\$97,923	\$96,614	\$96,423
Credit Derivatives	Debt to GDP	28.2%	21.4%	20.7%	18.4%	14.5%
	5 year % change	-70%	-74%	-69%	-66%	-62%
	\$ in billions	\$5,293	\$4,186	\$4,270	\$3,945	\$3,034
Total Notional	Debt to GDP	881.6%	880.0%	855.6%	800.0%	782.4%
	5 year % change	-41%	-36%	-39%	-37%	-21%
	\$ in billions	\$165,252	\$171,973	\$176,353	\$171,462	\$163,800

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Largest Individual Lenders

Lending Institutions		2016	2017	2018	2019	2020	
JP Morgan	Loans to GDP	4.8%	4.9%	4.9%	4.8%	5.0%	+
	5 year % change	2%	8%	12%	12%	10%	
	\$ in billions	\$892	\$954	\$1,003	\$1,024	\$1,053	
	Charge-off Rate	0.6%	0.6%	0.5%	0.6%	0.5%	
	Criticized Assets (% of Total Loans)	2.2%	1.6%	1.2%	1.5%	4.0%	
Citigroup	Loans to GDP	3.3%	3.4%	3.3%	3.3%	3.2%	+
	5 year % change	-20%	-16%	-16%	-11%	-5%	
	\$ in billions	\$625	\$668	\$685	\$700	\$677	
	Charge-off Rate	1.1%	1.1%	1.1%	1.1%	1.1%	
	Criticized Assets (% of Total Loans)	n/a	n/a	n/a	4.4%	10.4%	
Wells Fargo	Loans to GDP	5.2%	4.9%	4.6%	4.5%	4.3%	+
	5 year % change	3%	-1%	-6%	-9%	-16%	
	\$ in billions	\$972	\$961	\$953	\$965	\$890	
	Charge-off Rate	0.4%	0.3%	0.3%	0.3%	0.3%	
	Criticized Assets (% of Total Loans)	3.0%	2.3%	2.2%	2.1%	3.7%	
Bank of America	Loans to GDP	4.8%	4.8%	4.6%	4.6%	4.4%	+
	5 year % change	-19%	-14%	-17%	-8%	-10%	
	\$ in billions	\$907	\$937	\$947	\$983	\$928	
	Charge-off Rate	0.5%	0.5%	0.4%	0.4%	0.4%	
	Criticized Assets (% of Total Loans)	1.8%	1.5%	1.2%	1.2%	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		2016	2017	2018	2019	2020
Total Residential Mortgage Debt	Debt to GDP	51.5%	50.8%	49.5%	48.9%	52.2%
	5 Year % Change	-18%	-14%	-12%	-9%	0%
	\$ in billions	\$9,659	\$9,929	\$10,204	\$10,482	\$10,935
	Delinquency Rate	1.6%	1.3%	1.1%	1.1%	0.6%
	Forbearance Share	n/a	n/a	n/a	n/a	5.5%
Home Equity Loans Outstanding	Debt to GDP	2.5%	2.3%	2.0%	1.8%	1.7%
	5 Year % Change	-37%	-35%	-37%	-37%	-38%
	\$ in billions	\$473	\$444	\$412	\$390	\$349
Total Commercial Real Estate Debt	Debt to GDP	21.6%	22.1%	22.2%	22.7%	24.4%
	5 Year % Change	2%	9%	10%	12%	17%
	\$ in billions	\$4,055	\$4,316	\$4,566	\$4,857	\$5,117

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

Monthly Residential Housing Summary		Jul-2020	Aug-2020	Sep-2020	Oct-2020	Nov-2020	Dec-2020
New Home Sales	Volume	979,000	977,000	965,000	965,000	839,000	885,000
	Annual Change	48.1%	38.4%	32.9%	36.7%	20.5%	21.1%
Existing Home Sales	Volume	5,900,000	5,970,000	6,440,000	6,730,000	6,590,000	6,650,000
	Annual Change	n/a	n/a	n/a	n/a	n/a	n/a
Housing Starts	Volume	1,487,000	1,373,000	1,437,000	1,530,000	1,553,000	1,670,000
	Annual Change	22.7%	-0.3%	12.8%	14.2%	13.3%	5.2%
Home Price Index (Case-Shiller 20 City Composite)	Index (2000=100)	225.00	228.00	232.00	236.00	239.00	242.00
	Annual Change	4.2%	5.4%	6.7%	8.1%	9.2%	10.1%

Refinance Statistics		2016	2017	2018	2019	2020
Home Equity Cash-out Volume	to GDP	0.3%	0.4%	0.4%	0.5%	0.7%
	5 Year % Change	87%	98%	140%	254%	209%
	\$ in billions	\$61	\$71	\$87	\$108	\$153
Second Mortgages/HELOC Consolidation Volume	to GDP	0.2%	0.1%	0.1%	0.1%	0.4%
	5 Year % Change	-14%	-45%	-60%	37%	198%
	\$ in billions	\$28	\$23	\$15	\$30	\$75
Total Combined Cash-out and Second Mortgages/HELOC Consolidation Volume	to GDP	0.5%	0.5%	0.5%	0.6%	1.1%
	5 Year % Change	37%	21%	39%	164%	206%
	\$ in billions	\$89	\$94	\$101	\$138	\$228

- 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		2016	2017	2018	2019	2020
Federal Government Debt	Debt to GDP	106.6%	104.9%	106.6%	108.3%	132.5%
	5 year % change	9%	3%	3%	5%	28%
	\$ in billions	\$19,977	\$20,493	\$21,974	\$23,201	\$27,748
Memo: Federal Debt: Held by Public	Debt to GDP	77.0%	75.8%	78.1%	80.1%	103.3%
	5 year % change	15%	6%	6%	8%	38%
	\$ in billions	\$14,435	\$14,815	\$16,102	\$17,170	\$21,632
Memo: Federal Debt: Intragovernmental Holdings	Debt to GDP	19.8%	19.2%	19.0%	18.7%	17.8%
	5 year % change	-1%	-3%	-5%	-5%	-9%
	\$ in billions	\$5,542	\$5,678	\$5,872	\$6,031	\$6,115
State and Local Government Debt	Debt to GDP	23.1%	21.5%	19.9%	19.1%	18.0%
	5 year % change	-26%	-27%	-29%	-26%	-25%
	\$ in billions	\$3,136	\$3,136	\$3,086	\$3,096	\$3,187










Supplementary Data		2016	2017	2018	2019	2020
Nominal GDP	\$ in billions	\$18,745	\$19,543	\$20,612	\$21,433	\$20,935
	Annual % Change	2.8%	4.3%	5.5%	4.0%	-2.3%
Real GDP	Chained 2012 \$ in Billions	\$17,731	\$18,144	\$18,688	\$19,092	\$18,423
	Annual % Change	1.7%	2.3%	3.0%	2.2%	-3.5%
Consumer Price Index (Inflation)	CPI (2010=100)	110.07	112.41	115.16	117.24	118.69
	Inflation Rate	1.3%	2.1%	2.5%	1.8%	1.2%
Unemployment	Person (Thousands)	7,170	6,278	6,029	5,503	10,404
	Unemployment Rate	4.5%	3.9%	3.7%	3.4%	6.5%
Current Account Balance	\$ in billions	(\$428)	(\$440)	(\$491)	(\$498)	(\$550)
	to GDP	-2.3%	-2.3%	-2.4%	-2.3%	-2.7%






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

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Explanatory Notes

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

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