Goldman Sachs | Economics Research

4 May 2019 | 4:28PM EDT

US Economics Analyst

Corporate Debt Is Not Too High

- Nonfinancial corporate debt—defined as bonds, loans, and commercial paper—has risen to an all-time high as a share of GDP. How much of a threat does this pose to creditors and the sustainability of the expansion?
- We are not too concerned. First, despite the record level relative to GDP, corporate debt remains below the 2001 peak as a share of corporate cash flows and has declined since the mid-90s as a share of corporate assets. We think these latter measures are more meaningful as they better capture the risks of illiquidity and insolvency.
- Second, equilibrium leverage in the nonfinancial corporate sector is likely higher than during most of the postwar period. Lower interest rates and more stable corporate cash flows have reduced the cost of debt, and this should incentivize firms to raise leverage.
- Third, the structure of corporate debt has shifted toward longer maturities and refinancing risk has declined as corporate bond yields have become less volatile.
- Fourth, the corporate sector runs a financial surplus, an unusually healthy position this deep into a business cycle expansion. This implies capex is now less dependent on external finance, and thus less vulnerable to a profit squeeze than in previous cycles.
- If the economy entered a recession, defaults would rise, spreads would widen, and capital spending would decline substantially. After all, the corporate sector is highly cyclical. But we don't see these risks as larger than in previous cycles and don't expect high corporate debt to trigger a recession.

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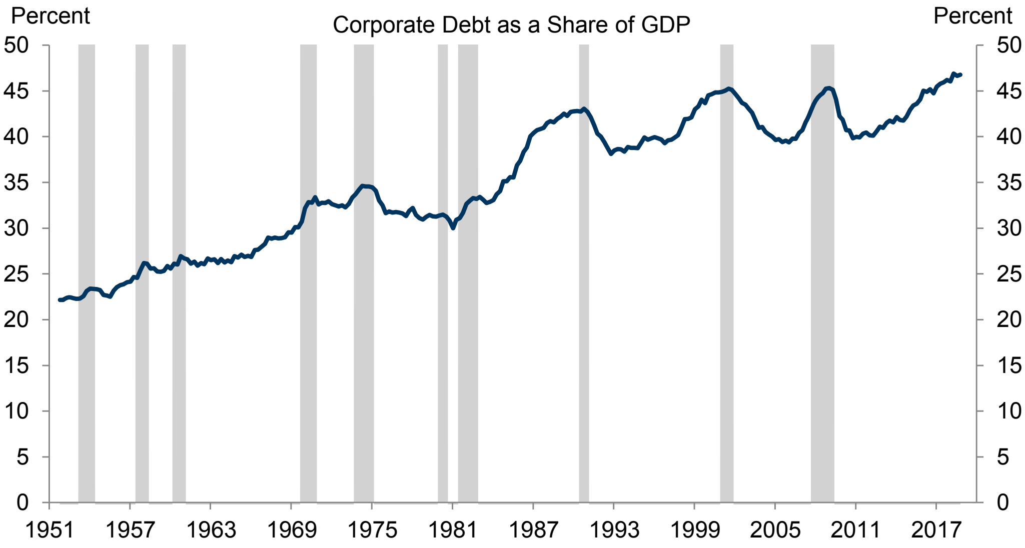
Corporate Debt Is Not Too High

Nonfinancial corporate debt—defined as bonds, loans, and commercial paper—has grown by 60% since 2011 and has recently risen to an all-time high as a share of GDP. How much of a threat does this pose to creditors and the sustainability of the expansion?

Exhibit 1: Corporate Debt as a Share of GDP Has Risen Significantly



Source: Department of Commerce, Federal Reserve, Goldman Sachs Global Investment Research

We are not too concerned by the threat corporate debt poses to the economy for four reasons.

Reason #1: Not That Levered

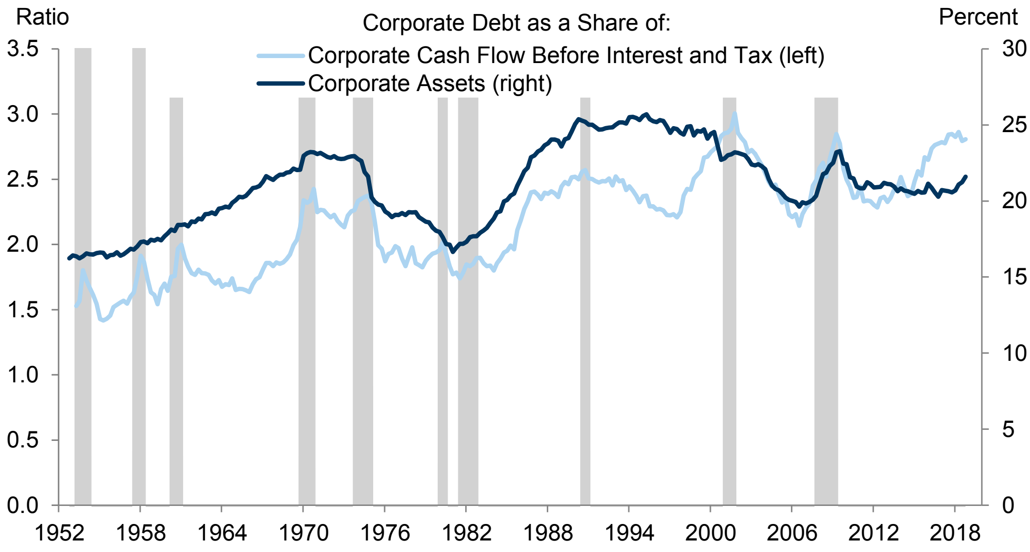
First, corporate leverage is lower than widely believed.

While nonfinancial corporate debt is near an all-time high as a share of GDP, it is much less elevated as a share of corporate cash flows and corporate assets. As Exhibit 2 shows, corporate debt as a share of corporate cash flows before interest and tax reached the 2008 peak early last year but has edged somewhat lower since and remains below the 2001 peak.[1] Corporate debt as a share of corporate assets remains well below the 2008 level and has declined by 4 percentage points (more than 15%) since 1995.

We think the less elevated debt-to-assets and debt-to-cash flow measures are more meaningful than debt-to-GDP as these former measures better capture the risks of insolvency and illiquidity. After all, a firm is insolvent when the value of its debt and other liabilities exceeds the value of its assets and illiquid when it does not have the internal or external cash flow to meet its current obligations.

[1] Corporate nonfinancial debt is the sum of loans and debt securities of nonfinancial corporations, including commercial paper. We define cash flow before interest and tax as profits before interest and tax plus depreciation plus inventory adjustment.

Exhibit 2: Corporate Leverage Ratios Remain Well Within Modern Norms



Source: Federal Reserve, Goldman Sachs Global Investment Research

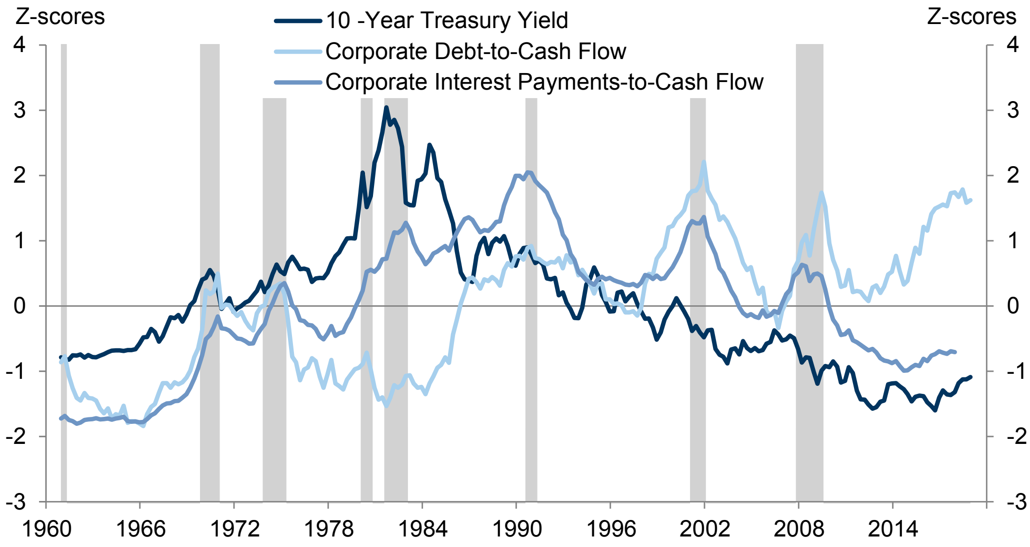
Reason #2: Higher Equilibrium Leverage

Second, equilibrium leverage in the nonfinancial corporate sector is now likely higher than during most of the postwar period as a result of lower interest rates and more stable cash flows.

In principle, lower interest rates incentivize firms to raise leverage through a lower cost of debt.[2] Empirically, we also find that lower corporate bond yields are associated with more debt issuance and greater equity repurchases, controlling for current investment and cyclical conditions. Exhibit 3 shows that the decline in interest rates has allowed firms to simultaneously boost corporate debt but lower interest payments as shares of corporate cash flows.

[2] Lower risk-free rates should in principle also lower the cost of equity. Nevertheless, several corporate finance theories suggest that lower interest rates should boost debt-to-cash flows. The pecking order theory predicts that that firms facing debt servicing constraints raise debt-to-cash flows in response to lower rates because they prefer to exhaust their available debt capacity before issuing costly external equity, for instance as a result of rating agencies constraints or other information asymmetry issues.

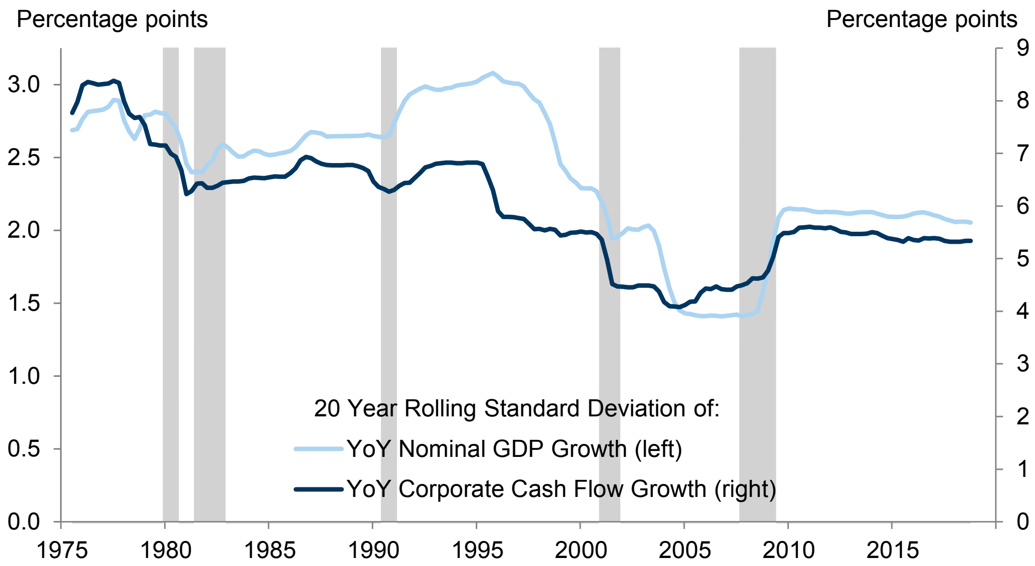
Exhibit 3: Interest Payments as a Share of Cash Flows Have Declined Despite Rising Leverage



Source: Federal Reserve, Goldman Sachs Global Investment Research

The structural decline in output volatility and time spent in recessions, or Great Moderation, likely also implies structurally higher corporate leverage. Exhibit 4 shows that the decline in output volatility has coincided with a decline in the volatility of corporate cash flows. And lower odds of a sharp decline in cash flow also incentivize firms to raise leverage through a lower cost of debt.[3]

Exhibit 4: GDP and Corporate Cash Flows Have Become Less Volatile



Source: Department of Commerce, Federal Reserve, Goldman Sachs Global Investment Research

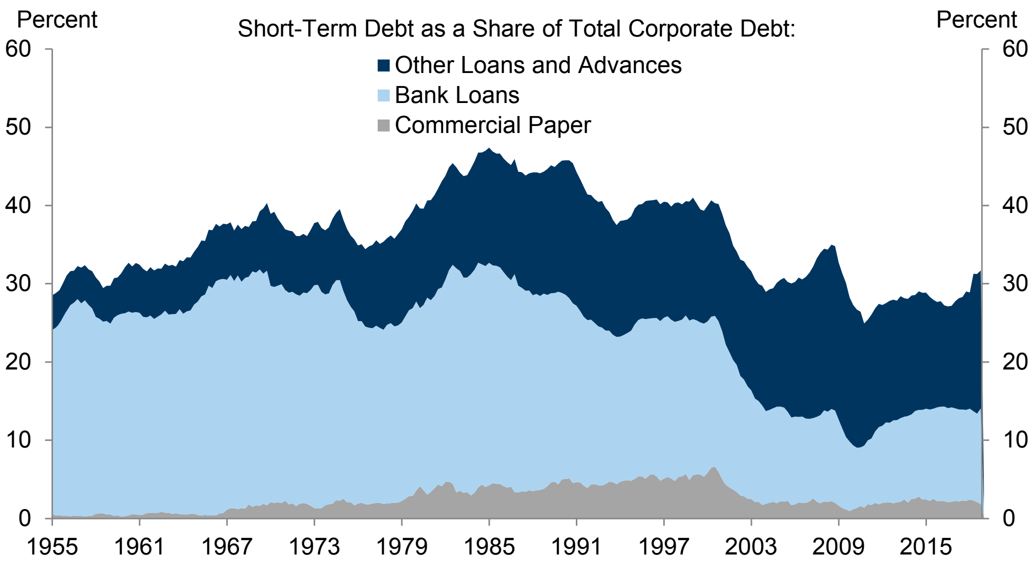
[3] Tax reform has limited the tax benefits of corporate leverage by capping the deductibility of interest expenses. We note however that this reform only affects the firms with high interest payments relative to earnings and that the research literature has typically found small tax effects on corporate leverage.

Reason #3: Lower Refinancing Risk

Third, the structure of corporate debt has shifted toward longer maturities and refinancing risk has declined as corporate bond yields have become less volatile.

Exhibit 5 shows that the share of debt that is short-term has fallen sharply since the mid-80s. This shift away from short-term funding largely reflects declines in the debt shares of bank loans and commercial paper. Longer-run funding makes firms less vulnerable to refinancing risk from a profit squeeze or credit crunch.

Exhibit 5: Short-Term Term Debt Has Fallen Sharply Since the Mid-80s

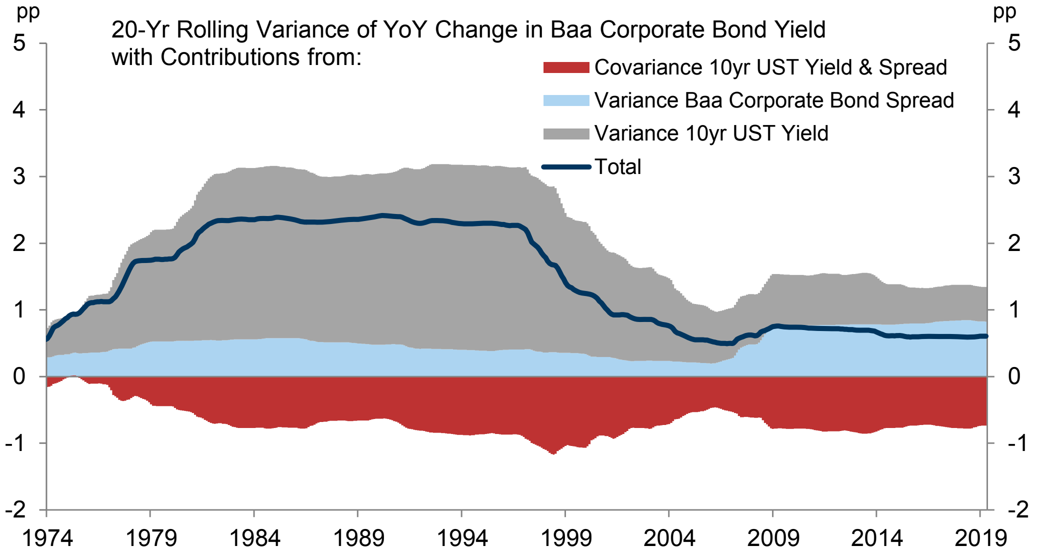


Source: Federal Reserve, Goldman Sachs Global Investment Research

More stable corporate bond yields have also lowered the vulnerability to refinancing risk. Exhibit 6 shows that the volatility of corporate bond yields has dropped sharply over the past few decades. The lower volatility of corporate bond yields mostly reflects the lower volatility of Treasury yields. The tendency for Treasury yields to decline when corporate spreads rise has also limited the volatility of corporate bond yields. For instance, when credit spreads widened sharply at the end of last year, IG corporate bond yields barely changed due to the rally in Treasuries.[4]

[4] This natural hedge against higher spreads from lower Treasury yields is quantitatively more relevant for IG firms than for HY firms.

Exhibit 6: The Decline in Interest Rate Volatility Has Made Total Corporate Funding Costs More Stable



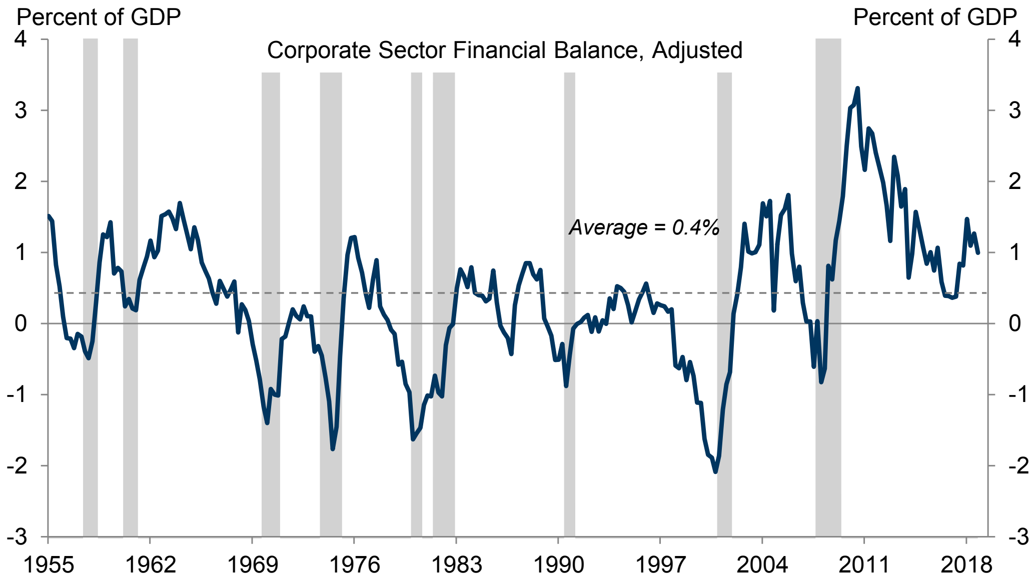
Source: Federal Reserve, Goldman Sachs Global Investment Research

Reason #4: Corporate Financial Surplus

Fourth, the corporate sector runs a financial surplus, which means that its income exceeds its spending.

We showed previously that financial balance measures are better predictors of financial crisis than debt growth. The good news is that the corporate financial balance is positive and remains above its historic average, an unusually healthy position this deep into a business cycle expansion.[5] The positive corporate financial balance implies that corporate investment is now less dependent on external finance, and thus less vulnerable to a profit squeeze or credit crunch than in previous cycles.

Exhibit 7: The Corporate Sector Financial Balance Is Positive and Above the Historical Average



Source: Federal Reserve, Goldman Sachs Global Investment Research

Overall, our analysis implies that we are not too concerned by the threat corporate debt poses to creditors and the sustainability of the expansion. Nevertheless, if the economy entered a recession, defaults would rise, spreads would widen, and capital spending would decline substantially. After all, the corporate sector is highly cyclical. But we don't see these risks as larger than in previous cycles and don't expect high corporate debt to trigger a recession.

Daan Struyven

[5] For a more granular analysis of the business sector financial balance, see Spencer Hill, "Stuck in the Middle with You: Searching for Corporate-Sector Imbalances," US Economics Analyst, 12 November 2018.

The US Economic and Financial Outlook

Forecast Changes

We lowered our past-quarter Q1 GDP tracking estimate by two tenths on net, after firm factory orders data, but inventories data suggested a smaller boost in the first quarter.

(% change on previous period, annualized, except where noted)

	2017	2018	2019	2020	2021	2022	2019				2020			
			(f)	(f)	(f)	(f)	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
OUTPUT AND SPENDING														
Real GDP	**2.2**	**2.9**	*2.7*	*2.3*	*2.0*	*1.7*	**3.2**	*1.9*	*2.6*	*2.5*	*2.3*	*2.3*	*2.0*	*2.0*
Real GDP (Q4/Q4)	**2.5**	**3.0**	*2.5*	*2.1*	*2.0*	*1.6*	--	--	--	--	--	--	--	--
Consumer Expenditure	**2.5**	**2.6**	*2.5*	*2.6*	*2.3*	*1.9*	**1.2**	*3.1*	*2.6*	*2.6*	*2.6*	*2.7*	*2.5*	*2.3*
Residential Fixed Investment	**3.3**	**-0.3**	*-2.1*	*4.7*	*3.7*	*2.3*	**-2.8**	*-4.4*	*4.0*	*6.0*	*6.0*	*6.0*	*4.0*	*4.0*
Business Fixed Investment	**5.3**	**6.9**	*3.8*	*3.8*	*3.4*	*3.2*	**2.7**	*1.5*	*5.3*	*4.3*	*3.5*	*3.5*	*3.4*	*3.4*
Structures	**4.6**	**5.0**	*-0.2*	*1.9*	*2.0*	*2.0*	**-0.8**	*0.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Equipment	**6.1**	**7.4**	*2.2*	*3.8*	*4.0*	*3.4*	**0.2**	*-3.4*	*5.0*	*5.0*	*4.0*	*4.0*	*4.0*	*4.0*
Intellectual Property Products	**4.6**	**7.5**	*8.5*	*4.9*	*3.5*	*3.8*	**8.6**	*9.0*	*8.0*	*5.0*	*4.0*	*4.0*	*3.5*	*3.5*
Federal Government	**0.7**	**2.6**	*2.6*	*1.2*	*0.0*	*0.0*	**-0.1**	*7.0*	*2.5*	*2.5*	*0.0*	*0.0*	*0.0*	*0.0*
State & Local Government	**-0.5**	**0.8**	*1.6*	*0.4*	*0.0*	*0.0*	**3.9**	*1.6*	*1.0*	*1.0*	*0.0*	*0.0*	*0.0*	*0.0*
Net Exports ($bn, '09)	**-859**	**-912**	*-910*	*-943*	*-978*	*-1,010*	**-899**	*-905*	*-915*	*-921*	*-930*	*-939*	*-948*	*-957*
Inventory Investment ($bn, '09)	**23**	**45**	*76*	*28*	*20*	*25*	**128**	*70*	*60*	*45*	*40*	*30*	*20*	*20*
Industrial Production, Mfg.	**2.0**	**2.3**	*0.7*	*1.3*	*1.3*	*1.0*	**-1.1**	*-1.0*	*1.2*	*1.6*	*1.5*	*1.4*	*1.2*	*1.3*
HOUSING MARKET														
Housing Starts (units, thous)	**1,208**	**1,249**	*1,266*	*1,327*	*1,373*	--	**1,193**	*1,282*	*1,274*	*1,313*	*1,299*	*1,322*	*1,341*	*1,349*
New Home Sales (units, thous)	**616**	**617**	*656*	*677*	*701*	--	**660**	*648*	*652*	*664*	*666*	*672*	*681*	*688*
Existing Home Sales (units, thous)	**5,531**	**5,341**	*5,224*	*5,271*	*5,321*	--	**5,207**	*5,218*	*5,230*	*5,241*	*5,253*	*5,265*	*5,277*	*5,290*
Case-Shiller Home Prices (%yoy)*	**6.2**	**4.4**	*3.3*	*2.8*	*2.2*	*2.0*	*3.4*	*3.7*	*3.4*	*3.3*	*3.2*	*3.0*	*2.9*	*2.8*
INFLATION (% ch, yr/yr)														
Consumer Price Index (CPI)	**2.1**	**2.4**	*2.0*	*2.2*	*2.2*	*2.4*	**1.6**	*2.1*	*2.2*	*2.3*	*2.5*	*2.0*	*2.0*	*2.1*
Core CPI	**1.8**	**2.1**	*2.2*	*2.3*	*2.5*	*2.6*	**2.1**	*2.2*	*2.3*	*2.3*	*2.3*	*2.3*	*2.3*	*2.4*
Core PCE**	**1.6**	**1.9**	*1.7*	*2.0*	*2.2*	*2.3*	**1.7**	*1.6*	*1.7*	*1.8*	*2.0*	*2.1*	*2.1*	*2.1*
LABOR MARKET														
Unemployment Rate (%)	**4.4**	**3.9**	*3.7*	*3.3*	*3.2*	*3.2*	**3.9**	*3.7*	*3.7*	*3.5*	*3.4*	*3.3*	*3.2*	*3.2*
U6 Underemployment Rate (%)	**8.5**	**7.7**	*7.2*	*6.5*	*6.3*	*6.4*	**7.5**	*7.3*	*7.1*	*6.9*	*6.7*	*6.5*	*6.4*	*6.4*
Payrolls (thous, monthly rate)	**180**	**221**	*175*	*125*	*95*	*90*	**210**	*180*	*160*	*150*	*140*	*140*	*120*	*100*
GOVERNMENT FINANCE														
Federal Budget (FY, $bn)	**-666**	**-779**	*-925*	*-1,000*	*-1,100*	*-1,250*	--	--	--	--	--	--	--	--
FINANCIAL INDICATORS														
FF Target Range (Bottom-Top, %)^	**1.25-1.5**	**2.25-2.5**	*2.25-2.5*	*2.5-2.75*	*2.75-3.0*	*2.75-3.0*	**2.25-2.5**	*2.25-2.5*	*2.25-2.5*	*2.25-2.5*	*2.25-2.5*	*2.25-2.5*	*2.25-2.5*	*2.5-2.75*
10-Year Treasury Note^	**2.40**	**2.69**	*2.80*	*3.00*	*3.00*	*3.00*	**2.41**	*2.55*	*2.65*	*2.80*	*2.90*	*3.00*	*3.00*	*3.00*
Euro (€/$)^	**1.20**	**1.15**	*1.18*	*1.25*	*1.30*	*1.35*	**1.12**	*1.11*	*1.12*	*1.18*	*1.19*	*1.21*	*1.23*	*1.25*
Yen ($/¥)^	**113**	**110**	*108*	*105*	*100*	*97*	**111**	*111*	*111*	*108*	*106*	*105*	*105*	*105*

* Weighted average of metro-level HPIs for 381 metro cities where the weights are dollar values of housing stock reported in the American Community Survey.
** PCE = Personal consumption expenditures. ^ Denotes end of period.
Note: Published figures in bold.

Source: Goldman Sachs Global Investment Research

GS Probabilistic Fed Call and Economic Releases

Quarter*	GS Modal Path of	Hike Probability	Cut Probability	No Change Probability	Expected Value of Funds Rate^	
	Target Range^	GS	GS	GS	GS**	Market
Current value	**2.25%-2.50%**	--	--	--	**2.40**	**2.40**
2019Q2	**2.25%-2.50%**	>5	5	95	**2.38**	**2.39**
2019Q3	**2.25%-2.50%**	5	5	90	**2.36**	**2.33**
2019Q4	**2.25%-2.50%**	20	10	70	**2.36**	**2.24**
2020Q1	**2.25%-2.50%**	30	10	60	**2.39**	**2.18**
2020Q2	**2.25%-2.50%**	30	10	60	**2.41**	**2.11**
2020Q3	**2.25%-2.50%**	25	15	60	**2.40**	**2.05**
2020Q4	**2.50%-2.75%**	55	20	25	**2.44**	**2.03**
2021Q1	**2.50%-2.75%**	35	20	45	**2.43**	**2.00**
2021Q2	**2.75%-3.00%**	55	20	25	**2.46**	**2.00**
2021Q3	**2.75%-3.00%**	40	20	40	**2.46**	**2.00**
2021Q4	**2.75%-3.00%**	30	20	50	**2.44**	**2.00**
	Modal Number of Hikes				**Expected Value of Number of Net Hikes**	
2019	**0**				**-0.2**	**-0.6**
2020	**1**				**0.3**	**-0.9**
2021	**1**				**0.0**	**-0.1**

^ Denotes end of period.

* Probabilities represent the likelihood of a policy change at either meeting in a given quarter.

** We assume hikes are 25bp per quarter and cuts average 50bp per quarter. The GS expected value of the funds rate is equal to the prior quarter value + 0.25 * the hike probability - 0.5 * the cut probability.

Note: No change to GS probabilities since last update on April 28, 2019.

Source: Goldman Sachs Global Investment Research

		Time		Estimate		
Date		(EST)	Indicator	GS	Consensus	Last Report
Tue	**May 07**	15:00	Consumer Credit (Mar)	n.a.	+$16.0bn	+$15.2bn
Thu	**May 09**	**8:30**	**Producer Price Index, Final Demand (Apr)**	**+0.3%**	**+0.2%**	**+0.6%**
			Ex Food & Energy	**+0.2%**	**+0.2%**	**+0.3%**
			Ex Food, Energy, and Trade	**+0.2%**	**+0.2%**	**Flat**
		8:30	**Trade Balance (Mar)**	**-$50.3bn**	**-$51.1bn**	**-$49.4bn**
		8:30	**Initial Jobless Claims**	**215,000**	**220,000**	**230,000**
		8:30	Continuing Claims	n.a.	n.a.	1,671,000
		10:00	Wholesale Inventories—Final (Mar)	n.a.	n.a.	Flat
Fri	**May 10**	**8:30**	**Consumer Price Index (Apr)**	**+0.46%**	**+0.4%**	**+0.4%**
			Ex Food and Energy	**+0.21%**	**+0.2%**	**+0.1%**
			Consumer Price Index NSA	**n.a.**	**255.823**	**254.202**
		14:00	Federal Budget Balance (Apr)	n.a.	+$160.0bn	-$146.9bn

Source: Goldman Sachs Global Investment Research

Disclosure Appendix

Reg AC

We, Jan Hatzius, Alec Phillips, David Mericle, Spencer Hill, Daan Struyven, David Choi, Blake Taylor and Ronnie Walker, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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