Goldman Sachs | Economics Research

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US Economics Analyst

The Impact of Higher Rates on Small Businesses (Abecasis/Hill)

- Borrowing costs surged in the wake of the Fed's tightening campaign. We recently showed that the headwind for larger companies that will have to refinance their maturing debt at higher interest rates in coming years should be manageable. But how much should we worry about the impact on small businesses, which are generally more vulnerable to funding stresses and other economic shocks?
- Small business financing differs from that of large corporations in two important ways. First, small businesses spend a larger share of revenues on interest payments—we estimate around 6% for small and 2% for large businesses in 2021. Second, while the average maturity of small and large business debt appears to be roughly similar, economic research finds that small business debt has a bimodal maturity profile: roughly half consists of credit lines, short-term loans, and other floating-rate debt (vs. 20% for large businesses), while the other half consists of term loans with 7-year average maturities when issued (vs. 5½-year for large firms).
- We forecast total small business interest expense by combining a top-down projection for floating-rate payments with a forecast for the fixed-rate segment using loan-level data from the Small Business Administration. We estimate that higher rates will increase the interest burden for small businesses by just over 1pp by 2024, from roughly 5.8% of revenues in 2021 to around 7% in 2024. Under our current rates forecasts, we forecast this share would increase further to just under 8% as term loans gradually mature—above the pre-pandemic share of 6.8% but similar to that of the mid-1990s.
- Combining these interest cost headwinds with our standing estimates of the modest sensitivity of employment and capital spending to interest rates, we estimate that the GDP growth drag from small business borrowing costs will peak *this year* at just 0.1pp. In our baseline, we forecast this growth headwind will wane in 2024 before rising modestly later in the decade as term loans are refinanced.
- Moreover, we expect the strong financial footing of small businesses to partially offset the hiring and investment drag from higher interest payments. We estimate that the small business sector is running a financial surplus worth 9.1% of sector revenues and 2.5% of economywide GDP. This indicator is a statistically

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significant predictor of business investment and argues for a tailwind to capex growth of as much as +4pp in the sector. The sector's balance sheet is healthy as well, with cash ratios and net worth ratios both near 40-year highs and interest income set to rise roughly 0.4pp cumulatively as a share of revenues, reflecting higher short-term interest rates.

- Where could we be wrong? One risk is that small businesses prove more sensitive to interest costs because of difficulty developing new banking relationships and difficulty accessing alternative sources of financing. Still, the share of businesses reporting that credit was harder to get relative to a few months ago stands at 8%—higher than before the pandemic but in line with the average share in the early 1990s.

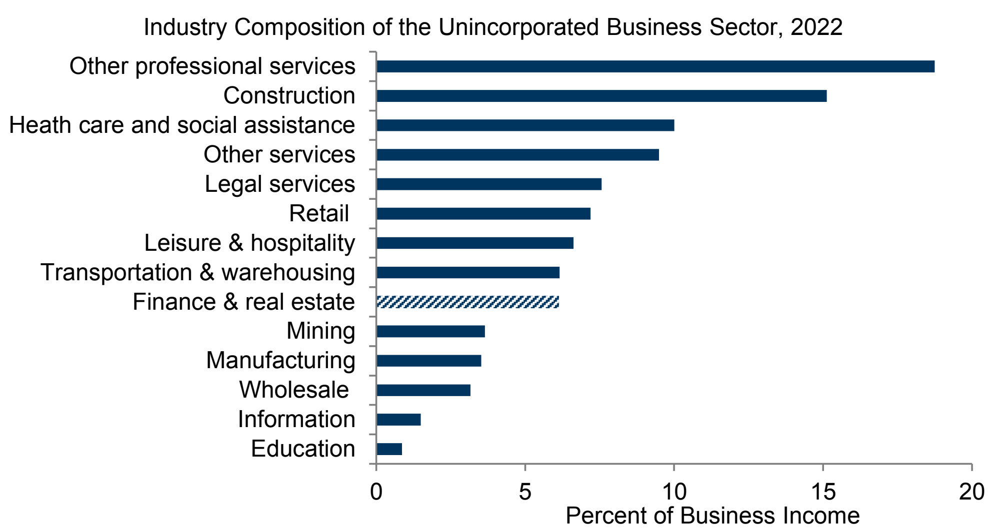
The Impact of Higher Rates on Small Businesses

Borrowing costs surged in the wake of the Fed's tightening campaign. In recent reports, we analyzed the growth and labor market impacts of higher funding costs on large firms and the government. In this week's *Analyst*, we examine the growth impact of higher interest rates on small businesses.

There are many definitions of what constitutes a small business, and these can capture sectors of meaningfully different sizes in the economy. Noncorporate businesses, for example, produce 15% of US GDP and pay out roughly 15% of employee compensation. These shares are similar for firms with fewer than 50 employees, while firms with fewer than 100 employees account for around 25% of both GDP and employee compensation.

Analyzing the small business sector presents several challenges, most notably a lack of data on business finances by company size for non-public companies. Because the official statistics in the national accounts only distinguish between corporate and noncorporate businesses, our analysis considers the noncorporate business sector. Exhibit 1 shows that these businesses are particularly concentrated in the professional and personal services, construction, and health care industries, which together account for over half of all income generated by the noncorporate sector.

Exhibit 1: Professional and Personal Services, Construction, and Health Care Account for the Majority of the Small Business Sector

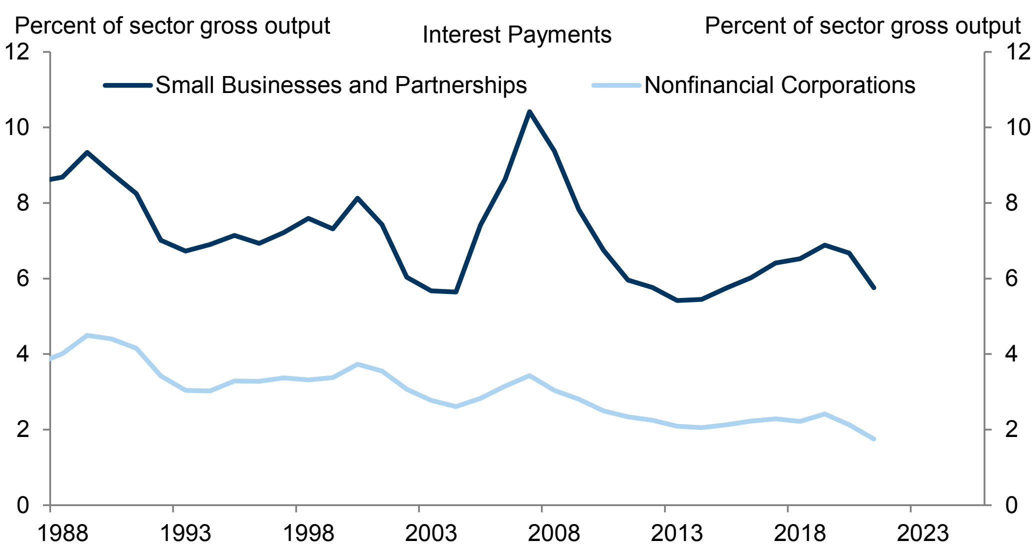


Source: Department of Commerce, Goldman Sachs Global Investment Research

Twin Peaks: Characteristics of Small Business Debt

Small business financing differs from that of larger businesses in two important ways. First, small businesses spend a larger share of output on interest payments than larger businesses, reflecting both higher interest rates on small business debt and a higher debt-to-output share on average. We estimate that the effective interest rate on small business loans was roughly 10½% in 2019, compared to 6.5% for the corporate sector, and that small business debt amounts to around 60-65% of the sector's gross output, compared to 35% for corporate businesses. In 2021, small businesses spent around 6% of the sector's gross output on interest payments, compared to only 2% for large businesses (Exhibit 2).

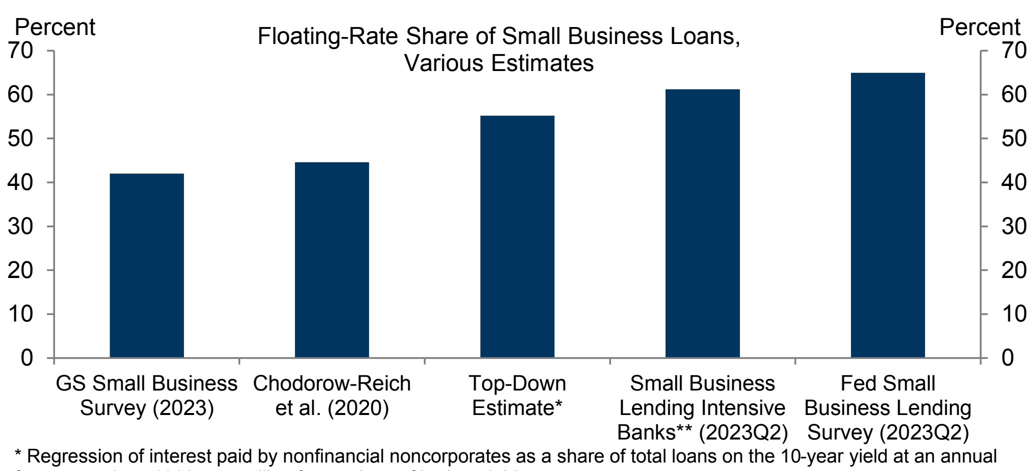
Exhibit 2: Small Businesses Spend a Larger Share of Revenues on Interest Than Corporations



Source: Department of Commerce, Goldman Sachs Global Investment Research

Second, small business debt has a bimodal maturity profile. Estimates from various sources find that roughly half of small business loans are credit lines, short-term loans, and other floating-rate debt (Exhibit 3).

Exhibit 3: Roughly Half of Small Business Debt Has a Floating Rate

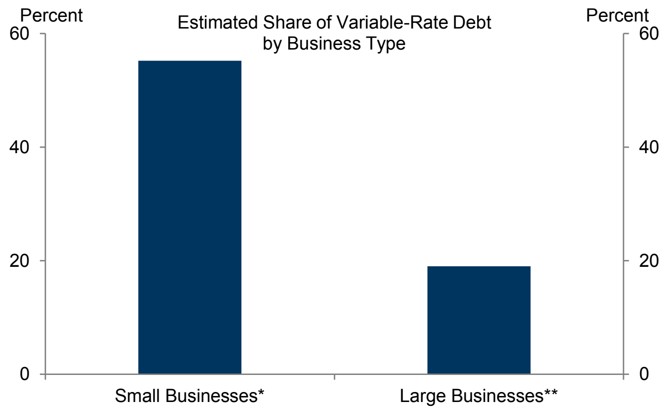


* Regression of interest paid by nonfinancial noncorporates as a share of total loans on the 10-year yield at an annual frequency since 1960, controlling for two lags of both variables.
** Loans repricing in one year or less on the balance sheets of banks whose business loans under $1 million account for at least 40% of their lending.

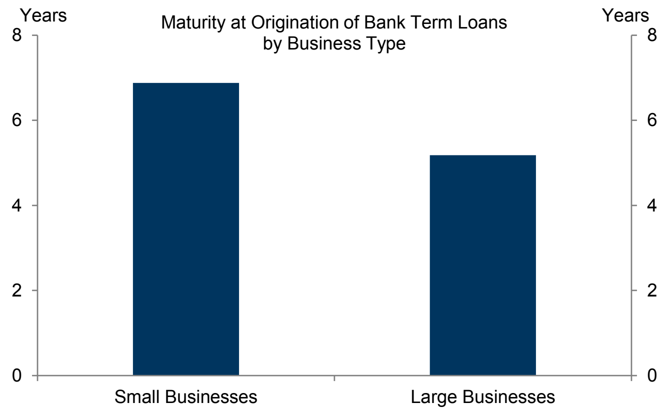
Source: Federal Reserve, Federal Financial Institutions Examination Council, Chodorow-Reich, Darmouni, Luck, and Plosser (2020), Goldman Sachs Global Investment Research

The other half has a much longer maturity. Economists Chodorow-Reich, Darmouni, Luck, and Plosser (2020) use confidential supervisory data on bank loans to show that, while small business credit lines have very short maturity at origination, these businesses' term loans actually have a somewhat *longer* average maturity than the typical term issued for large businesses (Exhibit 4).

Exhibit 4: Small Business Debt Exhibits a Bimodal Maturity Profile, With Half of Loans Repricing Quickly but the Rest Repricing Every 7 Years



* Median of the estimates presented in Exhibit 3.
** Based on the share of credit lines to total bank loans to large firms in Chodorow-Reich et al. (2020) and in Greenwald et al. (2023), the share of corporate bonds to total loans in the Flow of Funds accounts, and the share of fixed-rate corporate bonds in Kumbhat et al. (2017).



Source: Chodorow-Reich, Darmouni, Luck, and Plosser (2020).

Source: Federal Reserve, Chodorow-Reich et al. (2020), Greenwald et al. (2023), Kumbhat et al. (2017), Goldman Sachs Global Investment Research

How Much Will Interest Costs Rise for Small Businesses?

To gauge how small business interest expenses will evolve, we proceed in two steps.

First, we estimate the effect of higher interest rates over the last two years on the roughly 50% of business loans with that reprice soon after rates rise.[1] Based on a statistical model of the relationship between changes in interest rates and near-term changes in small business interest payments, we estimate that higher interest rates will increase the interest burden for small businesses in the near term from around 5.8% of revenues in 2021 to around 7% in 2024.

To quantify the increase in interest expense on the other half of small business loans, which has longer maturity and reprices more slowly, we leverage loan-level data on loan maturities and interest rates from the Small Business Administration (SBA). Similar to our recent work on corporate debt, we assume that loan rates reset in line with our strategists' forecasts for Treasury yields and high-yield credit spreads.[2] On this basis, and consistent with the evidence in Exhibit 4, the SBA data suggests that this half of

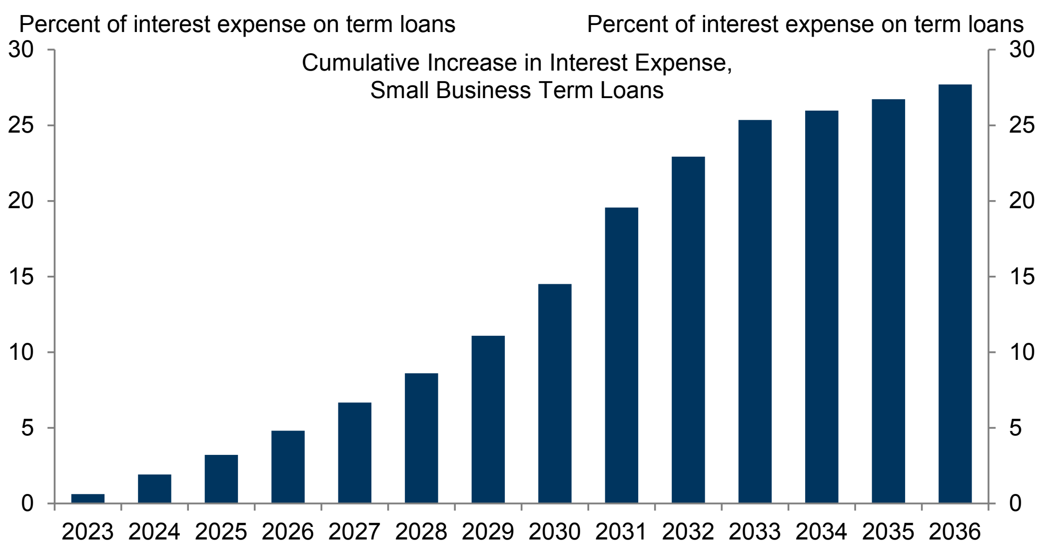
1 Because the source data on interest payments by small businesses in the national accounts is only available with a long lag, the 2022 reading is a very preliminary extrapolation, which will eventually be replaced with actual tax data in 2024. Currently, the extrapolation implies unusually low interest payments, even though interest rates increased markedly in 2022 and a meaningful share of small business debt reprices quickly. We instead assume that small business interest payments rose in 2022 based on their typical relationship with interest rates. The NIPAs extrapolations imply that small business interest payments as a share of gross output declined by 0.5pp in 2022, from 5.7% to 5.2%, and that the effective interest rate on small business loans (interest payments as a share of outstanding loans) also declined by roughly 0.5pp, from 8.5% to 8.1%.

2 Our strategists expect the long-end of the Treasury yield curve to remain elevated and credit spreads to narrow only modestly over the medium-term.

small business loans is set to reprice only gradually, with a cumulative increase in interest expenses on these loans of 25-30% (see Exhibit 5).

Our estimate of the increase in interest expense on this half of small business loans is similar but slightly lower than the 35% cumulative increase we estimate for corporate bonds—which also reprice slowly—for two main reasons. First, small businesses pay higher interest rates on loans than larger businesses, so a given percentage-point increase in interest rates translates to a lower increase as a share of these businesses' interest expenses. Second, corporate businesses were able to borrow and issue debt more aggressively when the Fed cut rates to zero in 2020—corporate business loans increased by around 15% of their 2019 level in 2020Q2, compared to a more modest 5½% increase in noncorporate business loans, according to the Federal Reserve's Flow of Funds accounts. This allowed larger businesses to set a larger share of their loan book at very low rates, which will eventually reprice higher.

Exhibit 5: We Estimate That Refinancing Maturing Term Loans Will Increase Small Business Interest Expense on These Loans by 25-30% Over the Next Decade



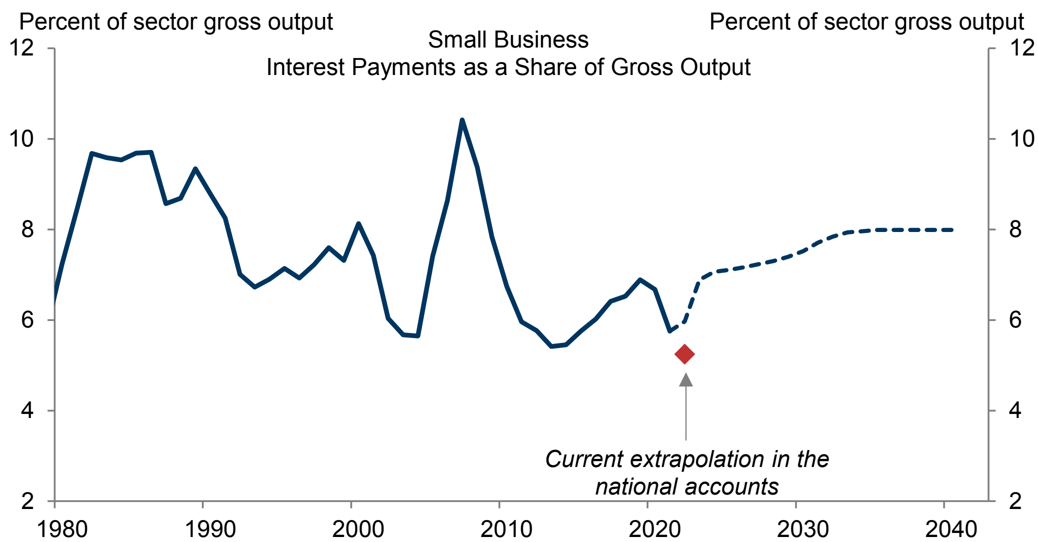
Source: Small Business Administration, Goldman Sachs Global Investment Research

Combining the results of these two approaches, we expect the small business interest payments to reach around 8% by the mid-2030s—above the pre-pandemic share of 6.8% but similar to that of the mid-1990s (Exhibit 6). This amounts to a roughly 40% increase in overall business interest expenses as a share of gross output since 2021.

This 2.2pp increase is larger than the 1.2pp cumulative increase we estimate for the corporate sector but might initially seem small relative to the rise in the fed funds rate. It is not larger for two reasons. First, because small business loans make up only around 65% of the sector's gross output, so a given percentage-point increase in interest rates translates to a smaller increase in interest expenses as a share of gross output. Second, because nominal small business gross output grew by 15% and 12% in 2021 and 2022, respectively—substantially faster than the 3% and 6½% growth rate in these businesses' loans. This in turn partially offsets the increase in interest expenses that we estimate took place in 2022 relative to prior years.

In all, we estimate that the effective interest rate on small business loans is likely to rise by a cumulative 3½-4pp, below the 5.25pp increase in the federal funds rate but above the 2pp difference between the median coupon rate on high yield bonds and current market refinancing rates. This is because the interest rates on small businesses' short-maturity variable-rate loans move closer with more volatile short-end rates than with long-term yields. With a 60-65% ratio between small business debt and the sector's gross output, this increase in interest rates implies a roughly 2.2pp rise in interest payments as a share of revenues.

Exhibit 6: We Estimate That Small Business Interest Payments Are Likely to Increase to Around 7% of Revenues by 2024, Then Gradually Rise to Around 8%

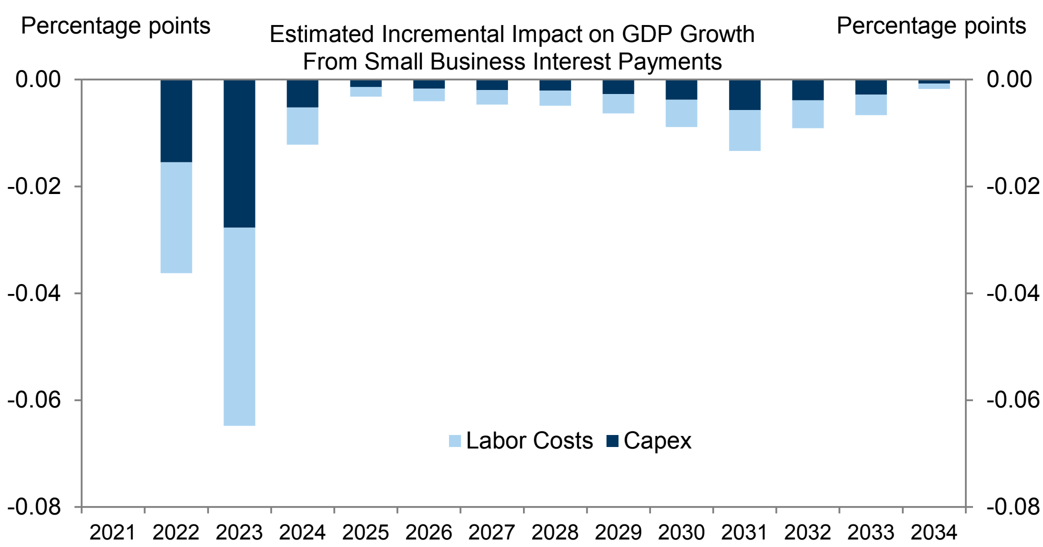


Source: Department of Commerce, Goldman Sachs Global Investment Research

GDP Effects of Higher Rates for Small Businesses

Combining this forecast with our standing estimates of corporate-sector sensitivities to interest payments, we expect the economic effects of higher interest rates on small business capex and employment to be modest. For example, in 2023, we expect small business interest payments as a share of output to increase by a little under 1pp, which is likely to reduce capex by around 0.1% and labor costs by 0.17% as a share of the sector's gross output. Since this sector accounts for around 15% of private-sector gross output and the ratio between private-sector gross output and US GDP is a little under 1.6, this implies a drag on economywide GDP growth of around 0.1pp. Our baseline estimates indicate this GDP growth headwind will moderate in 2024 before rising modestly later in the decade as term loans are refinanced.

Exhibit 7: We Expect the Growth Drag From Higher Interest Expense by Small Businesses to Peak This Year at Just 0.1pp, Decline in 2024, and Rise Modestly Later as Term Loans Are Refinanced



Source: Goldman Sachs Global Investment Research

These small magnitudes are broadly consistent with the weak empirical relationship between capex and interest rates commonly found in the academic literature. Academic research suggests that an increase in the cost of capital is likely to be a manageable headwind for business investment. Surveys of CFOs find that firms' investment hurdle rates are surprisingly insensitive to the cost of capital, and economic studies often fail to find an empirical relationship between interest rates and investment.[3]

Small Business Profits: Not Just Passing Through

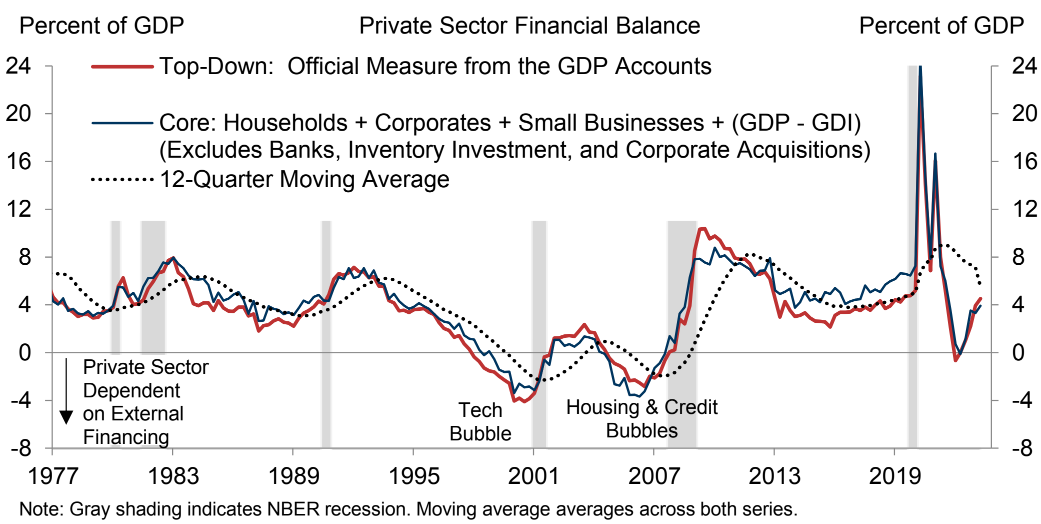
Since the early stages of the reopening, we have stressed that both households and corporates are on a strong financial footing, which will help the economy weather negative shocks and will reduce the risk of recession. And perhaps surprisingly, we also find this to be the case across the small businesses sector.

Our preferred metric to gauge the sustainability of private-sector economic activity is the financial balance: the difference between total income and total spending, or equivalently, between gross saving and total investment.[4] As shown in Exhibit 8, the private sector as a whole is currently running a financial surplus totaling 4% of GDP, in stark contrast to deficits ahead of both the dot-com recession and the Global Financial Crisis.

[3] See John Graham, "Presidential Address: Corporate Finance and Reality," 2022.

[4] When balances are high and positive, the level of spending and investment is low relative to income, and households and firms can increase outlays without the need to borrow or draw down asset holdings. In contrast, with low or negative financial balances, firms will exhaust internal funding sources relatively sooner, requiring leverage or equity issuance to fund growth and the risks and costs that come with it.

Exhibit 8: The Private Sector as a Whole Can Finance Its Own Spending and Investment—Unlike in 2000 and 2006



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

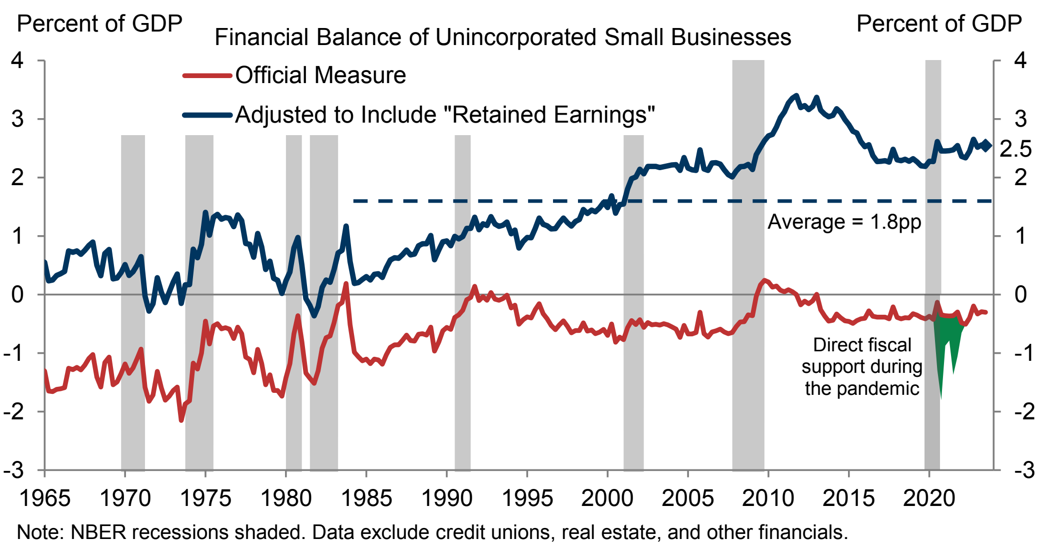
But the financial balance is less straightforward for the small business sector. Consistent with US tax law, the national accounts assume that 100% of small business earnings "pass through" to the households that own them (after paying employees, suppliers, and creditors). In contrast to corporations that deliberately set their dividend payout ratios, this implies that small businesses have no retained earnings that might be used to boost employment or capex in the current or future periods. For this reason, the sector generally runs a financial deficit, even in periods like 2023 when business activity and profitability are high, and capex outflows are relatively modest (see red line of Exhibit 9).[5]

We address this shortcoming by adding back an estimate of retained earnings, specifically the profits that would be available after distributing an imputed base salary to each owner-operator and an imputed dividend payment to each owner (see blue line of the same exhibit). This results in a Q2 surplus worth 2.5% of GDP—reflecting the strong profit levels in the sector that have outpaced the wage growth implicitly earned by owner-operators in recent decades.[6]

[5] The official measure indicates a financial deficit of totaling 0.3% of GDP in Q2, compared to -1.8% in 2000, -0.6% in 2006, and slightly stronger than -0.4% on average over 1985-2019.

[6] This base salary represents the labor compensation required by proprietors for their time and effort—small business owners do not work for free, and the opportunity cost of each hour spent at their firm is the wage they would otherwise earn as an employee at another firm. We assume a base salary for each self-employed individual equal to the industry-level average for full-time employees (shown by the grey series in the Appendix). Analogously, the imputed dividend payment rewards their capital contribution—after all, small business owners could have invested their assets in the stock market or in another private enterprise. We estimate this dividend payment by assuming the earnings payout ratio of small-cap US stocks (S&P 600, 5-year trailing median; light blue series in the Appendix).

Exhibit 9: The Small Business Financial Balance Is Healthier Than Normal—Particularly When Considering the Elevated Flow of Profits That Could Be Reinvested



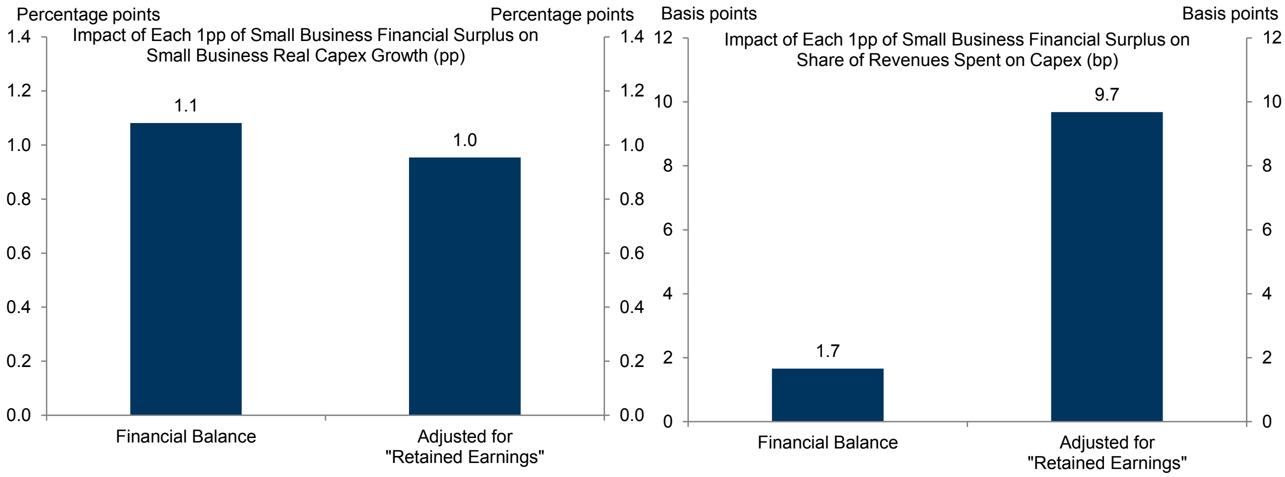
Source: Federal Reserve, Department of Commerce, Goldman Sachs Global Investment Research

This financial surplus argues for resilience in small business capex and employment in the face of higher borrowing costs, because that surplus represents a recurring cash flow that, if desired by business owners, can permanently finance growth in capex and employment.

And indeed, we find that the financial balance is an important determinant of capex in the sector.[7] As shown in Exhibit 10, we estimate that each 1pp of small business financial surplus, as a percent of revenue, increases real capex growth in the sector by 1.0pp and increases the share of revenues devoted to capex by 9.7 basis points (following year, right columns). We also find that the adjusted surplus statistically outperforms the unadjusted measure, consistent with a role for small business profitability levels in the investment decision (see p-values).

[7] We do not test the impact on employment growth due to data unavailability.

Exhibit 10: The Favorable Financial Balance and Strong Profit Levels of the Small Business Sector Should Help Offset the Capex Headwinds from Higher Interest Rates



T-statistic	*1.50*	*1.71*	1.85	1.92
p-value	0.138	0.093	0.069	0.060

Estimates reflect regression of the capex variable on prior-year financial balance of small businesses (percent of gross output), prior-year GDP growth (Q4/Q4 basis), recession-year dummy variable, and time trend. Estimated over 1960-2019.

Source: Goldman Sachs Global Investment Research

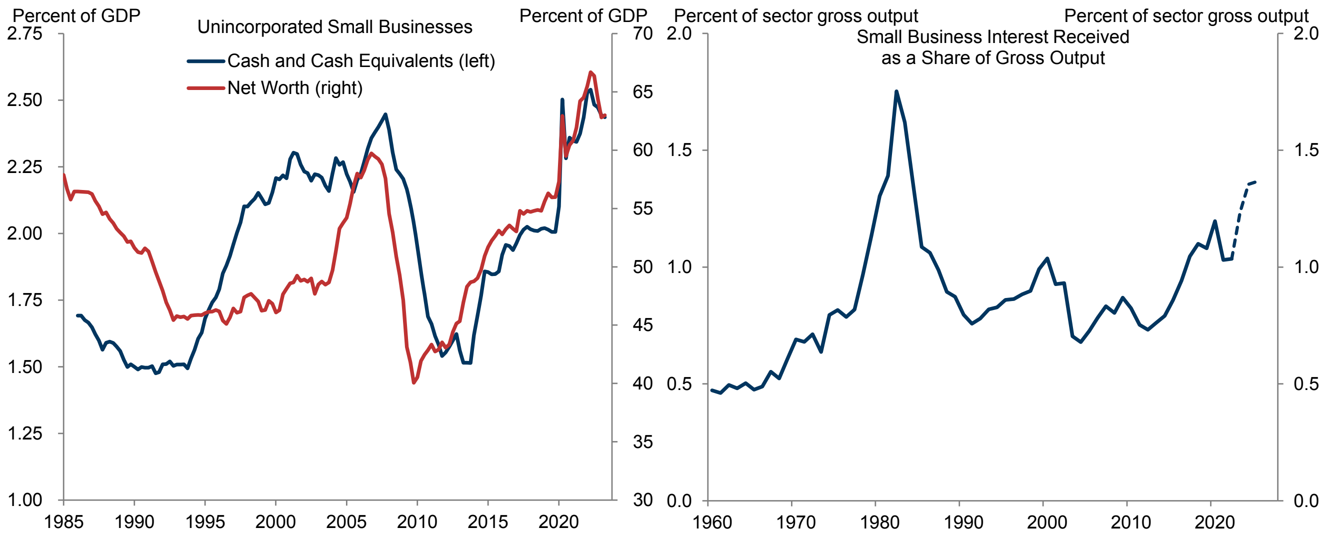
On this basis, we estimate that the 9.1% financial surplus of the small business sector, as a percent of revenues, represents a tailwind to capex growth in the sector of as much as +4pp—or +0.5pp for overall business investment—other things equal. Taken together, we view the solid financial footing of the small business sector as an offsetting positive for capex and employment in the face of higher interest expenses.

Strong Balance Sheets Are an Additional Buffer

In the aggregate, these firms also have plenty of cash to tap into, in part reflecting the cumulative effect of past surpluses. As shown in the left panel of Exhibit 11, small business cash holdings and net worth are both elevated.[8] And coupled with the uptrend in deposit rates, these cash balances will boost interest income, further dampening the effects of higher interest expense. Using information on the breakdown of small business assets from the Flow of Funds accounts, we estimate that interest received by small businesses is likely to increase by around 0.4pp of gross output by 2025 (see dotted line in right panel).

8 Relatedly, the ratio of credit-market debt to net worth in the sector is near 25-year lows, at 43.0% in Q2 compared to 48.8% in 2019 and 60.8% in 2010 (Flow of Funds data).

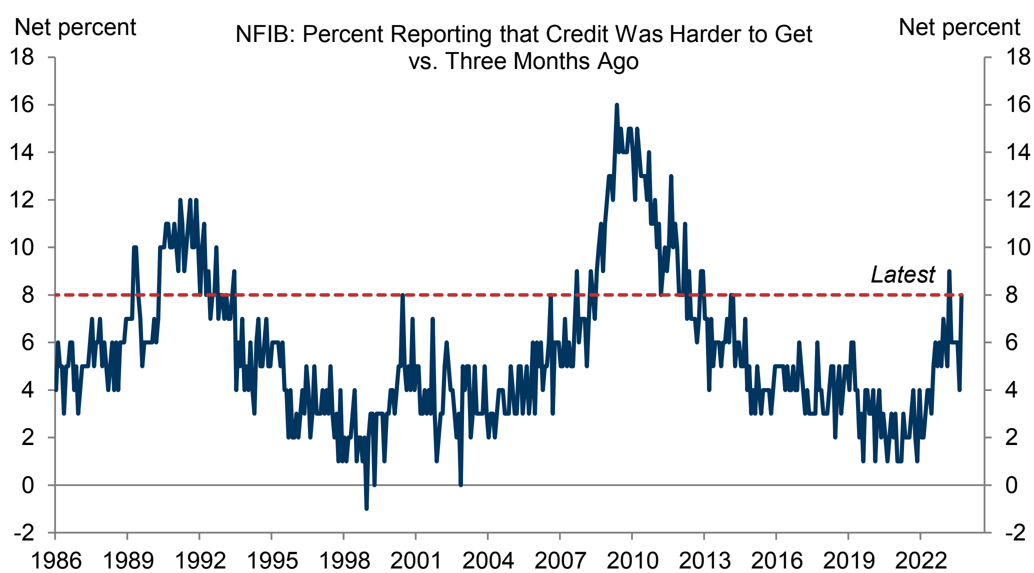
Exhibit 11: Strong Balance Sheets and Rising Interest Incomes Will Also Help Offset These Borrowing Cost Headwinds



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

Taken together, these considerations argue for a modest economic drag from higher small business borrowing costs. Where could we be wrong? One risk is that small businesses prove more sensitive to interest costs than corporates[9], for example because of difficulty developing new banking relationships or accessing alternative sources of financing. Still, the share of businesses reporting that credit was harder to get relative to a few months ago stands at 8%—higher than before the pandemic but in line with the average share in the early 1990s.

Exhibit 12: The Share of Small Businesses Reporting That Credit Was Harder to Get Relative to a Few Months Ago Stands at 8%, Higher Than Before the Pandemic but in Line With the Early 1990s



Source: National Federation of Independent Businesses, Goldman Sachs Global Investment Research

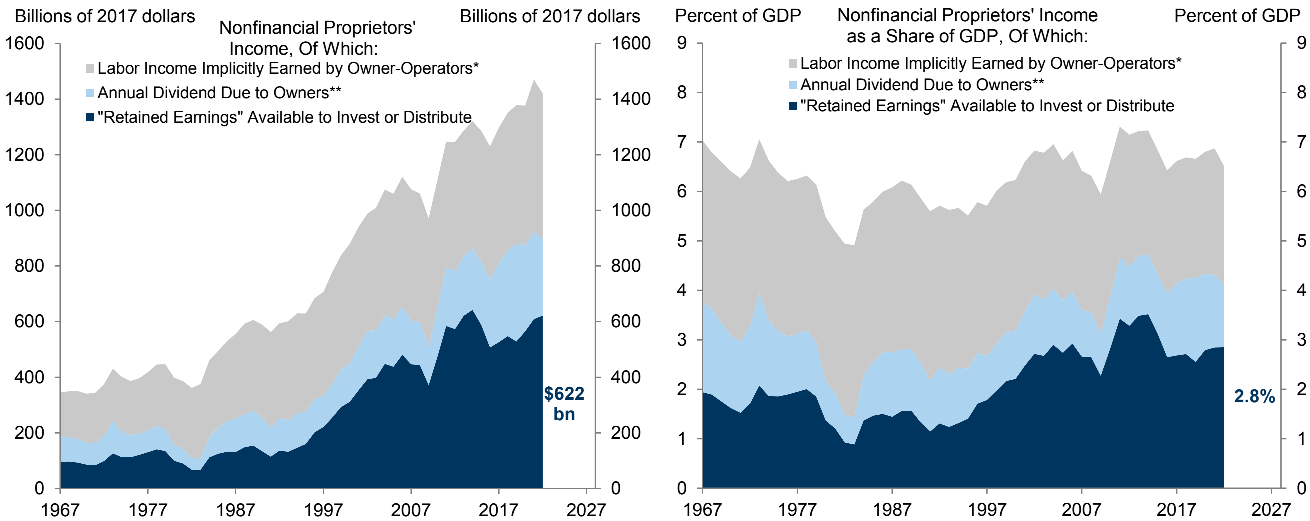
9 Both on average and in particular today given tight bank credit and volatile financial markets.

Manuel Abecasis

Spencer Hill

Appendix

Appendix: The National Accounts Assume That Small Business Profits "Pass Through" to Households, but a Subset of This Income Could Be Retained to Support Capex and Hiring—and Is Statistically Predictive of Future Growth



*Assumes self-employed workers require a base salary equal to the average for full-time employees in that industry.
**Assumes the dividend payout ratio of small-cap US stocks (5-year trailing median)
Note: Incomes reflect NIPA nonfarm capital consumption and inventory valuation adjustment ratios. Excludes agriculture, financials, and utilities.

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

The US Economic and Financial Outlook

THE US ECONOMIC AND FINANCIAL OUTLOOK

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

	2021	2022	2023 (f)	2024 (f)	2025 (f)	2026 (f)	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3	2024 Q4
OUTPUT AND SPENDING														
Real GDP	**5.8**	**1.9**	*2.2*	*1.9*	*1.9*	*1.9*	**2.2**	**2.1**	*3.7*	*0.7*	*1.9*	*1.9*	*1.9*	*1.9*
Real GDP (annual=Q4/Q4, quarterly=yoy)	**5.4**	**0.7**	*2.2*	*1.9*	*1.9*	*1.9*	**1.7**	**2.4**	*2.6*	*2.2*	*2.1*	*2.0*	*1.6*	*1.9*
Consumer Expenditures	**8.4**	**2.5**	*2.1*	*1.7*	*1.9*	*1.9*	**3.8**	**0.8**	*3.1*	*0.8*	*1.6*	*1.9*	*1.9*	*1.9*
Residential Fixed Investment	**10.7**	**-9.0**	*-11.2*	*2.7*	*3.2*	*3.0*	**-5.3**	**-2.2**	*1.8*	*2.5*	*3.5*	*3.5*	*3.5*	*3.5*
Business Fixed Investment	**5.9**	**5.2**	*4.4*	*3.6*	*3.7*	*3.6*	**5.7**	**7.4**	*1.0*	*3.5*	*3.5*	*4.1*	*3.8*	*3.8*
Structures	**-3.2**	**-2.1**	*10.9*	*2.4*	*2.8*	*3.0*	**30.3**	**16.1**	*-1.8*	*2.0*	*2.0*	*2.0*	*2.5*	*2.5*
Equipment	**6.4**	**5.2**	*0.9*	*4.7*	*3.4*	*3.0*	**-4.1**	**7.7**	*1.6*	*6.0*	*5.0*	*5.0*	*4.0*	*4.0*
Intellectual Property Products	**10.4**	**9.1**	*4.3*	*3.2*	*4.5*	*4.5*	**3.8**	**2.7**	*2.0*	*2.0*	*3.0*	*4.5*	*4.5*	*4.5*
Federal Government	**1.4**	**-2.8**	*3.2*	*0.2*	*0.0*	*0.0*	**5.2**	**1.1**	*0.5*	*-0.6*	*0.6*	*0.0*	*0.0*	*0.0*
State & Local Government	**-1.3**	**0.2**	*3.1*	*0.6*	*0.9*	*1.0*	**4.6**	**4.7**	*0.8*	*0.0*	*0.0*	*0.1*	*0.9*	*0.9*
Net Exports ($bn, '12)	**-934**	**-1,051**	*-903*	*-909*	*-931*	*-936*	**-935**	**-928**	*-868*	*-880*	*-893*	*-903*	*-914*	*-927*
Inventory Investment ($bn, '12)	**13**	**128**	*20*	*45*	*60*	*60*	**27**	**15**	*25*	*15*	*30*	*40*	*50*	*60*
Industrial Production, Mfg.	**4.9**	**2.7**	*0.2*	*2.9*	*3.3*	*3.3*	**-0.3**	**0.4**	*4.0*	*2.4*	*2.9*	*3.3*	*3.3*	*3.4*
HOUSING MARKET														
Housing Starts (units, thous)	**1,606**	**1,551**	*1,424*	*1,539*	*1,539*	*1,539*	**1,385**	**1,450**	*1,425*	*1,437*	*1,539*	*1,539*	*1,539*	*1,539*
New Home Sales (units, thous)	**769**	**637**	*694*	*713*	*716*	*716*	**638**	**691**	*726*	*721*	*713*	*710*	*714*	*716*
Existing Home Sales (units, thous)	**6,128**	**5,081**	*4,276*	*4,546*	*4,796*	*4,827*	**4,327**	**4,250**	*4,259*	*4,268*	*4,390*	*4,512*	*4,607*	*4,674*
Case-Shiller Home Prices (%yoy)*	**19.0**	**7.5**	*2.0*	*1.7*	*2.4*	*3.7*	**2.3**	**-0.2**	*0.6*	*2.0*	*2.6*	*1.4*	*1.6*	*1.7*
INFLATION (% ch, yr/yr)														
Consumer Price Index (CPI)**	**7.2**	**6.4**	*3.3*	*2.9*	*2.3*	*2.4*	**5.8**	**4.1**	**3.6**	*3.2*	*3.1*	*3.1*	*2.9*	*2.9*
Core CPI **	**5.5**	**5.7**	*3.9*	*2.9*	*2.5*	*2.5*	**5.6**	**5.2**	**4.4**	*4.0*	*3.7*	*3.3*	*3.2*	*3.0*
Core PCE** †	**5.2**	**4.9**	*3.3*	*2.4*	*2.2*	*2.1*	**4.8**	**4.6**	*4.0*	*3.4*	*2.9*	*2.6*	*2.6*	*2.5*
LABOR MARKET														
Unemployment Rate (%)^	**3.9**	**3.5**	*3.6*	*3.6*	*3.6*	*3.6*	**3.5**	**3.6**	**3.8**	*3.6*	*3.6*	*3.6*	*3.6*	*3.6*
U6 Underemployment Rate (%)^	**7.3**	**6.5**	*6.7*	*6.6*	*6.6*	*6.6*	**6.7**	**6.9**	**7.0**	*6.7*	*6.6*	*6.6*	*6.6*	*6.6*
Payrolls (thous, monthly rate)	**606**	**399**	*230*	*103*	*80*	*75*	**312**	**201**	**266**	*142*	*112*	*100*	*100*	*100*
Employment-Population Ratio (%)^	**59.5**	**60.1**	*60.5*	*60.4*	*60.2*	*60.0*	**60.4**	**60.3**	**60.4**	*60.5*	*60.5*	*60.5*	*60.4*	*60.4*
Labor Force Participation Rate (%)^	**62.0**	**62.3**	*62.8*	*62.6*	*62.4*	*62.4*	**62.6**	**62.6**	**62.8**	*62.8*	*62.7*	*62.7*	*62.7*	*62.6*
Average Hourly Earnings (%yoy)	**4.2**	**5.3**	*4.3*	*3.9*	*3.6*	*3.6*	**4.5**	**4.4**	**4.2**	*4.1*	*4.1*	*4.0*	*3.8*	*3.7*
GOVERNMENT FINANCE														
Federal Budget (FY, $bn)	**-2,775**	**-1,375**	*-1,700*	*-1,700*	*-1,900*	*-1,800*	--	--	--	--	--	--	--	--
FINANCIAL INDICATORS														
FF Target Range (Bottom-Top, %)^	**0-0.25**	**4.25-4.5**	*5.25-5.5*	*5-5.25*	*4-4.25*	*3-3.25*	**4.75-5**	**5-5.25**	**5.25-5.5**	*5.25-5.5*	*5.25-5.5*	*5.25-5.5*	*5.25-5.5*	*5-5.25*
10-Year Treasury Note^	**1.52**	**3.88**	*4.30*	*4.30*	*4.25*	*4.25*	**3.48**	**3.81**	**4.59**	*4.30*	*4.60*	*4.60*	*4.50*	*4.30*
Euro (€/$)^	**1.13**	**1.07**	*1.06*	*1.15*	*1.15*	*1.15*	**1.09**	**1.09**	**1.06**	*1.06*	*1.09*	*1.11*	*1.12*	*1.15*
Yen ($/¥)^	**115**	**132**	*150*	*135*	*135*	*135*	**133**	**144**	**149**	*150*	*153*	*153*	*151*	*135*

* 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. Annual numbers are Q4/Q4.
** Annual inflation numbers are December year-on-year values. Quarterly values are Q4/Q4.
† PCE = Personal consumption expenditures. ^ Denotes end of period.
Note: Published figures in bold.
Source: Goldman Sachs Global Investment Research.

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