Americas Consumer Cyclicals

2023 Outlook: Negative sentiment and defensive stance is overdone; 3 discretionary names to buy now

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Our senior analysts across our Consumer Staples, Retail, and Restaurant industries each published 2023 outlooks for their sectors today. As always, their recommendations are based on themes specific to their sector and idiosyncratic dynamics unique to their companies. The list of their top picks features a number of high-quality defensive stocks, including WMT, STZ, MNST, CL, and MCD, among others. But these stocks are relatively expensive with little room for failure, as defensive positioning has become the common and crowded book to play. The market, on the other hand, is inviting investors to go out the more discretionary risk curve with more compelling valuations. And our macro consumer work is encouraging us to take the invitation.

Spending growth has sustained through 2022, but it has been predicated on consumers drawing down on savings and re-levering their balance sheets. But the need to borrow-to-buy was the 2022 story while 2023 is the year of renewed cash inflow growth. Income growth should be relatively robust with sustained wage inflation, higher interest income, lower capital gains taxes and increased government transfers on cost-of-living adjustments. And lower essential expenditures (lower energy costs, moderating food at home inflation) will allow that income to fuel discretionary cash in-flow growth next year as opposed to being the incremental headwind it was in 2022. Said differently, absent a much worse employment environment, the consumer appears well positioned to at a minimum muddle along next year, which is better than the much more bearish narrative we hear from most investors we speak with.

In this context we believe playing offense will yield more alpha than defense in 2023 and sift through our analysts' top idiosyncratic picks to find compelling discretionary ideas. We highlight three such ideas and provide links to each of the sector outlook reports below.

- We continue to recommend **BBWI** (Buy, on CL with a $52 target price) into 2023 given a higher level of newness in stores, increased digital interest and higher sales driven by the company's new loyalty program, and some easing inflationary headwinds on both products costs and transportation. The stock is currently trading at 13.9x next year's earnings, a premium to where the stock has traded recently but at a significant discount to the market and peers.

- With our Apparel & Accessories Outlook (linked below), we upgrade GPS (Buy, with an $18 target price). Sequentially strengthening execution is a key idiosyncratic differentiator for this business with easy compares and opportunities for leadership announcements to be a catalyst. We believe accelerating earnings growth will be a key distinguishing factor for the stock.
- Within apparel, we also upgrade **TPR** (Buy, with a $44 target price). Strong brand momentum and an emotionally-driven category means the business is likely to be better ballasted from a choppy US consumer backdrop, but still have material upside to a soft landing. Margin recapture and capital allocation drive meaningful EPS growth. TPR also has several upside catalysts which could materialize, including China reopening.

Americas Consumer Staples

Americas Specialty Hardlines

Americas Branded Consumer Goods: Apparel & Accessories

Americas Restaurants

Americas Grocers

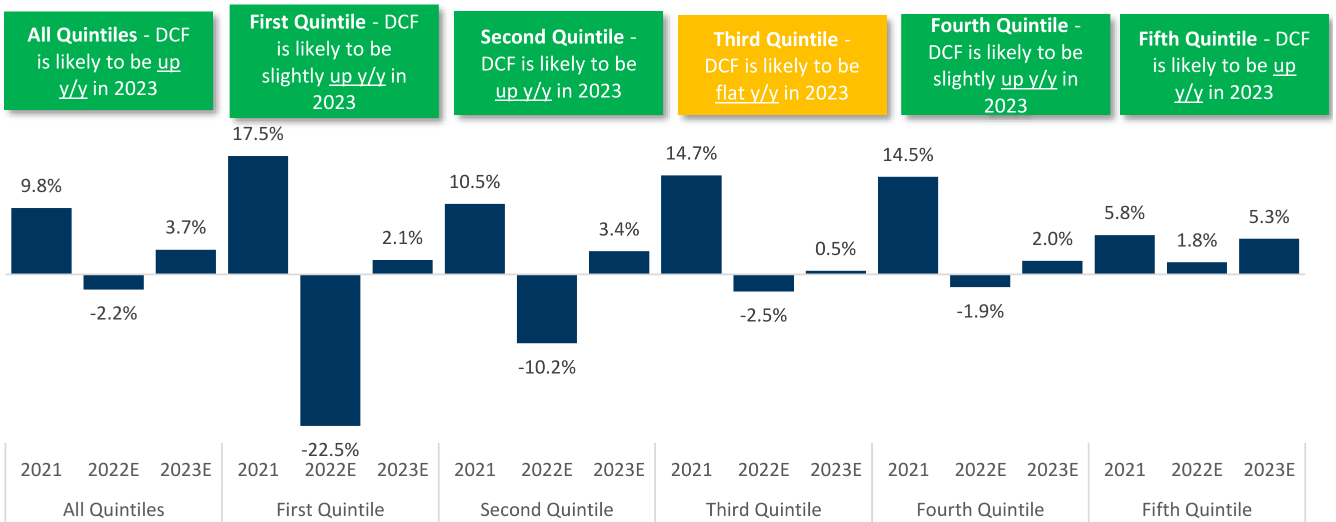
Consumer Spending Backdrop in 2023

As we look to 2023, the outlook for sustained consumer spending growth remains. Growth in DPI and moderation in essential spending inflation mean that spending growth will no longer need to be funded from net-savings with bounceback in the savings rate expected beginning in 1Q23. This should support sustained, moderate retail sales growth which bodes well for the retail categories which have seen 20%+ multiple compression, in excess of the S&P500 and broader consumer stocks which saw multiples down 6% YTD.

We predict discretionary cash in-flow growth of +3.7% in 2023E and savings-adjusted DCF growth of +2.6%. The return to growth for the un-adjusted DCF is a positive, but we expect the flow-through to PCE to be somewhat dampened by restored savings growth next year. Savings-adjusted DCF growth is historically correlated to PCE growth; the sequential slowdown from a breakneck +9.0% in 2022E to +2.6% in 2023E augurs a sequentially slower, though still positive, comp for our companies, absent wallet share shifts. This paints the picture of a consumer who is sequentially on firmer footing in 2023 vs. 2022 but who does not have the same savings cushion to fall back on and will therefore likely grow spending more slowly next year.

We now see an improved outlook for the lowest-income-skewing businesses (see our discussion of the outlook by quintile below) **but remain cautious on the most discretionary, durable goods companies** (see our wallet share analysis in the next section). As regards income distribution, we expect more balanced growth across the quintiles relative to prior years, with the middle quintile surprisingly the slowest at +0.5% and the top quintile the strongest at +5.3%. The unwind in pent-up savings served to cushion the blow of lower DPI year-over-year which strongly impacted the first and second quintiles in 2022 (DPI -22.5%/-10.2% in 2022E, respectively), but our economists believe the growth impulse from this unwind is most likely behind us at this point. Many of our companies have called out some weakness building among the lower income cohort, and we have heard from financials companies that debt and defaults have been creeping up among the lower income cohort. But we have not seen the -22.5% comps our 2022 estimate would suggest, which is likely due to the savings drawdown in the year. Were macro conditions to deteriorate, we are wary of how much cushion the lowest income group would have in 2023 to grow their spending.

Exhibit 1: We anticipate a return to growth in discretionary cash flow in 2023 across all quintiles

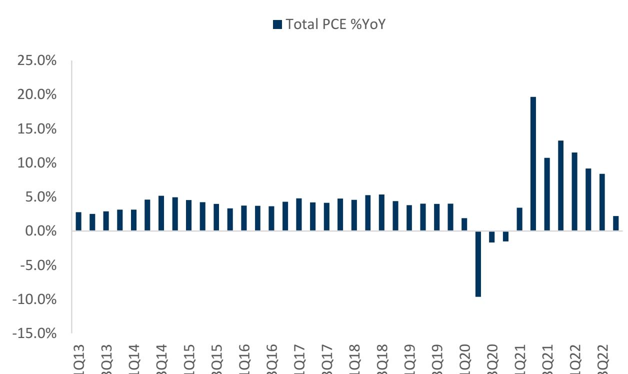


Source: Bureau of Economic Analysis, Goldman Sachs Global Investment Research

Recent economic data rundown

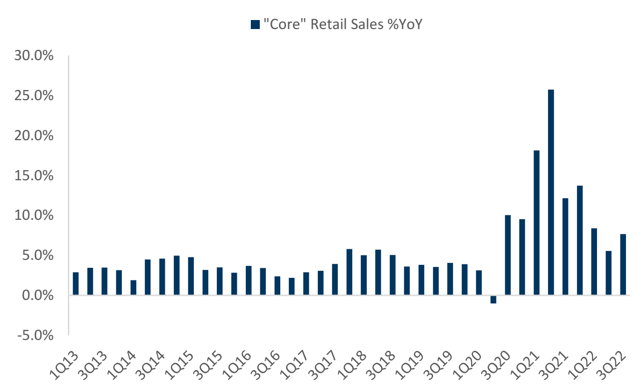
The heady growth in PCE we saw in late 2020 and 2021 has now abated, as government stimulus has wound down and the tailwind from pent-up savings has abated. Our economists now expect real PCE growth to further slow to a below-potential 2.1% in 4Q22, and to 1.5% through 2023. Although core retail sales have also slowed, they remain higher than overall PCE growth; the growth in core retail sales remains 3X above the historical norm. Meanwhile, the growth rate for real services PCE has converged with growth for goods as the economy has largely reopened, paving the way for some of the share shifts to be undone. Finally, declining consumer confidence, rising consumer credit, upside risks to inflation, and some concerning micro data points from companies are indicative of risks to the health of the consumer.

Exhibit 2: Total PCE growth has moderated in 2022, with our Economists expecting slower growth in 4Q22 (2.2% vs. 2013-2019 avg 4.1%)



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Exhibit 3: "Core" retail sales have also slowed off peak but remain elevated vs. broader PCE



Source: Census Bureau

Exhibit 4: In 1Q22-3Q22, core retail sales in absolute terms have grown at a 3X multiple of historical growth even as they have moderated off the highs of 5X in 2021

"Core" Retail Sales $ YoY (mn)

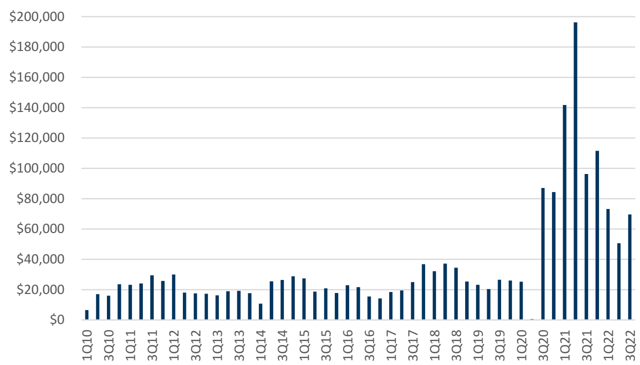
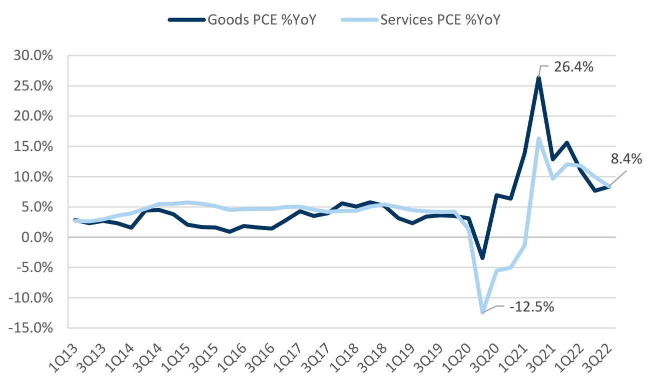


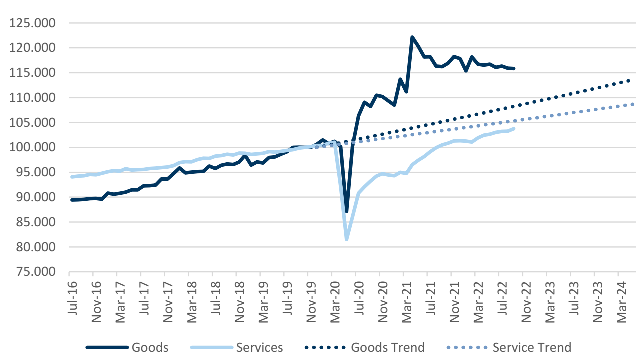
Exhibit 5: Services PCE growth has finally converged with Goods PCE growth...



Source: Bureau of Economic Analysis

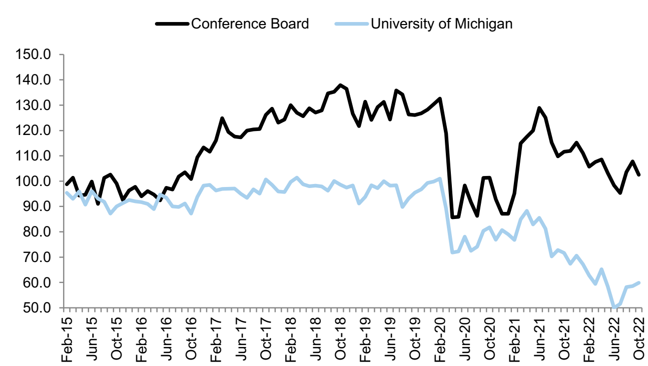
Exhibit 6: ...as a result, real services PCE has nearly caught up to the historical trend, though three years of outsized growth means real goods PCE is still running above-trend

Real goods and services PCE indexed to 2019=100



Source: Bureau of Economic Analysis, Goldman Sachs Global Investment Research

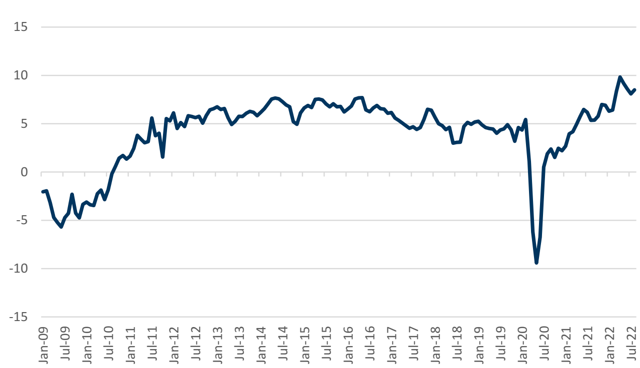
Exhibit 7: Overall consumer confidence has pulled back since the mid-2021 peak, contributing to our expectation for the savings rate to tick higher next year



Source: The Conference Board, University of Michigan

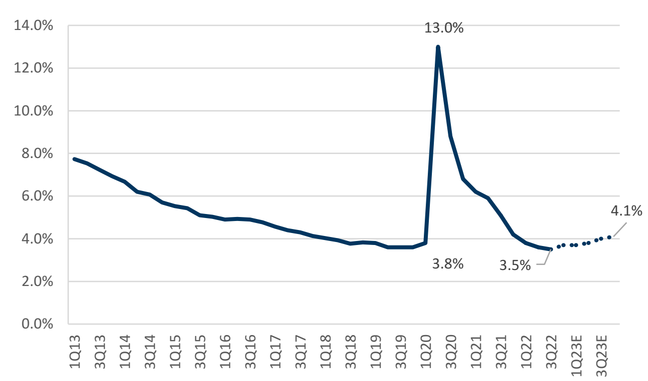
Exhibit 8: We also expect consumer credit growth to slow after the pick-up seen over the past year.

Consumer Credit (SAAR, %chg YoY), 3mma



Source: Haver Analytics

Exhibit 9: Unemployment has declined below pre-Covid levels in 2022, and is expected to normalize to 4.1% by 4Q23 as the labor market rebalances



Source: US Bureau of Labor Statistics, Goldman Sachs Global Investment Research

Discretionary cash flow dissected

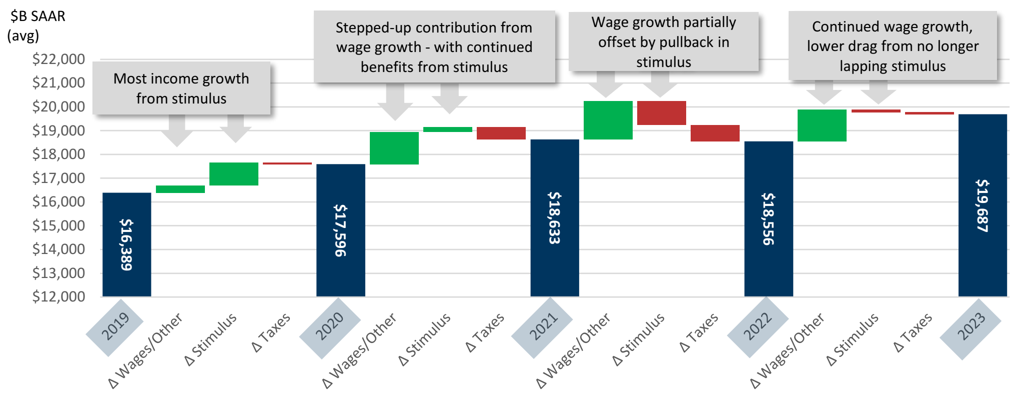
Our updated **consumer discretionary cash flow (DCF)** analysis points to a rebound to **growth pre-savings of +3.7%**, compared to a -2.2% decline in 2022 and the pre-COVID (2010-2019) average of +5.5%. Consumer expenditures sustained growth in 2022 as volumes in COVID-impacted categories recovered and companies broadly raised prices to offset input cost inflation; the swing factor that made this achievable was the much-discussed drop in the savings rate to 3.3% as of 3Q22, from a peak of 26.4% in 2Q20. Consumers have by now largely worked through pent-up savings, and we expect some normalization of the savings rate (to 4.6% by 4Q23) to drive a **sequential slowing in savings-adjusted discretionary cash flow to 2.6%** growth from +9% growth in 2022E.

Our economists expect **disposable personal income (DPI) to grow 6.1% in 2023**, vs. coming in slightly below flat in 2022 (-0.4%). The main buckets driving DPI include employee compensation, investment income (dividends, interest and rental), transfers (unemployment insurance, SNAP benefits, stimulus checks, etc.) and taxes (FICA + income). Apart from wages, where we expect sequentially slowing growth as labor market imbalances are corrected consistent with the goal of bringing down inflation, we expect all the other factors to act as a sequential tailwind to DPI growth. See below for more detail on the components of our DPI forecasts:

- **Employee compensation** (**+4.4% in 2023** vs. +8.2% in 2022): We expect positive employee compensation growth in 2023, driven by a normalizing, but still historically low, unemployment rate (4.1% by year-end) and continued hourly wage growth. Though we model alternative economic scenarios with higher unemployment rates, our economists continue to expect that the labor market rebalancing that is necessary to bring down wage growth to a sustainable 3.5% pace will primarily be achieved through a reduction in job openings and only to a lesser extent through and increase in the unemployment rate. The fourth quintile is the most sensitive to changes in employee compensation, as it makes up 69% of these households' pre-tax income.
- **Investment income** (**+8.7% in 2023** vs. +5.3% in 2022): We expect investment income, including dividends, interest, and rental income to accelerate in 2022. The largest contributing factor is a +16.4% rise in household interest income, the largest category (31% of the total). We expect proprietors' income, rental income, and household dividend income to grow 5.1%/5.9%/5.9%, respectively. This substantial rise in investment income most impacts that top quintile, as it makes up 39% of their pre-tax income.
- **Transfers (+2.7% in 2023** vs. -16.0% in 2022): The main story of 2022 was how pandemic stimulus rolling off created a drag for DPI and PCE. While we expect more muted growth in 2022 relative to the other categories, the sequential impact of lapping stimulus rolling off is massive in the context of government transfers making up 16% of pre-tax income in 2022. This is especially salient for the bottom quintile of households, for whom transfers and other benefits account for 53% of income before taxes.
- **Taxes** (**+1.9% in 2023** vs. +16.1% in 2022): 2021 and 2022 saw a step rise in taxes

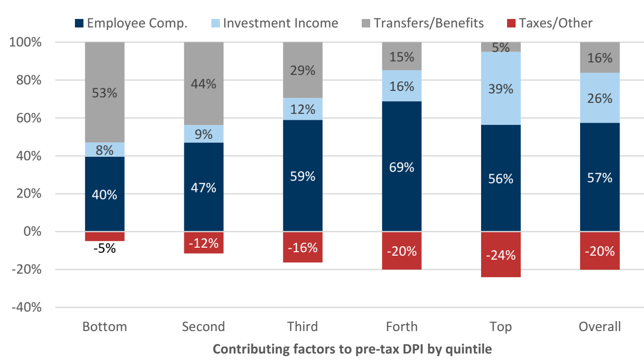
(+16.0%/+16.1%), which our economists expect will slow in 2023. Income taxes, which make up 65% of the total, are only expected to grow 0.5% while FICA taxes, at just 35% of the total, are expected to grow +4.6%. The effective tax rate (including income & FICA taxes) across all consumers is approximately 20%, but the top quintile has the highest at 24% while the bottom quintile has only a 5% effective tax rate. Despite the bottom quintile seemingly being insulated, however, they will be most exposed to tax increases in 2023 and will see a +7% increase after seeing slower tax growth relative to the other quintiles in 2021-22.

Exhibit 10: Overall disposable personal income ($B, SAAR) is likely to be up in 2023 after coming in flat in 2022, as income growth will no longer be offset by lower stimulus and higher taxes



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Exhibit 11: Breakdown of contributing factors to DPI by Quintile



Below the DPI line, consumer borrowing, essential spending, financial obligations all drive our discretionary cash flow model. We also factor in the savings rate to model our savings-adjusted discretionary cash flow estimates. Our detailed estimates are as follows.

Consumer borrowing continued to grow at a healthy clip throughout 2022. Overall consumer credit balances accelerated from flat year over year in April-December 2020 to +3.3% in 2021 and 7.2% in 2022.

- Much of this growth has been in **revolving credit**, where growth was negative amid stimulus in 2020-21 but more recently has surged to +MDD% year over year.

However, the growth rate appears to have peaked at +15.3% in August. We model continued growth in dollar terms but a sequential slowing to +7% year over year by the end of 2023. We base our forecasts on a regression vs. year-over-year delinquency rates (RSQ=81%), factoring in our Consumer Finance team's forecasts through 4Q23. Our Consumer Finance team expects delinquency rates to increase 50bps (Q4/Q4) in 2023 to 3.5% on average, amid low unemployment (the biggest driver of delinquencies and losses) and slow normalization from pre-pandemic levels.

- We model more moderate growth in **non-revolving credit**, which has been range-bound (~3%-5%) during the pandemic. The rate of growth accelerated in 2022 to 5.7% as of 3Q, but as a percentage of DPI nonrevolving credit has held at 18.8% for the last three quarters after climbing from a low of 17.0% in 2Q20. We model this holding through 4Q23 resulting in growth sustaining at the current 6% rate.
- **Mortgage equity withdrawals** saw continued growth in 2022 (+24%) but slowed sequentially compared to 2021, when they nearly tripled year over year. We model a decline of -38% versus 2022 levels amidst rising rates and stalling home prices. For context, during the GFC mortgage equity withdrawals moderated in 2007 (-31% from 2006 levels) and flipped negative in 2008. Our forecasts factor in our economists' expectations of new home sales (down -13% to 2.2mm in 2023), our estimates of new home prices staying flat in 2023 (leveraging our mortgage strategy team's forecasts for existing home price appreciation), and LTVs for new mortgages sustaining at 72%

Growth in "essential spending," which includes energy goods and services, food at home spending, and healthcare spending, was a staggering 11.3% in 2022E, after growing 11.0% in 2021. Even if DPI growth had been strong in 2022, this would have posed a substantial challenge for households, and DPI growth ultimately came in flat in 2022. As we move into 2023, **we expect moderation in the growth rate in essential spending, to +1.4%**. Our estimate is based on the following.

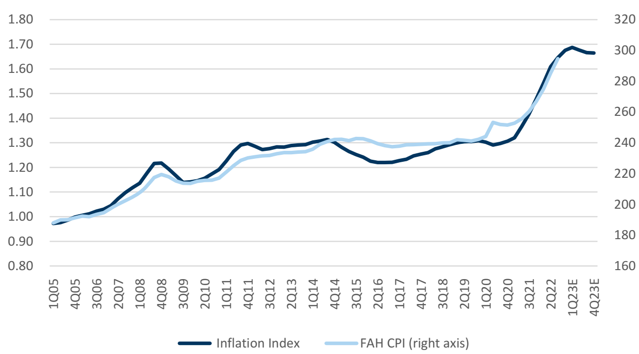
- **Energy Goods and Services** (-6.3% in 2023): We expect a substantial sequential swing to negative growth in 2022, following 29%/25% growth in 2021/2022. Our estimates factor in forward pricing curves (CBOE) for gasoline, Brent Crude, and Natural Gas. We assume 2% growth in gasoline demand, 1% growth in natural gas demand, and 1.5% growth in electricity consumption. We acknowledge upside risks to energy inflation exist amid a volatile geopolitical environment, and note that were energy spending to rise at the average of food at home and health care (5%), this would shave off 60bps from our discretionary cash flow estimates, all else equal.
- **Food at Home Spending** (+3.0% in 2023): We now break up our estimates into price and quantity, forecasting real food at home PCE and food at home inflation. We leverage our Food and HPC team's food commodities build, which correlates highly with food at home inflation, and predicts inflation slowing from the 3Q22 peak of +13.7% to -0.6% by 4Q23. We forecast food volumes will continue to decline year-over-year through 2Q23, as pandemic normalization continues. We model growth returning to the historical trendline by the end of 2025 (2.5 years of over-earning, and 3.5 years of under-earning). As such, we expect +3.5% price

growth in 2023 and -a 0.5% volume decline in 2023 driving +3% food at home PCE growth.

- **Health Care Spending** (+6.1% in 2023): We leverage forecasts for health care spending across categories produced by the Office of the Actuary in the Centers for Medicare & Medicaid Services, a U.S. government agency. Their forecasts call for +6.1% growth in 2023, slightly slower than the +6.4% they expect for 2022.

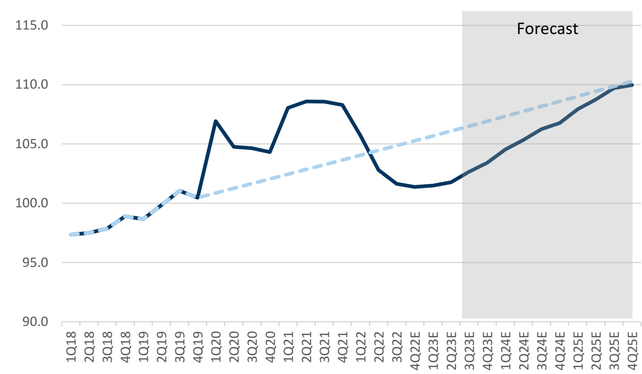
Savings rate: While we looked to the normalization of the savings rate as the largest driver of consumer spending in 2022, we expect a more balanced contribution in 2023 from DPI growth, moderating inflation, and a still-depressed (but slightly higher) savings rate. All in this translates to "cash income" of +5.8% year over year, discretionary cash flow +3.7%, and adjusted discretionary cash flow (accounting for the savings rate) of +2.6%.

Exhibit 12: Our Food Inflation index correlates highly (RSQ=92%) with FAH CPI & the FAH PCE Deflator



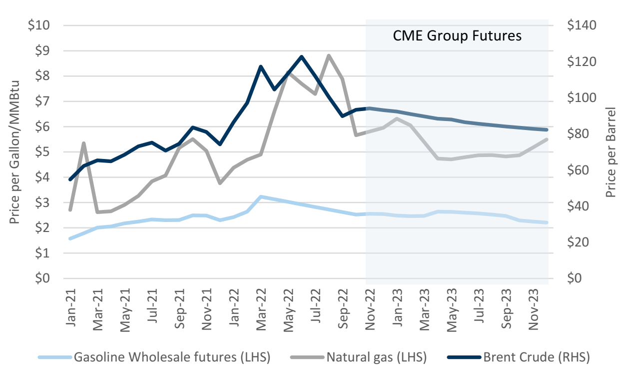
Source: Goldman Sachs Global Investment Research, US Bureau of Labor Statistics, US Bureau of Economic Analysis (BEA), Haver Analytics

Exhibit 13: We expect real food at home PCE to be below-trend through 2025, as the category under-earns to make up for outsized spend during the pandemic (area over the curve = area under the curve)



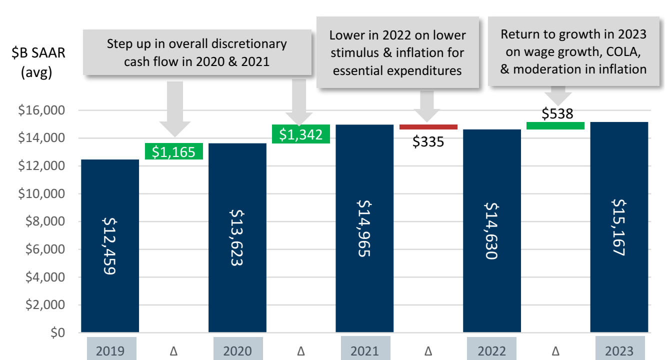
Source: Goldman Sachs Global Investment Research, US Bureau of Economic Analysis (BEA)

Exhibit 14: Gasonline, natural gas, and brent crude futures point to a decline in energy expenditures in 2023.



Source: CME Group

Exhibit 15: Overall discretionary cash flow (pre-savings, $B SAAR) is expected to be up again in 2023, on the back of wage growth with a much smaller drag from stimulus and taxes



Data for 2022 & 2023 is estimated.

Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Exhibit 16: Discretionary cash flow will likely be higher in 2023 vs. 2022

$bn SAAR	Employee Comp	Other Pvt. Income	Regular Transfers	Stimulus & Other Govt Benefits	Taxes	DPI	Cash Adjustments + Mortgage Equity	Financial Obligations & Essential Spending	Discretionary CF
2019 avg	$11,448	$5,419	$3,055	$90	$3,623	$16,389	$716	-$4,646	$12,459
2020 avg	$11,593	$5,458	$3,180	$1,052	$3,686	$17,596	$696	-$4,669	$13,623
2021 avg	$12,539	$5,680	$3,361	$1,256	$4,202	$18,633	$1,295	-$4,963	$14,965
2022 avg	$13,566	$5,991	$3,625	$253	$4,880	$18,556	$1,453	-$5,379	$14,630
2023 avg	$14,167	$6,513	$3,844	$138	$4,973	$19,687	$1,149	-$5,669	$15,167
Annual $ Delta									
2020	$145	$40	$125	$962	$63	$1,207	-$20	-$22	$1,165
2021	$946	$221	$182	$204	$516	$1,037	$599	-$294	$1,342
2022	$1,028	$311	$264	-$1,003	$677	-$77	$158	-$416	-$335
2023	$600	$521	$219	-$115	$94	$1,132	-$304	-$290	$538
2023-19	$2,719	$1,094	$789	$48	$1,350	$3,299	$433	-$1,023	$2,709

Data for 2022 & 2023 is estimated.

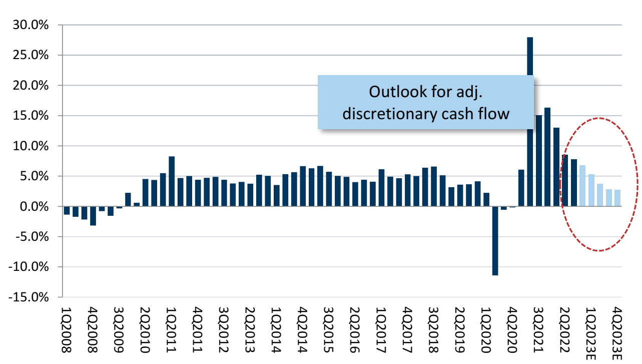
Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Exhibit 17: Adjusted discretionary cash flow is expected to rise in 2023 due to higher DPI and slower growth in essential spending, partially offset by growth in financial obligations, a decline in mortgage equity withdrawals, and a rebound in the savings rate; figures in billions

	2019	2020	2021	1Q22	2Q22	3Q22	4Q22E	2022E	1Q23E	2Q23E	3Q23E	4Q23E	2023E	
Disposable Personal Income	**$16,389**	**$17,596**	**$18,633**	**$4,544**	**$4,607**	**$4,674**	**$4,731**	**$18,555**	**$4,817**	**$4,884**	**$4,955**	**$5,031**	**$19,687**	**<-- Nominal DPI growth muted in 2022 on stimulus lap; bounce back expected on wage growth & lower cap gains tax in 2023.**
% change	**5.0%**	**7.4%**	**5.9%**	**-7.2%**	**0.8%**	**2.1%**	**3.1%**	**-0.4%**	**6.0%**	**6.0%**	**6.0%**	**6.4%**	**6.1%**	
Cash adjustments	$450	$484	$467	$108	$102	$95	$90	$395	$99	$94	$90	$85	$367	
% change	**9.3%**	**7.6%**	**-3.6%**	**-14.5%**	**-15.7%**	**-17.0%**	**-14.6%**	**-15.5%**	**-9.2%**	**-7.7%**	**-5.4%**	**-5.1%**	**-7.0%**	
"Cash income"	**$16,838**	**$18,080**	**$19,100**	**$4,652**	**$4,709**	**$4,769**	**$4,820**	**$18,950**	**$4,916**	**$4,978**	**$5,045**	**$5,116**	**$20,054**	
% change	**5.1%**	**7.4%**	**5.6%**	**-7.4%**	**0.4%**	**1.6%**	**2.7%**	**-0.8%**	**5.7%**	**5.7%**	**5.8%**	**6.1%**	**5.8%**	**<-- 2023 cash income & total HH cashflow to mirror DPI**
Borrowing	$182	-$3	$230	$78	$104	$88	$47	$316	$100	$103	$66	$54	$323	**Mortgage Equity Withdrawals down YoY**
% change	4.4%	NM	-8390.1%	106.9%	71.8%	45.2%	-34.7%	37.4%	28.2%	-0.9%	-24.4%	16.4%	2.3%	
Total household cash flow	**$17,105**	**$18,292**	**$19,928**	**$4,912**	**$5,018**	**$5,043**	**$5,035**	**$20,008**	**$5,164**	**$5,206**	**$5,214**	**$5,252**	**$20,836**	
% change	**4.9%**	**6.9%**	**8.9%**	**-4.7%**	**2.1%**	**2.4%**	**2.0%**	**0.4%**	**5.1%**	**3.7%**	**3.4%**	**4.3%**	**4.1%**	
Financial obligations	-$2,432	-$2,468	-$2,521	-$647	-$657	-$671	-$685	-$2,660	-$703	-$719	-$736	-$754	-$2,912	
% of DPI	14.8%	14.0%	13.5%	14.2%	14.3%	14.4%	14.5%	14.3%	14.6%	14.7%	14.9%	15.0%	14.8%	**<-- Financial obligations continue to rise with higher rates**
% change	5.6%	1.5%	2.1%	4.4%	4.9%	6.0%	6.8%	5.5%	8.7%	9.4%	9.7%	10.0%	9.5%	
Essential spending(2)	-$2,214	-$2,200	-$2,442	-$667	-$690	-$684	-$678	-$2,719	-$690	-$687	-$693	-$686	-$2,757	**<-- Essential spend up big in 2022, slower growth in 2023 on NRG**
% change	1.9%	-0.6%	11.0%	13.6%	14.3%	10.7%	6.9%	11.3%	3.5%	-0.3%	1.2%	1.3%	1.4%	
Discretionary cash flow	**$12,459**	**$13,623**	**$14,965**	**$3,598**	**$3,671**	**$3,688**	**$3,673**	**$14,629**	**$3,771**	**$3,799**	**$3,785**	**$3,812**	**$15,167**	**<-- Discretionary cash in-flow down in '22 w/ bounce back expected in '23**
$ change	**$628.0**	**$1,164.7**	**$1,341.9**	**-$348.0**	**-$14.7**	**$16.4**	**$10.5**	**-$335.8**	**$172.3**	**$128.4**	**$97.7**	**$139.6**	**$538.0**	
% change	**5.3%**	**9.3%**	**9.9%**	**-8.8%**	**-0.4%**	**0.4%**	**0.3%**	**-2.2%**	**4.8%**	**3.5%**	**2.6%**	**3.8%**	**3.7%**	
Savings adjustment														
Savings rate (% of income)	**8.8%**	**16.8%**	**11.9%**	**4.3%**	**3.4%**	**3.3%**	**3.3%**	**3.6%**	**3.9%**	**4.1%**	**4.4%**	**4.6%**	**4.3%**	**<-- Slight rebound in savings rate**
YoY chg	1.3%	8.0%	-4.9%	-16.0%	-7.4%	-5.8%	-4.0%	-8.3%	-0.4%	0.7%	1.0%	1.4%	0.7%	
Savings from cash flow	**$1,629**	**$2,957**	**$2,447**	**$274**	**$261**	**$244**	**$201**	**$982**	**$289**	**$302**	**$283**	**$288**	**$1,161**	
Adj. discretionary cash flow	**$10,830**	**$10,666**	**$12,518**	**$3,324**	**$3,409**	**$3,443**	**$3,472**	**$13,648**	**$3,481**	**$3,497**	**$3,502**	**$3,525**	**$14,006**	**<-- … drives slowing, but positive, adj. DCF growth**
% change	**3.4%**	**-1.5%**	**17.4%**	**14.2%**	**8.9%**	**7.8%**	**6.6%**	**9.0%**	**4.7%**	**2.6%**	**1.7%**	**1.5%**	**2.6%**	

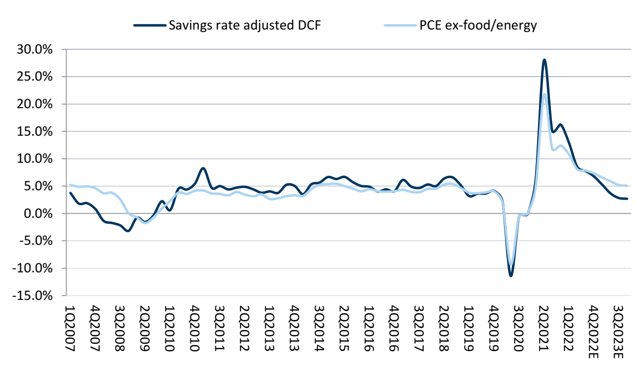
Source: BEA, BLS, Federal Reserve, EIA, CMS, Goldman Sachs Global Investment Research

Exhibit 18: Adjusted discretionary cash flow is expected to increase +3.7% in 2023



Source: BEA, BLS, Federal Reserve, EIA, CMS, Goldman Sachs Global Investment Research

Exhibit 19: PCE ex-food and energy is likely to normalize in conjunction with discretionary cash flow (R-squared of 82% since 1990)



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

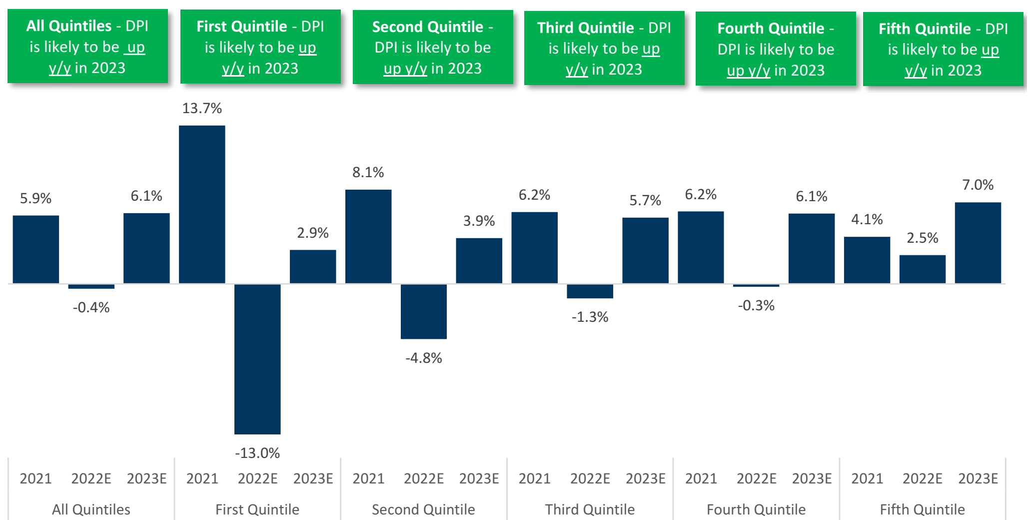
Overview of our quintile-by-quintile disposable personal income and discretionary cash flow analysis

At a very high level, the overall US consumer environment in 2023 is likely to continue to support spending growth, with less reliance on tapping savings compared to 2022. In terms of hard numbers by quintile, we see +2.9%/+4.0%/+5.7%/+6.1%/+7.1% growth in disposable personal income (DPI) for the first through fifth quintiles, respectively.

Beyond the headline level, we also look at discretionary cash flow by population quintile, and here the analysis suggests relatively broad-based strength for all cohorts apart from the low-income consumer. For discretionary cash flow, we see growth of +2.1%/+3.4%/+0.5%/+2.0%/+5.3% for the first through fifth quintiles, respectively. This growth is relatively even across cohorts as opposed to the outsized swings among lower income quintiles over the past two years.

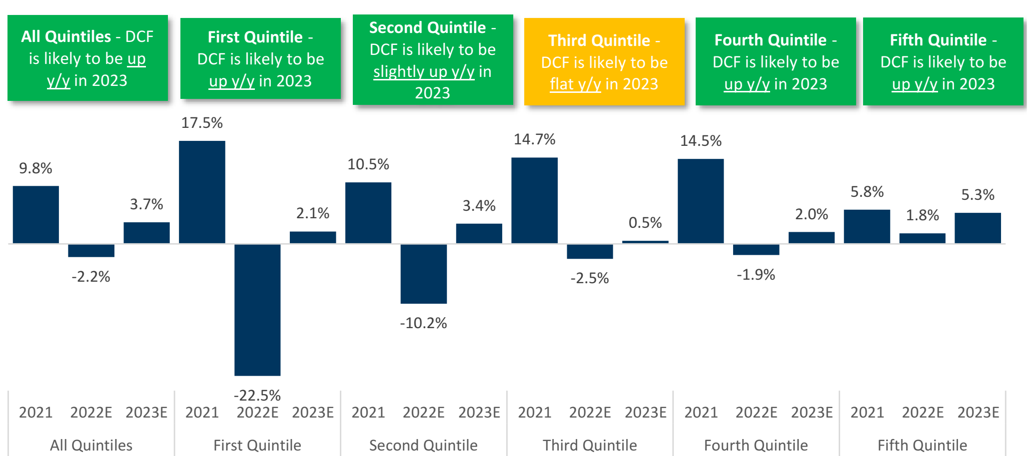
For a detailed quintile-by-quintile analysis, see the Appendix.

Exhibit 20: Y/Y % change in DPI overall and by income quintile for 2021, 2022 & 2023 ($B, SAAR)



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Exhibit 21: Y/Y % change in DCF overall & by income quintile for 2021, 2022 & 2023 ($B, SAAR)



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

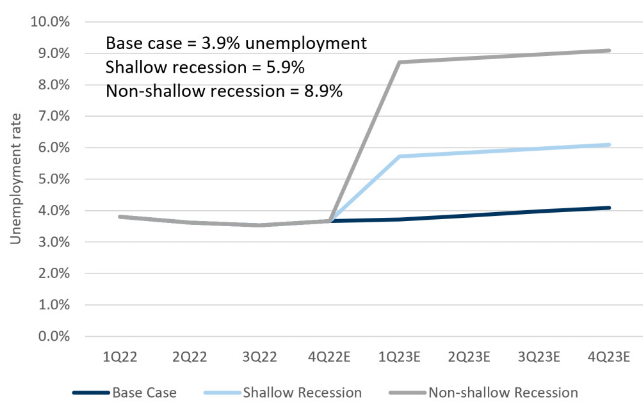
Sensitizing our DCF forecasts

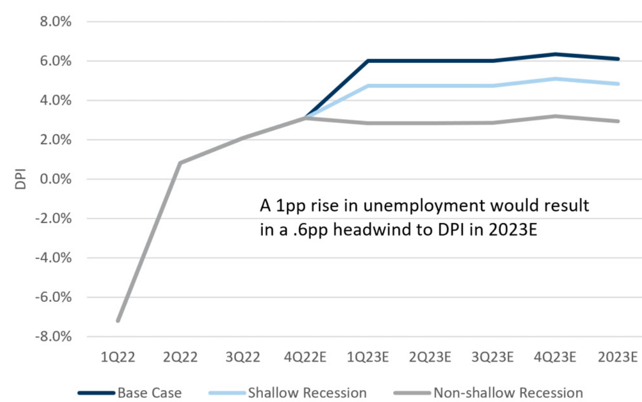
Given the unusually volatile macroeconomic environment, the inputs to our DCF could end up varying from our current estimates, which we explore in this section. Our economists have noted that our relatively positive 2023 real spending growth forecast is contingent on inflation moderating without the unemployment rate rising above the low 4s. They note that risks to spending growth skew to the downside, particularly if gasoline prices surge, house prices fall, and households hit borrowing constraints. As such, we present sensitivities on our pre-savings DCF and post-savings adjusted DCF under varying inputs in Exhibit 24 and Exhibit 25. At a high level, we note that our DCF estimates are contingent on fairly robust DPI growth and a moderation in essential expenditures. As we show in our sensitivities, if there were to be a non-shallow recession or if inflationary or other factors were to come in worse than we are modeling, the DCF and adj. DCF could flip negative in 2023.

Recessionary scenarios: Unemployment +2pts/+5pts higher

Because DPI is the largest contributor to the DCF, we have laid out two different recessionary scenarios: a shallow one with unemployment 2pp higher, and a deeper one with unemployment 5pp higher. We expect that under the shallow recession scenario, DPI would grow only 4.8% in 2023, the DCF would grow +2.1%, and the post-savings DCF grow +1%. We note that these scenarios ignore second-order effects – e.g., recessions are usually accompanied by sequential deflation.

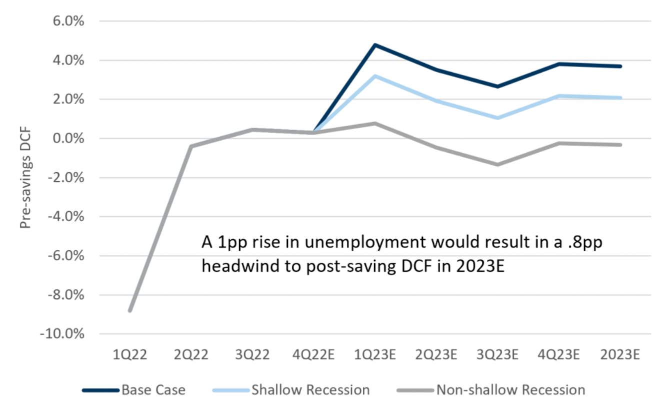
Exhibit 22: We sensitize DPI to different unemployment rates under two recessionary scenarios...

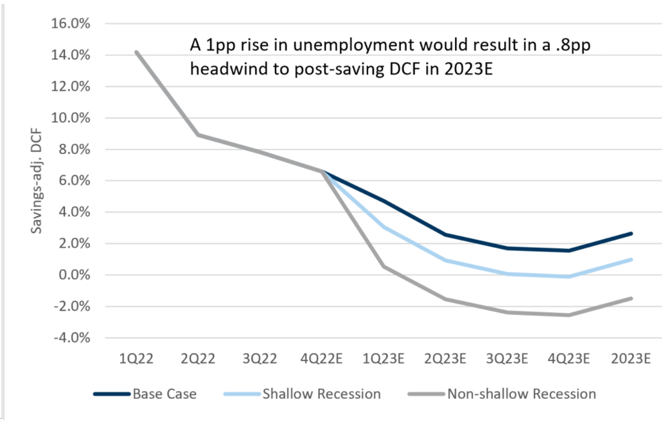




Source: Goldman Sachs Global Investment Research, US Bureau of Labor Statistics

Exhibit 23: ...and the associated impact to consumer discretionary cash flow





Source: Goldman Sachs Global Investment Research, US Bureau of Labor Statistics

Downside Sensitivity Analysis

Exhibit 24: We sensitize our discretionary cash flow model along a number of potential inputs, recognizing there exists a downside skew in outcomes for some inputs (DPI, mortgage equity withdrawals) where our Economists' forecasts are above consensus

Sensitivities on pre-savings discretionary cash flow growth (LHS) and post-savings adjusted discretionary ash flow growth (RHS)

DCF, pre-savings

Discretionary Cash Flow growth sensitivity

DPI, YoY (+/-250bps)	Essential Spending, YoY (+/- 300bps)				
	7.4%	4.4%	**1.4%**	-1.6%	-4.6%
-1.4%	-5.5%	-5.0%	-4.4%	-3.9%	-3.3%
1.1%	-2.8%	-2.3%	-1.7%	-1.2%	-0.6%
3.6%	-0.1%	0.4%	1.0%	1.5%	2.1%
6.1%	2.6%	3.1%	3.7%	4.2%	4.8%
8.6%	5.3%	5.8%	6.4%	6.9%	7.5%

Discretionary Cash Flow growth sensitivity

DPI, YoY (+/-250bps)	Mortgage equity withdrawals, YoY (+/- 15pp)				
	-78%	-58%	**-38%**	-18%	2%
-1.4%	-6.5%	-5.4%	-4.4%	-3.4%	-2.4%
1.1%	-3.8%	-2.7%	-1.7%	-0.7%	0.3%
3.6%	-1.1%	0.0%	1.0%	2.0%	3.0%
6.1%	1.6%	2.7%	3.7%	4.7%	5.7%
8.6%	4.3%	5.4%	6.4%	7.4%	8.4%

Discretionary Cash Flow growth sensitivity

DPI, YoY (+/-250bps)	Borrowing, YoY (+/- 20pp)				
	-38%	-18%	**2%**	22%	42%
-1.4%	-5.3%	-4.9%	-4.4%	-4.0%	-3.6%
1.1%	-2.6%	-2.2%	-1.7%	-1.3%	-0.9%
3.6%	0.1%	0.5%	1.0%	1.4%	1.8%
6.1%	2.8%	3.2%	3.7%	4.1%	4.5%
8.6%	5.5%	5.9%	6.4%	6.8%	7.2%

Adj. DCF, post-savings

Adj. Discretionary Cash Flow growth sensitivity

DPI, YoY (+/-250bps)	Essential Spending, YoY (+/- 300bps)				
	7.4%	4.4%	**1.4%**	-1.6%	-4.6%
-1.4%	-6.8%	-6.2%	-5.6%	-5.0%	-4.4%
1.1%	-4.1%	-3.5%	-2.9%	-2.3%	-1.7%
3.6%	-1.3%	-0.7%	-0.1%	0.5%	1.1%
6.1%	1.4%	2.0%	2.6%	3.2%	3.8%
8.6%	4.2%	4.8%	5.4%	6.0%	6.6%

Adj. Discretionary Cash Flow growth sensitivity

DPI, YoY (+/-250bps)	Mortgage equity withdrawals, YoY (+/- 15pp)				
	-78%	-58%	**-38%**	-18%	2%
-1.4%	-7.8%	-6.7%	-5.6%	-4.5%	-3.5%
1.1%	-5.1%	-4.0%	-2.9%	-1.8%	-0.7%
3.6%	-2.3%	-1.2%	-0.1%	1.0%	2.0%
6.1%	0.4%	1.5%	2.6%	3.7%	4.8%
8.6%	3.2%	4.3%	5.4%	6.5%	7.6%

Adj. Discretionary Cash Flow growth sensitivity

DPI, YoY (+/-250bps)	Savings Rate (+/-100bps)				
	7.3%	6.3%	5.3%	**4.3%**	3.3%
-1.4%	-9.7%	-8.3%	-7.0%	-5.6%	-4.3%
1.1%	-7.0%	-5.6%	-4.3%	-2.9%	-1.5%
3.6%	-4.4%	-2.9%	-1.5%	-0.1%	1.3%
6.1%	-1.7%	-0.3%	1.2%	2.6%	4.1%
8.6%	0.9%	2.4%	3.9%	5.4%	6.9%

Source: Goldman Sachs Global Investment Research

Exhibit 25: Sensitizing our post-savings, adj. DCF under three different potential savings rates, variations on DPI/Essential Spending Growth

Adj. DCF, post-savings - different savings rates

Adj. Discretionary Cash Flow growth sensitivity, Savings Rate = 4.3%		Essential Spending, YoY (+/- 300bps)				
		7.4%	4.4%	**1.4%**	-1.6%	-4.6%
DPI, YoY (+/-250bps)	-1.4%	-6.8%	-6.2%	-5.6%	-5.0%	-4.4%
	1.1%	-4.1%	-3.5%	-2.9%	-2.3%	-1.7%
	3.6%	-1.3%	-0.7%	-0.1%	0.5%	1.1%
	6.1%	1.4%	2.0%	2.6%	3.2%	3.8%
	8.6%	4.2%	4.8%	5.4%	6.0%	6.6%

Adj. Discretionary Cash Flow growth sensitivity, Savings Rate = 6.3%		Essential Spending, YoY (+/- 300bps)				
		7.4%	4.4%	**1.4%**	-1.6%	-4.6%
DPI, YoY (+/-250bps)	-1.4%	-9.5%	-8.9%	-8.3%	-7.7%	-7.1%
	1.1%	-6.8%	-6.2%	-5.6%	-5.0%	-4.4%
	3.6%	-4.1%	-3.5%	-2.9%	-2.3%	-1.7%
	6.1%	-1.5%	-0.9%	-0.3%	0.3%	0.9%
	8.6%	1.2%	1.8%	2.4%	3.0%	3.6%

Adj. Discretionary Cash Flow growth sensitivity, Savings Rate = 8.3%		Essential Spending, YoY (+/- 300bps)				
		7.4%	4.4%	**1.4%**	-1.6%	-4.6%
DPI, YoY (+/-250bps)	-1.4%	-12.2%	-11.6%	-11.0%	-10.4%	-9.8%
	1.1%	-9.6%	-9.0%	-8.4%	-7.8%	-7.2%
	3.6%	-7.0%	-6.4%	-5.8%	-5.2%	-4.6%
	6.1%	-4.3%	-3.7%	-3.1%	-2.5%	-2.0%
	8.6%	-1.7%	-1.1%	-0.5%	0.1%	0.7%

Share of Wallet Revisited

In this section we update our work on share of wallet. **We find that the categories *across both goods and services* most impacted by the pandemic have largely recovered**. However, zooming out to the decades-long goods vs. services trend, we find **wallet share for services remains below trend and is likely years away from recovering**. As we unpack in the real vs. nominal section below, the reason for this is that **goods volumes remain above the historical trendline, while goods inflation has outpaced services inflation** throughout the pandemic. Finally, we take a deep dive into the sub-categories of PCE, as we try to answer the questions we frequently receive from investors on which pandemic beneficiaries have room for further normalization, what categories may be permanently impaired, and which look most at risk from lapping pent-up demand.

As we look to 2023, we are most cautious on the discretionary, durable goods categories that have already come under pressure in 2022 but still remain above-trend, including furniture (Sell WSM), new & used cars, electronics, apparel (Sell FIGS, VFC), and household supplies (Sell CLX). However, we are not uniformly behind the mean-reversion trade; we are more positive on select sporting goods/athletic apparel names due to their controlled inventory levels and innovation (Buy DKS/ASO/NKE/LULU), and select Food/Bev/Tobacco names on compelling valuation and overall defensiveness (Buy HSY/KHC/POST/SOVO/SMPL; STZ/MNST/PEP; MO).

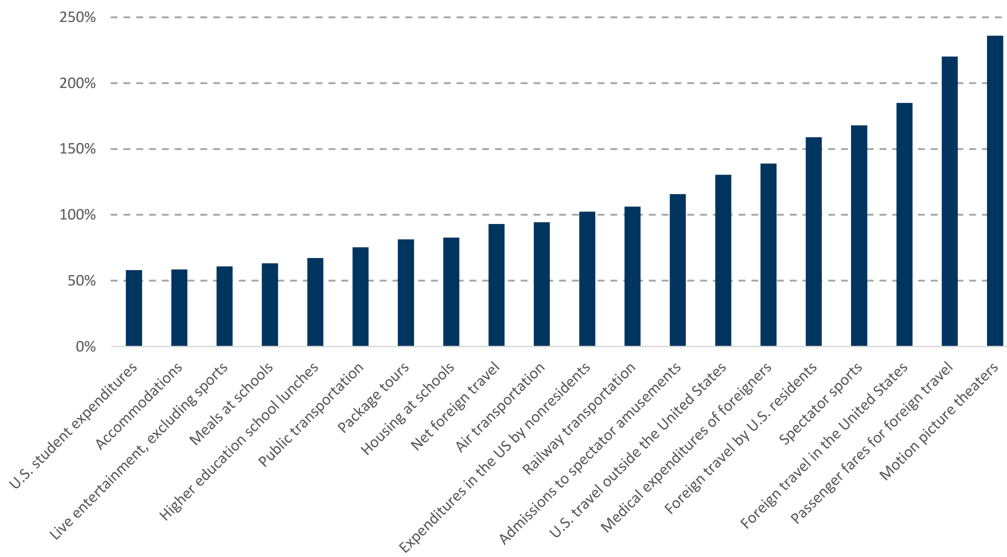
Our views on the risks to discretionary categories are not much different to than what we have flagged previously. One area where we are incrementally more cautious is on the restaurants, which went from under-earning during the pandemic to over-earning upon reopening. Lapping this growth and competing with food at home, which we expect will see trade down and slowing inflation, could set up the group for challenging traffic trends in 2023; still we look to dispersion in the growth trajectory as creating opportunities (Buy MCD/CMG/FWRG/SG; Sell EAT/CAKE/DNUT).

Tracking the reopening

2022 saw the world ex-China largely complete its post-COVID reopening. As we entered the year, there remained significant debate whether share gains during the pandemic in durable goods, food at home, and other "stay at home" categories would prove sticky. We found some evidence of normalization in share for the most impacted categories, and mean reversion from goods to services (discussed in the next section). The top 20 fastest-growing categories this year were those generally most impacted by restrictions, including movie theaters, travel, sports, live entertainment, and tourism. In 2022 to date, the major share donor categories are just 55bps off prior peak, having fallen from an average run-rate (2007-2019) of 22% of nominal PCE to 16.4% in 2020. One notable laggard in 2021 was international travel, which remained relatively muted after falling from 79.4mn arrivals in 2019 to 19.4mn in 2020. These tourists had been contributing a net $53bn (~$239bn less ~$186bn from US residents spend abroad) to PCE, and 2022 saw the gap close with 7 of the top 20 fastest-growing categories related to tourism spend, and air transportation, hotel accommodations and foreign travel by US residents now back at or above 2019 share of wallet.

Exhibit 26: The top 20 fastest-growing sub-segments of PCE in 2022 continue to be those most impacted in 2020 by lockdowns...

YoY Growth (2022TD)



Source: US Bureau of Economic Analysis (BEA)

Exhibit 27: ...reflecting share donor categories (services + gas + clothing) recovering from 16.9% of PCE in 2020 to 21.5% YTD 2022 (21.8% as of 3Q22), nearly closing the gap.

Categories of spending - share of total	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Hist Avg Pre-Pand	2020	2021	2022'TD	Vs. Hist.
Gasoline and other energy goods (NDG)	3.5%	3.9%	2.9%	3.3%	3.9%	3.8%	3.7%	3.4%	2.5%	2.2%	2.3%	2.5%	2.3%	**3.1%**	1.8%	2.3%	**2.9%**	**(19bps)**
Clothing and footwear (NDG)	3.3%	3.2%	3.1%	3.1%	3.1%	3.1%	3.1%	3.0%	3.0%	3.0%	2.9%	2.8%	2.8%	**3.0%**	2.5%	2.9%	**2.8%**	**(19bps)**
Luggage and similar personal items (DG)	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	**0.2%**	0.2%	0.2%	**0.2%**	**2**
Physician services (S)	0.9%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	**1.0%**	1.0%	1.0%	**0.9%**	**(7bps)**
Dental services (S)	0.2%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	**0.2%**	0.2%	0.2%	**0.2%**	**(3bps)**
Motor vehicle services (S)	2.1%	2.1%	2.0%	2.0%	2.0%	2.0%	2.0%	2.1%	2.1%	2.2%	2.2%	2.1%	2.2%	**2.1%**	2.0%	1.9%	**1.9%**	**(13bps)**
Ground transportation (S)	0.3%	0.3%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	**0.4%**	0.2%	0.3%	**0.3%**	**(6bps)**
Air transportation (S)	0.6%	0.7%	0.6%	0.7%	0.7%	0.7%	0.8%	0.8%	0.7%	0.7%	0.7%	0.8%	0.8%	**0.7%**	0.3%	0.6%	**0.9%**	**15**
Membership clubs, sports centers, parks, theaters (S)	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.5%	1.5%	1.5%	1.5%	**1.4%**	0.8%	0.9%	**1.1%**	**(34bps)**
Gambling (S)	1.1%	1.1%	1.1%	1.1%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	**1.0%**	0.8%	1.0%	**0.9%**	**(11bps)**
Food services (S)	5.2%	5.2%	5.3%	5.2%	5.3%	5.4%	5.4%	5.5%	5.7%	5.8%	5.8%	5.8%	5.9%	**5.5%**	5.2%	5.8%	**6.1%**	**60**
Accommodations - Hotels, Motels, Housing at Schools (S	0.9%	1.0%	0.9%	1.0%	1.0%	1.0%	1.0%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	**1.0%**	0.6%	0.8%	**1.1%**	**2**
Personal care services (S)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.1%	1.1%	1.1%	**1.0%**	0.7%	0.8%	**0.9%**	**(13bps)**
Clothing/ footwear services - laundry, dry cleaning, etc. (S	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	**0.1%**	0.1%	0.1%	**0.1%**	**(4bps)**
Foreign travel by U.S. residents (S)	1.1%	1.1%	1.0%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.2%	1.2%	1.3%	**1.1%**	0.4%	0.6%	**1.1%**	**(4bps)**
Aggregate of the above listed categories	**22.4%**	**22.5%**	**21.3%**	**21.7%**	**22.4%**	**22.6%**	**22.5%**	**22.4%**	**21.8%**	**21.6%**	**21.8%**	**22.1%**	**22.0%**	**22.1%**	**16.9%**	**19.4%**	**21.5%**	**(55bps)**

The share donor categories (services + gas + clothing) have historically constituted about 22% of PCE historically; 2020 fell to 16.9% and has nearly recovered to 21.5% currently

Category indicators: (S) = services, (NDG) = non-durable goods, (DG) = durable goods

Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Goods vs. Services: Checking in on the services recovery

Beyond specific COVID-impacted categories (which included some goods like gasoline in addition to services), the pandemic saw a dramatic shift from services towards goods. We had previously looked at what happened during prior periods when services' share of spending fell. We found two instances over a 30-year period — 1999 and 2010-11 — with a sharp drop in services share of spending (admittedly nothing compared to pandemic trends). In both instances, the recovery in services share of spending was gradual, spanning 2-4 years. 2022 has seen a move back towards services and recovery of share for the most COVID-impacted categories in general, but services' share of nominal PCE remains 300bps below prior peak and even further off the historical trend line. If services were to regain share at the cadence observed in 1999 and 2010-11, a full recovery to 2019 levels could take as long as 6 years. However, in '08-'09 services gained share much more quickly; at this rate services could return to prior peak by 2025, as we show in Exhibit 30.

Real vs. Nominal Share of Wallet: Despite the service *volume* recovery, still-elevated goods volumes and higher inflation through the pandemic create overhang for goods in 2023

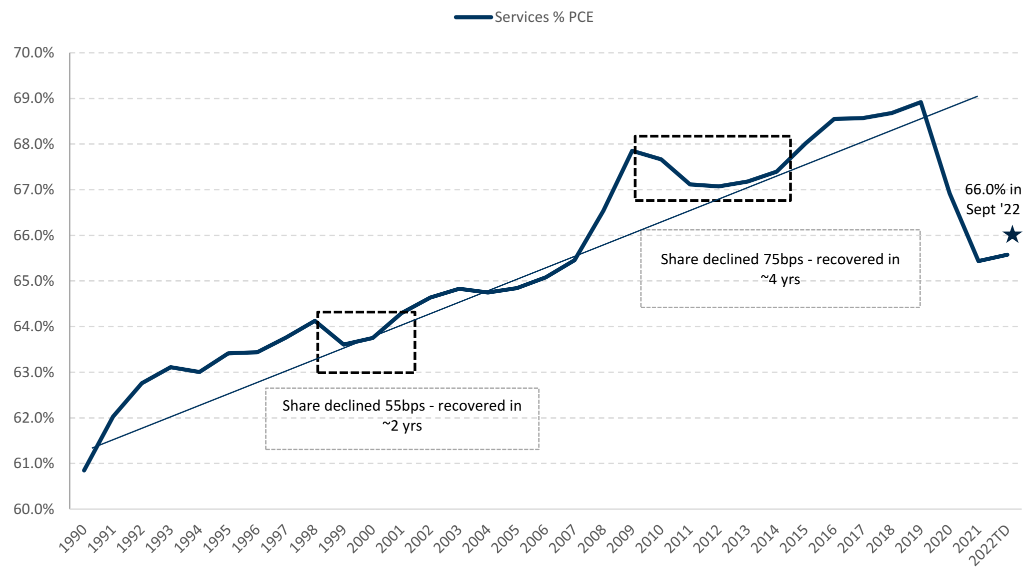
We have historically focused primarily on share of nominal PCE because this reflects the current dollars our companies earn as revenues and is therefore useful for assessing growth estimates. **With this year's outlook, we additionally look at real PCE and inflation across categories to get a better sense of price vs. volume growth,** which has been a major theme this year and which we expect will continue to be top of mind in 2023.

Instead of services gaining share of real PCE over time, as they have done as a percentage of nominal PCE, the historical trendline runs in the opposite direction. Volumes of goods have gained share over time at the expense of services (though both grow in absolute terms). In particular, durable goods have gained in volume while nondurable goods are closer to flat. Higher inflation for services more than offsets this, and this is what drives services' share of nominal PCE to grow over time (See Exhibit 28).

2022 saw goods and services come closer to converging, as the reopening took full effect and goods volumes actually declined vs. 2019. However, goods volumes remain above the historical trendline. And goods furthermore saw more inflation throughout 2020-2022 compared to services (Exhibit 33), which is a departure from the historical norm where goods inflated at an average of 0.6% per year and services inflated at 2.7%.

As we look to 2023, the volume recoveries we saw in 2022 for COVID-impacted industries could make it more difficult to see meaningful share gains for services. Instead, share normalization could be the result of: **(1)** volume growth continuing to slow for pandemic beneficiaries (ex. lapping pull forward of demand from stay-at-home durable goods categories), **(2)** volume growth slowing in a macroeconomic slowdown (ex. furnishing demand could slow as fewer homes are purchased/built), and **(3)** price; where there are higher-than-typical inventory levels (many retail/apparel categories) or industry cycle dynamics (Food/Bevs on the other side of the price/cost curve), promotions creeping back in would drive these categories to see a normalization in share of nominal PCE. Furthermore, goods *deflated* in 2009 (-1.9% for durable goods, -2.4% for goods overall) while service inflation slowed, but remained positive at +0.8%. A recessionary scenario could therefore put pressure on goods *prices,* and therefore their share of nominal PCE, beyond the impact of excess inventories and industry dynamics.

Exhibit 28: After the drops in 1999 and 2010-11, services' shares of PCE took 2-4 years to get back to prior levels; the current gap has widened by an even greater extent vs. history, which could set up for a similarly long path back to the trend-line as services share of wallet remains 300bps off prior peak



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Exhibit 29: As services share of PCE dropped in 1999 and 2010-11, goods took over for a multi-year window - 2020-21 saw a similar, but magnified share shift which has been slower to unwind

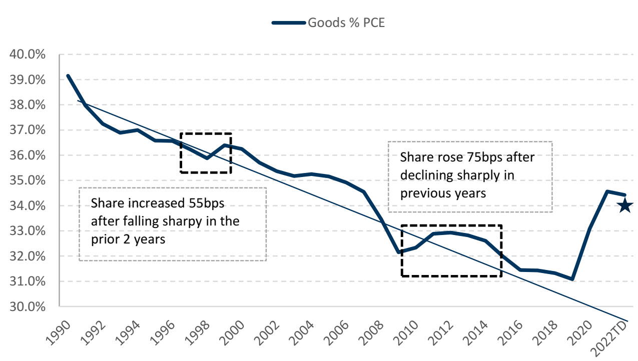
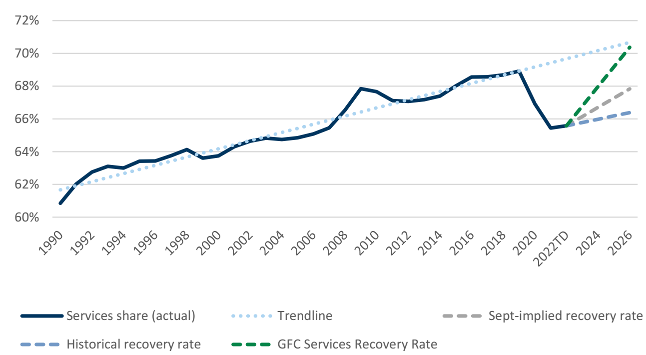


Exhibit 30: The latest (September) data imply a faster recovery rate for services vs. prior history, though even at this run-rate services remain ~6 years off the 2019 peak; if services regained share at the rate they did in '08-'09, they would reach prior peak by 2025



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Exhibit 31: In real terms, services PCE is now running +4% vs. 2019 while goods PCE remains above at +16.3%, as volumes for goods remain elevated

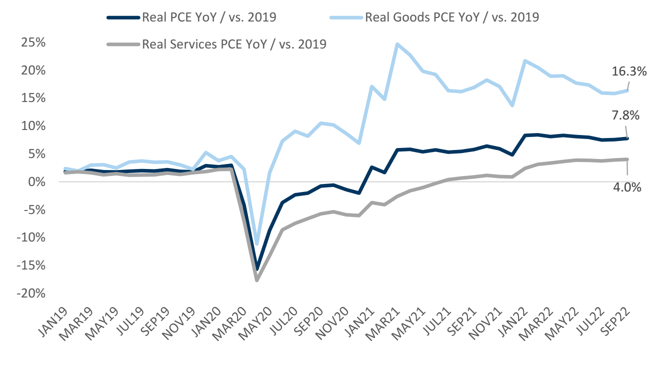


Exhibit 32: ...and although durable goods had been taking share of real PCE over time, the growth remains slightly above-trend

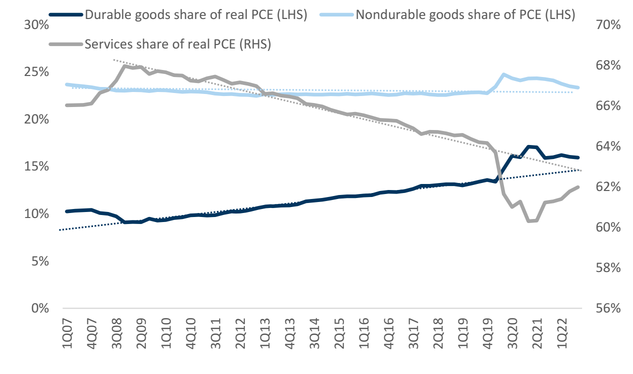


Exhibit 33: Goods have broadly been more inflationary than services through the pandemic, which is pushing their share of nominal PCE above their share of real PCE...

	2019	2020	2021	2022TD
Personal consumption expenditures	1%	1%	4%	6%
Goods	0%	-1%	5%	8%
Durable goods	-1%	-1%	6%	6%
Motor vehicles and parts	1%	2%	11%	11%
Furnishings and durable household equipment	1%	1%	5%	9%
Recreational goods and vehicles	-4%	-4%	2%	1%
Other durable goods	-2%	-3%	1%	2%
Food and beverages purchased for off-premises consu	1%	3%	3%	9%
Clothing and footwear	-1%	-5%	2%	5%
Gasoline and other energy goods	-4%	-15%	34%	35%
Other nondurable goods	0%	1%	1%	4%
Services	2%	2%	4%	4%
Household consumption expenditures (for services)	2%	2%	3%	4%
Housing and utilities	3%	3%	3%	6%
Health care	2%	3%	3%	2%
Transportation services	2%	-1%	4%	10%
Recreation services	2%	2%	3%	4%
Food services and accommodations	3%	2%	6%	7%
Financial services and insurance	3%	1%	5%	1%
Other services	1%	2%	2%	3%

Exhibit 34: ...with energy, transportation, vehicles/parts, and food among the most inflationary categories of PCE in 2022

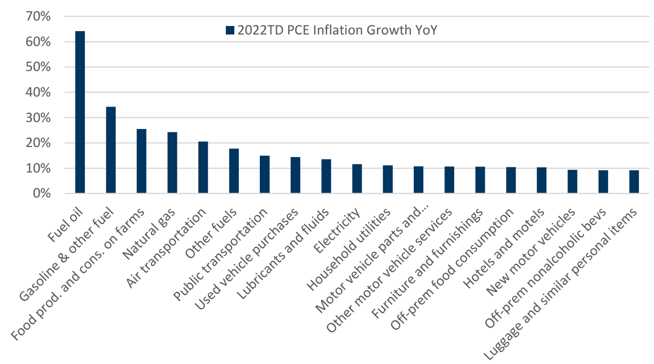


Exhibit 35: While inflation remained elevated and accelerated for a number of categories this year, some started to see disinflation - notably other fuels, used cars, jewelry, financial services, RVs, and appliances

	2019	2020	2021	2022TD	Disinflation: 2022 - 2021
Financial service charges, fees, and commissions	2%	3%	10%	-2%	**-11.6%**
Net purchases of used motor vehicles	1%	3%	26%	14%	**-11.2%**
Railway transportation	-1%	-3%	5%	-2%	**-7.0%**
Jewelry and watches	-1%	-2%	8%	2%	**-5.9%**
Other fuels	-4%	-3%	22%	18%	**-4.0%**
Household appliances	2%	4%	10%	6%	**-3.4%**
Financial services furnished without payment	5%	-2%	5%	3%	**-2.5%**
Sports and recreational vehicles	3%	2%	6%	3%	**-2.4%**
Spectator sports	2%	3%	-3%	-5%	**-1.7%**
Household maintenance	4%	3%	8%	6%	**-1.7%**
Outpatient services	1%	2%	3%	2%	**-1.3%**
AV/Photo Equipment	-7%	-8%	-1%	-2%	**-1.1%**
Housing at schools	2%	2%	2%	2%	**-0.7%**
Tobacco	5%	5%	7%	7%	**-0.7%**
Hospitals	2%	3%	3%	3%	**-0.5%**
Social services and religious activities	3%	4%	5%	4%	-0.5%
Sporting equipment, supplies, guns, and ammunition	-2%	-1%	6%	6%	-0.4%
Gasoline and other motor fuel	-4%	-15%	35%	34%	-0.2%

Breaking down the categories

Exhibit 36: Within services, food & accommodations have rapidly bounced back above their pre-pandemic share of total service spend, led entirely by food services (accommodations are flat vs. 2019).
Services categories share of total services PCE, change vs. 2019

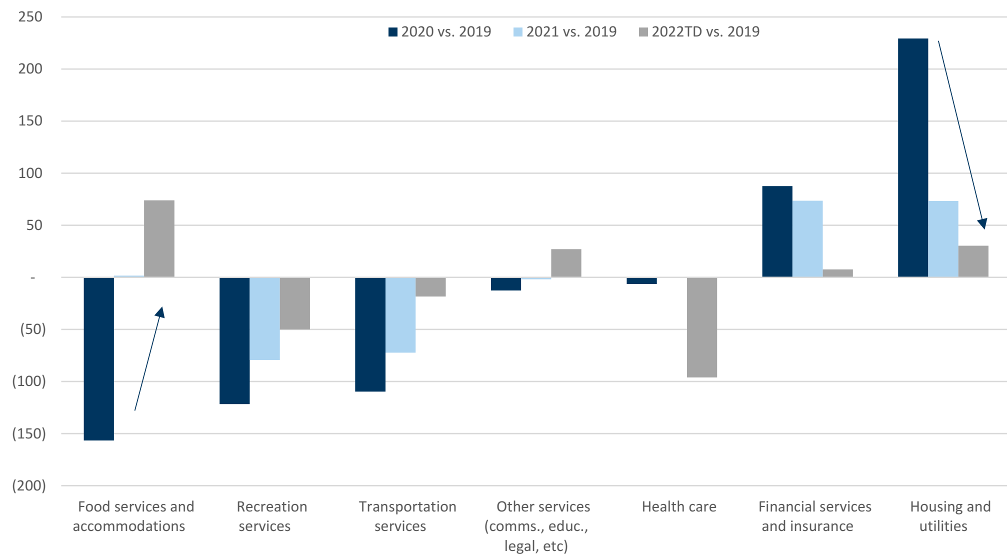
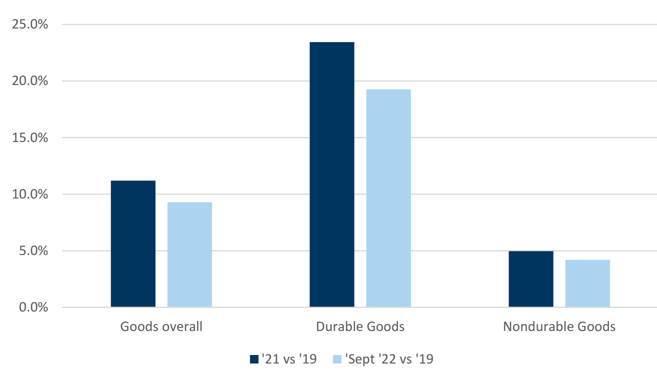
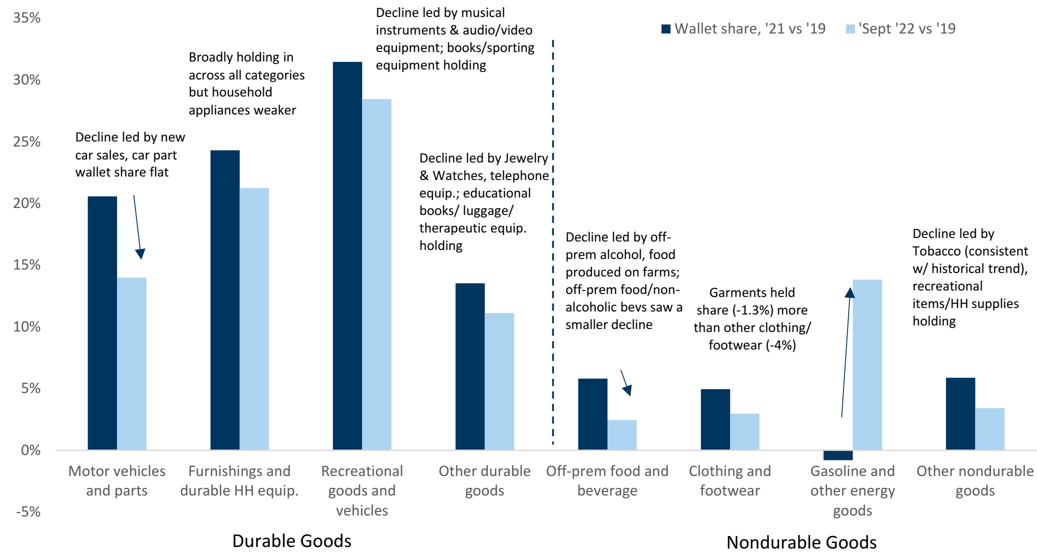


Exhibit 37: Within goods, most of the gains during the pandemic have come from durable goods, which are now coming in vs. peak to a greater extent than nondurable goods...
Change in wallet share (% of total PCE) vs. 2019



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Exhibit 38: ...motor vehicles have come off peak to a greater extent than furnishing/recreational goods, while the biggest gainer this year has been gasoline



Source: BEA, Goldman Sachs Global Investment Research

Exhibit 39: Full goods subcategory breakdown

	'21 vs '19	'Sept '22 vs '19	vs. Peak
Net purchases of used motor vehicles	43.0%	36.7%	-4.4%
Sporting equipment, supplies, guns, and ammunition	42.3%	39.8%	-1.8%
Sports and recreational vehicles	36.6%	34.3%	-1.7%
Magazines, newspapers, and stationery	29.1%	29.9%	0.6%
Video, audio, photographic, and information processing equipment and media	28.6%	25.1%	-2.7%
Furniture and furnishings	28.6%	25.7%	-2.3%
Jewelry and watches	28.5%	22.5%	-4.7%
Recreational items	20.7%	19.8%	-0.8%
Tools and equipment for house and garden	19.5%	16.6%	-2.4%
Musical instruments	18.9%	13.2%	-4.7%
Household appliances	17.2%	13.4%	-3.3%
Food produced and consumed on farms	15.0%	4.6%	-9.1%
Glassware, tableware, and household utensils	14.6%	11.7%	-2.6%
Recreational books	13.1%	12.2%	-0.8%
Educational books	12.9%	12.0%	-0.8%
Household supplies	12.8%	9.9%	-2.6%
New motor vehicles	11.3%	2.7%	-7.7%
Luggage and similar personal items	10.7%	13.2%	2.3%
Motor vehicle parts and accessories	10.3%	10.5%	0.1%
Alcoholic beverages purchased for off-premises consumption	9.1%	3.4%	-5.3%
Therapeutic appliances and equipment	8.4%	9.6%	1.2%
Personal care products	7.7%	5.2%	-2.4%
Other clothing materials and footwear	7.7%	3.4%	-4.0%
Food and nonalcoholic beverages purchased for off-premises consumption	5.2%	2.3%	-2.8%
Garments	4.2%	2.8%	-1.3%
Motor vehicle fuels, lubricants, and fluids	-0.5%	14.0%	14.6%
Pharmaceutical and other medical products	-2.7%	-4.3%	-1.6%
Tobacco	-2.8%	-14.1%	-11.6%
Fuel oil and other fuels	-5.4%	11.4%	17.8%
Telephone and facsimile equipment	-8.8%	-16.9%	-8.9%
Net expenditures abroad by U.S. residents	-12.3%	-17.1%	-5.6%

How does this stack up vs. the sectors we cover?

In Exhibit 40 and Exhibit 41, we dive into the subcategories of PCE, assessing which of them punched above or below their weight in 2021, whether they mean-reverted in 2022, and what kind of debate this sets up for the stocks/categories in 2023. Some of the most notable pandemic beneficiaries have already seen wallet share normalize (electronics, furniture, new & used cars, sporting goods, food at home, apparel, household supplies) while others have not (fuel, car parts). Meanwhile, some of the pandemic laggards have continued to bleed share (hospital/health services, pharma, housing, education), while others saw a partial climb back (rental cars & other motor vehicle services, live entertainment, hotels, salons), and others saw such a large pop on reopening that they could be at risk of wallet share loss going forward (restaurants, utilities).

Exhibit 40: Depending on whether categories over/under-earned during the pandemic, and the extent of mean reversion, we see different upside/downside risks to wallet share going forward.

Exhibit 41: Full description by category

Category of PCE	Pre-pandemic, % of nominal PCE	Mean reverted in 2022?	Extent of mean reversion, % of gap	Sept '22 wallet share vs. historical trendline	Comments
Over-earned during pandemic, but mean reverted					
AV, photo, and IP equipment/media	1.8%	YES	12%	47	Over-earned, mean reverted and is now 47bps above trendline
Furniture and furnishings	1.5%	YES	10%	45	Over-earned, mean reverted and is now 45bps above trendline
Net purchases of used motor vehicles	1.1%	YES	14%	45	Over-earned, mean reverted and is now 45bps above trendline
New motor vehicles	2.2%	YES	46%	27	Over-earned, mean reverted and is now 27bps above trendline
Recreational items	1.3%	YES	4%	25	Over-earned, mean reverted and is now 25bps above trendline
Food and nonalcoholic beverages purchased for off-premises consur	6.5%	YES	48%	23	Over-earned, mean reverted and is now 23bps above trendline
Sporting equipment, supplies, guns, and ammunition	0.5%	YES	6%	22	Over-earned, mean reverted and is now 22bps above trendline
Garments	2.5%	YES	15%	22	Over-earned, mean reverted and is now 22bps above trendline
Sports and recreational vehicles	0.4%	YES	6%	17	Over-earned, mean reverted and is now 17bps above trendline
Jewelry and watches	0.6%	YES	18%	15	Over-earned, mean reverted and is now 15bps above trendline
Household supplies	1.1%	YES	19%	13	Over-earned, mean reverted and is now 13bps above trendline
Glassware, tableware, and household utensils	0.4%	YES	12%	8	Over-earned, mean reverted and is now 8bps above trendline
Household appliances	0.4%	YES	18%	8	Over-earned, mean reverted and is now 8bps above trendline
Personal care products	1.0%	YES	31%	6	Over-earned, mean reverted and is now 6bps above trendline
Recreational books	0.2%	YES	3%	5	Over-earned, mean reverted and is now 5bps above trendline
Alcoholic beverages purchased for off-premises consumption	1.0%	YES	57%	5	Over-earned, mean reverted and is now 5bps above trendline
Tools and equipment for house and garden	0.2%	YES	14%	4	Over-earned, mean reverted and is now 4bps above trendline
Other clothing materials and footwear	0.7%	YES	49%	3	Over-earned, mean reverted and is now 3bps above trendline
Professional and other services	1.5%	YES	93%	2	Over-earned, mean reverted and is now 2bps above trendline
Educational books	0.1%	YES	4%	2	Over-earned, mean reverted and is now 2bps above trendline
Musical instruments	0.0%	YES	22%	1	Over-earned, mean reverted and is now 1bps above trendline
Food produced and consumed on farms	0.0%	YES	58%	0	Over-earned, mean reverted and is now 0bps above trendline
Tobacco	0.8%	YES	>100	(6)	Over-earned, mean reverted and is now -6bps below trendline
Financial services	4.9%	YES	>100	(36)	Over-earned, mean reverted and is now -36bps below trendline
Over-earned during pandemic and has not yet mean reverted					
Motor vehicle fuels, lubricants, and fluids	2.9%	NO	-	39	Over-earned, moved further off trend and is now 39bps above trendline
Magazines, newspapers, and stationery	0.5%	NO	-	19	Over-earned, moved further off trend and is now 19bps above trendline
Motor vehicle parts and accessories	0.6%	NO	-	6	Over-earned, moved further off trend and is now 6bps above trendline
Therapeutic appliances and equipment	0.5%	NO	-	4	Over-earned, moved further off trend and is now 4bps above trendline
Fuel oil and other fuels	0.2%	NO	-	3	Over-earned, moved further off trend and is now 3bps above trendline
Luggage and similar personal items	0.2%	NO	-	3	Over-earned, moved further off trend and is now 3bps above trendline
Under-earned during pandemic, but mean reverted on reopening					
Food services	5.4%	YES	>100	20	Under-earned, mean reverted and is now 20bps above trendline
Household utilities	2.7%	YES	>100	15	Under-earned, mean reverted and is now 15bps above trendline
Final consumption expenditures of nonprofit institutions serving hous	2.9%	YES	>100	2	Under-earned, mean reverted and is now 2bps above trendline
Public transportation	1.1%	YES	>100	1	Under-earned, mean reverted and is now 1bps above trendline
Other recreational services	0.4%	YES	81%	(2)	Under-earned, mean reverted and is now -2bps below trendline
Accommodations	1.0%	YES	78%	(9)	Under-earned, mean reverted and is now -9bps below trendline
Motor vehicle services	2.1%	YES	32%	(15)	Under-earned, mean reverted and is now -15bps below trendline
Personal care and clothing services	1.2%	YES	34%	(23)	Under-earned, mean reverted and is now -23bps below trendline
Membership clubs, sports centers, parks, theaters, and museums	1.4%	YES	33%	(44)	Under-earned, mean reverted and is now -44bps below trendline
Under-earned during pandemic, still below-trendline					
Net expenditures abroad by U.S. residents	0.1%	NO	-	(2)	Under-earned, moved further off trend and is now -2bps below trendline
Gambling	1.1%	NO	-	(3)	Under-earned, moved further off trend and is now -3bps below trendline
Telephone and facsimile equipment	0.2%	NO	-	(5)	Under-earned, moved further off trend and is now -5bps below trendline
Household maintenance	0.6%	NO	-	(6)	Under-earned, moved further off trend and is now -6bps below trendline
Communication	1.9%	NO	-	(7)	Under-earned, moved further off trend and is now -7bps below trendline
Social services and religious activities	1.4%	NO	-	(7)	Under-earned, moved further off trend and is now -7bps below trendline
Audio-video, photographic, and information processing equipment se	1.0%	NO	-	(8)	Under-earned, moved further off trend and is now -8bps below trendline
Insurance	2.9%	NO	-	(24)	Under-earned, moved further off trend and is now -24bps below trendline
Education services	2.1%	NO	-	(27)	Under-earned, moved further off trend and is now -27bps below trendline
Pharmaceutical and other medical products	3.3%	NO	-	(34)	Under-earned, moved further off trend and is now -34bps below trendline
Housing	15.5%	NO	-	(66)	Under-earned, moved further off trend and is now -66bps below trendline
Outpatient services	7.4%	NO	-	(80)	Under-earned, moved further off trend and is now -80bps below trendline
Hospital and nursing home services	8.7%	NO	-	(119)	Under-earned, moved further off trend and is now -119bps below trendline

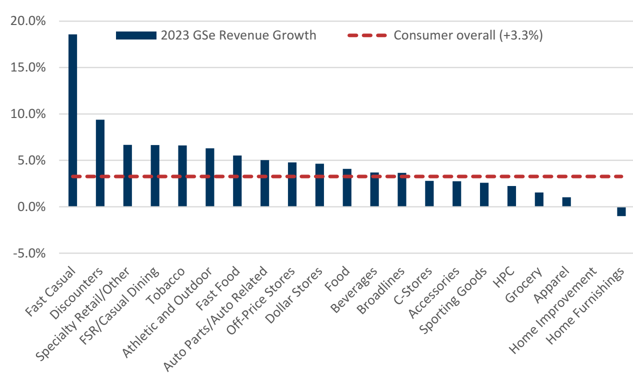
Putting It All Together: What's Priced In?

The Fundamentals

Similar to our post-savings DCF forecast, we expect revenue growth for our coverage universe to continue next year, but at more modest levels than in 2022. In fact, we see sustained sales growth for all sub-sectors except Home Furnishings. And we note that many of our retailers under coverage are poised to enter the year with clean inventory levels and face easy comparisons beginning in 2Q when they cycle the discounting measures taken to clear excess inventory in 2022. As a result we expect faster EPS growth in 2023 vs. 2022 in sub-sectors such as Casual Diners, Specialty Retail, Sporting Goods, and Off-Price Stores; all of these are rebounds off EPS declines in 2022.

Exhibit 42: We expect fast casual to see the highest revenue growth in 2023, while home improvement/home furnishings/apparel which took an outsized share of wallet during the pandemic should see slower growth

Sub-sectors ranked by GSe 2023 revenue growth



Source: Goldman Sachs Global Investment Research

Exhibit 43: Sequentially, we are modeling revenues decelerating across our Consumer coverage

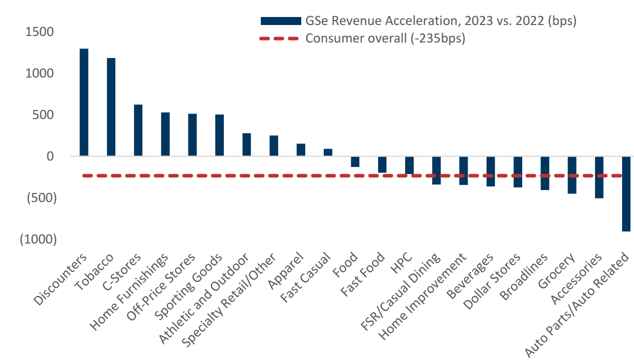
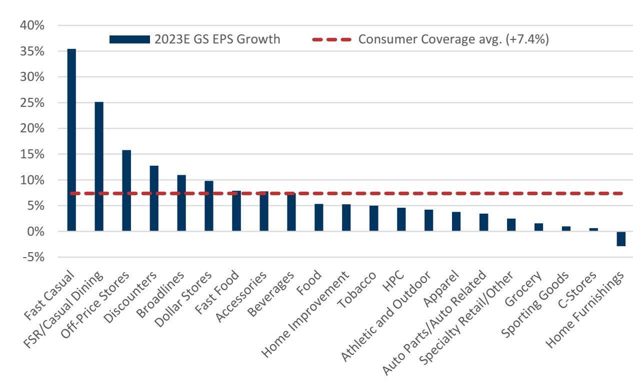
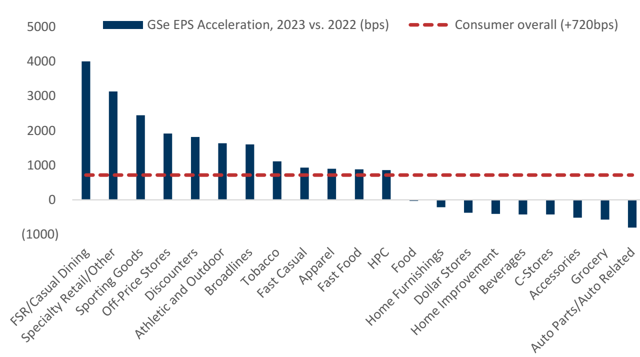


Exhibit 44: We are modeling EPS growth across nearly all sub-sectors and see the fastest EPS growth for Fast Casual owing to op. leverage for SG/SHAK/WING/CMG which are all growing revenues in excess of 15%



Source: Goldman Sachs Global Investment Research

Exhibit 45: ...with improved margins more than offsetting slower revenues, driving +720bps of EPS acceleration in 2023



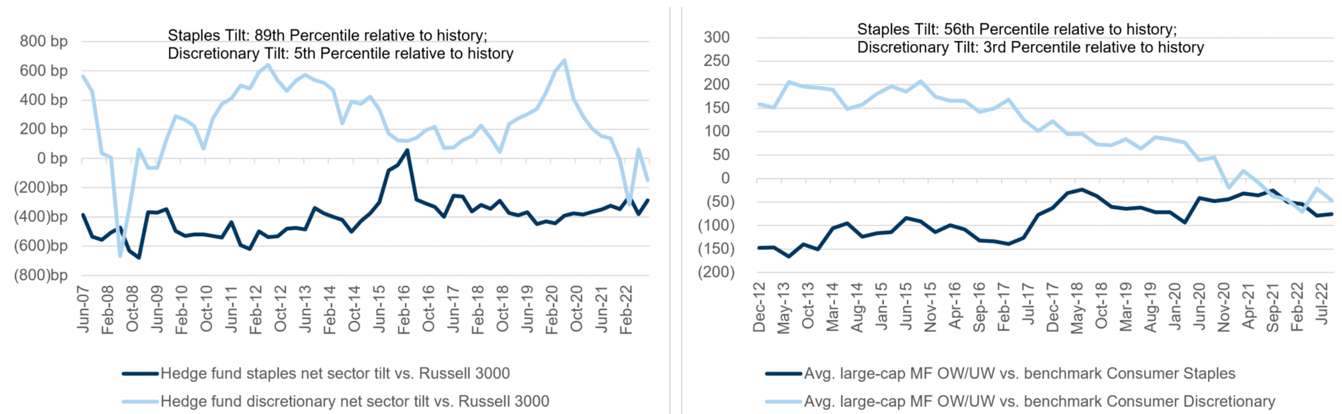
Source: Goldman Sachs Global Investment Research

Positioning & Valuation

As we unpack positioning at the sector and stock level, leveraging our US Portfolio Strategy Team's latest editions of Mutual Fundamentals and Hedge Fund Trend Monitor, the data suggest that investors have taken a more guarded view than our forecasts suggest may be warranted. **Consumer discretionary exposure is at near-historical lows as of 3Q**: both hedge funds and mutual funds are underweight, with exposure at the 5th and 3rd percentiles vs. history, respectively. Mutual Funds and hedge funds are also underweight Staples, but not as much by historical standards; HFs increased exposure to the 89th percentile vs. history, while MF exposure is about average (56th percentile).

Our Portfolio Strategy Team's updated screens show which single-stocks HFs and MFs are in and out of favor, and where sentiment has changed the most. Consumer names in our coverage that appear in these lists include: RH as a Hedge Fund VIP Long; BBWI/DPZ with concentrated HF ownership; TJX/LULU/CMG/STZ as mutual fund overweights. SG/DKS/FIGS all screen in the top 50 short interest as a percentage of market cap; HD/MCD/SBUX/KO/PEP/WMT/COST/PM all screen as mutual fund underweights. Greatest increases in positioning ("rising stars") include LULU/DPZ on the HF side and TJX/BJ on the MF side. "Falling stars" included DRI on the HF side and CL/KMB on the MF side.

Exhibit 46: Both HFs and MFs are now much more underweight Consumer Discretionary than they historically have been



Source: Goldman Sachs Global Investment Research

The change in positioning is also evident in relative valuation levels. Consumer Staples sectors such as HPC and Beverages are trading at relatively lofty levels versus both the market and their own history. And while the XLY too screens relatively rich, there are various sub-sectors within our coverage universe that screen at more compelling levels. Accessories, Sporting Goods, select Specialty Retailers and Department Stores, for example, all screen attractively relative to both the market and their own history. Within this universe we highlight Buy rated CPRI, BBWI, ASO, and DKS as attractive investment options.

Exhibit 47: While the XLP and XLY both screen rich vs. history, our hardlines/softlines in discretionary and Tobacco/C-Stores in staples screen as fertile ground to hunt for good relative value investments

	Absolute P/E (market-weighted)			Relative P/E (market-weighted)			GSe Revs Growth		Revs vs Consensus		GSe EPS Growth		EPS vs Consensus		GSe EBITDA Growth		EBITDA vs Consensus	
	2023 P/E mult		Current rel to	2023 P/E mult		Current rel to												
	Current	10-Yr Avg	10-Yr Avg	Current	10-Yr Avg	10-Yr Avg	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024
Beverages	27.4x	23.2x	118%	149%	136%	110%	4%	5%	3.8%	5.0%	7%	9%	-1.5%	-1.2%	5%	7%	-1.8%	-1.6%
Tobacco	15.4x	16.8x	92%	83%	98%	85%	4%	5%	3.8%	5.0%	7%	9%	-1.5%	-1.2%	5%	7%	-1.8%	-1.6%
HPC	27.0x	22.3x	121%	146%	130%	112%	2%	4%	1.3%	4.3%	5%	10%	-0.1%	-0.9%	5%	7%	0.2%	-0.7%
Packaged Food	20.9x	19.6x	107%	113%	114%	99%	4%	2%	3.2%	2.3%	4%	4%	-1.1%	-2.1%	4%	3%	-0.8%	-1.0%
Broadlines	28.5x	22.1x	129%	155%	129%	120%	4%	4%	4.2%	4.1%	11%	11%	-2.0%	-2.8%	7%	8%	-1.8%	-2.0%
Dollar Stores	21.7x	19.5x	111%	118%	114%	104%	5%	7%	6.1%	6.0%	10%	15%	-2.8%	-1.6%	6%	9%	-1.7%	-1.6%
Grocers	16.7x	18.3x	91%	91%	107%	85%	3%	3%	3.9%	2.9%	3%	8%	-1.0%	0.4%	0%	2%	-2.9%	-3.2%
Discounters	37.0x	39.6x	93%	201%	231%	87%	9%	10%	6.8%	10.3%	13%	9%	0.3%	0.9%	12%	9%	0.1%	0.8%
C-Stores	16.9x	19.4x	87%	92%	114%	81%	3%	0%	2.8%	0.8%	1%	6%	5.9%	7.4%	-3%	3%	3.3%	4.3%
Fast Food	29.5x	25.6x	115%	160%	150%	107%	5%	8%	6.6%	7.5%	8%	16%	-3.8%	-2.1%	9%	11%	-1.3%	0.3%
FSR/Casual Dining	25.1x	29.4x	85%	136%	172%	79%	7%	5%	6.7%	5.8%	25%	15%	-0.3%	1.3%	6%	7%	-1.0%	-0.3%
Fast Casual	42.5x	46.1x	92%	230%	270%	85%	19%	16%	15.1%	14.7%	35%	18%	10.5%	9.7%	39%	20%	10.2%	10.2%
Lodging/Leisure	17.4x	25.9x	67%	94%	151%	62%	-	-	-	-	-	-	-	-	-	-	-	-
Home Improvement	19.0x	21.5x	88%	103%	126%	82%	0%	3%	0.5%	2.7%	5%	8%	1.7%	2.5%	3%	5%	4.0%	5.7%
Home Furnishings	9.0x	20.1x	45%	49%	117%	42%	-1%	4%	-3.3%	1.9%	-3%	4%	4.6%	8.8%	-1%	2%	4.6%	7.6%
Sporting Goods	8.6x	12.0x	71%	47%	70%	66%	3%	5%	0.8%	3.3%	1%	11%	3.4%	6.9%	-2%	5%	3.1%	5.8%
Auto Parts/Auto Related	21.1x	18.8x	112%	115%	110%	104%	5%	8%	4.7%	5.7%	2%	10%	0.3%	3.9%	0%	7%	1.3%	4.1%
Specialty Retail	18.2x	30.3x	60%	99%	177%	56%	3%	5%	1.0%	3.8%	3%	23%	3.9%	8.0%	5%	10%	3.3%	6.1%
Accessories	9.0x	13.4x	67%	49%	78%	63%	3%	6%	3.3%	6.4%	8%	13%	-0.4%	0.7%	1%	7%	-0.5%	0.4%
General Apparel	16.0x	17.4x	92%	87%	101%	85%	1%	3%	2.5%	4.7%	3%	7%	-0.2%	-1.2%	1%	3%	2.6%	1.9%
Off-Price Stores	28.0x	27.9x	101%	152%	163%	93%	5%	7%	5.6%	6.1%	16%	14%	-1.9%	-2.4%	11%	10%	-1.1%	-2.4%
Department Stores	6.8x	11.0x	62%	37%	64%	57%	-	-	-	-	-	-	-	-	-	-	-	-
S&P 500	**18.4x**	**17.1x**	**108%**	**100%**														
Consumer Staples (XLP)	22.1x	19.9x	111%	120%	116%	103%												
Consumer Discretionary (XLY)	28.2x	24.4x	116%	153%	142%	107%												
Communication Services (XLC)	16.9x	20.6x	82%	92%	120%	76%												
Energy (XLE)	8.6x	8.9x	97%	47%	52%	90%												
Financials (XLF)	14.5x	13.9x	105%	79%	81%	97%												
Healthcare (XLV)	17.2x	16.7x	103%	93%	97%	96%												
Industrials (XLI)	21.2x	20.0x	106%	115%	117%	98%												
Materials (XLB)	15.4x	17.7x	87%	83%	103%	81%												
Real Estate (XLRE)	17.8x	19.8x	90%	96%	116%	83%												
Technology (XLK)	22.7x	19.6x	116%	123%	115%	107%												
Utilities (XLU)	20.2x	17.8x	113%	110%	104%	105%												

2022 in Review: Anatomy of Performance

We had approached 2022 with a more guarded view of the consumer, as we looked to tough compares due to lapping stimulus benefits, wallet share normalization (particularly for categories which had achieved ~5 years of growth in four quarters alone), and an expectation that consumer spending could see a bifurcation despite healthy levels of growth. We were particularly concerned about the lower income cohorts in light of outsized stimulus exposure, rising inflation, and higher financial obligations. While the low income consumer has yet to fall off a cliff, the micro-data we track in our Monthly Tracker suggests some weakness building over the past couple months. As the year progressed, new challenges arose: the war in Ukraine accelerated inflationary pressures particularly for food; the subsequent isolation of Russia drove exits for some of our companies and energy prices even higher (precipitating the recession looming for Europe) ; and a longer-than-expected zero-COVID tolerance policy in China contributed to continued weakness for our companies there. 3Q earnings for the broader market were a mixed bag, with beats rarer and smaller than historical averages, as many large companies outside of Consumer (ex. megacap tech) saw more challenging fundamentals and are pivoting to plan for slowing growth. Within Consumer, we were gruntled to see results mostly held up (pricing generally strong with muted elasticity impacts) but there were some scattered signs of a slowdown, with discretionary margins challenged and apparel companies now flagging weakness for the Consumer.

Amid choppier fundamentals and recession fears, Consumer Staples bounced back after years of underperformance and substantially outperformed discretionary, though hedge funds and mutual funds remain underweight both. **But what mattered the most this year for our stocks was rates**. With inflation proving stickier and more unpredictable than policymakers and many market participants had anticipated, the Fed continued to hike rates and markets hung on every inflation data-point. Stocks were: (1) unusually volatile (levels generally not even seen in recessions); (2) unusually correlated to bonds in the context of shifting rates; and (3) saw average dispersion, making stock-picking more challenging - much of the alpha came from sector tilts. Our above-consensus macro view that the Consumer should (at a minimum) continue to muddle along drives our belief that investors can capture more alpha from offense than defense. **This could set up opportunity for single-stock alpha in 2023 if there is more dispersion once rates peak and macro debates are (hopefully) settled. The three single-stock ideas we highlight include BBWI, GPS, and TPR.**

Exhibit 48: Looking across the factors, the cheapest and lowest volatility stocks outperformed, while the highest growth stocks underperformed; estimate revisions, balance sheet quality, and financial returns did not matter quite as much, suggesting more rate-driven rather than micro-driven market moves
Performance is vs. S&P500

Factor Performance - Market Neutral	YTD 2022
Value (Cheapest vs. Richest)	30%
Integrated (High vs. Low)	24%
Volatility (Low vs. High)	30%
Financial Returns (High vs. Low)	20%
Short Interest (Low vs. High)	15%
Size (Large vs. Small)	18%
Revisions (High vs. Low)	6%
Balance Sheet (Strong vs. Weak)	1%
Momentum (Leaders vs. Laggards)	10%
Growth (High vs. Low)	-18%

Exhibit 49: Consumer staples returns had a high positive 1 yr correlation vs. Volatility, Value and Financial Returns, while they have been most negatively correlated with Growth, on a relative basis; consumer Discretionary exhibited a somewhat opposite dynamic in 2022

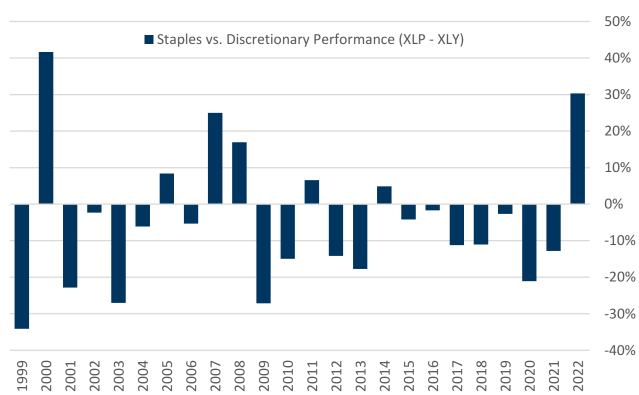
1 Yr Correlation with Factor	Consumer Staples	Consumer Discretionary
Value	52%	-54%
Integrated	25%	-34%
Volatility	72%	-65%
Financial Returns	52%	-53%
Short Interest	39%	-48%
Size	60%	-57%
Revisions	33%	-33%
Balance Sheet	-35%	27%
Momentum	49%	-54%
Growth	-65%	63%

Exhibit 50: Consumer staples outperformed the broader market by 13pp after underperforming in from 2018-2021, while consumer discretionary underperformed by 14pp
Index & Sector Performance YTD as of 11/14/2022

Index & Sector Performance	2018	2019	2020	2021	YTD 2022
Consumer Staples (XLP)	-10%	24%	7%	14%	**-1%**
S&P 500	-7%	29%	16%	27%	**-17%**
Consumer Discretionary (XLY)	-1%	27%	28%	27%	**-32%**
Staples vs. SPX	-3%	-5%	-9%	-13%	16%
Discretionary vs. SPX	6%	-2%	12%	0%	-15%
Staples vs. Discretionary	-9%	-3%	-21%	-13%	31%

Source: Goldman Sachs Global Investment Research, FactSet

Exhibit 51: This marks the first time since 2014 that staples outperformed, and the most outperformance since 2000



Source: FactSet, Data compiled by Goldman Sachs Global Investment Research

Diving into the sub-sectors and the stocks...

While at the headline level much of the price action in consumer this year represented a macro trade and dispersion was average, there were still pockets of it both across and within the sub-sectors. Convenience Stores, Dollar Stores, Food, and Sporting Goods all ended positive, and far outperformed Athletic and Outdoor, Apparel, and Home

Furnishing. We saw substantial dispersion within HPC (REYN flat%, OLPX -81%), Auto-related (GPC +35%, MCW -47%), Discounters (OLLI -1%, BIG -63%), and Apparel (RL -7%, FIGS -72%).

In general, change in valuation was a bigger factor than change in earnings per share: the expected NTM change in EPS across our Consumer coverage increased by +1.9%, while the average P/E decreased -5.6%, driving the stocks to drop -4.4% on average. For 61% of our coverage, EPS revisions and P/E moved in opposite directions. Food, HPC, Home Furnishings, Discounters, Broadlines, Sporting Goods, Apparel, and Athletic and Outdoor were the sectors where both EPS and P/E ratios moved in the same direction, which may indicate investors modeled longer-lasting estimate revision cycles for these areas. For all 8/9 sub-sectors where EPS revisions outpaced the broader market (except food), P/E contracted, which might indicate that (apart from food) investors looked past better expected earnings in the short term.

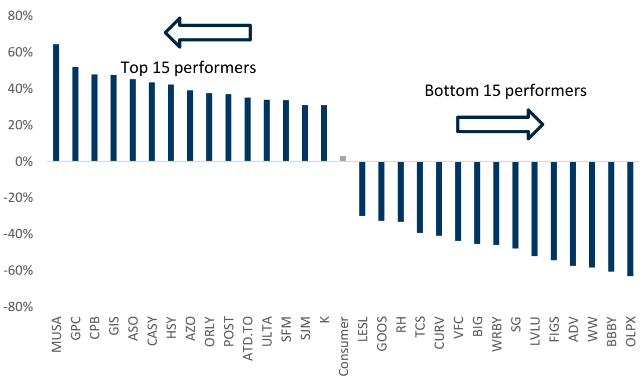
Exhibit 52: We recap 2022 YTD price performance by sub-sector

Price performance YTD, %

Sector Performance from 01/03/22 to 11/30/22	# Stocks	Performance (Absolute)	Performance (vs. SPX)	Dispersion (Best-Worst)	Best Performer	%	Worst Performer	%
SPX	500	-17%	-	-	-	-	-	-
Consumer BU	**121**	**-14%**	**3%**	**128%**	**MUSA**	**47%**	**OLPX**	**-81%**
C-Stores	3	30%	48%	29%	MUSA	47%	ATD.TO	18%
Sporting Goods	3	7%	25%	41%	ASO	28%	FL	-13%
Food	15	4%	21%	68%	CPB	31%	FRPT	-38%
Dollar Stores	2	4%	21%	3%	DG	6%	DLTR	2%
Tobacco	2	2%	20%	9%	PM	7%	MO	-2%
Beverage	11	-4%	14%	57%	COCO	13%	ZVIA	-44%
Auto Parts/Auto Related	8	-5%	13%	81%	GPC	35%	MCW	-47%
FSR/Casual Diners	6	-5%	12%	26%	TXRH	10%	CAKE	-16%
Grocery	5	-5%	12%	43%	SFM	16%	ACI	-27%
Off-Price Stores	3	-8%	10%	35%	TJX	4%	BURL	-31%
Broadlines	4	-10%	8%	40%	BJ	6%	TGT	-34%
Fast Food	8	-10%	7%	44%	QSR	12%	DPZ	-32%
Discounters	3	-25%	-8%	62%	OLLI	-1%	BIG	-63%
Specialty Retail/Other	6	-26%	-9%	64%	ULTA	17%	WEBR	-47%
Home Improvement	5	-27%	-10%	40%	TSCO	-7%	LESL	-47%
HPC	13	-27%	-10%	81%	REYN	0%	OLPX	-81%
Accessories	3	-28%	-11%	54%	TPR	-10%	WRBY	-63%
Fast Casual	4	-30%	-12%	56%	CMG	-9%	SG	-65%
Athletic and Outdoor	4	-35%	-18%	58%	LULU	-3%	VFC	-61%
Apparel	9	-40%	-22%	65%	RL	-7%	FIGS	-72%
Home Furnishing	4	-55%	-37%	45%	WSM	-33%	BBBY	-78%

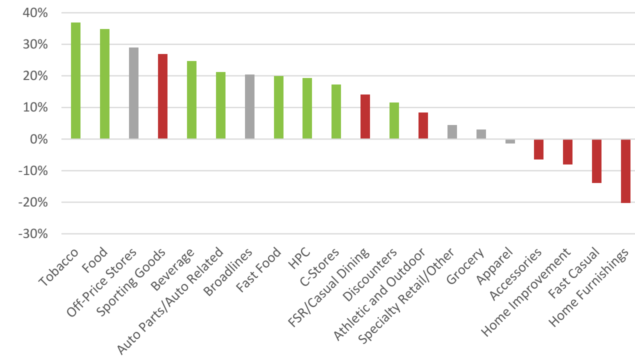
Source: Goldman Sachs Global Investment Research, FactSet

Exhibit 53: Top 15 out/under-performers
YTD Price Performance vs. S&P500



Source: FactSet, Goldman Sachs Global Investment Research

Exhibit 54:
YTD change in relative PE, color-coded with subjective assessment of the defensiveness of the category



Source: FactSet, Goldman Sachs Global Investment Research

Exhibit 55: Diving deeper into price performance across Consumer, we found NTM EPS revisions were on average positive (+1.9%) as the year went on, with compressed (-5.6%) but still elevated multiples relative to the broader market driving the stocks down (-4.4%) but better than the S&P500 (-17.4%)

Anatomy of share price perf. - since Jan 3rd, 2022

Ticker	NTM EPS, growth	Ticker	Absolute PE, growth	Ticker	Price performance
Fast Casual	31.4%	Tobacco	9.4%	C-Stores	16.0%
C-Stores	24.7%	Food	7.8%	Auto Parts/Auto Related	14.8%
Grocery	18.6%	Off-Price Stores	2.9%	Sporting Goods	14.3%
Auto Parts/Auto Related	18.4%	Sporting Goods	1.3%	Food	13.9%
FSR/Casual Dining	13.7%	Beverage	-0.4%	Beverage	5.0%
Sporting Goods	12.9%	Auto Parts/Auto Related	-3.3%	Tobacco	3.5%
Accessories	12.6%	Broadlines	-3.9%	Off-Price Stores	0.8%
Home Improvement	8.4%	Fast Food	-4.2%	FSR/Casual Dining	-1.4%
Specialty Retail/Other	7.8%	HPC	-4.7%	Grocery	-2.2%
Food	6.0%	C-Stores	-6.4%	Fast Food	-3.2%
Beverage	**5.5%**	FSR/Casual Dining	-9.0%	Broadlines	-6.3%
S&P 500	3.5%	Discounters	-9.9%	Specialty Retail/Other	-8.3%
Fast Food	0.9%	Athletic and Outdoor	-13.5%	Fast Casual	-11.9%
Broadlines	-1.2%	Specialty Retail/Other	-15.8%	HPC	-11.9%
Off-Price Stores	-1.7%	Grocery	-17.8%	Discounters	-12.0%
Tobacco	-4.5%	Apparel	-17.8%	Accessories	-15.7%
Discounters	-5.3%	**S&P 500**	**-20.1%**	**S&P 500**	**-17.4%**
HPC	-7.3%	Accessories	-25.2%	Home Improvement	-20.4%
Athletic and Outdoor	-16.0%	Home Improvement	-26.5%	Apparel	-26.6%
Home Furnishings	-19.0%	Fast Casual	-29.9%	Athletic and Outdoor	-28.1%
Apparel	-23.6%	Home Furnishings	-35.9%	Home Furnishings	-42.0%
Consumer, Weighted-Avg.	**1.9%**		**-5.6%**		**-4.4%**

Exhibit 56: Consensus Revenues have largely come in for the most discretionary categories, while increasing for defensives
YTD Median Consensus Revenue Revisions for 2022 and 2023 by sub-sector

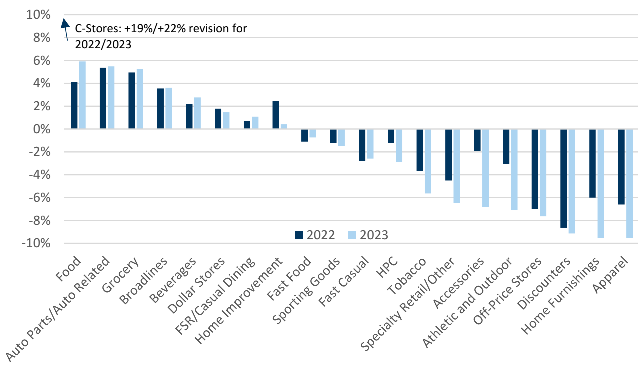
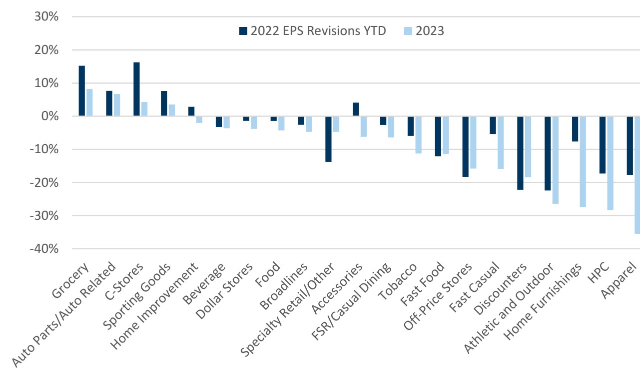


Exhibit 57: The magnitude of EPS revisions has been greater, particularly for retail on the downside given mark-downs, rising COGS, and deleverage on downward revenue revisions
YTD Median Consensus EPS Revisions for 2022 and 2023 by sub-sector



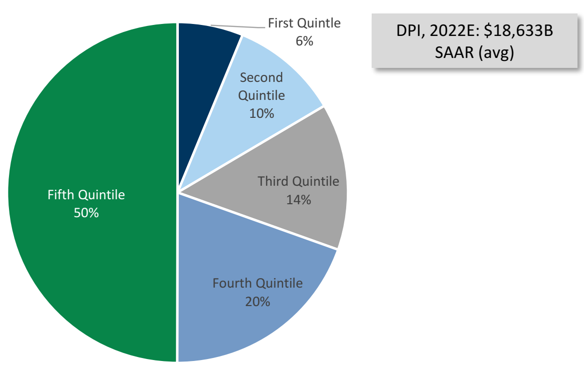
Source: FactSet, Data compiled by Goldman Sachs Global Investment Research

Appendix

Discretionary Cash Flow - A Deeper Dive into the Quintiles

Breaking down our DCF by Quintile: As an aside and for some perspective, our analysis breaks down the US population into quintiles. The exhibit below illustrates the dispersion of disposable personal income by quintile, with the first (and lowest quintile) only accounting for ~6% disposable personal income, the second quintile accounting for ~10% of disposable personal income, the third quintile accounting for ~14% of disposable personal income, and the fourth quintile accounting for ~20% of disposable personal income. Not surprisingly, the fifth (and highest) income quintile accounts for ~50% of total U.S. disposable personal income, and therefore will be more immune to inflationary pressures for essential items such as gas, utilities, and food at home. But while only 16% of discretionary personal income is generated by the bottom two quintiles, those two account for nearly a third of the overall population.

Exhibit 58: Breakdown of DPI by Income Quintile, 2022E ($B, SAAR avg) - Not surprisingly, the highest income quintile accounts half of overall DPI



Analysis breaks down the U.S. into quintiles - with the cutoffs based on population (i.e. equal population in each quintile). The first quintile represents the lowest income quintile and the fifth quintile reflects the highest income quintile.

Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Exhibit 59:

U.S. Households at a Glance, 2021	Bottom	Second	Third	Fourth	Top
Income & Spending:					
Average annual income before taxes	**$13,165**	**$34,767**	**$61,214**	**$100,527**	**$226,386**
% of total US income	**3%**	**8%**	**14%**	**23%**	**52%**
Number of Earners/HH	0.4	0.8	1.3	1.7	2.1
Average disposable income after transfers/taxes	**$29,341**	**$35,729**	**$39,331**	**$48,525**	**$105,258**
Average tax rate, % of DPI	3.9%	11.1%	17.2%	22.8%	29.3%
Average consumer spending per HH	**$30,869**	**$43,918**	**$55,914**	**$75,284**	**$128,213**
As % of HH's DPI	105%	123%	142%	155%	122%
% of total US consumer spending	9%	13%	17%	23%	38%
Assets & Wealth:					
Percent Homeowner	45%	57%	62%	74%	86%
If Homeowner, % with a Mortgage	**31%**	**39%**	**58%**	**69%**	**76%**
Estimated Market Value of Owned Home	$117,305	$157,089	$196,309	$274,645	$520,770
At Least One Vehicle Owned or Leased	71%	89%	94%	96%	96%
Number of Vehicles	1.0	1.5	1.9	2.3	2.7
Demographics:					
# of people (mm)	45	56	67	75	86
% of population	**14%**	**17%**	**20%**	**23%**	**26%**
Average age	58	55	50	48	49
Number of Children Under 18 per HH	0.3	0.4	0.6	0.7	0.8
Adults 65 and Older per HH	0.5	0.6	0.4	0.3	0.2
Percent Elementary (1-8)	6%	3%	2%	1%	1%
Percent High School (9-12)	45%	37%	29%	21%	9%
Percent College	48%	59%	69%	77%	90%
Percent Never Attended School and Other	1%	0%	0%	0%	0%

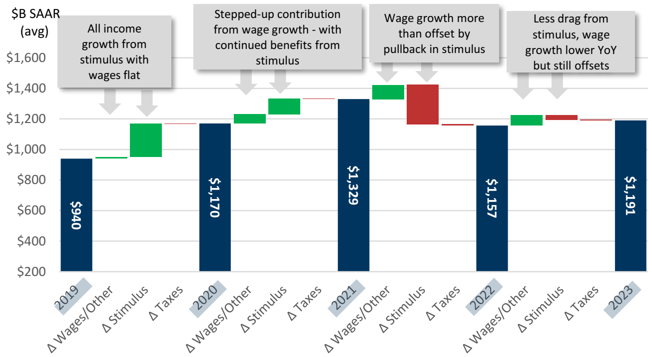
Source: US Bureau of Economic Analysis (BEA), US Bureau of Labor Statistics

Our detailed quintile-by-quintile disposable personal income & discretionary analysis of the U.S. consumer

Breaking down the lowest income quintile: We expect positive (albeit slower vs. the other quintiles) DPI growth for this group, with government transfers no longer providing a headwind in 2023. As inflation normalizes, muted essential spending growth should drive positive DCF growth for this group.

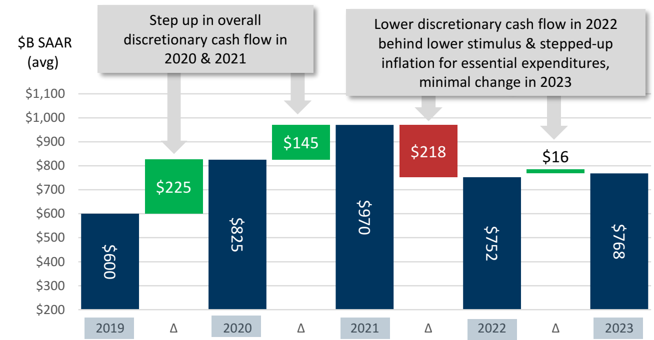
After benefiting from unprecedented stimulus in 2020 and 2021, this group saw a step-down in both disposable personal income and discretionary cash flow in 2022. We had been particularly concerned about this cohort amidst inflationary pressures affecting essential spending (energy, food at home, and health care) which at 28% of DPI in 2022 is double the proportion of income (14%) the other four cohorts spend on essential spending. The bottom quintile is expected to see the slowest DPI growth in 2023 and average reduction in essential spending; we expect this cohort to see discretionary cash flow up 2.1% year-over-year in 2023. Our discretionary cash flow estimates are pre-savings; while we do not have granular data on the savings rate by quintile, commentary from financial companies regarding revolving credit balance increases and higher subprime auto loan delinquency rates (though still below pre-pandemic levels) could create a limited cushion for the low income consumer to spend above this 2.1% estimate in 2023, now that the cushion of excess savings is behind us.

Exhibit 60: First income quintile disposable personal income ($B, SAAR) for 2019-2023



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

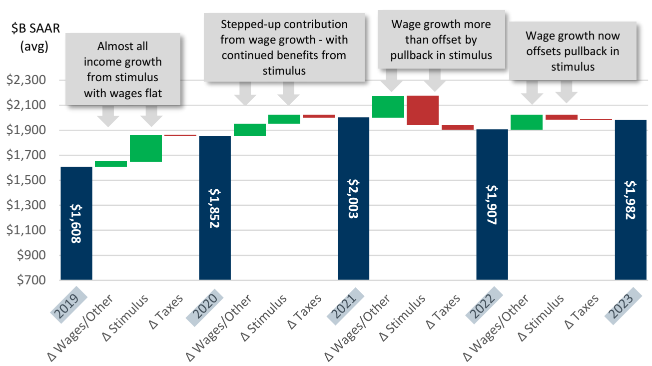
Exhibit 61: First income quintile discretionary cash flow (pre-savings, $B, SAAR) for 2019-2023



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

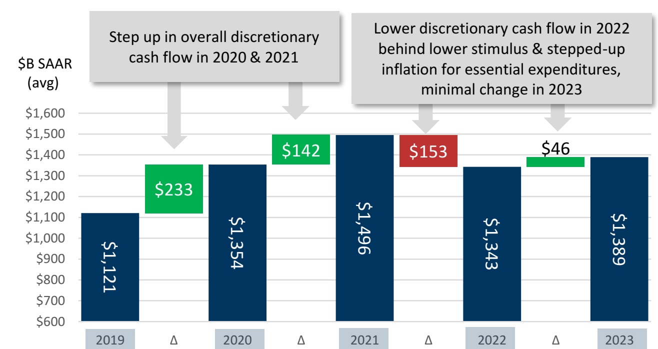
Breaking down the <u>second income quintile:</u> We expect this group to see faster DCF growth (+3.5%) than the bottom quintile, mostly owing to faster DPI growth (+4.0%). Like the bottom quintile, this cohort had significantly benefited from pandemic-related stimulus and spends a high proportion of their income on essential spending (22%) relative to the average (14%), so rising inflation and lapping stimulus drove DPI to decline -4.7% and discretionary cash flow down -10% in 2022.

Exhibit 62: Second income quintile disposable personal income ($B, SAAR) for 2019-2023



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

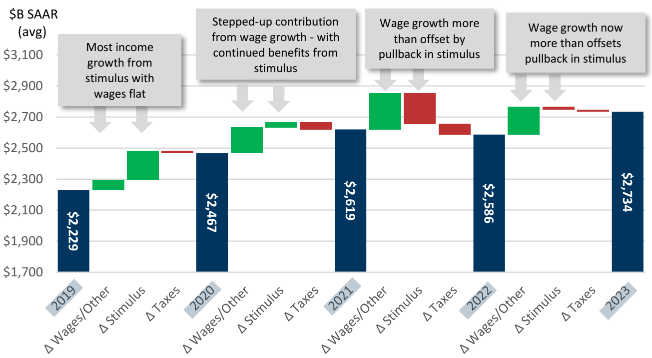
Exhibit 63: Second income quintile discretionary cash flow (pre-savings, $B, SAAR) for 2019-2023



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

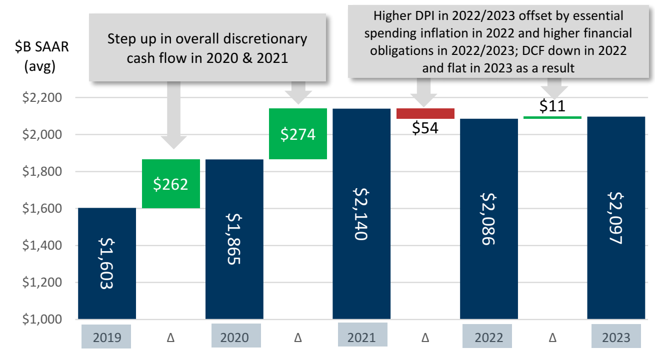
Breaking down the <u>middle income quintile:</u> We expect the middle income consumer to see the lowest discretionary cash flow growth (+0.5%) relative to the other quintiles (3.7%). While they should see higher wage growth powering DPI growth above the second quintile (+5.7%), financial obligations are rising and make up a larger proportion of DPI for this group, while essential spending makes up a smaller proportion of spending so slowing inflation should have a less marked impact on their discretionary cash flow. Furthermore, as mortgage equity withdrawals are expected to decline year-over-year, this adds a headwind for this group relative to the first two quintiles which did not benefit as much for cashing out on higher home values. Income taxes are also expected to increase the most for this group in 2023.

Exhibit 64: Third income quintile disposable personal income ($B, SAAR) for 2019-2023



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

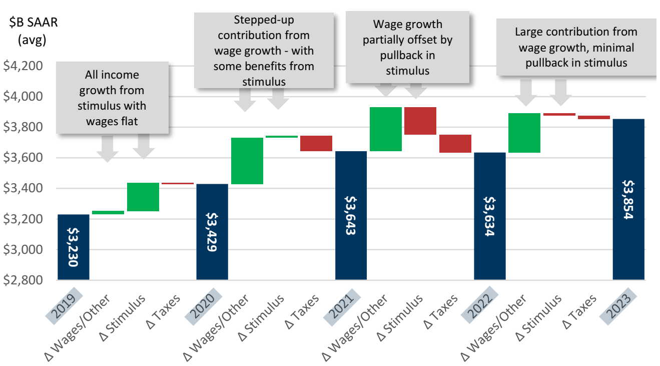
Exhibit 65: Third income quintile discretionary cash flow (pre-savings, $B, SAAR) for 2019-2023



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

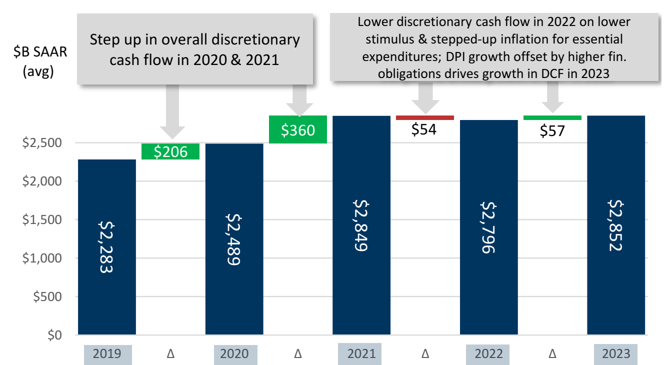
Breaking down the fourth income quintile: We expect discretionary cash flow for this group to be up +2.0% in 2023, as DPI growth of 6.1% combined is offset by weaker mortgage equity withdrawals (the second-biggest drop by quintile) and a rise in financial obligations, which are the highest as a percentage of DPI for this group.

Exhibit 66: Fourth income quintile disposable personal income ($B, SAAR) for 2019-2023



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Exhibit 67: Forth income quintile discretionary cash flow (pre-savings, $B, SAAR) for 2019-2023

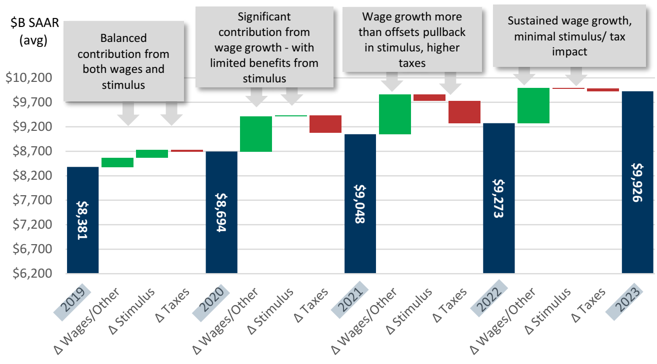


Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Breaking down the highest income quintile: We expect this group to see the highest DPI growth (+7.1%) and the highest discretionary cash flow growth (+5.3%) in 2023. While their wages are expected to increase +4.2%, their dividend, rental, and proprietors income are expected to grow 5-6%, while interest income is expected to grow at a whopping +16.4% in 2023, a $200bn tailwind. Financial obligations as a percentage of income peak for the fourth quintile, and fall to 15.1% for the highest income quintile, while mortgage equity withdrawals peak as a percentage of income for the third quintile. This group is therefore expected to see the benefits of higher rates (interest income, companies pivoting from growth investments to capital return) and fewer of the drawbacks (lower mortgage equity withdrawals, more expensive financial obligations). Finally, this group has the highest effective tax rate as a percentage of DPI of all the quintiles, and will see the lowest year-over-year increase.

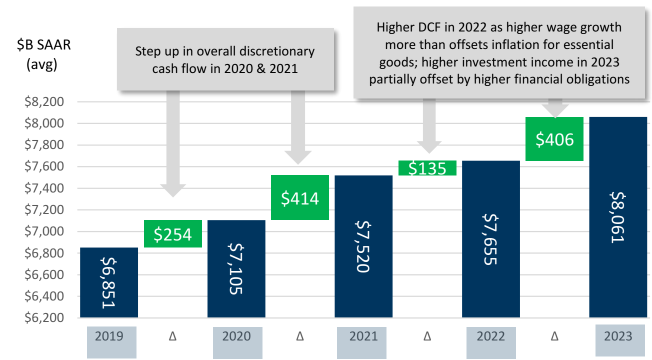
Exhibit 68: Fifth income quintile disposable personal income ($B, SAAR) for 2019-2023

Fundamentals for high income consumers in 2023 look attractive as wage growth is no longer offset by the pullback in stimulus/higher taxes



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Exhibit 69: Fifth income quintile discretionary cash flow (pre-savings, $B, SAAR) for 2019-2023



Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

A note on mortgage equity withdrawal methodology: We are now using the MEW2 data-set from Haver, which captures mortgages on single family homes, excluding home purchases. We prefer this series to MEW1, which effectively tracks the same thing but excludes borrowing associated with renovations, because that spending is part of PCE and flows to our home improvement coverage. We previously used a correlation to estimate MEW7, which was published by the Fed until 2008 and has since been discontinued, to estimate "active" withdrawals but are now using the more broad MEW2, which can be actualized. The historical data have been re-stated, resulting in a ~30-40bps swing factor to historical discretionary cash flow.

Wallet share - Appendix

Exhibit 70: Full breakdown of nominal PCE by category

Category of PCE	Pre-pandemic, % of nominal PCE	Pre-pandemic, avg share of nominal PCE gained/yr (bps)	2021 wallet share vs. historical trendline	2021 wallet share gap, % of pre-pandemic share	Mean reverted in 2022?	Extent of mean reversion, % of gap
Housing	15.5%	3	(39.6)	-3%	NO	-
Hospital and nursing home services	8.7%	9	(62.5)	-7%	NO	-
Outpatient services	7.4%	5	(51.6)	-7%	NO	-
Food and nonalcoholic bevs at home	6.5%	(3)	38.3	6%	YES	56%
Food services	5.4%	4	(14.0)	-2%	YES	>100
Financial services	4.9%	4	15.2	3%	YES	>100
Pharmaceutical and other medical products	3.3%	6	(22.3)	-6%	NO	-
Motor vehicle fuels, lubricants, and fluids	2.9%	(3)	4.2	2%	NO	>100
Insurance	2.9%	(1)	(12.7)	-4%	NO	-
Household utilities	2.7%	(2)	(3.5)	-1%	YES	>100
Garments	2.5%	(5)	19.6	9%	YES	32%
Education services	2.1%	1	(22.5)	-11%	NO	-
Communication	1.9%	(2)	(0.7)	0%	NO	-
New motor vehicles	2.2%	(7)	36.8	19%	YES	76%
Motor vehicle services	2.1%	(1)	(22.7)	-11%	YES	30%
AV, photo, and IP equipment/media	1.8%	(1)	52.3	30%	YES	12%
Professional and other services	1.5%	(2)	4.1	3%	YES	-
Furniture and furnishings	1.5%	(2)	48.2	30%	YES	10%
Membership clubs, sports centers, parks, theaters, and museums	1.4%	1	(64.5)	-42%	YES	34%
Social services and religious activities	1.4%	1	(5.7)	-4%	NO	-
Recreational items	1.3%	(0)	26.2	21%	YES	4%
Personal care and clothing services	1.2%	0	(34.4)	-28%	YES	35%
Alcoholic beverages purchased for off-premises consumption	1.0%	(0)	10.2	10%	YES	63%
Personal care products	1.0%	(0)	7.9	8%	YES	33%
Household supplies	1.1%	(1)	15.3	15%	YES	23%
Gambling	1.1%	(1)	(0.5)	0%	NO	-
Net purchases of used motor vehicles	1.1%	(2)	49.5	46%	YES	15%
Accommodations	1.0%	2	(33.2)	-30%	YES	89%
AV, photographic, and information processing equipment services	1.0%	0	(3.2)	-3%	NO	-
Tobacco	0.8%	(1)	0.7	1%	YES	-
Public transportation	1.1%	1	(43.9)	-34%	YES	>100
Magazines, newspapers, and stationery	0.5%	(1)	17.9	33%	NO	-
Jewelry and watches	0.6%	(1)	17.0	33%	YES	21%
Other clothing materials and footwear	0.7%	(0)	5.4	9%	YES	56%
Household maintenance	0.6%	(0)	(3.7)	-6%	NO	-
Therapeutic appliances and equipment	0.5%	0	4.0	8%	NO	-
Motor vehicle parts and accessories	0.6%	(0)	6.0	11%	NO	-
Sporting equipment, supplies, guns, and ammunition	0.5%	(0)	23.2	44%	YES	6%
Glassware, tableware, and household utensils	0.4%	(2)	7.4	25%	YES	20%
Other recreational services	0.4%	1	(7.6)	-15%	YES	>100
Sports and recreational vehicles	0.4%	(1)	17.6	40%	YES	6%
Household appliances	0.4%	(1)	8.4	21%	YES	22%
Luggage and similar personal items	0.2%	0	2.2	10%	NO	-
Recreational books	0.2%	(1)	4.3	32%	YES	7%
Fuel oil and other fuels	0.2%	(1)	0.4	3%	NO	>100
Tools and equipment for house and garden	0.2%	(0)	4.6	21%	YES	15%
Telephone and facsimile equipment	0.2%	1	(3.1)	-15%	NO	-
Educational books	0.1%	(0)	1.6	23%	YES	7%
Net expenditures abroad by U.S. residents	0.1%	0	(1.1)	-14%	NO	-
Musical instruments	0.0%	(0)	1.1	25%	YES	30%
Food produced and consumed on farms	0.0%	(0)	0.1	18%	YES	70%
Net foreign travel	-0.2%	(1)	22.6	-196%	NO	-

Source: US Bureau of Economic Analysis (BEA), Goldman Sachs Global Investment Research

Anatomy of Performance - Factor Performance and Positioning

A deeper dive into 2022 results:

1. Consumer Staples bounced back after years of underperformance and substantially outperformed discretionary, but hedge funds and mutual funds remain underweight both. The XLP index of Consumer Staples stocks outperformed the S&P500 by 16pp YTD, while the XLY index of Consumer Discretionary stocks underperformed 15pp. This was the first time staples outperformed discretionary since 2015, and the 31pp gap in performance is the **widest since 2000**. Consumer discretionary exposure is at near-historical lows as of 3Q: both hedge funds and mutual funds are underweight, with exposure at the 5th and 3rd percentiles vs. history, respectively. Mutual Funds and hedge funds are also underweight Staples, but not as much by historical standards; HFs increased exposure to the 89th percentile vs. history, while MF exposure is about average (56th percentile).

2. The macro/rates trade predominated: Factor & sector tilts largely drove the stocks, setting up opportunity for single-stock alpha in 2023 if there is more dispersion. Across the broader market, stock correlations are unusually elevated while return dispersion has been about average. Within our consumer coverage, dispersion declined both *across* and *within* sectors: the standard deviation in sectors' performance declined 9% from 2021 to 2022, while average dispersion within each sub-sector was

48pp vs. 70pp in 2021. 14/21 sub-sectors saw less dispersion this year and those that did generally skewed towards consumer discretionary. The Value and Volatility factors performed the best, while Growth underperformed the most. Integrated, Financial Returns, Estimate Revisions, and Balance Sheet quality did not see as much dispersion. Taken altogether, this suggests Consumer stocks' performance in 2022 has been largely rates-driven with an element of sector positioning.

- In this context, Mutual fund out-performance in 2022 has generally come from elevated cash allocations and sector tilts. Of the 25 stocks in the Russell 1000 that have generated the most *positive* alpha YTD, just one is a Consumer stock (TJX); nearly all the rest were internet/media/semiconductor companies where mutual funds were underweight, or energy/financials companies where mutual funds were overweight. Single stock picking mattered more on the negative side of the return spectrum: Of the top 25 stocks that generated the most *negative* alpha YTD, there were four Consumer stocks (MCD/WMT/KO/PEP). The first three were instances where mutual funds started the year underweight bellwether names which saw roughly average estimate revisions compared to our Consumer coverage, but a dramatic re-rating higher on a relative PE basis. For PEP the out-performance was more balanced across positive EPS revisions and about slightly above average multiple expansion vs. our Consumer coverage.
- On the hedge fund side, despite the sharp reduction in net length, single stock short interest remains close to record lows as funds employed macro tools like ETFs to hedge their longs. If return dispersion were to increase next year (vs. average this year) and the unusually high S&P500 stock correlation were to move lower, this could set up a better environment for single stock picking into 2023.

3. Our Portfolio Strategy Team's updated screens show which single-stocks HFs and MFs are in and out of favor, and where sentiment has changed the most. These screens offer opportunity to "follow the money" or to express contrarian views.

- **On the hedge fund side,** portfolio turnover declined to a record low in 3Q22 (especially for consumer discretionary) as investors stuck to their calls, and the average hedge fund holds 71% of its long portfolio in its top 10 positions, the highest concentration on record outside of 4Q 2018. This makes positioning ever-relevant. The Hedge Fund VIP basket (ticker: GSTHHVIP) of the **most popular long positions includes just one consumer name (RH)**, alongside a few consumer-facing internet companies (AMZN, UBER, NFLX, ATVI, BKNG, GDDY, BABA). Among the 20 S&P500 stocks with the **most concentrated HF ownership** (as a percentage of market cap), there are five Consumer stocks: BBWI, DPZ, CZR, NWL, and LW. BBWI is the S&P500 stock with the highest percentage of HF ownership at 28% (vs. 3% on average). Of the 20 S&P500 stocks with the **least hedge fund concentration**, there are two consumer stocks: WMT and MCD. The Very Important Short Position basket (ticker: GSTHVISP), which includes the 50 stocks with the **largest short interest** ($bn), counts 10 Consumer stocks: COST, HD, LOW, KO, PEP, PG, MCD, TGT, NKE, and CMG. Of the 50 stocks with the largest short interest as a percent of market cap, 16 are Consumer stocks: BYND, SG, W, DKS, CHWY, SKIN, FIGS, WWE, CWH, BROS, BGS, GME, SAH, LYFT, AMC, and

CNK. Notably, concentrated longs outperformed concentrated shorts in most sectors, including consumer discretionary, but this was not the case for staples.

- **On the mutual fund side, our Mutual Fund Overweight Positions** basket (ticker: GSTHMFOW) contains 50 Russell 1000 stocks where the average large-cap core, growth, and value mutual fund is most overweight relative to a blended benchmark. It includes six Consumer stocks: TJX, LULU, CMG, STZ, GM, and SYY; CMG is the only new addition to this list. Conversely, our **Mutual Fund Underweight Positions basket** (ticker: GSTHMFUW) includes six Discretionary names (TSLA, AMZN, HD, MCD, SBUX, F) and five Staples names (KO, PEP, WMT, COST, PM, MO).
- **Changes in popularity with HF investors can be strong signals for future stock performance.** During the last 20 years, stocks with the largest increase in the number of HF investors have typically gone on to outperform sector peers during the quarters following their rise in popularity. "Falling Star" stocks with the largest decline in number of owners have subsequently underperformed peers by a similar magnitude. **Rising stars** in 3Q included LULU, DPZ, and SYY, while DRI screened as a **falling star**. Popular longs outperformed concentrated shorts in most sectors, including Consumer Discretionary, but Staples was an exception, creating an interesting setup for mean reversion. **On the mutual fund side, of the 20 stocks where investors added the most exposure in 3Q**, two were a consumer stocks (TJX and BJ) while the 20 stocks with the largest *decreases* in exposure included CL and KMB.

Disclosure Appendix

Reg AC

We, Jason English, Kate McShane, CFA, Bonnie Herzog, Jared Garber, Brooke Roach, CFA, Leah Jordan, CFA and Noah Naparst, hereby certify that all of the views expressed in this report accurately reflect our personal views about the subject company or companies and its or their securities. We also certify that no part of our compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

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Growth is based on a stock's forward-looking sales growth, EBITDA growth and EPS growth (for financial stocks, only EPS and sales growth), with a higher percentile indicating a higher growth company. **Financial Returns** is based on a stock's forward-looking ROE, ROCE and CROCI (for financial stocks, only ROE), with a higher percentile indicating a company with higher financial returns. **Multiple** is based on a stock's forward-looking P/E, P/B, price/dividend (P/D), EV/EBITDA, EV/FCF and EV/Debt Adjusted Cash Flow (DACF) (for financial stocks, only P/E, P/B and P/D), with a higher percentile indicating a stock trading at a higher multiple. The **Integrated** percentile is calculated as the average of the Growth percentile, Financial Returns percentile and (100% - Multiple percentile).

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