

## Mutual Fundamentals

# Diversification dilemma: Caught between a benchmark and a hard place

*Mutual Fundamentals analyzes the quarter-end positioning of 506 mutual funds with a combined \$2.6 trillion in equity assets.*

**PERFORMANCE: Mutual funds have struggled relative to benchmarks so far this year.** The average fund is trailing its benchmark by 217 bp YTD. 33% of funds are outperforming their benchmarks YTD (vs. the long-term average of 38%). The underweight positions of core and growth funds in the largest tech stocks have been a significant headwind to returns amid this year's narrow market rally.

**MACRO POSITIONING: Fund managers are positioned for an environment of strong economic growth.** Mutual fund PMs rotated toward pro-cyclical pockets of the market in 1Q. At a factor level, they added to Value relative to Growth. They also added to stocks with low quality attributes that tend to outperform in strong economic growth environments, like those with weak balance sheets, low returns on capital, and small market caps. Funds added to Industrials and Energy stocks. Financials remains their largest overweight while Tech is their largest underweight.

**DIVERSIFICATION: The extreme concentration of the Russell 1000 Growth Index is a significant challenge for actively-managed growth funds given SEC diversification requirements.** AAPL and MSFT together account for 24% of the benchmark. The average large-cap growth mutual fund is 15 pp underweight AAPL, MSFT, GOOGL, AMZN, NVDA, TSLA, and META (27% allocation vs. 42% Russell 1000 Growth weight), which has driven significant underperformance during this year's mega-cap led rally. 74% of growth funds are classified as "diversified" under the Investment Company Act of 1940, but 30% of these funds currently fail to meet these requirements. So far this year, these non-diversified "diversified" growth funds have markedly outperformed their peers who are in compliance with the SEC concentration thresholds.

**BASKETS: We rebalance our Mutual Fund Overweight Positions basket (GSTHMFOW) and our Mutual Fund Underweight Positions basket (GSTHMFUW).** Largest overweights: MA, V, CMCSA, WFC, UBER. Largest underweights: AAPL, MSFT, TSLA, BRK.B, PG. See [Exhibit 24](#) and [Exhibit 25](#).

**SINGLE STOCK ROTATIONS: Funds cut exposure to mega-cap tech and added to BRK.B.** Largest increases in exposure: BRK.B, JNJ, CMCSA, PFE, CVX. Largest decreases in exposure: AAPL, TSLA, NVDA, MSFT, NFLX. See [Exhibit 21](#), [Exhibit 22](#).

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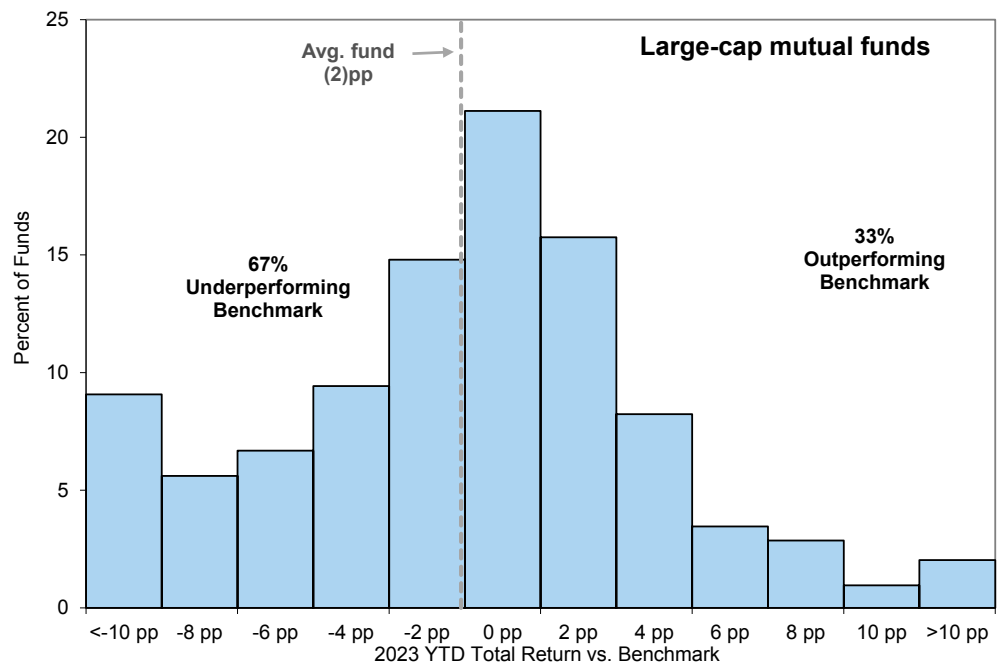
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# Performance analytics

**The sharp outperformance of the largest tech stocks—which mutual funds are consistently underweight—has dragged on mutual fund performance this year.**

Only 33% of large-cap mutual funds are beating their respective benchmarks this year as compared with the long-term average of 38% (Exhibit 2). The average large-cap mutual fund is trailing its benchmark by 217 bp. Value managers have performed best (45% outperforming Russell 1000 Value, trailing by an average of 0.5 pp), though they are on pace for their worst year of relative performance since 2019. The outperformance of mega-cap tech has been a significant headwind to core and growth mutual funds, a similar dynamic to what drove significant underperformance in 2021.

**Exhibit 1: The average large-cap mutual fund is lagging its benchmark by 2 pp YTD**  
as of May 22, 2023



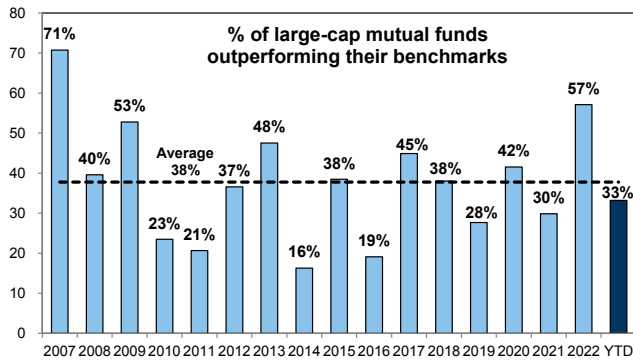
Source: FactSet, Goldman Sachs Global Investment Research

**The portfolio of the average large-cap mutual fund, which we use to estimate the efficacy of the average fund manager’s stock selection, has lagged the Russell 1000 by 135 bp YTD—though this has been entirely driven by mega-cap tech.**

Following an exceptional 4Q22 for the average mutual fund portfolio (+160 bp vs. the Russell 1000), mutual fund stock picks have struggled so far in 2023 (Exhibit 2).

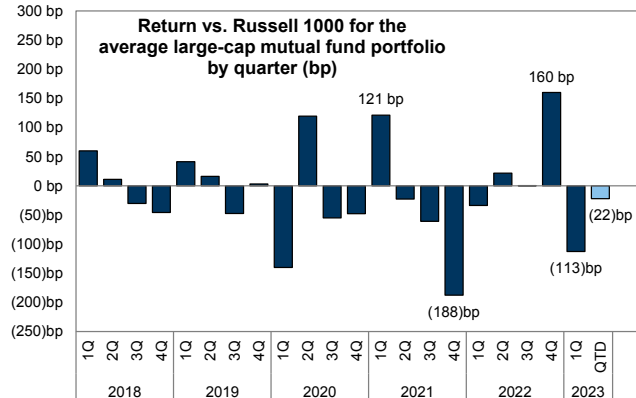
However, mega-cap tech (AAPL, MSFT, GOOGL, AMZN, TSLA, NVDA, META) has contributed -189 bp to the average portfolio YTD while the remaining stocks have generated net alpha of +55 bp. See *Single stock positioning* for further discussion.

**Exhibit 2: 33% of large-cap mutual funds are outperforming their benchmarks YTD as of May 22, 2023**



Source: FactSet, Goldman Sachs Global Investment Research

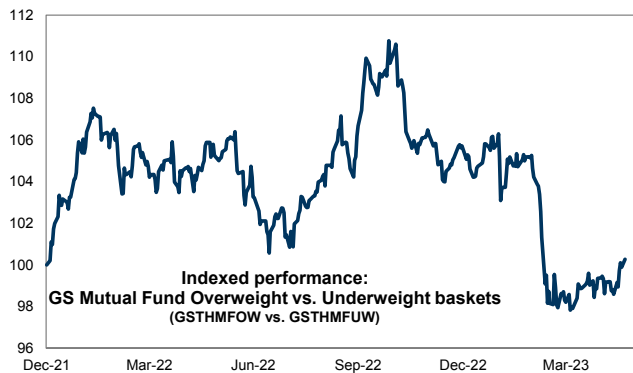
**Exhibit 3: Return of the average large-cap mutual fund portfolio vs. the Russell 1000 as of May 22, 2023**



Source: Goldman Sachs Global Investment Research

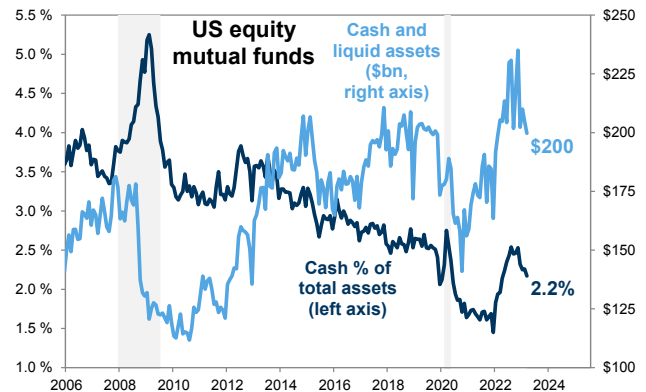
**The most overweight mutual fund positions lagged the most underweight by 7 pp in March, the worst month of relative performance since March 2020 (-2% vs. +5%).** The Mutual Fund Overweight basket (GSTMFOV) also underperformed the S&P 500 by the most of any month since March 2020. Financials stocks, which make up one third of the Mutual Fund Overweight basket, were a 4 pp drag on the performance of the basket as stress in the banking sector became increasingly apparent. Meanwhile, the Mutual Fund Underweight basket (GSTMFUW) received a 3 pp boost from its positions in Tech, Communication Services, and Health Care, led by Intel, Meta, and Moderna, respectively. See [Exhibit 4](#).

**Exhibit 4: GSTMFOV significantly underperformed GSTMFUW in March as of May 22, 2023**



Source: Goldman Sachs Global Investment Research

**Exhibit 5: Mutual funds have cut their cash allocation so far this year as of May 22, 2023**



Source: ICI, Goldman Sachs Global Investment Research

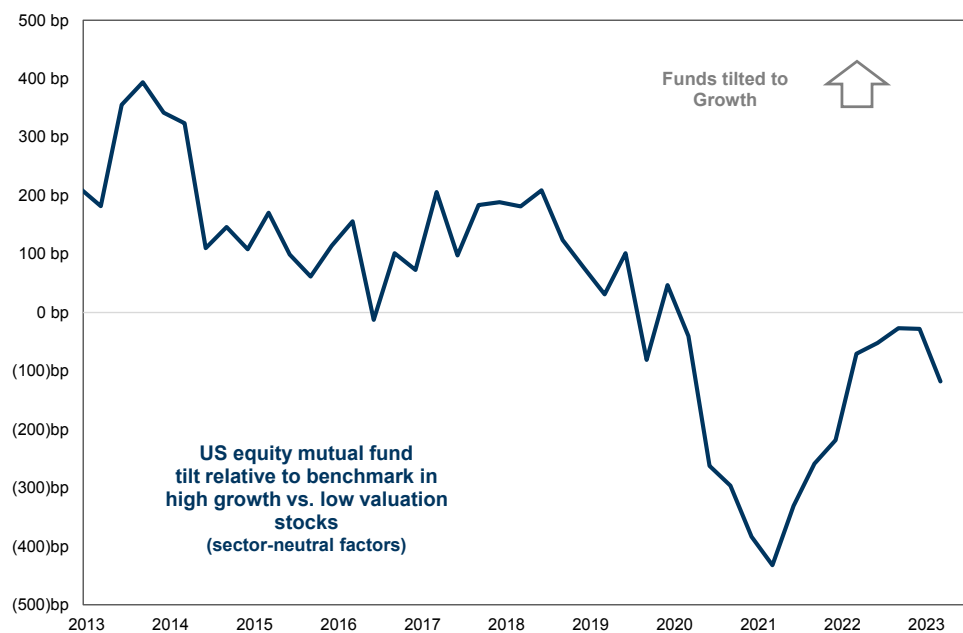
**A diminished drag from cash holdings has helped mutual fund performance in this year's rising market—though the narrow breadth of the market rally has limited the impact of this tailwind.** Mutual funds sharply increased cash holdings in 2022 from 1.5% to 2.5% of assets, which boosted performance in the face of a declining equity market. So far this year, funds have cut their cash allocation to 2.2%, which has helped mutual fund performance ([Exhibit 5](#)). However, the median S&P 500 stock has returned

just 1% YTD, meaning that reduced holdings have had a limited the effect on mutual fund returns—especially in the context of funds’ underweight exposure to the large tech stocks that have driven nearly all equity returns YTD.

## Macro positioning: Factors, sectors & themes

**Factor positioning shows that mutual fund managers are positioned for an environment of strong economic growth.** The median consensus recession probability is 66% according to the *Wall Street Journal's* forecaster survey. However, GS Economics assigns a 35% probability of recession and expects that US economic growth will decelerate but remain positive in coming quarters. Value stocks tend to perform best when economic growth is above trend or accelerating. In a reversal of the trend of the last 7 quarters, mutual funds rotated away from Growth stocks and toward Value in 1Q, reflecting PM's increased optimism around economic growth. Notably, funds are significantly less tilted toward Value than during much of the last few years. The average fund also rotated toward stocks with low quality attributes that tend to outperform when economic growth accelerates, such as those with weak balance sheets, low returns, and small market caps.

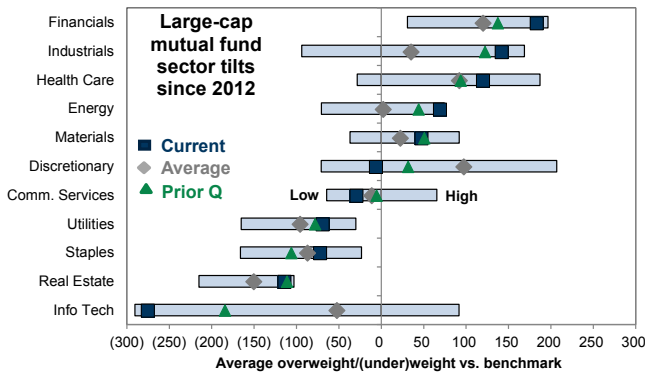
**Exhibit 6: Mutual funds rotated away from Growth stocks and toward Value stocks in 1Q23**  
as of March 31, 2023



Source: Goldman Sachs Global Investment Research

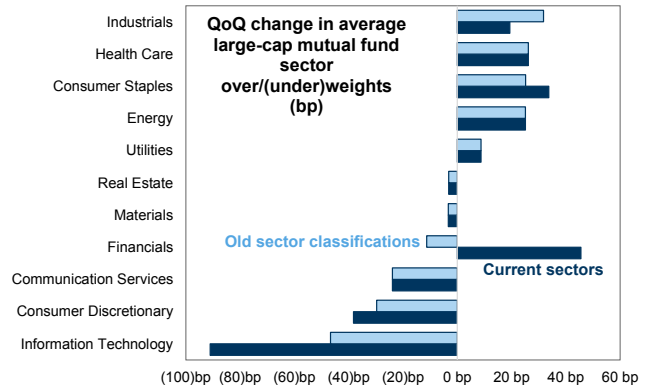
**At the sector level, funds still prefer cyclical sectors, though the March GICS sector reclassification exaggerates recent rotations.** Mutual funds now hold a near record overweight in Financials while holding a near record underweight in Info Tech. However, the recent reclassification of companies like V and MA—which are the two largest mutual fund overweights—from Info Tech to Financials widened the gap between these two sector allocations while not reflecting any stock-level positioning change from mutual funds. If we hold the previous sector composition constant, mutual funds added most to Industrials, Health Care, and Staples and cut Info Tech, Consumer Discretionary, and Communication Services most.

**Exhibit 7: Mutual fund sector allocations vs. history**  
as of March 31, 2023



Source: Goldman Sachs Global Investment Research

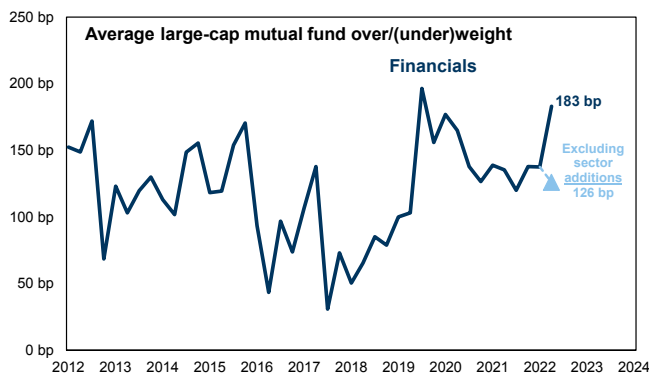
**Exhibit 8: QoQ change in large-cap mutual fund sector over/(under)weights**  
as of March 31, 2023



Source: Goldman Sachs Global Investment Research

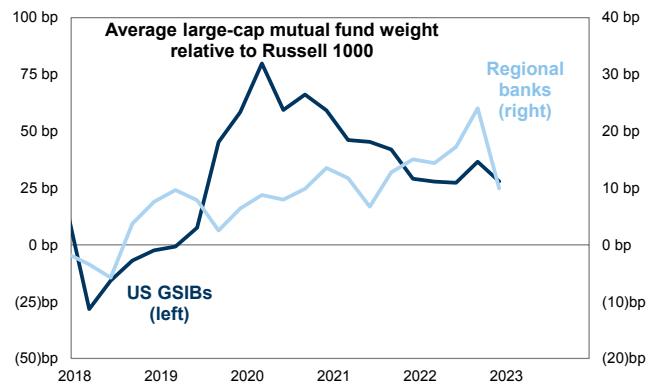
**After accounting for the new additions to the Financials sector, mutual funds rotated away from Financials and especially away from regional banks.** Excluding the new additions to the sector, mutual funds decreased their overweight to the Financials sector by 12 bp in Q1. Within the sector, mutual funds rotated away from bank stocks—though they most aggressively rotated away from regional bank stocks while cutting their exposure to Globally Systematically Important Banks (GSIBs) only modestly (Exhibit 10). Financial Services was the only industry group within Financials that mutual funds added to, led by an increase in exposure to BRK.B, which was the most added to stock for the average fund.

**Exhibit 9: Mutual funds cut exposure to Financials after accounting for the recent sector re-classification**  
as of March 31, 2023



Source: Goldman Sachs Global Investment Research

**Exhibit 10: Mutual fund positions in GSIBs vs. regional banks**  
as of March 31, 2023

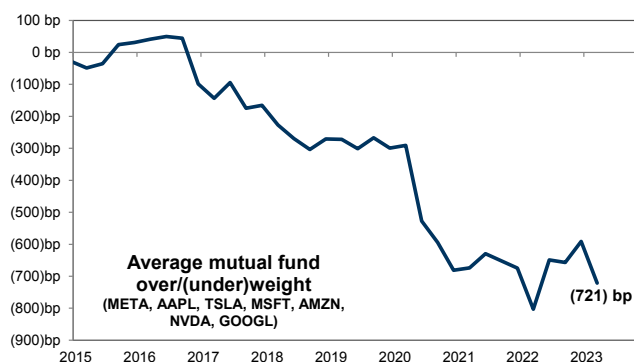


Source: Goldman Sachs Global Investment Research

## Single stock positioning: Mega-cap tech

**Mutual funds remain significantly underweight the largest tech stocks and reduced exposure to these names in 1Q.** The average mutual fund is 721 bp underweight the seven largest tech stocks (AAPL, MSFT, GOOGL, AMZN, META, TSLA, NVDA). Amid the sharp rally in mega-cap tech stocks YTD, the average mutual fund reduced its exposure to the group by 130 bp relative to its benchmark, which is the largest single quarter decline in exposure since 2Q 2020. Funds cut exposure most to AAPL (-44 bp) and TSLA (-37 bp) while maintaining essentially flat exposure to AMZN despite its 37% YTD rally. AAPL and TSLA remain the largest underweight positions for the average fund. META is the lone stock that growth funds are overweight ([Exhibit 12](#)).

**Exhibit 11: Mutual funds decreased their exposure to mega-cap tech relative to the benchmark**  
as of March 31, 2023



Source: Goldman Sachs Global Investment Research

**Exhibit 12: Mutual fund positions in mega-cap tech by style benchmark**  
as of March 31, 2023

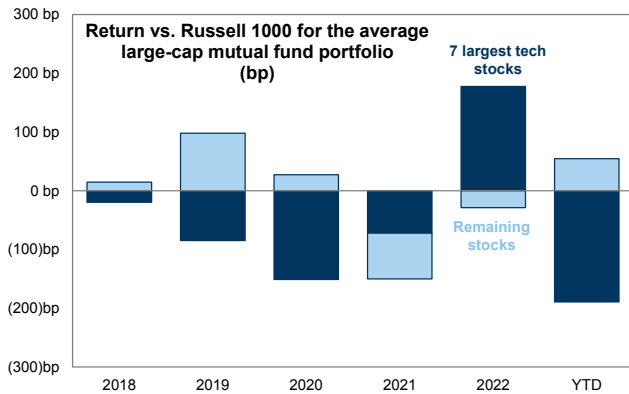
Ticker	Large-cap mutual fund average over/(under)weight				
	Core	Growth	Value	All	Change
AAPL	(366)bp	(721)bp	75 bp	(337)bp	(44)bp
MSFT	(130)	(427)	158	(133)	(14)
TSLA	(123)	(185)	0	(102)	(37)
AMZN	(104)	(65)	32	(46)	(2)
NVDA	(86)	(39)	12	(37)	(13)
GOOGL	(56)	(104)	53	(36)	(10)
META	(35)	70	(124)	(30)	(10)
<b>Aggregate</b>	<b>(898)bp</b>	<b>(1471)bp</b>	<b>205 bp</b>	<b>(721)bp</b>	<b>(130)bp</b>

Source: Goldman Sachs Global Investment Research

**The largest tech stocks have been the primary driver of mutual fund underperformance this year and for the last several years ([Exhibit 13](#)).** These seven largest tech stocks have also been the seven largest detractors to mutual fund alpha YTD, contributing -189 bp of excess returns to the average mutual fund portfolio ([Exhibit 20](#)). In contrast, all other positions contributed +55 bp of alpha YTD. Since 2018, the average fund has lagged its index by 252 bp. However, 339 bp of this underperformance is attributable to positions in the largest tech stocks alone.

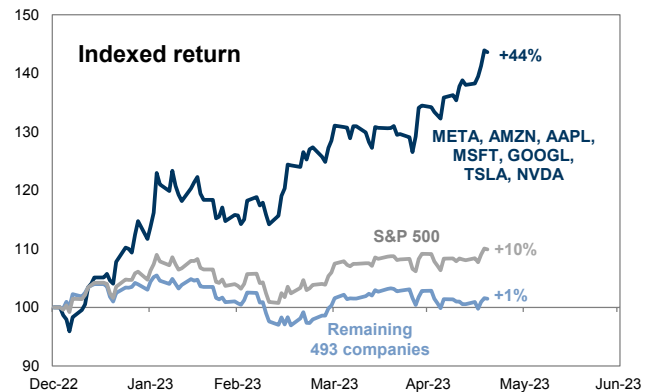


**Exhibit 13: 7 largest tech stocks have been the primary driver of mutual fund performance vs. benchmark in recent years**  
as of May 22, 2023



Source: Goldman Sachs Global Investment Research

**Exhibit 14: Mega-cap tech stocks have outperformed sharply YTD**  
as of May 22, 2023



Source: Goldman Sachs Global Investment Research

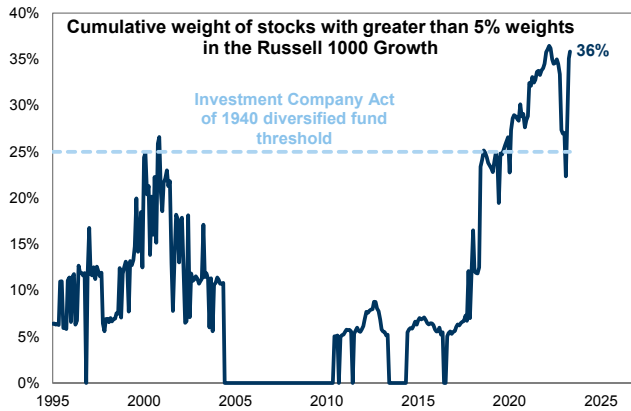
**The Investment Company Act of 1940 (ICA) set portfolio construction limitations**

**for mutual funds to be classified as “diversified.”** Under section 5(b) of the Act, a “diversified company” must hold at least 75% of its total assets 1) in securities, cash, or government securities that individually account for no more than 5% of the fund’s total assets and 2) in positions that are less than 10% of the issuer’s outstanding voting shares.

**High and increasing market concentration presents a significant challenge for “diversified” large-cap growth funds to match benchmark performance.**

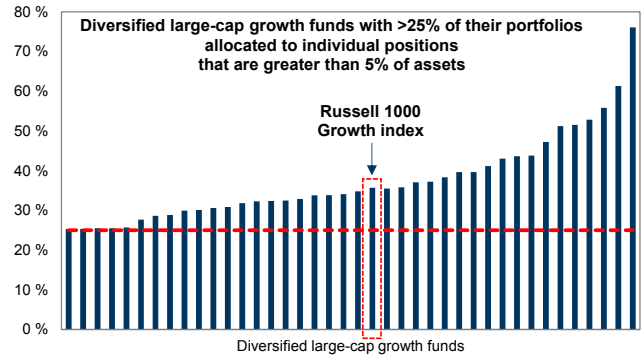
74% of large-cap growth funds in our universe are classified as “diversified” growth funds under the Investment Company Act. The Russell 1000 Growth is once again so concentrated that it does not meet the ICA diversification test ([Exhibit 15](#)). The 42% weight of the seven largest tech stocks in the Russell 1000 Growth drives the nearly 15 pp underweight in the group for the average large-cap growth fund. However, the average fund with a diversified portfolio is 20 pp underweight the group while the average non-diversified portfolio is just 8 pp underweight.

**Exhibit 15: The Russell 1000 Growth Index does not meet the ICA of 1940 diversified fund threshold**  
as of May 22, 2023



Source: Goldman Sachs Global Investment Research

**Exhibit 16: Diversified growth mutual funds in violation of the Investment Company Act of 1940 diversification requirements**  
as of March 31, 2023

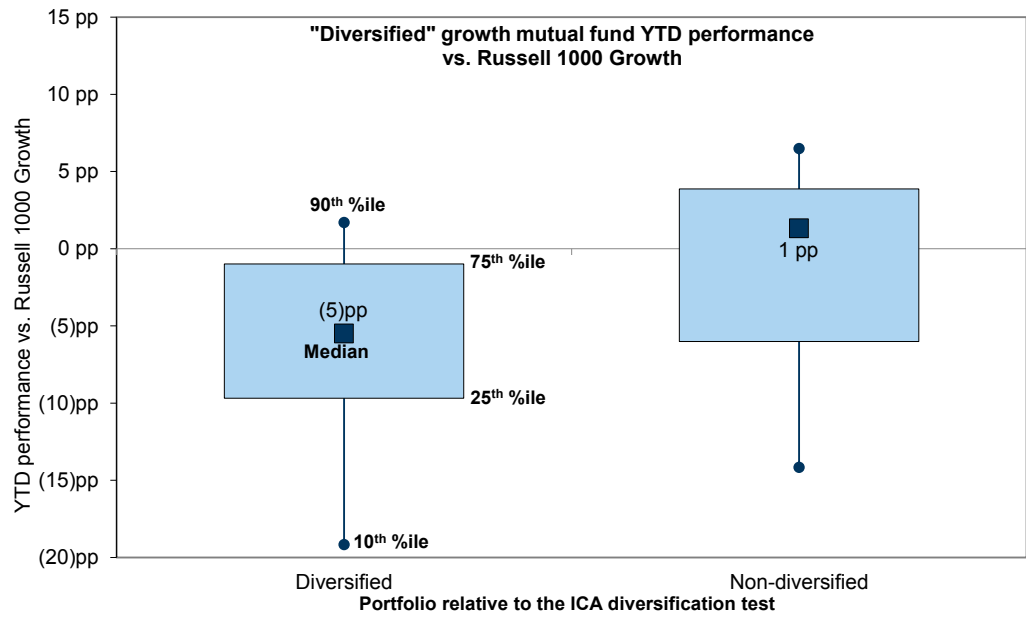


Source: Goldman Sachs Global Investment Research

**30% of large-cap growth funds that are classified as diversified under the Investment Company Act fail to meet the diversification test.** These funds hold more than 25% of their assets in positions worth 5% or more of their portfolio ([Exhibit 16](#)).

**The level of diversification of mutual fund portfolios has had an inverse relationship with performance YTD.** Growth funds that do not meet the ICA diversification test have markedly outperformed their peers that are in compliance. The median mutual fund that is classified as diversified but does not meet the diversification test has outperformed the Russell 1000 by 1 pp YTD as compared with -5 pp for the median mutual fund that is in compliance.

**Exhibit 17: YTD returns of "diversified" growth mutual funds relative to the Russell 1000 Growth based on whether the fund passes the '40 Act diversification test**  
 May 22, 2023



Source: Goldman Sachs Global Investment Research

**We identify 52 stocks that diversified large-cap growth funds hold at a 5% or greater portfolio weights.** These stocks would face selling pressure in the event that under-diversified growth funds moved into compliance with their ICA diversification requirements. If all funds were to sell down to 5% weights in these stocks, the group would need to absorb selling pressure worth nearly \$50 billion or 45% of the last 3-month average daily volume of the group. Notably, during the past two years, many funds have intermittently been in passive violation of these restrictions. Because there is some cost associated with a holding a greater than 5% weight, these stocks also represent the highest conviction ideas of growth funds.

**Exhibit 18: Stocks in diversified growth fund portfolios that individually comprise 5%+ of fund assets**

pricing as of May 22, 2023; weights and positions as of March 31, 2023

Ticker	Company	Market cap (\$ billions)	Russell 1000		Average growth mutual fund		Number of growth mutual funds w/ more than 5% weight	Diversified growth mutual fund holdings in positions >5% weight (\$ bn)	Potential selling if growth funds cut to 5% weight	
			Growth weight	Weight	Over/(under)weight	\$ bn			% of 3m ADV	
MSFT	Microsoft	\$2,388	11.1 %	6.8 %	(427)bp	74	\$54.7	\$18.1	196 %	
AAPL	Apple	2,740	12.7	5.5	(721)	47	27.4	14.1	140	
GOOGL	Alphabet	1,482	5.2	4.2	(104)	39	14.6	2.9	65	
AMZN	Amazon.com	1,180	4.7	4.1	(65)	36	16.9	2.6	36	
NVDA	NVIDIA	770	3.4	3.0	(39)	22	14.3	5.7	41	
V	Visa	374	1.9	2.0	16	9	2.3	0.3	19	
MA	Mastercard	362	1.6	1.9	36	8	0.6	0.1	6	
META	Meta Platforms	549	0.5	1.2	70	7	2.0	0.7	10	
UNH	UnitedHealth Group	447	2.1	1.7	(32)	5	1.4	0.2	13	
SHOP	Shopify	74	0.0	0.0	0	5	0.6	0.2	17	
SNOW	Snowflake	58	0.2	0.4	14	5	0.6	0.2	22	
TTD	Trade Desk	30	0.1	0.3	21	5	0.6	0.2	69	
NET	Cloudflare	16	0.1	0.3	17	4	0.6	0.2	56	
RBLX	Roblox	22	0.1	0.2	8	4	0.5	0.1	22	
RPRX	Royalty Pharma	15	0.0	0.0	0	4	0.5	0.0	77	
UBER	Uber Technologies	79	0.3	0.6	36	4	0.6	0.2	20	
TSLA	Tesla	599	2.8	0.9	(185)	3	0.2	0.0	0	
NOW	ServiceNow	104	0.5	1.0	47	2	0.1	0.0	1	
ASML.AS	ASML Holding	259	0.0	0.0	0	2	0.2	0.0	11	
LLY	Eli Lilly & Co	412	1.2	0.9	(28)	2	0.8	0.2	11	
BRK.B	Berkshire Hathaway	720	0.0	0.2	22	2	1.0	0.1	13	
JPM	JPMorgan Chase	403	0.0	0.3	30	2	0.0	0.0	0	
DASH	DoorDash	24	0.1	0.2	10	2	0.3	0.0	5	
AMGN	Amgen	120	0.6	0.2	(34)	1	0.0	0.0	1	
ACN	Accenture	193	0.9	0.5	(43)	1	0.0	0.0	1	
CDW	CDW	24	0.1	0.2	9	1	0.1	0.0	14	
QCOM	QUALCOMM	117	0.7	0.4	(33)	1	0.1	0.0	1	
SNPS	Synopsys	61	0.3	0.3	3	1	0.0	0.0	0	
VRTX	Vertex Pharmaceuticals	88	0.4	0.4	3	1	0.3	0.1	37	
AVGO	Broadcom	283	1.3	0.3	(98)	1	0.3	0.1	9	
TDG	TransDigm Group	44	0.1	0.3	18	1	0.5	0.0	10	
CSCO	Cisco Systems	200	0.0	0.2	18	1	0.0	0.0	1	
INTU	Intuit	127	0.6	1.0	41	1	0.0	0.0	1	
LOW	Lowe's Companies	121	0.5	0.4	(16)	1	0.0	0.0	0	
MRK	Merck & Co	291	0.6	0.1	(43)	1	0.0	0.0	0	
ADSK	Autodesk	44	0.2	0.3	11	1	0.2	0.0	4	
SPGI	S&P Global	119	0.0	0.5	53	1	0.0	0.0	1	
LRCX	Lam Research	79	0.4	0.2	(13)	1	0.1	0.0	1	
SCHW	Charles Schwab	92	0.2	0.3	8	1	0.0	0.0	0	
CTAS	Cintas	48	0.2	0.2	5	1	0.0	0.0	4	
ACGL	Arch Cap Grp	27	0.0	0.1	9	1	0.0	0.0	4	
TEL	TE Connectivity	39	0.0	0.1	13	1	0.3	0.1	29	
CMCSA	Comcast	172	0.0	0.1	10	1	0.2	0.0	3	
MELI	Mercadolibre	67	0.0	0.0	0	1	0.0	0.0	2	
BA	Boeing	124	0.2	0.3	10	1	0.6	0.1	8	
HUM	Humana	64	0.2	0.3	3	1	0.0	0.0	0	
ETN	Eaton	69	0.0	0.1	15	1	0.1	0.0	3	
AGL	agilon health	9	0.0	0.1	12	1	0.1	0.0	21	
KLAC	KLA	58	0.3	0.3	0	1	0.0	0.0	1	
COO	Cooper Companies	19	0.0	0.0	0	1	0.1	0.0	11	
HIG	Hartford Financial Services	22	0.0	0.0	0	1	0.0	0.0	0	
JAZZ	Jazz Pharmaceuticals	9	0.0	0.0	0	1	0.0	0.0	0	
<b>Total</b>		<b>\$15,839</b>	<b>56.5 %</b>	<b>43.3 %</b>	<b>(1314)bp</b>		<b>\$144.1</b>	<b>\$46.7</b>	<b>44 %</b>	

Source: Goldman Sachs Global Investment Research

**Independent of position weights, 50-100 single stock positions has typically been the sweet spot for mutual fund returns vs. benchmarks.** The median fund in our sample holds 63 stocks while the median fundamental hedge fund holds 31 positions. Funds with 50-100 positions tend to perform best relative to their benchmarks while funds with either fewer than 50 positions or more than 100 tend to lag.

**Aside from the largest tech stocks, mutual funds generated positive alpha in consumer-exposed stocks and negative alpha in Financials YTD.** Consumer exposed stocks such as SHOP, PG, HD, KO, and CMG all appeared among the stocks that mutual funds have generated the most alpha to YTD through a favorable mix of underweight and overweight positions. Meanwhile, overweight positions in Financials were a significant driver of negative alpha for the average portfolio, including SCHW, CI, FRC, USB, MET, and BAC.

**BRK.B, JNJ, CMCSA, PFE, and CVX were the most added-to stocks by the average fund.** Funds cut exposure to select Financials (SCHW, V) and Real Estate (e.g., CCI) companies. Outside of mega-cap tech, SCHW and IBM were the stocks that the average fund cut exposure to most.

**We rebalance our Mutual Fund Overweight Positions Basket (GSTHMFOW) and Mutual Fund Underweight Positions Basket (GSTHMFUW) below. See Exhibit 24 and Exhibit 25.**

**Exhibit 19: The 25 stocks that have generated the most POSITIVE alpha YTD**

positioning as of March 31, 2023; weights as of December 31, 2022; pricing as of May 22, 2023

The 25 stocks that have generated the most POSITIVE alpha YTD							
Ticker	Name	Starting R1K weight (%)	LC mutual funds		YTD return		YTD alpha contrib. (bp)
			OW/(UW) (bp)	Mar '23 QoQ chg	Absolute	vs. R1K	
JNJ	Johnson & Johnson	1.3 %	(45)bp	12 bp	(10)%	(20)pp	10.8 bp
PFE	Pfizer	0.8	(22)	9	(23)	(33)	9.8
SHOP	Shopify	0.0	17	4	79	69	8.3
CVX	Chevron	1.0	(30)	9	(13)	(23)	8.1
UBER	Uber Technologies	0.1	17	4	58	49	6.5
PG	Procter & Gamble	1.0	(52)	5	(0)	(10)	5.5
ASML.AS	ASML Holding	0.0	26	1	30	20	5.0
HD	Home Depot	0.9	(28)	(0)	(7)	(17)	4.7
MRNA	Moderna	0.2	(9)	(6)	(29)	(39)	4.4
ABBV	AbbVie	0.8	(21)	5	(9)	(18)	4.2
MELI	Mercadolibre	0.0	12	4	58	49	4.1
KO	Coca-Cola	0.7	(30)	5	(3)	(12)	4.0
T	AT&T	0.4	(24)	(6)	(8)	(18)	4.0
CAT	Caterpillar	0.4	(14)	3	(10)	(19)	3.2
BRK.B	Berkshire Hathaway	1.6	(83)	14	7	(3)	3.1
NEE	NextEra Energy	0.5	(15)	0	(10)	(20)	2.9
TTD	Trade Desk	0.1	7	2	53	43	2.5
XOM	Exxon Mobil	1.3	0	(0)	(3)	(13)	2.5
IBM	IBM	0.4	(12)	(13)	(7)	(17)	2.4
CMG	Chipotle	0.1	6	(0)	51	42	2.4
ADP	Automatic Data Processing	0.3	(10)	2	(9)	(18)	2.2
NOW	ServiceNow	0.2	13	5	32	22	2.2
DUK	Duke Energy	0.2	(10)	3	(9)	(19)	2.1
EXAS	EXACT Sciences	0.0	4	(1)	69	59	2.1
PM	Philip Morris	0.4	(11)	5	(7)	(16)	2.0

Source: FactSet, Goldman Sachs Global Investment Research

**Exhibit 20: The 25 stocks that have generated the most NEGATIVE alpha YTD**

positioning as of March 31, 2023; weights as of December 31, 2022; pricing as of May 22, 2023

The 25 stocks that have generated the most <b>NEGATIVE</b> alpha YTD							
Ticker	Name	Starting R1K weight (%)	LC mutual funds		YTD return		YTD alpha contrib. (bp)
			OW/(UW) (bp)	Mar '23 QoQ chg	Absolute	vs. R1K	
AAPL	Apple	5.5 %	(337)bp	(44)bp	34 %	25 pp	(70.2)bp
TSLA	Tesla	0.9	(102)	(36)	53	44	(28.9)
MSFT	Microsoft	5.1	(133)	(14)	35	25	(28.3)
NVDA	NVIDIA	1.0	(37)	(15)	113	104	(23.7)
META	Meta Platforms	0.8	(30)	(10)	106	97	(17.9)
AMZN	Amazon.com	2.1	(46)	(2)	37	27	(11.0)
GOOGL	Alphabet	1.5	(36)	(10)	42	32	(9.2)
SCHW	Charles Schwab	0.4	5	(12)	(37)	(47)	(7.9)
TPL	TX Pac Land	0.0	11	(1)	(42)	(51)	(6.3)
CI	Cigna	0.3	14	(2)	(23)	(32)	(5.1)
WMS	Advanced Drainage Systems	0.0	(39)	(0)	18	8	(4.9)
AIG	American International Group	0.1	10	(8)	(14)	(24)	(4.5)
FRC	First Republic Bank	0.1	(0)	(1)	(100)	(109)	(4.3)
DHR	Danaher	0.5	12	(7)	(13)	(22)	(3.6)
AMD	AMD	0.3	(5)	(1)	67	57	(3.4)
USB	U.S. Bancorp	0.2	10	2	(28)	(38)	(3.3)
MET	MetLife	0.1	6	(3)	(26)	(36)	(2.8)
AVGO	Broadcom	0.6	(22)	1	22	13	(2.6)
WFC	Wells Fargo	0.4	7	(2)	1	(9)	(2.5)
COP	ConocoPhillips	0.4	6	(6)	(11)	(20)	(2.5)
UNH	UnitedHealth Group	1.4	10	(3)	(9)	(19)	(2.4)
PD.TO	Precision Drilling	0.0	5	6	(39)	(49)	(2.2)
CB	Chubb	0.3	7	(2)	(10)	(19)	(1.8)
BAC	Bank of America	0.7	8	1	(14)	(24)	(1.8)
DG	Dollar General	0.2	7	(1)	(14)	(23)	(1.7)

Source: FactSet, Goldman Sachs Global Investment Research

**Exhibit 21: Stocks with the largest INCREASES in exposure by mutual funds**

positioning &amp; weights as of March 31, 2023; pricing as of May 22, 2023

Stocks with the largest INCREASES in exposure by mutual funds											
Ticker	Company name	Return		Benchmark weight (%)			OW/UW by fund type (bp)			Average across styles (bp)	
		2022	YTD	S&P 500	RLG	RLV	Core	Growth	Value	OW/(UW)	QoQ chg
BRK.B	Berkshire Hathaway	3 %	7 %	1.6 %	0.0 %	3.0 %	(81)bp	22 bp	(189)bp	(83)bp	14 bp
JNJ	Johnson & Johnson	6	(10)	1.2	0.0	2.2	(38)	12	(108)	(45)	12
CMCSA	Comcast	(29)	20	0.5	0.0	0.9	10	10	40	20	10
PFE	Pfizer	(10)	(23)	0.7	0.0	1.3	(21)	0	(54)	(25)	9
CVX	Chevron	58	(13)	0.8	0.0	1.7	(24)	7	(74)	(30)	9
LOW	Lowe's Companies	(21)	3	0.4	0.5	0.1	6	(16)	25	5	7
MRK	Merck & Co	49	4	0.8	0.6	0.9	3	(43)	31	(3)	6
CSCO	Cisco Systems	(22)	4	0.6	0.0	1.2	3	18	3	8	6
APD	Air Products & Chemicals	4	(10)	0.2	0.0	0.3	19	9	(12)	5	6
ADBE	Adobe	(41)	11	0.5	0.9	0.0	7	6	8	7	6
NKE	NIKE	(29)	(6)	0.4	0.8	0.0	(4)	(14)	8	(3)	6
ACN	Accenture	(35)	10	0.5	0.9	0.0	(3)	(43)	27	(7)	5
PG	Procter & Gamble	(5)	(0)	1.0	0.8	1.1	(31)	(58)	(66)	(52)	5
PM	Philip Morris	12	(7)	0.4	0.0	0.8	(13)	4	(24)	(11)	5
ABBV	AbbVie	24	(9)	0.8	1.4	0.0	(20)	(125)	83	(21)	5
NOW	ServiceNow	(40)	32	0.3	0.5	0.0	(10)	47	0	12	5
KO	Coca-Cola	11	(3)	0.7	0.9	0.3	(10)	(77)	(2)	(30)	5
BIIB	Biogen	15	11	0.1	0.0	0.2	(4)	10	(12)	(2)	5
MS	Morgan Stanley	(10)	(2)	0.3	0.0	0.6	4	14	(1)	6	4
ORCL	Oracle	(5)	25	0.4	0.5	0.2	12	(20)	28	7	4

Source: FactSet, Goldman Sachs Global Investment Research

**Exhibit 22: Stocks with the largest DECREASES in exposure by mutual funds**

positioning &amp; weights as of March 31, 2023; pricing as of May 22, 2023

Stocks with the largest DECREASES in exposure by mutual funds											
Ticker	Company name	Return		Benchmark weight (%)			OW/UW by fund type (bp)			Average across styles (bp)	
		2022	YTD	S&P 500	RLG	RLV	Core	Growth	Value	OW/(UW)	QoQ chg
AAPL	Apple	(26)%	34 %	7.1 %	12.7 %	0.0 %	(366)bp	(721)bp	75 bp	(337)bp	(44)bp
TSLA	Tesla	(65)	53	1.6	2.8	0.0	(123)	(185)	0	(102)	(36)
NVDA	NVIDIA	(50)	113	2.0	3.4	0.0	(86)	(39)	0	(41)	(15)
MSFT	Microsoft	(28)	35	6.2	11.1	0.0	(130)	(427)	158	(133)	(14)
NFLX	Netflix	(51)	23	0.4	0.4	0.5	(12)	26	(38)	(8)	(13)
IBM	IBM	11	(7)	0.3	0.4	0.2	(11)	(37)	11	(12)	(13)
SCHW	Charles Schwab	0	(37)	0.2	0.2	0.2	0	8	8	5	(12)
GOOGL	Alphabet	(39)	42	3.4	5.2	0.8	(56)	(104)	53	(36)	(10)
META	Meta Platforms	(64)	106	1.4	0.5	2.0	(35)	70	(124)	(30)	(10)
AIG	AIG	14	(14)	0.1	0.0	0.2	2	0	28	10	(8)
CCI	Crown Castle	(33)	(14)	0.2	0.3	0.0	(6)	(24)	16	(5)	(8)
ROP	Roper Technologies	(12)	6	0.1	0.0	0.3	5	25	(22)	3	(7)
DHR	Danaher	(19)	(13)	0.5	0.1	0.8	8	81	(53)	12	(7)
V	Visa	(3)	12	1.1	1.9	0.0	16	16	29	20	(7)
ORLY	O'Reilly Automotive	20	10	0.2	0.1	0.2	2	9	(13)	(0)	(7)
AME	AMETEK	(4)	6	0.1	0.0	0.2	3	16	(16)	1	(7)
MRNA	Moderna	(29)	(29)	0.1	0.0	0.3	(8)	3	(22)	(9)	(6)
COP	ConocoPhillips	71	(11)	0.4	0.0	0.7	(1)	11	8	6	(6)
ED	Consolidated Edison	16	1	0.1	0.0	0.2	(7)	0	(18)	(8)	(6)
O	Realty Income	(7)	(3)	0.1	0.0	0.2	(8)	0	(18)	(9)	(6)

Source: FactSet, Goldman Sachs Global Investment Research



## Large-cap mutual fund position baskets

**We analyzed \$2.6 trillion of individual equity holdings from 506 large-cap core, growth, and value mutual funds to identify the most over- and under-weight positions of long-only investors.**

### MUTUAL FUND OVERWEIGHT POSITIONS (GSTHMFOW)

Our portfolio of favorite mutual fund positions contains 50 Russell 1000 stocks where the average large-cap core, growth, and value mutual fund is most overweight relative to a blended benchmark. The basket is equal-weighted and not sector-neutral to the Russell 1000. Mutual fund holdings range from 6 bp to 26 bp overweight ([Exhibit 24](#)).

**11 new constituents:** PGR, CSCO, AMP, NET, ADBE, ORCL, PANW, MRVL, BKR, MSCI, MS

### MUTUAL FUND UNDERWEIGHT POSITIONS (GSTHMFUW)

Our portfolio of out-of-favor mutual fund positions contains 50 Russell 1000 stocks where the average large-cap core, growth, and value mutual fund is most underweight relative to a blended benchmark. The basket is equal-weighted and not sector-neutral to the Russell 1000. Mutual fund holdings range from 8 bp to 337 bp underweight ([Exhibit 25](#)).

**New constituents include:** CRM, MO, NFLX, ED

### Investors may use this analysis to identify stock preferences across mutual funds.

The relative performance of these baskets is not intended to track the performance of large-cap funds. Instead, these baskets spotlight favored/out-of-favor stocks that mutual fund managers expect to outperform/underperform. They may be used separately or together to follow mutual fund preferences or to locate contrarian opportunities. Both baskets have a large-cap bias. The overweight positions basket has a median market capitalization of \$63 billion compared with \$185 billion for the underweight positions basket and \$12 billion for the Russell 1000.

#### Exhibit 23: Mutual fund baskets summary

<b>Mutual fund OVERWEIGHTS (GSTHMFOW)</b>
<i>Top 10 overweights: MA, V, CMCSA, WFC, UBER, CI, INTU, NOW, WDAY, ISRG</i>
<i>5 most overweight new constituents: PGR, CSCO, AMP, NET, ADBE</i>
<b>Mutual fund UNDERWEIGHTS (GSTHMFUW)</b>
<i>Top 10 underweights: AAPL, MSFT, TSLA, BRK.B, PG, AMZN, JNJ, NVDA, GOOGL, XOM</i>
<i>5 most underweight new constituents: O, CRM, MO, NFLX, ED</i>

Source: Goldman Sachs Global Investment Research

# GSTHMFOW: Mutual Fund Overweight Positions basket

## Exhibit 24: Core, growth, and value mutual fund overweight positions vs. benchmarks (GSTHMFOW)

holdings as of March 31, 2023; pricing as of May 22, 2023; bold indicates new constituent

Company Name	Ticker	Sector	YTD return	Mkt cap (\$ bil)	Blended Weight		OVER-weight
					Average Fund	Benchmark	
Mastercard Inc.	MA	Financials	11 %	365	1.1 %	0.8 %	26 bp
Visa Inc.	V	Financials	12	376	1.2	1.0	20
Comcast Corp.	CMCSA	Communication Services	20	173	0.6	0.4	20
Wells Fargo & Co.	WFC	Financials	1	156	0.6	0.4	19
Uber Technologies	UBER	Industrials	58	79	0.3	0.1	17
Cigna Corp.	CI	Health Care	(23)	76	0.4	0.2	14
Intuit Inc.	INTU	Information Technology	17	128	0.5	0.3	14
ServiceNow Inc.	NOW	Information Technology	32	104	0.4	0.3	13
Workday Inc.	WDAY	Information Technology	17	51	0.2	0.1	12
Intuitive Surgical	ISRG	Health Care	18	110	0.4	0.2	12
Danaher Corp.	DHR	Health Care	(13)	168	0.6	0.5	12
Pioneer Natural Resources	PXD	Energy	(5)	50	0.2	0.1	11
Lululemon Athletica Inc	LULU	Consumer Discretionary	13	46	0.2	0.1	11
Texas Pacific Land	TPL	Energy	(42)	11	0.1	0.0	11
Amdocs Limited	DOX	Information Technology	4	11	0.1	0.0	11
Elevance Health	ELV	Health Care	(11)	109	0.4	0.3	11
Medtronic	MDT	Health Care	16	119	0.4	0.3	10
American Intl Group	AIG	Financials	(14)	40	0.2	0.1	10
U.S. Bancorp	USB	Financials	(28)	47	0.2	0.1	10
UnitedHealth Group	UNH	Health Care	(9)	449	1.3	1.2	10
TJX Companies Inc	TJX	Consumer Discretionary	(1)	91	0.3	0.2	10
<b>Progressive Corp.</b>	<b>PGR</b>	<b>Financials</b>	<b>5</b>	<b>79</b>	<b>0.3</b>	<b>0.2</b>	<b>9</b>
Bank of New York Mellon Corp	BK	Financials	(8)	33	0.2	0.1	9
Fiserv Inc.	FISV	Financials	18	76	0.3	0.2	9
Bank of America Corp	BAC	Financials	(14)	227	0.6	0.6	8
Johnson Controls Intl	JCI	Industrials	(1)	43	0.2	0.1	8
<b>Cisco Systems Inc.</b>	<b>CSCO</b>	<b>Information Technology</b>	<b>4</b>	<b>201</b>	<b>0.7</b>	<b>0.6</b>	<b>8</b>
Humana Inc.	HUM	Health Care	1	64	0.2	0.2	8
Hess Corp.	HES	Energy	(6)	41	0.2	0.1	8
Hartford Financial Svc. Gp.	HIG	Financials	(6)	22	0.1	0.1	8
Trade Desk Inc.	TTD	Communication Services	53	34	0.1	0.0	7
Chubb Limited	CB	Financials	(10)	82	0.3	0.2	7
<b>Ameriprise Financial</b>	<b>AMP</b>	<b>Financials</b>	<b>(2)</b>	<b>32</b>	<b>0.2</b>	<b>0.1</b>	<b>7</b>
Vertex Pharmaceuticals	VRTX	Health Care	18	87	0.3	0.2	7
<b>Cloudflare Inc</b>	<b>NET</b>	<b>Information Technology</b>	<b>26</b>	<b>19</b>	<b>0.1</b>	<b>0.0</b>	<b>7</b>
Veeva Systems Inc	VEEV	Health Care	2	26	0.1	0.0	7
Travelers Companies	TRV	Financials	(3)	42	0.2	0.1	7
<b>Adobe Inc.</b>	<b>ADBE</b>	<b>Information Technology</b>	<b>11</b>	<b>170</b>	<b>0.5</b>	<b>0.5</b>	<b>7</b>
Dollar General	DG	Consumer Staples	(14)	47	0.2	0.1	7
<b>Oracle Corp.</b>	<b>ORCL</b>	<b>Information Technology</b>	<b>25</b>	<b>274</b>	<b>0.5</b>	<b>0.4</b>	<b>7</b>
<b>Palo Alto Networks</b>	<b>PANW</b>	<b>Information Technology</b>	<b>38</b>	<b>58</b>	<b>0.2</b>	<b>0.1</b>	<b>7</b>
<b>Marvell Technology</b>	<b>MRVL</b>	<b>Information Technology</b>	<b>26</b>	<b>40</b>	<b>0.1</b>	<b>0.1</b>	<b>6</b>
Intercontinental Exchange	ICE	Financials	7	61	0.2	0.2	6
<b>Baker Hughes</b>	<b>BKR</b>	<b>Energy</b>	<b>(3)</b>	<b>29</b>	<b>0.1</b>	<b>0.1</b>	<b>6</b>
FedEx Corp.	FDX	Industrials	33	58	0.2	0.1	6
<b>MSCI Inc.</b>	<b>MSCI</b>	<b>Financials</b>	<b>2</b>	<b>38</b>	<b>0.2</b>	<b>0.1</b>	<b>6</b>
Constellation Brands	STZ	Consumer Staples	2	43	0.2	0.1	6
CDW Corp.	CDW	Information Technology	(1)	24	0.1	0.1	6
ConocoPhillips	COP	Energy	(11)	127	0.4	0.3	6
<b>Morgan Stanley</b>	<b>MS</b>	<b>Financials</b>	<b>(2)</b>	<b>138</b>	<b>0.4</b>	<b>0.3</b>	<b>6</b>
<b>Mutual Fund Overweight Positions Median</b>			<b>2 %</b>	<b>63</b>	<b>0.2 %</b>	<b>0.2 %</b>	<b>8 bp</b>
<b>Russell 1000 Median</b>			<b>2</b>	<b>12</b>	<b>0.0</b>	<b>0.0</b>	<b>0</b>

Note: Based on our analysis of 506 large-cap core, growth, and value mutual funds with \$2.6 trillion in equity assets.

**New stocks in basket listed in bold**

Blend is comprised of the equal-weighted average of the large-cap core, large-cap growth and large-cap value funds.

Source: FactSet, Goldman Sachs Global Investment Research

# GSTHMFUW: Mutual Fund Underweight Positions basket

## Exhibit 25: Core, growth, and value mutual fund underweight positions vs. benchmarks (GSTHMFUW)

holdings as of March 31, 2023; pricing as of May 22, 2023; bold indicates new constituent

Company Name	Ticker	Sector	YTD return	Mkt cap (\$ bil)	Blended Weight		UNDER-weight
					Average Fund	Benchmark	
Apple Inc.	AAPL	Information Technology	34 %	2756	3.3 %	6.6 %	(337)bp
Microsoft Corp.	MSFT	Information Technology	35	2391	4.4	5.8	(133)
Tesla Inc	TSLA	Consumer Discretionary	53	598	0.4	1.5	(102)
Berkshire Hathaway	BRK.B	Financials	7	723	0.7	1.6	(83)
Procter & Gamble	PG	Consumer Staples	(0)	352	0.4	1.0	(52)
Amazon.com Inc.	AMZN	Consumer Discretionary	37	1179	2.0	2.5	(46)
Johnson & Johnson	JNJ	Health Care	(10)	410	0.7	1.1	(45)
NVIDIA Corp.	NVDA	Information Technology	113	767	1.4	1.8	(37)
Alphabet Inc.	GOOGL	Communication Services	42	1496	2.8	3.1	(36)
Exxon Mobil Corp.	XOM	Energy	(3)	432	0.9	1.3	(34)
Chevron Corp.	CVX	Energy	(13)	295	0.6	0.9	(30)
Coca-Cola Co.	KO	Consumer Staples	(3)	266	0.4	0.7	(30)
Meta Platforms Inc.	META	Communication Services	106	553	1.0	1.3	(30)
Home Depot Inc.	HD	Consumer Discretionary	(7)	296	0.5	0.8	(28)
McDonald's Corp.	MCD	Consumer Discretionary	10	212	0.3	0.6	(26)
Walmart Inc.	WMT	Consumer Staples	6	401	0.3	0.6	(25)
Linde	LIN	Materials	13	180	0.2	0.5	(24)
AT&T Inc.	T	Communication Services	(8)	117	0.1	0.4	(24)
Pfizer Inc.	PFE	Health Care	(23)	218	0.4	0.6	(22)
Broadcom Inc.	AVGO	Information Technology	22	283	0.5	0.7	(22)
PepsiCo Inc.	PEP	Consumer Staples	4	257	0.5	0.7	(22)
Intel Corp.	INTC	Information Technology	16	125	0.2	0.4	(21)
Abbott Laboratories	ABT	Health Care	(0)	189	0.3	0.5	(21)
AbbVie Inc.	ABBV	Health Care	(9)	256	0.5	0.8	(21)
Costco Wholesale	COST	Consumer Staples	8	218	0.4	0.6	(19)
Walt Disney	DIS	Communication Services	6	168	0.3	0.5	(17)
Eli Lilly	LLY	Health Care	19	412	0.6	0.8	(16)
NextEra Energy Inc.	NEE	Utilities	(10)	148	0.3	0.4	(15)
Caterpillar Inc.	CAT	Industrials	(10)	112	0.2	0.3	(14)
International Bus. Machines	IBM	Information Technology	(7)	115	0.2	0.3	(12)
Verizon Communications	VZ	Communication Services	(6)	151	0.3	0.5	(12)
Starbucks Corp.	SBUX	Consumer Discretionary	5	118	0.2	0.3	(11)
Southern Co.	SO	Utilities	1	77	0.1	0.2	(11)
Philip Morris Intl	PM	Consumer Staples	(7)	144	0.3	0.4	(11)
Honeywell Intl	HON	Industrials	(7)	132	0.2	0.4	(10)
Prologis Inc.	PLD	Real Estate	11	115	0.2	0.3	(10)
Illinois Tool Works	ITW	Industrials	4	69	0.1	0.2	(10)
Automatic Data Processing	ADP	Industrials	(9)	90	0.2	0.2	(10)
Boeing Co.	BA	Industrials	8	123	0.2	0.3	(10)
Equinix Inc.	EQIX	Real Estate	11	67	0.1	0.2	(10)
Duke Energy Corp.	DUK	Utilities	(9)	71	0.1	0.2	(10)
Ford Motor Co.	F	Consumer Discretionary	8	46	0.0	0.1	(9)
Thermo Fisher Scientific	TMO	Health Care	(4)	207	0.5	0.6	(9)
Moderna Inc.	MRNA	Health Care	(29)	49	0.1	0.1	(9)
<b>Realty Income Corp.</b>	<b>O</b>	<b>Real Estate</b>	<b>(3)</b>	<b>38</b>	<b>0.0</b>	<b>0.1</b>	<b>(9)</b>
<b>Salesforce Inc.</b>	<b>CRM</b>	<b>Information Technology</b>	<b>59</b>	<b>210</b>	<b>0.5</b>	<b>0.5</b>	<b>(9)</b>
<b>Altria Group Inc</b>	<b>MO</b>	<b>Consumer Staples</b>	<b>0</b>	<b>80</b>	<b>0.1</b>	<b>0.2</b>	<b>(9)</b>
3M Co.	MMM	Industrials	(13)	56	0.1	0.2	(8)
<b>Netflix Inc.</b>	<b>NFLX</b>	<b>Communication Services</b>	<b>23</b>	<b>162</b>	<b>0.3</b>	<b>0.4</b>	<b>(8)</b>
<b>Consolidated Edison</b>	<b>ED</b>	<b>Utilities</b>	<b>1</b>	<b>34</b>	<b>0.0</b>	<b>0.1</b>	<b>(8)</b>
<b>Mutual Fund Underweight Positions Median</b>			<b>3 %</b>	<b>185</b>	<b>0.3 %</b>	<b>0.5 %</b>	<b>(18)bp</b>
<b>Russell 1000 Median</b>			<b>2</b>	<b>12</b>	<b>0.0</b>	<b>0.0</b>	<b>0</b>

Note: Based on our analysis of 506 large-cap core, growth, and value mutual funds with \$2.6 trillion in equity assets.

**New stocks in basket listed in bold**

Blend is comprised of the equal-weighted average of the large-cap core, large-cap growth and large-cap value funds.

Source: FactSet, Goldman Sachs Global Investment Research

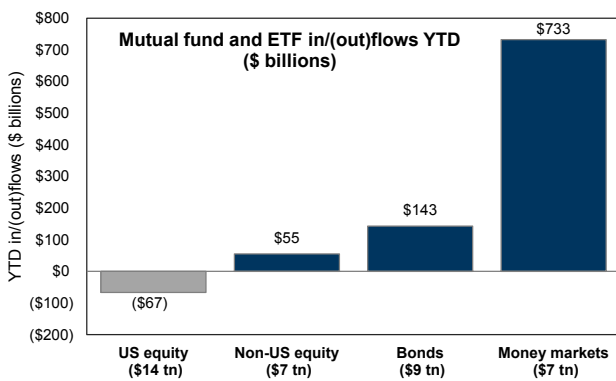
# Fund flows

## Cross asset flows

**Investors have been shifting away from US equity funds and toward money market, bond, and non-US equity funds.** The level of yields available to investors

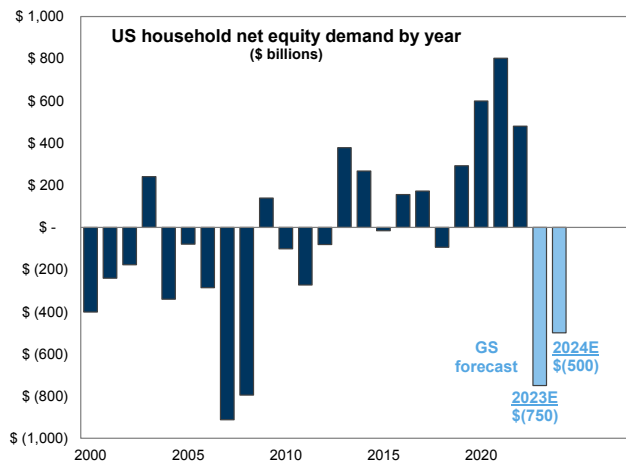
indicates that the era of There Is No Alternative (“TINA”) to equities has ended and that now There Are Reasonable Alternatives (“TARA”). YTD flows have corroborated this shift: A combined \$931 billion has flowed into money market, bond and non-US equity funds YTD while \$67 billion has flowed out of US equity funds. We recently modeled household demand for stocks as a function of interest rates and the savings rate. We forecast households will be net sellers of \$750 billion in equities in 2023 and an additional \$500 billion in 2024. Notably, high frequency data show that the shift away from equities appears to have accelerated in recent weeks.

**Exhibit 26: Investors are rotating from US equities to money markets, bonds, and foreign equities**  
as of May 17, 2023; weekly flow data



Source: EPFR, Goldman Sachs Global Investment Research

**Exhibit 27: We forecast households will be net sellers of equities in 2023 and 2024**

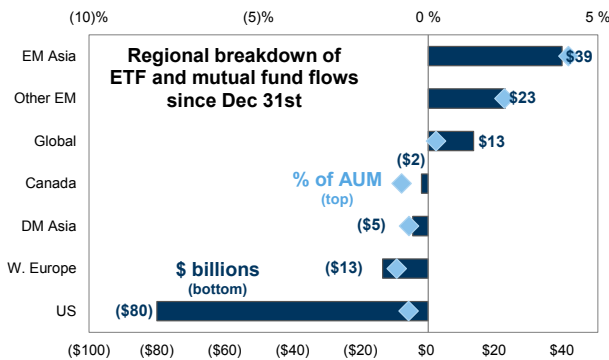


Source: Goldman Sachs Global Investment Research

## Geographic flows

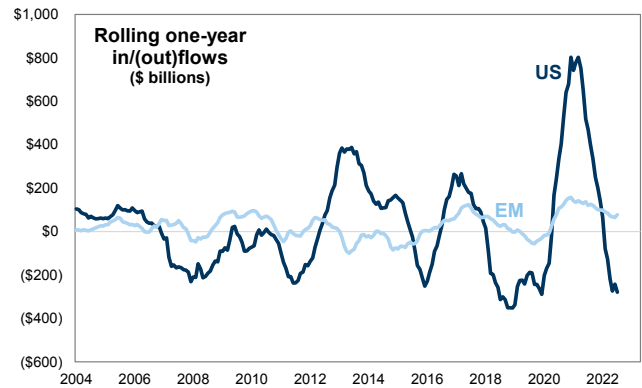
**EM funds have garnered the most inflows YTD.** Amid optimism around China re-opening, EM Asia funds have had the greatest inflows both in dollar terms and as a share of AUM so far this year. A weaker dollar has also driven inflows for other EM funds. US equity funds have had the largest outflows in dollar terms though Western European funds have had the largest outflows as a share of AUM.

**Exhibit 28: Mutual fund and ETF flows have turned away from domestic equities YTD as of May 17, 2023**



Source: EPFR, Goldman Sachs Global Investment Research

**Exhibit 29: US vs. EM rolling one-year flow of funds as of May 17, 2023**

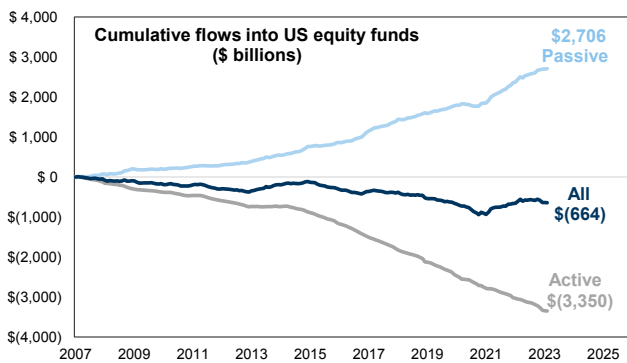


Source: EPFR, Goldman Sachs Global Investment Research

**Active vs. passive**

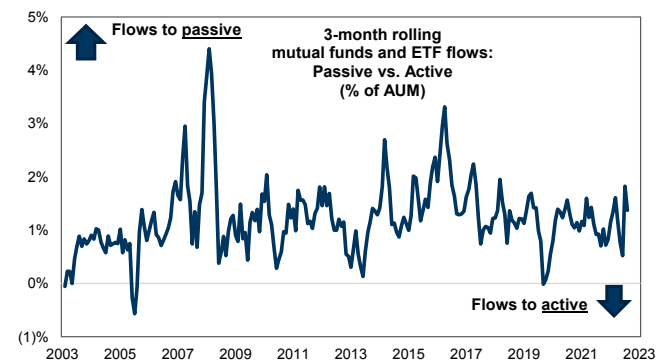
**The secular shift from active to passive management has continued.** \$2.7 trillion has flowed into passive products since 2007 while \$3.4 trillion has flowed out of actively managed mutual funds. Flows from active to passive have continued at about their average pace in recent months.

**Exhibit 30: Secular shift from active to passive management continues as of May 17, 2023**



Source: EPFR, Goldman Sachs Global Investment Research

**Exhibit 31: Passive vs. active rolling 3-month flows as of May 17, 2023**

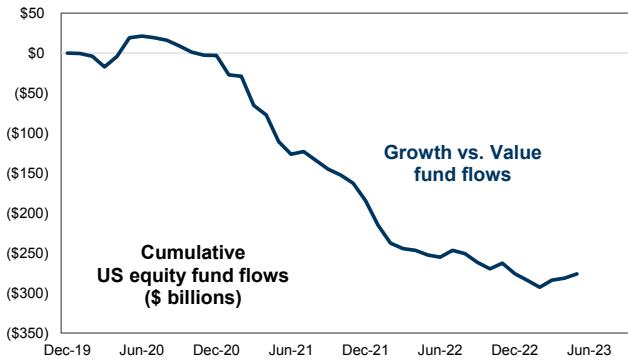


Source: EPFR, Goldman Sachs Global Investment Research

**Style flows**

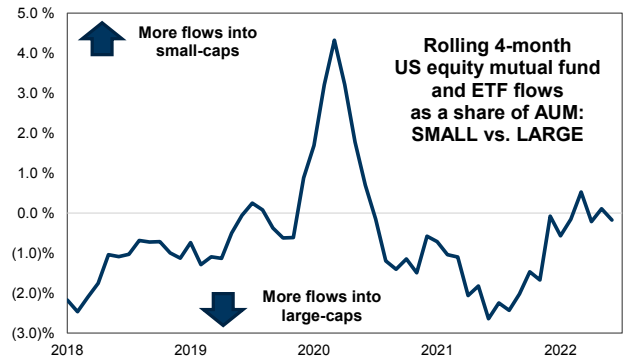
**Growth funds have seen less outflows relative to Value funds this year.** Tech outperformance and optimism regarding AI have led investors to flow out of Growth funds at a slower pace than Value funds. Elsewhere, large-cap equity funds have garnered more inflows over the last four months than small-caps.

**Exhibit 32: Cumulative flows into Growth vs. Value funds**  
as of May 17, 2023



Source: EPFR, Goldman Sachs Global Investment Research

**Exhibit 33: ETF and mutual fund flows breakdown by market cap focus**  
as of May 17, 2023



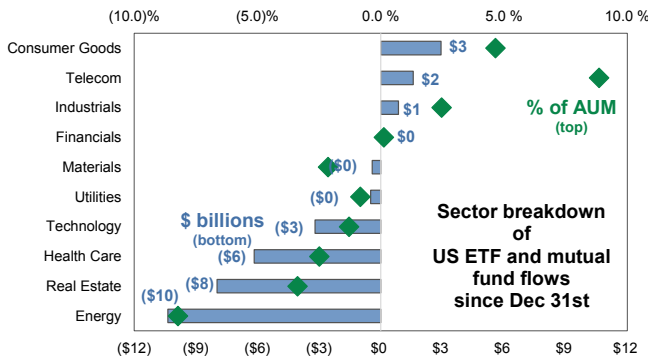
Source: EPFR, Goldman Sachs Global Investment Research

**US flows into sector funds**

**Energy funds have experienced significant outflows as a portion of AUM YTD.**

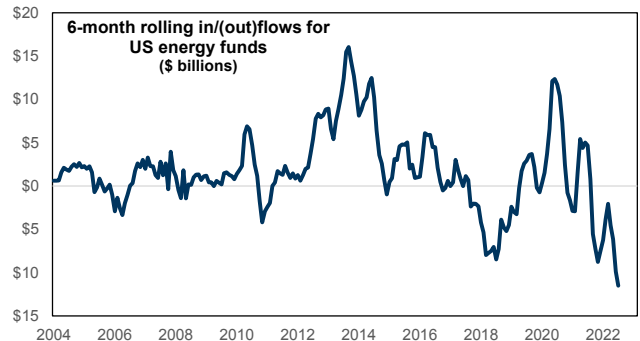
Declining oil prices have driven investors to flow out of the Energy sector so far this year. Real Estate funds have experienced the second-largest outflow this year as a share of AUM. Meanwhile, Telecom funds have experienced the largest inflows as a share of AUM.

**Exhibit 34: YTD US mutual fund and ETF flows by sector**  
as of May 17, 2023



Source: EPFR, Goldman Sachs Global Investment Research

**Exhibit 35: Energy sector flows are as negative in dollars terms as at any time since 2004**  
as of May 17, 2023



Source: EPFR, Goldman Sachs Global Investment Research

## Positioning and performance by fund type

**Exhibit 36: Summary of mutual fund sector positioning by style relative to benchmark**  
holdings as of March 31, 2023

Fund type	Sector allocation	Industrials	Financials	Materials	Energy	Health Care	Consumer Staples	Comm. Services	Utilities	Consumer Discretionary	Real Estate	Information Technology
<b>Large-cap CORE</b>	Average Fund Weight (%)	12	16	4	6	16	8	7	3	9	2	19
	Over/(Underweight) (bp)	246	174	100	75	41	24	(59)	(64)	(69)	(83)	(394)
<b>Large-cap GROWTH</b>	Average Fund Weight (%)	10	12	2	2	17	4	8	0	13	1	30
	Over/(Underweight) (bp)	45	434	73	79	367	(243)	146	30	(79)	(41)	(811)
<b>Large-cap VALUE</b>	Average Fund Weight (%)	12	21	4	9	17	8	6	4	7	2	11
	Over/(Underweight) (bp)	135	(59)	(31)	54	(48)	3	(174)	(174)	128	(219)	380
<b>Small-cap CORE</b>	Average Fund Weight (%)	20	16	5	6	15	4	2	2	11	4	13
	Over/(Underweight) (bp)	365	(150)	62	(62)	(150)	51	(42)	(149)	104	(244)	216

Note: Benchmark indices used for overweight/(underweight) calculations were as follows:

S&P 500 for large-cap core, Russell 1000 Growth for large-cap growth, Russell 1000 Value for large-cap value, Russell 2000 for small-cap core mutual funds

Source: FactSet, Goldman Sachs Global Investment Research

**Exhibit 37: Summary of most overweight and most underweight mutual fund stock positions**  
holdings as of March 31, 2023; performance as of May 22, 2023

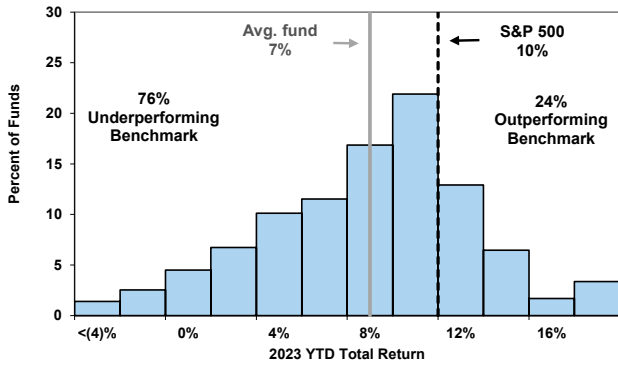
Large-cap core (Avg Fund: +7.1%; S&P 500: +9.9%)						Small-cap core (Avg Fund: +2.6%; Russell 2000: +2.5%)					
Overweight			Underweight			Overweight			Underweight		
Ticker	Avg OW	YTD	Ticker	Avg UW	YTD	Ticker	Avg OW	YTD	Ticker	Avg UW	YTD
APD	19 bp	(10)%	AAPL	(366)bp	34 %	ADUS	22 bp	(11)%	LNW	(23)bp	6 %
V	16	12	MSFT	(130)	35	MCRI	17	(6)	IRDM	(20)	20
SYI	15	(5)	AMZN	(104)	37	XPEL	17	24	CELH	(20)	26
WFC	15	1	NVDA	(86)	113	USPH	15	37	KRTX	(19)	15
HES	14	(6)	BRK.B	(81)	7	KFRC	14	9	CROX	(19)	(1)
DG	13	(14)	GOOGL	(56)	42	VRTV	14	(6)	SAIA	(19)	31
ORCL	12	25	JNJ	(38)	(10)	AGYS	14	(11)	NJR	(18)	0
MA	12	11	META	(35)	106	JOUT	13	(8)	ORA	(18)	(2)
MKC	12	6	PG	(31)	(0)	JBI	13	(2)	AJRD	(18)	(1)
ELV	11	(11)	HD	(28)	(7)	ENSG	12	(3)	ABG	(16)	14

Large-cap growth (Avg Fund: +15.7%; R1000 Growth: +19.3%)						Large-cap value (Avg Fund: +0.8%; R1000 Value: +0.7%)					
Overweight			Underweight			Overweight			Underweight		
Ticker	Avg OW	YTD	Ticker	Avg UW	YTD	Ticker	Avg OW	YTD	Ticker	Avg UW	YTD
DHR	81 bp	(13)%	AAPL	(721)bp	34 %	UNH	53 bp	(9)%	BRK.B	(189)bp	7 %
META	70	106	MSFT	(427)	35	GOOGL	53	42	JNJ	(108)	(10)
TMO	65	(4)	TSLA	(185)	53	UPS	43	0	XOM	(99)	(3)
ISRG	48	18	ABBV	(125)	(9)	CMCSA	40	20	CVX	(74)	(13)
NOW	47	32	GOOGL	(104)	42	WFC	35	1	TMO	(73)	(4)
CRM	46	59	AVGO	(98)	22	MRK	31	4	PG	(66)	(0)
INTU	41	17	PEP	(79)	4	AIG	28	(14)	WMT	(63)	6
UBER	36	58	KO	(77)	(3)	ORCL	28	25	DIS	(61)	6
MA	36	11	AMZN	(65)	37	CI	28	(23)	LIN	(58)	13
REGN	32	4	PG	(58)	(0)	ELV	27	(11)	ABT	(54)	(0)

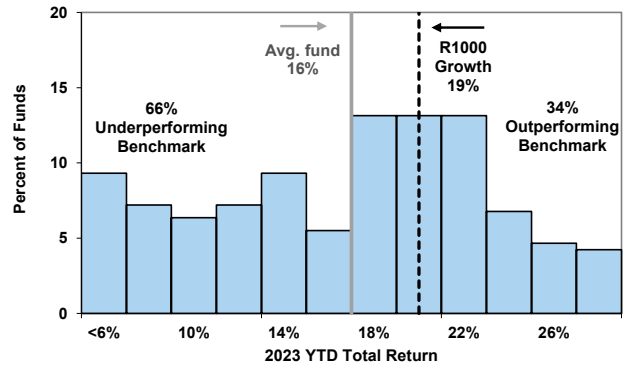
Source: FactSet, Goldman Sachs Global Investment Research

**Exhibit 38: Distribution of LARGE-CAP CORE mutual fund YTD performance**  
as of May 22, 2023



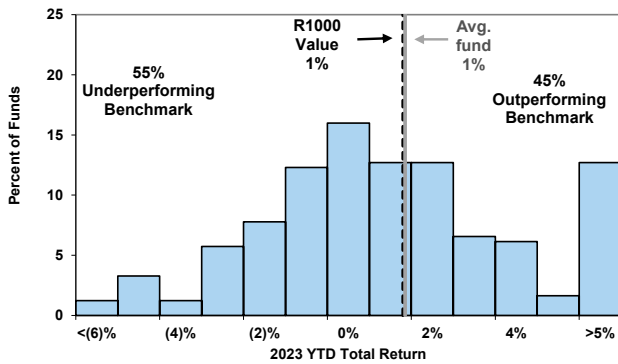
Source: EPFR, FactSet, Goldman Sachs Global Investment Research

**Exhibit 39: Distribution of LARGE-CAP GROWTH mutual fund YTD performance**  
as of May 22, 2023



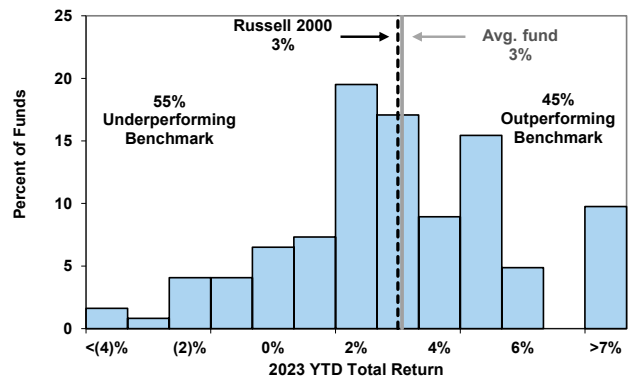
Source: EPFR, FactSet, Goldman Sachs Global Investment Research

**Exhibit 40: Distribution of LARGE-CAP VALUE mutual fund YTD performance**  
as of May 22, 2023



Source: EPFR, FactSet, Goldman Sachs Global Investment Research

**Exhibit 41: Distribution of SMALL-CAP CORE mutual fund YTD performance**  
as of May 22, 2023



Source: EPFR, FactSet, Goldman Sachs Global Investment Research



## Appendix

**Exhibit 42: Top 50 domestic large-cap core, growth, and value and small-cap core mutual funds by AUM**  
 holdings as of March 31, 2023; pricing as of May 22, 2023; excludes ETFs and index objective funds

Fund name	Type	Ticker	Equity holdings (\$ billions)	Return	
				YTD	2022
The Growth Fund of America	Growth	AGTHX	\$213	15 %	(31)%
Washington Mutual Invs Fund	Value	AWSHX	151	3	(8)
Fidelity Contrafund	Core	FCNTX	120	17	(28)
Fundamental Investors	Core	ANCFX	110	9	(17)
American Funds Investment Co of America	Core	AIVSX	108	10	(16)
Dodge & Cox Stock Fund	Value	DODGX	89	2	(7)
American Mutual Fund	Value	AMRMX	88	1	(4)
Strategic Advisers Fidelity U.S. Total Stock Fund	Core	FCTDX	72	10	(18)
AMCAP Fund	Growth	AMCPX	71	13	(29)
Vanguard PRIMECAP Fund	Core	VPMAX	64	11	(15)
MFS Value Fund	Value	MEIIX	57	(1)	(6)
Fidelity Growth Company Fund	Growth	FDGRX	56	23	(34)
Vanguard Equity Income Fund	Value	VEIRX	53	(2)	0
T. Rowe Price Blue Chip Growth Fund	Growth	TRBCX	53	25	(39)
Vanguard Dividend Growth Fund	Core	VDIGX	52	0	(5)
Vanguard Windsor II Fund	Value	VWNAX	52	7	(13)
Strategic Advisers Large Cap Fund	Core	FALCX	50	10	(17)
JPMorgan Equity Income Fund	Value	OIEJX	48	(3)	(2)
Fidelity Blue Chip Growth Fund	Growth	FBGRX	48	26	(38)
JPMorgan Large Cap Growth Fund	Growth	JLGMX	47	14	(25)
Columbia Dividend Income Fund	Value	GSFTX	36	(0)	(5)
MFS Growth Fund	Growth	MFEKX	36	17	(31)
Vanguard U.S. Growth Fund	Growth	VWUAX	35	21	(40)
DFA U.S. Core Equity 2 Portfolio	Core	DFQTX	30	6	(14)
DFA U.S. Core Equity 1 Portfolio	Core	DFOEX	29	7	(15)
T. Rowe Price Value Fund	Value	TRZAX	27	1	(11)
Parnassus Core Equity Fund	Core	PRILX	25	10	(18)
Fidelity Magellan	Growth	FMAGX	25	12	(27)
Fidelity OTC Pt	Growth	FOCPX	24	22	(32)
Vanguard Windsor Fund	Value	VWNEX	22	3	(3)
Harbor Capital Appreciation Fund	Growth	HACAX	22	26	(38)
T. Rowe Price Dividend Growth Fund	Core	PRDGX	21	3	(10)
Bridge Builder Large Cap Growth Fund	Growth	BBGLX	21	14	(27)
JPMorgan U.S. Equity Fund	Core	JUEMX	21	11	(19)
Franklin Dynatech Fund	Growth	FKDNX	19	22	(40)
Putnam Large Cap Value Fund	Value	PEYAX	19	2	(3)
BlackRock Eq Dividend	Value	MADVX	19	4	(4)
AB Large Cap Growth Fund	Growth	APGYX	18	16	(29)
American Century Ultra Investor	Growth	TWCUX	17	22	(32)
T. Rowe Price Equity Income Fund	Value	PRFDX	17	(1)	(3)
Edgewood Growth Fund	Growth	EGFIX	17	17	(40)
Bridge Builder Large Cap Value Fund	Value	BBVLX	16	2	(5)
Janus Henderson Research Fund	Growth	JNRFX	16	20	(30)
Franklin Growth Fund	Growth	FKGRX	16	11	(25)
T. Rowe Price Large-Cap Growth Fund	Growth	TRLGX	16	22	(35)
Janus Henderson Forty Fund	Growth	JFRDX	16	18	(34)
Fidelity Advisor New Insights Fund:	Growth	FINSX	16	15	(27)
Oakmark Fund Investor	Core	OAKMX	16	11	(13)
The Hartford Dividend & Growth Fund	Value	HDFGX	15	3	(9)
JPMorgan Hedged Equity Fund	Core	JHEQX	15	10	(8)

Source: EPFR, FactSet, Goldman Sachs Global Investment Research

**Exhibit 43: Comparative sector composition of major US equity market indices**

as of March 31, 2023

Russell 1000 Growth (\$17.1 Trillion)		S&P 500 (\$32.1 Trillion)		Russell 1000 Value (\$18.3 Trillion)		Russell 2000 (\$2.3 Trillion)	
<b>Sectors</b>							
Name	Weight	Name	Weight	Name	Weight	Name	Weight
Information Technology	38.1%	Information Technology	22.5%	Financials	21.3%	Financials	17.9%
Consumer Discretionary	13.6	Health Care	15.8	Health Care	17.3	Health Care	16.4
Health Care	13.5	Financials	14.4	Industrials	10.7	Industrials	16.0
Industrials	9.1	Consumer Discretionary	9.3	Energy	8.4	Information Technology	11.0
Financials	7.4	Industrials	9.2	Consumer Staples	7.7	Consumer Discretionary	10.3
Communication Services	6.9	Consumer Staples	7.7	Communication Services	7.3	Energy	6.8
Consumer Staples	6.7	Communication Services	7.3	Information Technology	6.8	Real Estate	6.4
Energy	1.7	Energy	5.2	Utilities	5.8	Materials	4.3
Real Estate	1.6	Utilities	3.2	Consumer Discretionary	5.7	Consumer Staples	3.6
Materials	1.4	Materials	2.7	Real Estate	4.4	Utilities	3.5
Utilities	0.1	Real Estate	2.7	Materials	4.3	Communication Services	2.6
	<b>100.0%</b>		<b>100.0%</b>		<b>100.0%</b>		<b>100.0%</b>
<b>Largest Industries</b>							
Software	16.1%	Software	8.3%	Oil Gas & Consumable Fuels	7.7%	Banks	10.5%
Tech Hardware	11.6	Tech Hardware	6.3	Banks	7.2	Biotechnology	7.3
Semiconductors	7.2	Semiconductors	5.1	Pharmaceuticals	6.5	Oil Gas & Consumable Fuels	4.6
Interactive Media & Services	5.6	Pharmaceuticals	4.9	Capital Markets	4.9	Software	4.5
Health Care Providers & Services	3.6	Oil Gas & Consumable Fuels	4.8	Electric Utilities	3.8	Health Care Equipment & Supplies	3.7
Biotechnology	3.6	Interactive Media & Services	4.0	Insurance	3.7	Machinery	3.7
Specialty Retail	3.3	Banks	3.8	Health Care Providers & Services	3.3	Specialty Retail	2.6
Beverages	2.6	Health Care Providers & Services	3.7	Health Care Equipment & Supplies	3.3	Semiconductors & Semiconductor Equipment	2.5
Pharmaceuticals	2.6	Capital Markets	3.1	Chemicals	2.6	Hotels Restaurants & Leisure	2.5
Hotels Restaurants & Leisure	2.4	Health Care Equipment & Supplies	2.8	Aerospace & Defense	2.6	Health Care Providers & Services	2.4
	<b>58.6%</b>		<b>46.8%</b>		<b>45.5%</b>		<b>44.3%</b>
<b>Largest Companies</b>							
Apple Inc. (AAPL)	11.4%	Apple Inc. (AAPL)	6.0%	Berkshire Hathaway (BRK.B)	3.0%	Halozyme Therapeutics (HALO)	0.3%
Microsoft Corp. (MSFT)	10.5	Microsoft Corp. (MSFT)	5.6	Johnson & Johnson (JNJ)	2.5	Shockwave Medical (SWAV)	0.3
Alphabet Inc. (GOOGL)	5.1	Alphabet Inc. (GOOGL)	3.1	Exxon Mobil Corp. (XOM)	2.5	Inspire Medical Systems (INSP)	0.3
Amazon.com Inc. (AMZN)	4.4	Amazon.com Inc. (AMZN)	2.3	JPMorgan Chase (JPM)	2.1	EMCOR Group Inc. (EME)	0.3
UnitedHealth Group (UNH)	2.6	Berkshire Hathaway (BRK.B)	1.7	Chevron Corp. (CVX)	1.9	Crocs Inc. (CROX)	0.3
NVIDIA Corp. (NVDA)	2.1	UnitedHealth Group (UNH)	1.5	Pfizer Inc. (PFE)	1.6	Matador Resources (MTDR)	0.3
Visa Inc. (V)	2.0	Johnson & Johnson (JNJ)	1.4	Bank of America Corp (BAC)	1.3	Iridium Communications (IRDM)	0.3
Tesla Inc (TSLA)	1.9	Exxon Mobil Corp. (XOM)	1.4	Meta Platforms Inc. (META)	1.2	Murphy Oil Corp. (MUR)	0.3
Mastercard Inc. (MA)	1.7	JPMorgan Chase (JPM)	1.2	Procter & Gamble (PG)	1.1	Agree Realty Corp. (ADC)	0.3
AbbVie Inc. (ABBV)	1.7	NVIDIA Corp. (NVDA)	1.1	Walmart Inc. (WMT)	1.1	Texas Roadhouse (TXRH)	0.3
Eli Lilly and (LLY)	1.5	Procter & Gamble (PG)	1.1	Cisco Systems Inc. (CSCO)	1.1	RBC Bearings Inc. (RBC)	0.3
Broadcom Inc. (AVGO)	1.3	Visa Inc. (V)	1.1	Thermo Fisher Scientific (TMO)	1.0	Karuna Therapeutics (KRTX)	0.3
PepsiCo Inc. (PEP)	1.2	Tesla Inc (TSLA)	1.0	NextEra Energy Inc. (NEE)	0.9	Murphy USA Inc. (MUSA)	0.3
Costco Wholesale (COST)	1.2	Home Depot Inc. (HD)	1.0	Verizon Communications (VZ)	0.9	STAG Industrial (STAG)	0.3
Home Depot Inc. (HD)	1.1	Chevron Corp. (CVX)	1.0	Abbott Laboratories (ABT)	0.9	ChampionX Corp. (CHX)	0.3
Coca-Cola Co. (KO)	1.1	Mastercard Inc. (MA)	0.9	Merck & Co. Inc. (MRK)	0.9	Celsius Holdings (CELH)	0.3
Accenture (ACN)	1.0	Eli Lilly and (LLY)	0.9	Danaher Corp. (DHR)	0.9	SouthState Corp. (SSB)	0.3
Adobe Inc. (ADBE)	0.9	Pfizer Inc. (PFE)	0.9	Philip Morris Intl (PM)	0.9	Chord Energy Corp. (CHRD)	0.2
Procter & Gamble (PG)	0.9	AbbVie Inc. (ABBV)	0.9	Wells Fargo & Co. (WFC)	0.9	Kinsale Capital Group (KNSL)	0.2
NIKE Inc. (NKE)	0.8	Merck & Co. Inc. (MRK)	0.9	Bristol-Myers Squibb (BMY)	0.8	Commercial Metals (CMC)	0.2
	<b>54.3%</b>		<b>35.2%</b>		<b>27.4%</b>		<b>5.5%</b>

Source: FactSet, Goldman Sachs Global Investment Research

# Disclosure Appendix

## Reg AC

We, Cormac Conners, David J. Kostin, Ben Snider, Ryan Hammond, Lily Calcagnini, Jenny Ma and Daniel Chavez, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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