The **PACER PERSPECTIVE**
October 2023

Growth Investing Illuminated: The “take-one” on Free Cash Flow Margin

– Danke Wang, CFA, FRM, Portfolio Manager

In the realm of growth investing, investors look for companies that are expected to outpace the industry or the market averages in terms of growth. However, approaching growth investing isn't always a straightforward endeavor, given there is no universally accepted formula to gauge a company's growth potential.

Key Takeaways

1. Growth investing is a complex and multifaceted strategy, in which there is rarely a one-size-fits-all approach.
2. Free cash flow (FCF) margin proves its worth as a critical factor for identifying growth opportunities.
3. Selecting stocks with high FCF margin has historically helped investors to achieve better long-term returns.

Instead, growth investing requires a degree of subjective interpretation and judgment. A prime example of this is cutting-edge technology companies, which lack reliable financial data for investors to conduct conclusive evaluations. In such cases, the investment theme heavily relies on the estimation of future market share and growth, demanding active management. Alternatively, investors may use certain factors or criteria in the analysis frameworks, but these methods must be applied with other qualitative considerations, such as industry trend and evolution. Unlike value investing which boasts standardized valuation ratios, growth investing has restraints when it comes to passive factor screening. That is why there are more actively managed growth funds than passive ones.

As illustrated in the table below, major growth indexes employ a variety of passive factors, including sales growth, earnings growth, and price momentum. Notably, none of these methodologies are similar to each other, underscoring the inherent complexity in assessing the potential of growth stocks.

Major Growth Indexes Use Sales Growth as a Key Input

MSCI USA Growth Index	S&P 500 Growth Index	Russell 1000 Growth Index
Long-Term Forward Earnings Per Share (EPS) Growth Rate	Three-Year Net Change in Earnings Per Share (Excluding Extra Items) Over Current Price	Forecast Medium-Term Growth (2 Year)
Long-Term Historical Sales Per Share Growth Trend	Three-Year Sales Per Share Growth Rate	Sales Per Share Historical Growth (5 Year)
Current Internal Growth Rate	Momentum (12-Month % Price Change)	
Long-Term Historical EPS Growth Trend		
Short-Term Forward EPS Growth Rate		

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According to the S&P Style Index methodology, growth is characterized by three factors: three-year sales growth, three-year earnings change over price, and 12-month price return. Those in conjunction with three valuation ratios (Price to Book, Price to Sales, and Price to Earnings) establish the value/growth scores that categorize stocks into three baskets: growth, blended, and value.

In constructing the style indexes, the growth and blended baskets merge to form the growth index, while the value and blended baskets create the value index. Additionally, S&P also introduced the pure style indexes, which exclusively focus on either the growth or value basket. For instance, the S&P 500 Pure Growth Index includes fewer than 100 stocks from the S&P 500 with the best growth scores.

At the end of 2022, the S&P Style Indexes went through the annual reconstitution. Surprisingly, we noticed that the S&P 500 Pure Growth Index had over 30% exposure to the Energy sector, while the corresponding weight in the S&P 500 Growth Index was only 8%. This divergence raises questions regarding the underlying implications and reasoning.

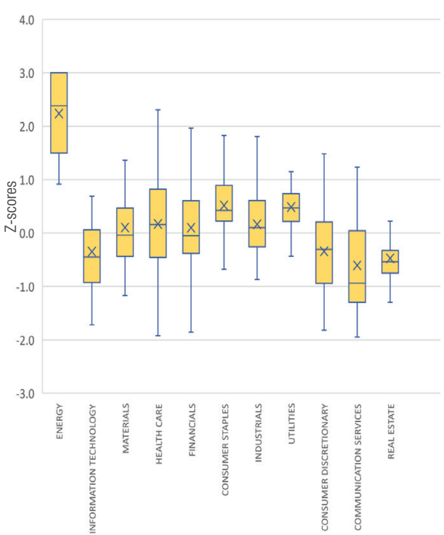
Weights on Selected Sectors
as of 12/31/2022

	S&P 500 Growth Index	S&P 500 Pure Growth Index
Energy	8.47	30.48
Technology	29.66	12.92

Source: Morningstar Direct

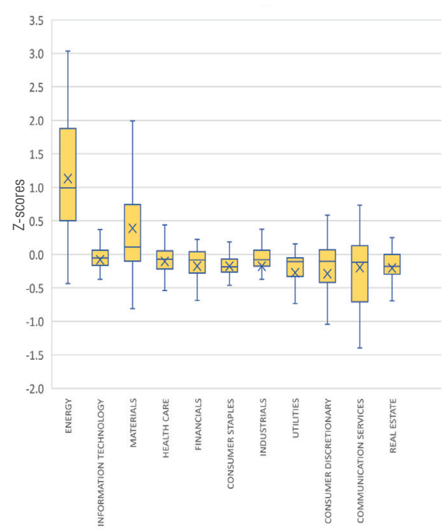
Interestingly enough, Energy companies stood out on all three growth factors in 2022. The sector witnessed a 70% increase in revenue, a staggering 270% surge in earnings and almost 60% price return, far surpassing other sectors.

12 Month Price Return
as of 12/31/2022



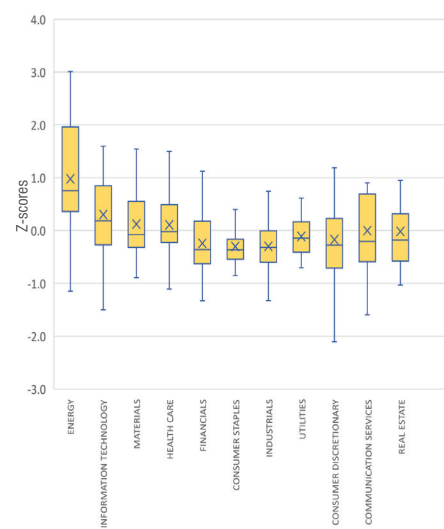
Source: Pacer Advisors, FactSet

3 Year Earnings Per Share Change/Price as of 12/31/2022



Source: Pacer Advisors, FactSet

3 Year Sales Growth
as of 12/31/2022



Source: Pacer Advisors, FactSet

Consequently, the S&P 500 Pure Growth Index not only shifted sector allocations dramatically relative to the historical range, but also markedly deviated from the average composition of large-cap growth funds in the Morningstar category. On average, the US growth funds held a 32% allocation to Technology, whereas Energy stocks made up only 2% of the allocation.

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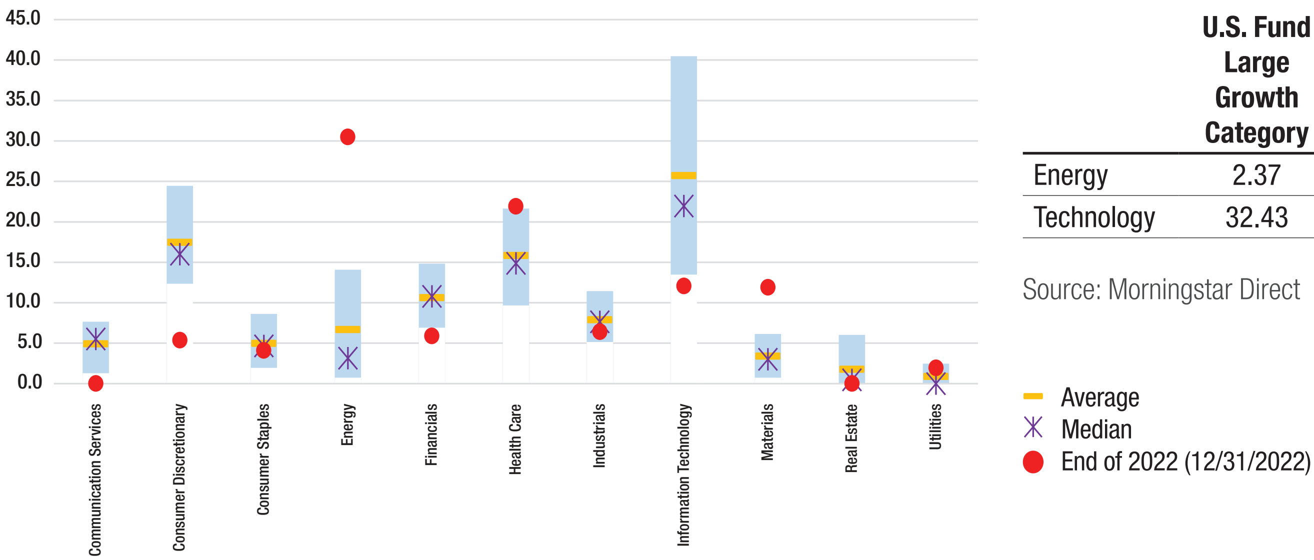
S&P 500 Pure Growth Sector End of 2022 vs Historical Middle 80% Range
12/31/1996 to 12/31/2022



Source: Pacer Advisors, FactSet

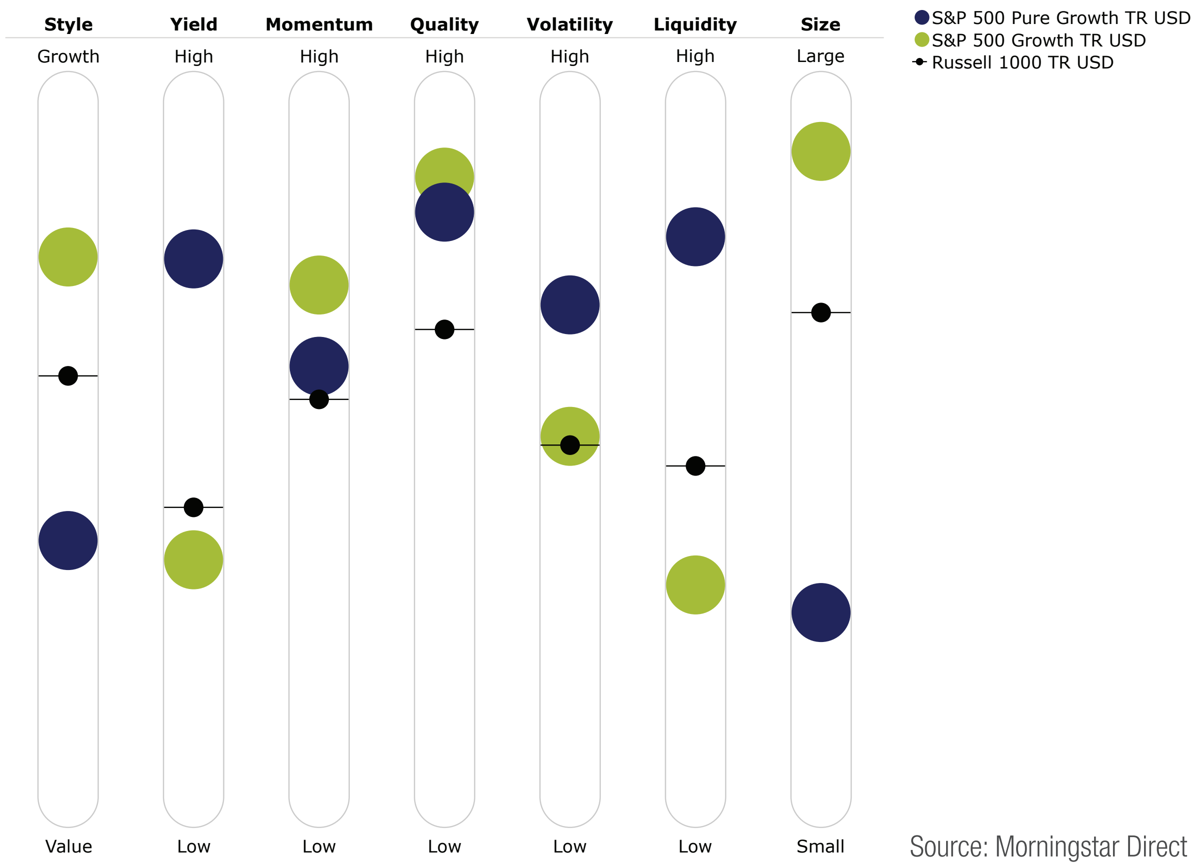
Weights on Selected Sectors
as of 12/31/2022

	U.S. Fund Large Growth Category	S&P 500 Pure Growth Index
Energy	2.37	30.48
Technology	32.43	12.92

Source: Morningstar Direct

This disparity highlights that "pure growth" may not always live up to its name. This observation is corroborated by Morningstar's factor exposure analysis, which indicates the S&P 500 Pure Growth Index as having a value tilt.

Morningstar Factor Profile
as of 8/31/2023



Source: Morningstar Direct

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Our Solution

Since the end of 2022, Pacer has introduced two new growth-oriented funds, namely the Pacer US Large Cap Cash Cows Growth Leaders ETF (COWG) and the Pacer US Small Cap Cash Cows Growth Leaders ETF (CAFG), which are centered on identifying growth investment opportunities by screening for high FCF margin stocks within both the large cap and small cap universes.

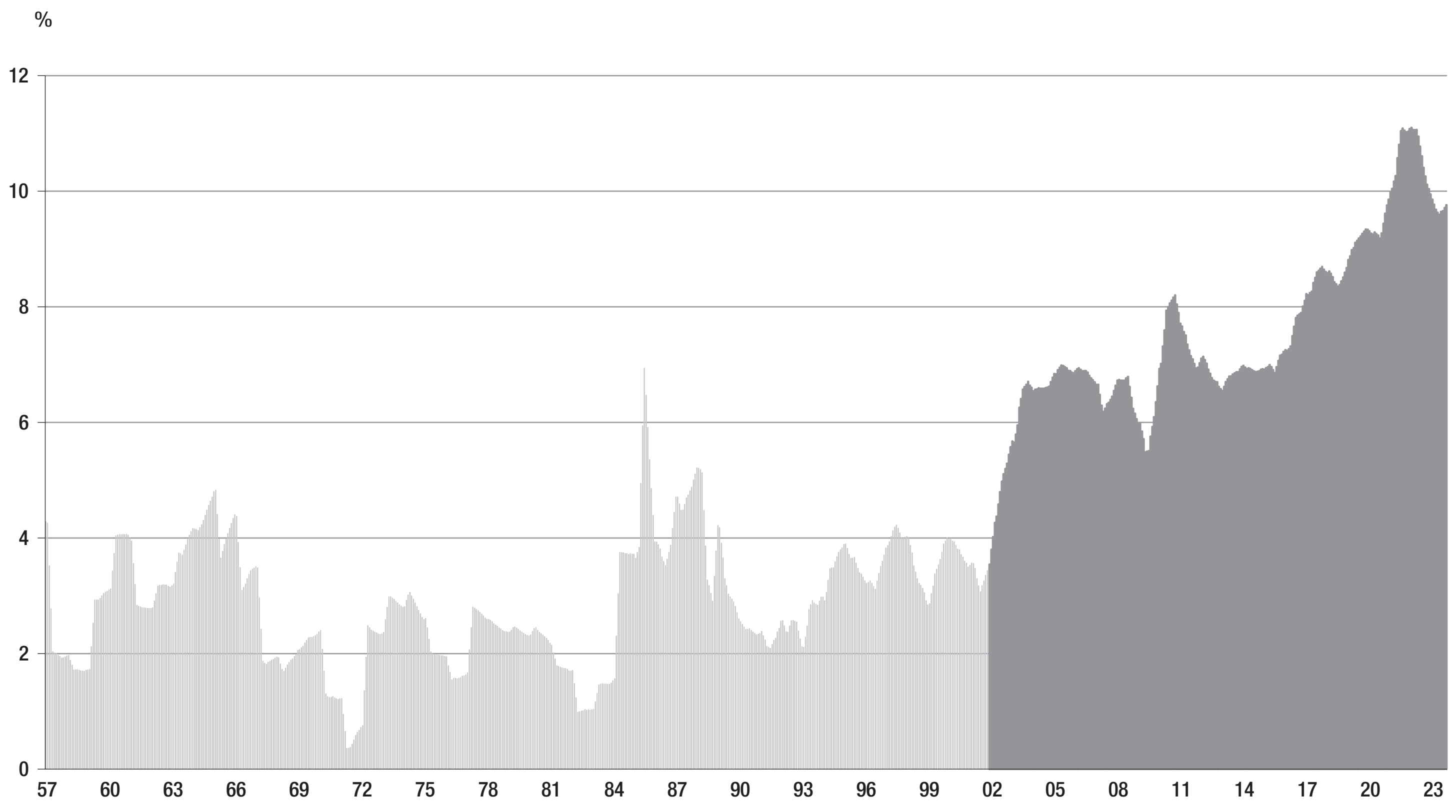
Why do we like FCF Margin?

Capital is an indispensable requirement for growth. Companies need investment in research and development, advertising, and marketing to generate current and future sales. The sources of capital can be external, encompassing equity and debt issuance, which may negatively impact the shareholder value. Meanwhile, capital can be sourced internally. The retained FCF may be used not only for sales-driving expenditures, but also for acquisitions and share buybacks.

Since the year 2000, we have seen massive margin expansion among U.S. large cap companies, and the ability to generate FCF has become a key feature for U.S. companies establishing a competitive edge.

US Large-Capitalization Stocks Free Cash Flow Margins[1]

1957 - September 2023



Source: Empirical Research

(1)Empirical Research US Large Cap Stocks Universe

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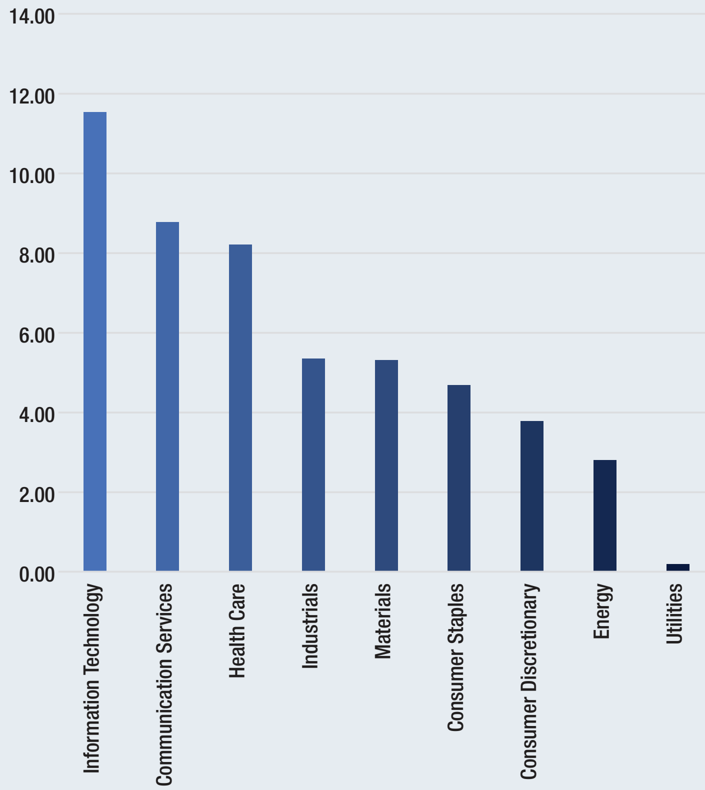
Over time, Technology, Communication Services, and Healthcare Sectors have consistently led in FCF production.

Historical Average FCF Margin by Russell 1000 Sector
12/31/1991 - 9/30/2023



Source: FactSet, Pacer Advisors

FCF margin, calculated via FCF divided by sales, shows how much FCF a company generates relative to its revenue. It essentially provides insight into a company's ability to generate cash relative to its business scale. A high FCF Margin suggests that a company is efficient at converting its revenue into cash, which in turn may be used to finance future growth. Such is a positive sign for investors.

$$FCF\ Margin = \frac{FCF}{Sales}$$

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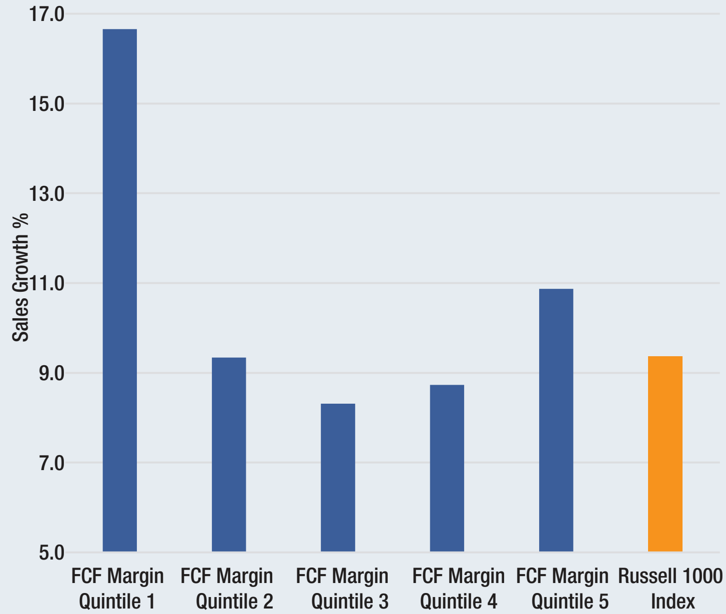
Why is FCF Margin Growth Oriented?

Growth stocks are typically associated with revenue growth, the expectation being: robust sales growth will translate into profit and cash flow growth.

When examining the three-year sales growth among quintiles of FCF margin companies within the Russell 1000 Index, a clear trend is revealed: the high FCF producers have delivered faster revenue expansion than the rest of the universe, aligning them more closely with the growth segment of the market.

Trailing 3-Year Sales Growth (Median)
as of 9/30/2023

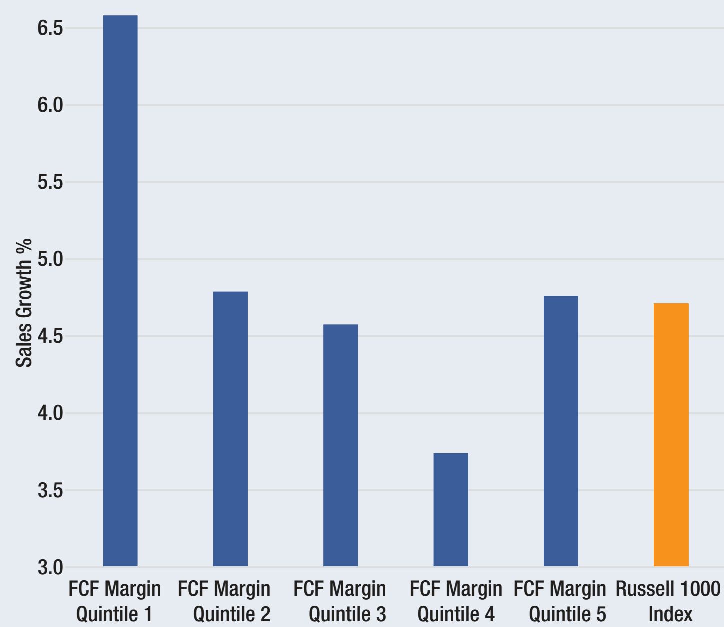


Source: FactSet, Pacer Advisors

Additionally, high FCF margin companies are expected to surpass the rest of the market in terms of revenue growth over the next two years (based on consensus estimates).

This forward-looking perspective underscores the growth-oriented nature of FCF margin as investors seeking growth opportunities tend to favor companies with the potential to achieve strong top-line growth in the coming years.

Forward 2-Year Sales Growth Estimate (Median)
as of 9/30/2023



Source: FactSet, Pacer Advisors

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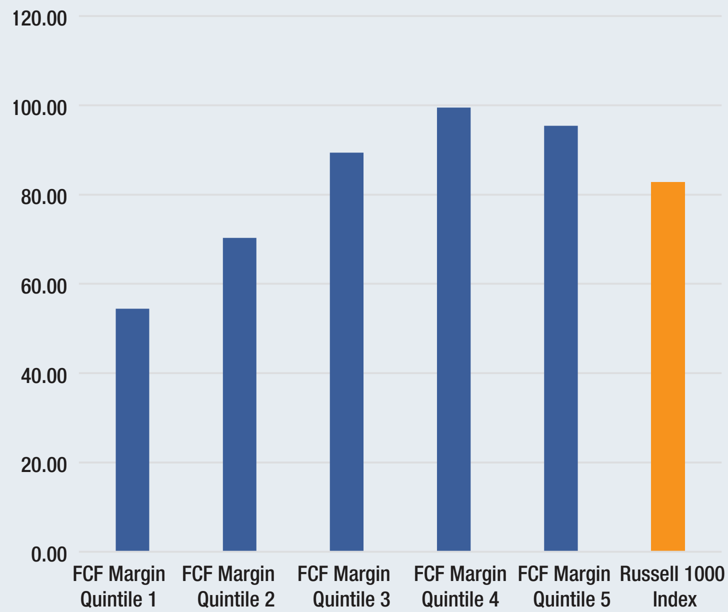
When a company enjoys healthy margins and strong cash flows, it can actively pursue growth without exposing itself to excessive financial leverage. This is a pivotal aspect of growth investing.

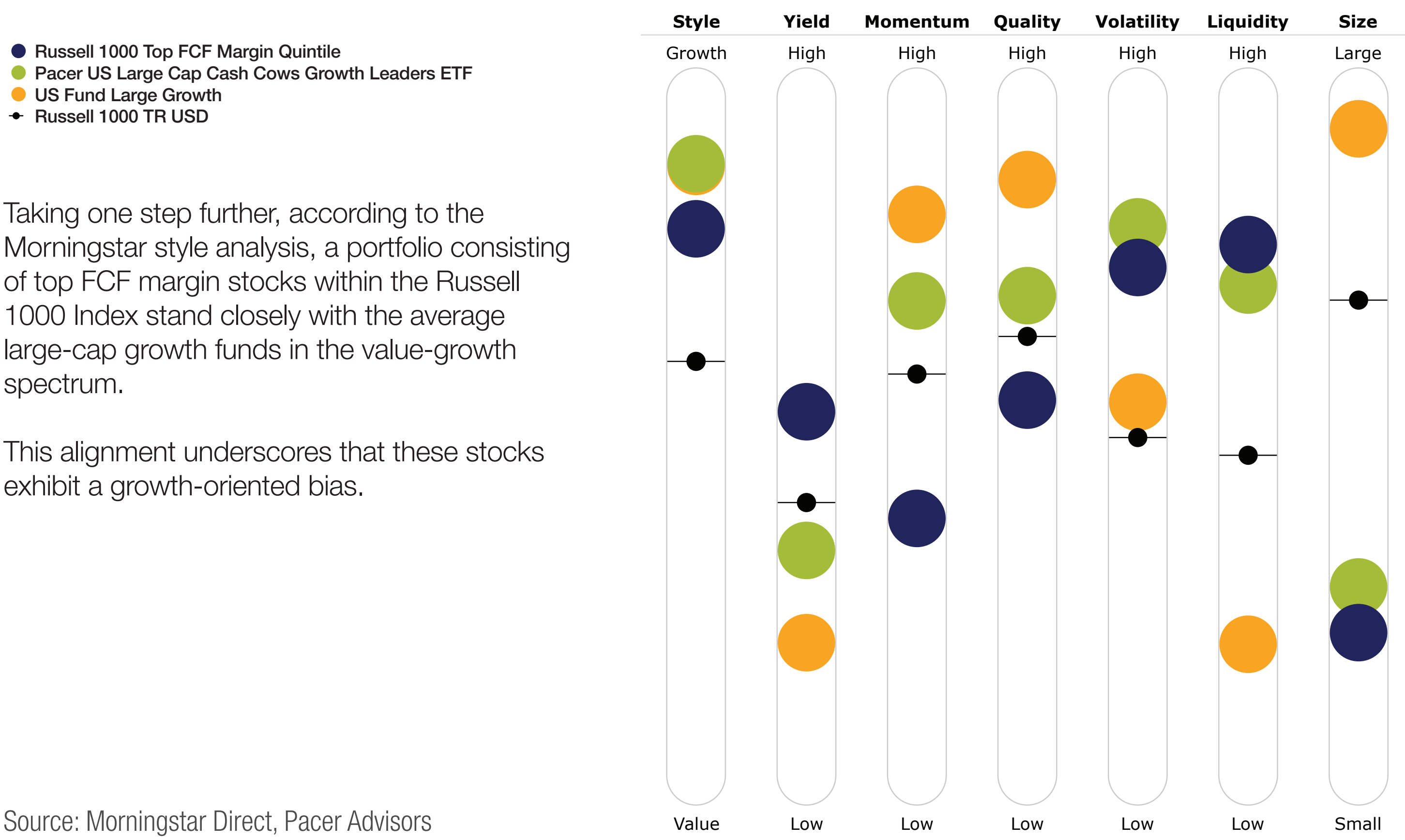
As illustrated in the chart to the right, the top quintile FCF producers within the Russell 1000 Index exhibit lower debt-to-equity ratios compared to their low FCF margin counterparts. The FCF production highlights a company's ability to self-finance its growth initiatives, aligning it with better growth potential.

Source: FactSet, Pacer Advisors

Debt-to-Equity (Median)
as of 9/30/2023



Morningstar Factor Profile
as of 8/31/2023



Taking one step further, according to the Morningstar style analysis, a portfolio consisting of top FCF margin stocks within the Russell 1000 Index stand closely with the average large-cap growth funds in the value-growth spectrum.

This alignment underscores that these stocks exhibit a growth-oriented bias.

Source: Morningstar Direct, Pacer Advisors

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Based on the comprehensive fundamental and style analysis above, FCF margin is indeed a highly relevant factor for investors pursuing growth investments. Furthermore, various performance analyses reaffirm this conclusion.

According to data sourced from Empirical Research, the top quintile FCF margin large cap stocks (top FCF margin stocks) delivered higher annualized returns in the growth-driven period than in the value dominated market. These returns were comparable to those achieved by the Russell 1000 Growth Index.

Average Yearly Return
12/31/1991 - 6/30/2023

	Top FCF Margin Stocks	Russell 1000 Index	Russell 1000 Value Index	Russell 1000 Growth Index
Average Return in Growth Market	21.17%	16.75%	10.44%	22.80%
Average Return in Value Market	7.77%	3.88%	8.84%	-1.16%

Source: Empirical Research, Pacer Advisors

Based on excess returns, top FCF margin stocks exhibit positive correlations with the growth benchmark and negative correlations with the value benchmark. Regression analysis on monthly returns reveals that top FCF producers have higher betas against the Russell 1000 Growth Index. Moreover, a high R-squared against the Russell 1000 Growth Index indicates that a substantial portion of the returns from the top FCF margin stocks can be explained by the growth benchmark.

Various Performance Measurement
3/31/1999 - 6/30/2023

	Top FCF Margin Stocks	S&P 500 Pure Growth Index	S&P 500 Growth Index	Nasdaq 100 Index	Russell 1000 Growth Index	S&P 500 Pure Value Index	Russell 1000 Value Index
Correlation with Russell 1000 Growth	0.53	0.57	0.79	0.83	1.00	(0.69)	(0.99)
Correlation with Russell 1000 Value	(0.54)	(0.58)	(0.81)	(0.83)	(0.99)	0.70	1.00
Beta against Russell 1000 Growth	0.97	1.10	0.91	1.28	1.00	0.81	0.70
R-squared against Russell 1000 Growth	88.74%	87.40%	96.95%	87.97%	100.00%	42.47%	61.93%

Source: Empirical Research, Pacer Advisors

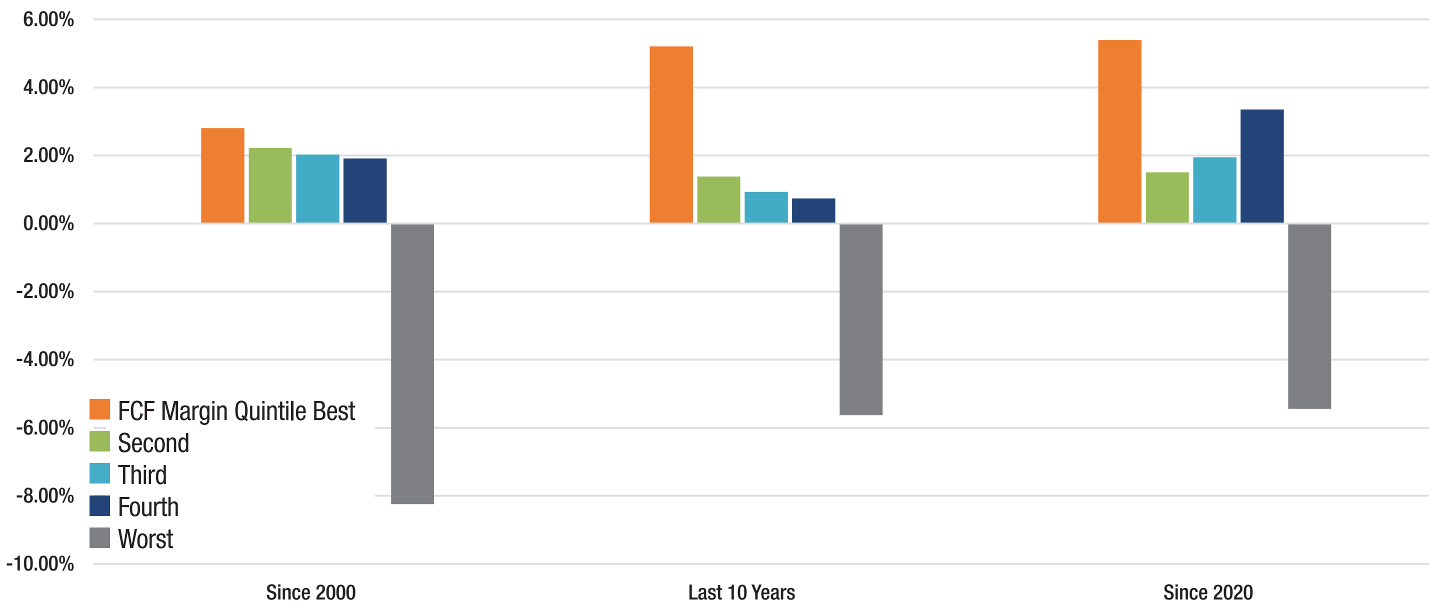
How Effective is FCF Margin for Stock Selection?

The historical performance data strongly supports the notion that using FCF margin has led to higher returns.

The top quintile of FCF margin large cap companies outperform the lower quintiles across different historical time frames, including longer-term periods since 2000, the past decade, and more recent periods since 2020. Companies with the weakest profitability, as indicated by lower FCF margins, consistently lag the broader large-cap universe.

Relative Return of U.S. Large Cap Companies by FCF Margin Quintile

2000 - June 2023

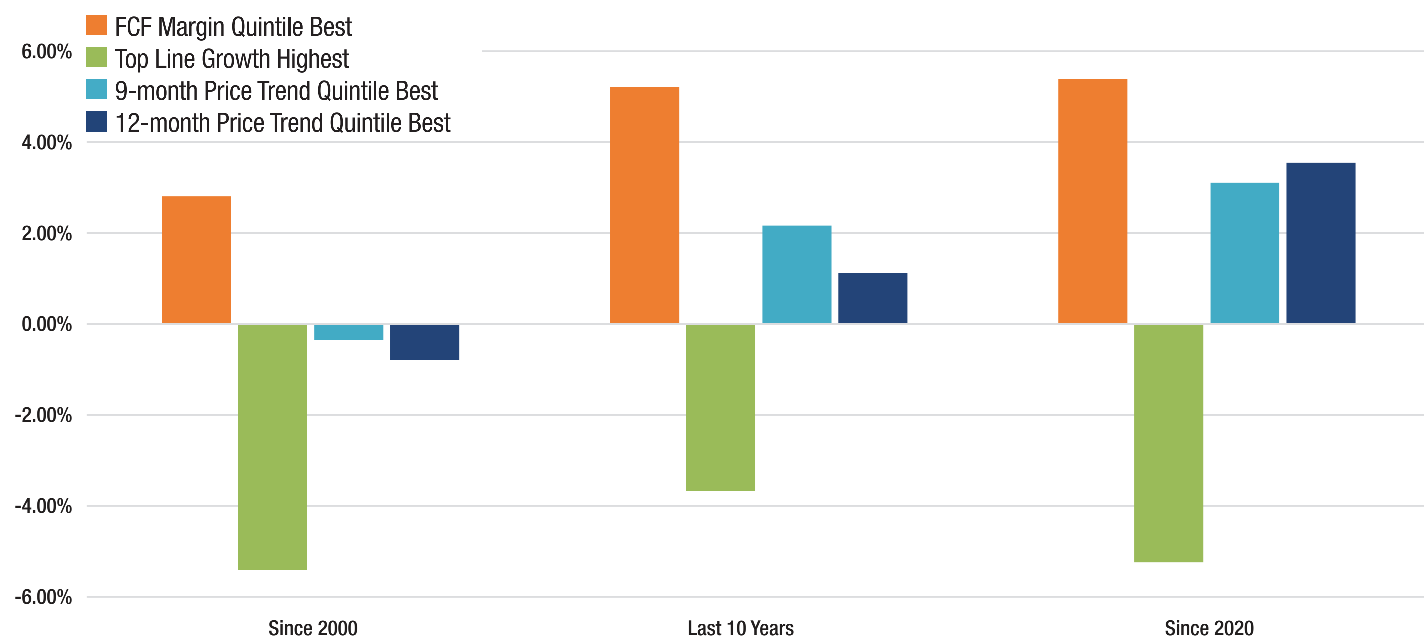


Source: Empirical Research, Pacer Advisors

The chart below illustrates the relative performance of the top quintile of FCF margin within U.S. large cap stocks against commonly used metrics by investors, such as sales growth and momentum. FCF margin consistently outperforms these factors across different trailing periods.

Relative Return of U.S. Large Cap Companies – Best Factor Quintile

2000 - June 2023



Source: Empirical Research, Pacer Advisors

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It's worth highlighting some insights from this comparison: 1) investors who focus solely on momentum may overlook the crucial aspects of a company's financial health and growth potential that FCF margin captures. 2) While sales growth is undoubtedly important, it does not necessarily translate into superior stock performance. In contrast, FCF margin reflects a company's ability to convert sales growth into cash flow and profitability, which is ultimately more influential in driving stock returns.

In conclusion, FCF margin has emerged as a pivotal factor for identifying growth opportunities. By prioritizing companies with robust FCF margins, investors position themselves to capitalize on the financial strength and the growth potential of these firms and potentially achieve better long-term returns.

PACER US LARGE CAP CASH COWS GROWTH LEADERS ETF
COWG

Pacer US Large Cap Cash Cows Growth Leaders ETF

Is a strategy-driven exchange traded fund that aims to identify top growth companies in the Russell 1000 Index by screening for above average free cash flow margins.

PACER US SMALL CAP CASH COWS GROWTH LEADERS ETF
CAFG

Pacer US Small Cap Cash Cows Growth Leaders ETF

Is a strategy-driven exchange traded fund that aims to identify top growth companies in the S&P SmallCap 600 Index by screening for above average free cash flow margins.

Correlation: Correlation (or correlation coefficient) is a statistical measure of the strength of a linear relationship between two variables.
Beta: Beta is a statistic that measures the expected increase or decrease of an individual stock price in proportion to movements of the benchmark.
R-Squared: R-Squared (R^2 or the coefficient of determination) is a statistical measure in a regression model that determines the proportion of variance in the dependent variable that can be explained by the independent variable.
Regression: A regression is a statistical technique that relates a dependent variable to one or more independent (explanatory) variables.
Debt-to-Equity: The debt-to-equity ratio indicates how much debt a company is using to finance its assets relative to the value of shareholders' equity.
Free Cash Flow (FCF): A company's cash flow from operations minus capital expenditures (expenses, interest, taxes, and long-term investments)
Free Cash Flow Margin: the FCF margin is a profitability ratio that compares a company's free cash flow to its revenue to understand the proportion of revenue that becomes free cash flow (FCF).
S&P 500 Growth Index: is a stock index to serve as a proxy for growth companies included in the S&P 500. The index identifies growth stocks using three factors: sales growth, the ratio of earnings change to price, and momentum.
S&P 500 Pure Growth Index: is a style-concentrated index designed to track the performance of stocks that exhibit the strongest growth characteristics by using a style-attractiveness-weighting scheme.
S&P 500 Value Index: is a stock index to serve as a proxy for value companies included in the S&P 500. The index identifies value stocks using three factors: the ratios of book value, earnings, and sales to price.
S&P 500 Pure Value Index: is a style-concentrated index designed to track the performance of stocks that exhibit the strongest value characteristics by using a style-attractiveness-weighting scheme.
NASDAQ 100 Index: is a basket of the 100 largest, most actively traded companies listed on the Nasdaq stock exchange.
Russell 1000 Index: is a market-capitalization weighted index representing the top 1000 large-cap stocks in the Russell 3000 Index.
Russell 1000 Value Index: is a market-capitalization weighted index representing approximately 1000 large- and mid cap value stocks in the Russell 3000 Index.
Russell 1000 Growth Index: is a market-capitalization weighted index representing approximately 1000 large- and mid-cap growth stocks in the Russell 3000 Index.
Momentum: momentum refers to the inertia of a price trend to continue either rising or falling for a particular length of time. Momentum is usually measured by taking the price changes for a fixed time period.
Z-score: Z-score is a statistical measurement that describes a value's relationship to the mean of a group of values.

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