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TRIVARIATE RESEARCH

TECH STRATEGY: LONG AND SHORT IDEAS BASED ON QUALITY AND BETA

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RESEARCH SUMMARY

Background: With the Technology sector nearly 31% of the S&P500, it is a constant struggle to participate in the new trends but also manage risk. We have found that quality and beta matter, and we focus on generating actionable long / short Technology ideas in today's research.

Quality definition: For growth investors, quality really matters. Trivariate's proprietary "substance" tag groups stocks into **4 categories for quality: high, mid, low, and junk.** The signals used for the model for a growth stock include level and change of some of the following: cash to market cap, net debt to equity, distance to default, gross margin, free cash flow yield, free cash flow growth, and short interest to float cap.

Quality results: While there was a significant drawdown in mega-/ large-cap quality Growth stocks from 2021 through 2022, the highest quality quartile has performed the best over the long-term. Clearly, avoiding the lowest quality quartile has been prudent among mega-/ large-cap quality stocks. The same is true for SMID-cap quality Growth. **Interestingly though, high-quality mega-/ large cap. stocks are at all-time highs, but that is not yet true for SMID caps.**

Quality plus beta combined: We defined "growth beta" as beta vs. the Nasdaq – NOT the S&P500 to make it more relevant for Growth investors. High growth-beta Growth stocks in the bottom half of quality are down in absolute terms over the last 24 years! **By far the best performing bucket are low growth-beta Growth stocks that are high quality – up over 4500% during that timeframe. If Growth managers are going to own high growth-beta Growth stocks, skewing to the highest quality quartile is crucial.**

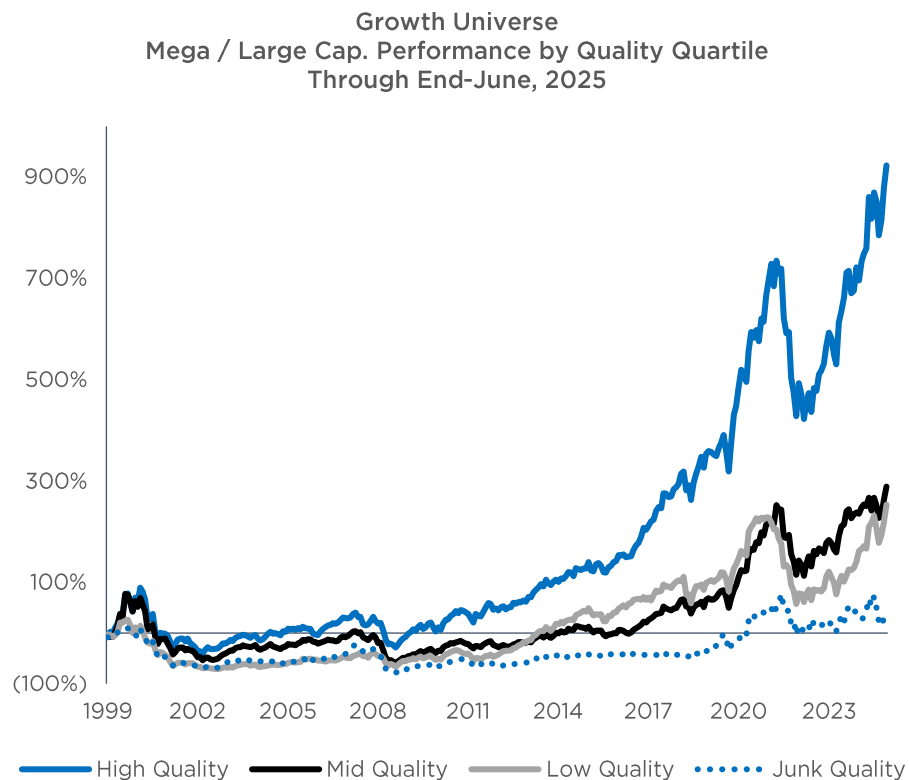
Stock ideas: We offer buy and sell Technology stock ideas based on quality and beta.

Slide 5 includes long ideas, in the top quartile of quality we call "high" and in the bottom half of growth beta. These include CSCO, INTU, and ADBE among others.

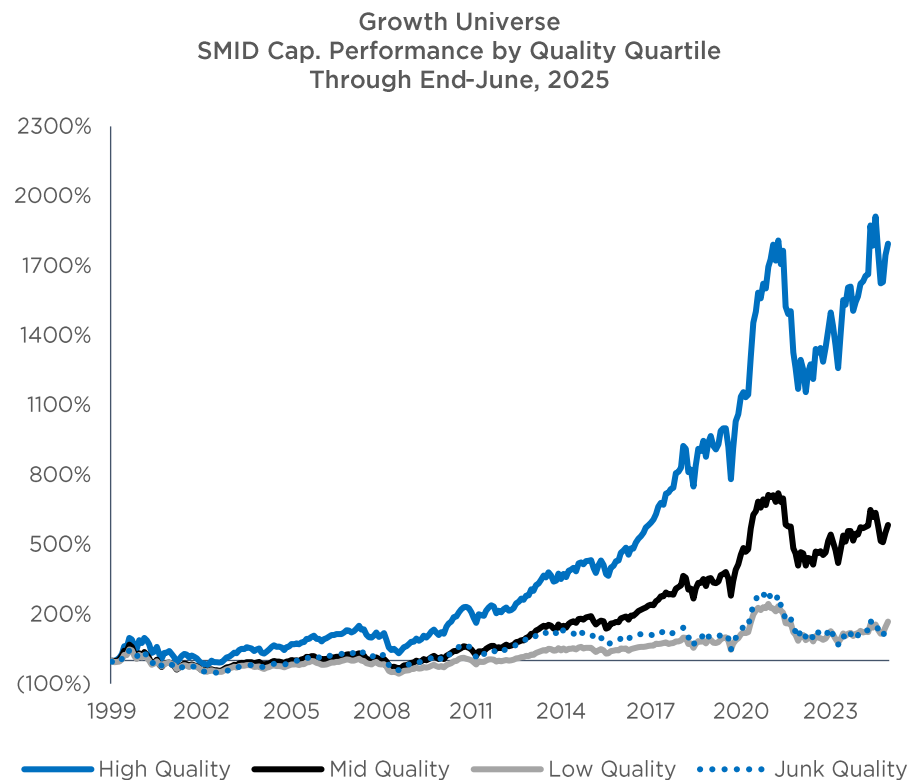
Slide 6 is short ideas, in the bottom half of quality we call "low" or "junk" and in the top half of growth beta. These include MU, ADI, and JBL, among others.

AMONG GROWTH STOCKS, HIGH-QUALITY IS BEST

While there was a significant drawdown in mega-/ large-cap quality Growth stocks from 2021 through 2022, the highest quality quartile has performed the best over the long-term. Clearly, avoiding the lowest quality quartile has been prudent among mega-/ large-cap quality stocks (left). The same is true for SMID-cap quality Growth (right). Interestingly though, high-quality mega-/ large cap. stocks are at all-time highs, but that is not yet true for SMID caps.



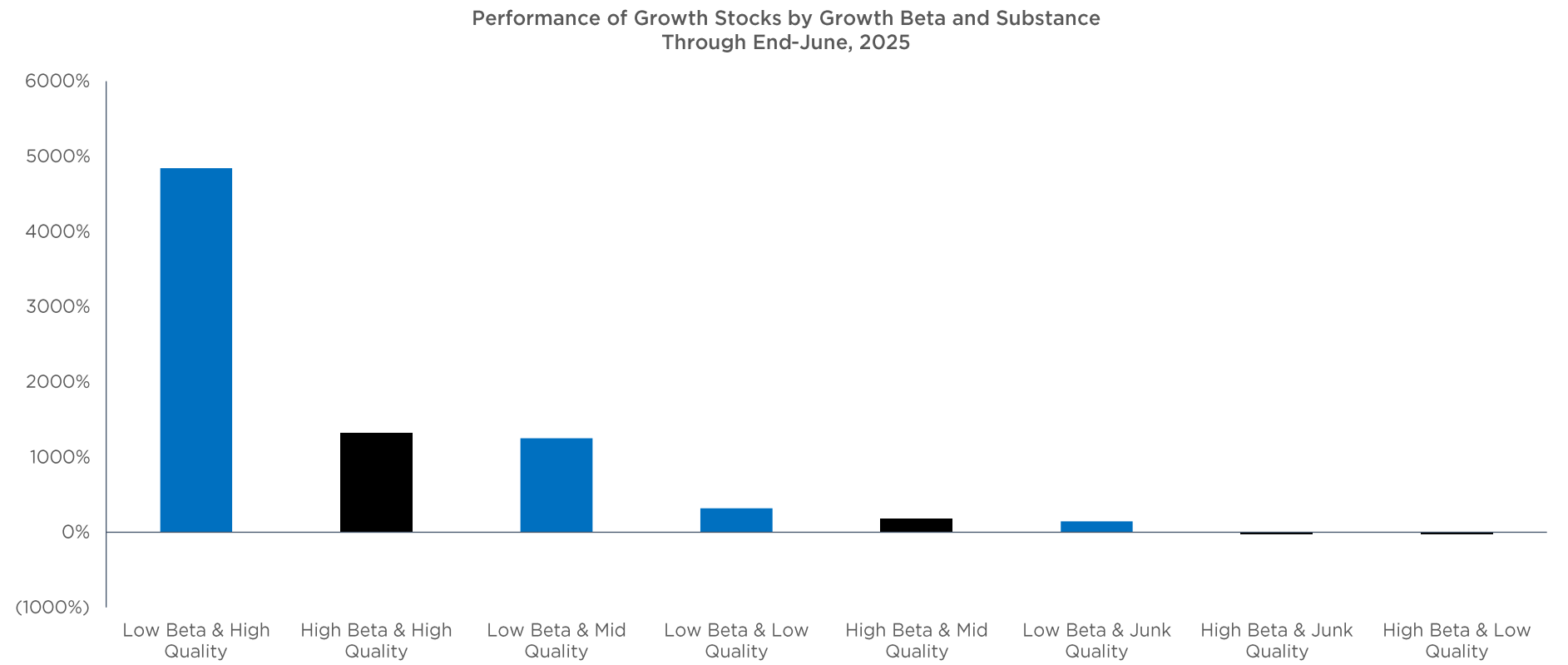
Source: Trivariate Research



Source: Trivariate Research

AVOIDING HIGH BETA GROWTH STOCKS IS KEY

We define “growth beta” as beta vs. the Nasdaq – NOT the S&P500 to make it more relevant for Growth investors. High growth-beta Growth stocks in the bottom half of quality are down in absolute terms over the last 24 years! By far the best performing bucket are low growth-beta Growth stocks that are high quality – up over 4500% during that timeframe. If Growth managers are going to own high growth-beta Growth stocks, skewing to the highest quality quartile is crucial (black bar 2nd from left below).



Source: Trivariate Research

TECHNOLOGY GROWTH STOCK BUY IDEAS

Below, we show Technology stocks in the highest quality quartile of our model that are also in the lowest half of beta . Mega-/large-cap. ideas on the left include CSCO, INTU, and ADBE. On the right, we show mid-cap and small-cap buy ideas which include IT, TYL, and PTC, among others.

**Information Technology: Mega/Large Cap Growth Stocks
High Quality & Bottom Half of Growth Beta
As of July 18th, 2025**

Ticker	Company	Market Cap. (US \$Bil.)	Growth Beta
CSCO	Cisco Systems, Inc.	269.48	0.63
INTU	Intuit Inc.	209.94	0.74
ADBE	Adobe Inc.	155.17	0.71
MSI	Motorola Solutions, Inc.	70.18	0.38
ADSK	Autodesk, Inc.	63.55	0.76
FICO	Fair Isaac Corporation	37.53	0.74

Source: Trivariate Research

**Information Technology: Small / Mid Cap Growth Stocks
High Quality & Bottom Half of Growth Beta
As of July 18th, 2025**

Ticker	Company	Market Cap. (US \$Bil.)	Growth Beta
IT	Gartner, Inc.	27.35	0.63
TYL	Tyler Technologies, Inc.	24.34	0.46
PTC	PTC Inc.	23.94	0.77
CHKP	Check Point Software Technologies Ltd.	23.35	0.37
ZM	Zoom Communications Inc.	22.65	0.59
GWRE	Guidewire Software, Inc.	18.68	0.62
BSY	Bentley Systems, Incorporated	18.24	0.61
DT	Dynatrace, Inc.	16.07	0.75
APPF	AppFolio, Inc.	9.04	0.73
BMI	Badger Meter, Inc.	7.20	0.69
VRNS	Varonis Systems, Inc.	5.74	0.59
QLYS	Qualys, Inc.	5.06	0.75
TENB	Tenable Holdings, Inc.	4.04	0.71
BL	BlackLine, Inc.	3.52	0.67

Source: Trivariate Research

TECHNOLOGY SELL / SHORT IDEAS

Stocks in the bottom half of our quality model (“low” or “junk” quality) in the highest half of beta include mega-/large-caps (left) like MU, ADI, and MRVL. JBL, NTAP, and FSLR are among those (right) that are bottom-half quality and high beta among the SMID cap. universe.

Information Technology: Mega/Large Cap Growth Stocks
Bottom Half of Quality & Top Half of Growth Beta
As of July 18th, 2025

Ticker	Company	Market Cap. (US \$Bil.)	Growth Beta
MU	Micron Technology, Inc.	128.02	1.72
ADI	Analog Devices, Inc.	120.02	1.25
MRVL	Marvell Technology, Inc.	64.36	2.01
GLW	Corning Incorporated	46.26	0.85

Source: Trivariate Research

Information Technology: Small / Mid Cap Growth Stocks
Bottom Half of Quality & Top Half of Growth Beta
As of July 18th, 2025

Ticker	Company	Market Cap. (US \$Bil.)	Growth Beta
JBL	Jabil Inc.	24.04	1.07
NTAP	NetApp, Inc.	21.71	0.97
FSLR	First Solar, Inc.	18.86	0.89
COHR	Coherent Corp.	15.48	2.06
IONQ	IonQ, Inc.	13.17	2.23
KD	Kyndryl Holdings, Inc.	9.13	1.09
QRVO	Qorvo, Inc.	8.22	1.39
LSCC	Lattice Semiconductor Corp	7.29	1.77
AEIS	Advanced Energy Industries	5.39	1.48
SMTC	Semtech Corporation	4.65	2.10
TTMI	TTM Technologies, Inc.	4.58	1.23
MIR	Mirion Technologies, Inc.	4.50	1.00
IREN	IREN Limited	4.34	1.95
OSIS	OSI Systems, Inc.	3.55	0.85
PI	Impinj, Inc.	3.36	1.67
DOCN	DigitalOcean Holdings, Inc.	2.69	1.57

Source: Trivariate Research

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