

May 2023

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Executive Summary

The “Intangible Value Factor” (IHML) can play an additive role in factor portfolios alongside the established market, size, value, quality, and momentum factors. This Six-Factor Model avoids the problematic “anti-innovation” bias of traditional factor portfolios and can be easily implemented using ETFs.

Modern Factors

Intangible Value as a Factor

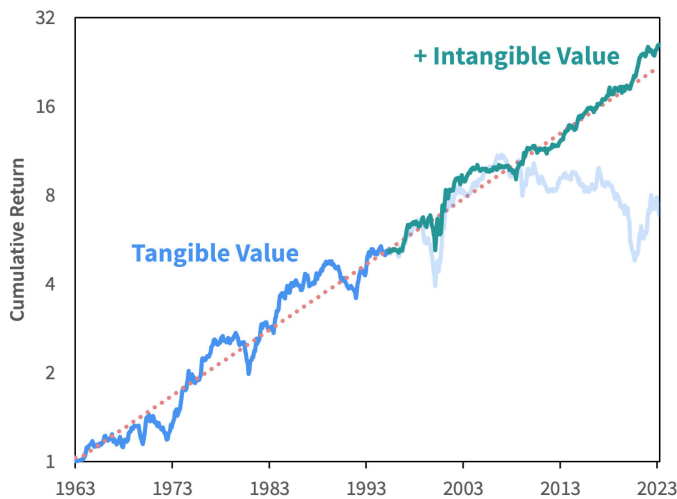
The “Value Factor” was popularized by the seminal work of Nobel laureate Eugene Fama and Ken French, who found that stocks with low prices relative to book value tended to outperform. Yet, despite its intuitive appeal, this factor has failed to repeat its historical performance the past decade.

In [Intangible Value](#) (Jun 2021), we argued that this is due to the Value Factor’s failure to account for the rise of intangible assets. To address this, we built an “Intangible Value Factor” that incorporates intangible assets, such as intellectual property, brand equity, human capital, and network effects. We estimate these intangibles using alternative data (e.g., patents, job posts) and natural language processing.

While the traditional Value Factor has struggled, the Intangible Value Factor has continued to outperform.

Exhibit 1

Value Is Dead, Long Live Value! 🙌



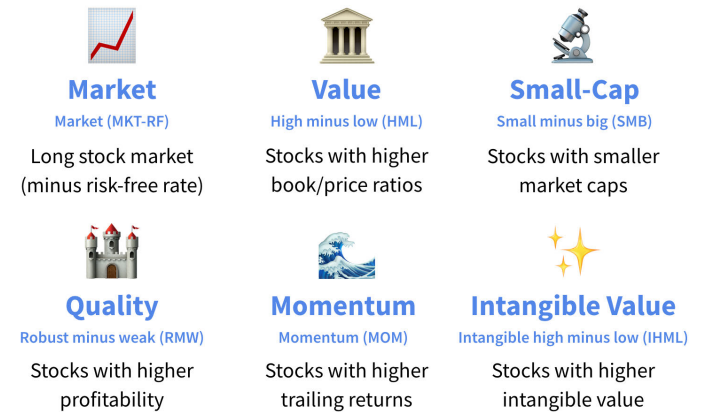
Source: Ken French, Sparkline. Tangible Value is a long-short portfolio constructed per the Fama-French HML factor. Intangible Value is the same except it uses the intangible value factor. Analysis updated to include both large- and small-cap stocks for greater comparability to Fama-French. No transaction or financing costs. From 7/1/1963 to 3/31/2023. See more complete definitions and important backtest disclosure below.

Factor Investing

Factor investing has enjoyed steady adoption by investors seeking an evidence-based and cost-effective approach. In addition to Value, investors now have access to several other popular factors, such as Small-Cap, Quality, and Momentum.

Exhibit 2

Our Factor Universe

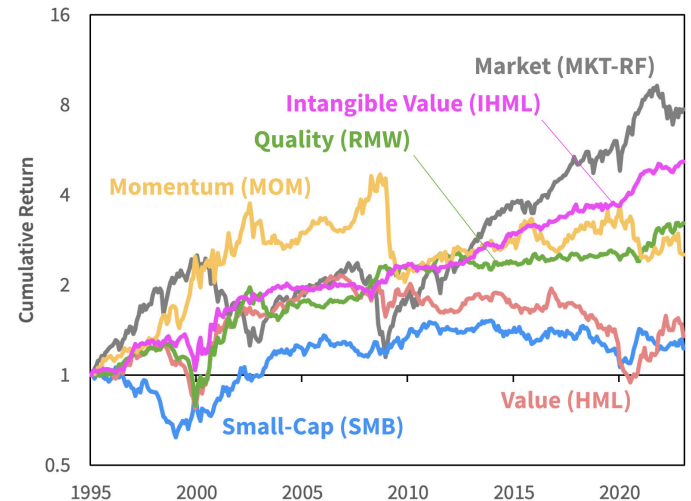


Source: Ken French, Sparkline. See complete definitions below.

Like Value, these other factors are motivated by a historical (backtested!) record of excess returns.

Exhibit 3

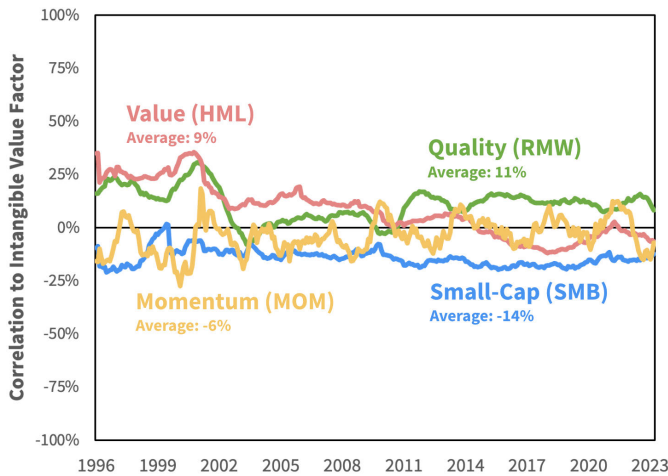
Factor Returns



Source: Ken French, Sparkline. Market and long-short portfolios constructed per the Fama-French Rm-Rf, HML, SMB, RMW, and MOM factors. Intangible Value follows the HML methodology except it uses the intangible value factor. Analysis includes both large- and small-cap stocks. No transaction or financing costs. From 3/31/1995 to 3/31/2023. See more complete definitions and important backtest disclosure below.

For a new factor to be included in asset pricing models, it should be distinct from existing ones. This is important for not only academics seeking theoretical purity but also practitioners seeking the benefits of diversification. The next exhibit computes the stock-level correlations of Intangible Value to the other factors.

Exhibit 4
Intangible Value Factor Correlations



Source: Ken French, Sparkline. Cross-sectional position-level correlations between Intangible Value and other factors. All factors are themselves cross-sectionally normalized within the top 3000 U.S. stocks. From 12/31/1995 to 3/31/2023.

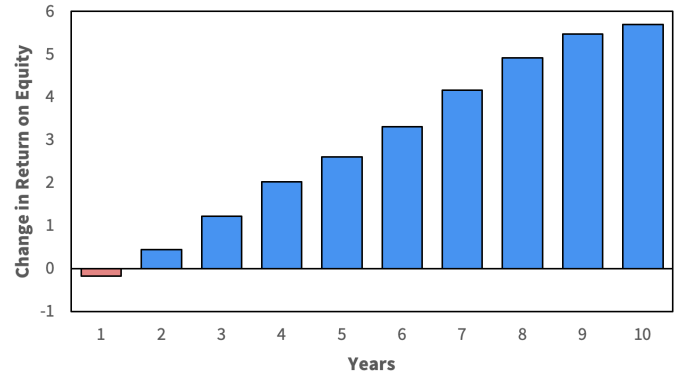
Intangible Value appears to be a distinct “sixth factor.” While varying over time, its correlations to other factors are modest, averaging between -14 and +11%. Furthermore, standard asset pricing regressions find that Intangible Value has a positive and significant association with future stock returns even after controlling for traditional factors.

What is the intuition behind Intangible Value as a distinct sixth factor? While ideological twins, Intangible Value and Value focus on opposing parts of the balance sheet. This results in two very different sets of companies. Value favors capital-intensive banks and manufacturers, while Intangible Value prefers asset-light tech platforms and brands. 🧠

Similarly, both Quality and Intangible Value seek firms with wide moats, which often take the form of intangible assets, such as luxury brands or drug patents. However, building intangible moats requires large upfront investments that can

take years to pay off (e.g., advertising, R&D). While Quality seeks firms that are profitable today, Intangible Value seeks those investing in profitability tomorrow.

Exhibit 5
Intangible Value: The Quality of Tomorrow



Source: S&P, Sparkline. Bars represent the coefficients of regressions where $Y = ROE(T+N) - ROE(T)$ and $X = INTANGIBLE(T)$. N is the number of years in the future. ROE is “return on equity” and INTANGIBLE is “intangible value.” Both are cross-sectionally Z-scored. Regression includes a constant. Analysis covers top 1000 U.S. stocks from 3/31/1995 to 3/31/2023.

Correlations with Small-Cap and Momentum are also low. Firms with high Intangible Value can be found in both the small-cap and large-cap universes and can have both positive and negative momentum.

Six-Factor Model

Not only is Intangible Value uncorrelated with other factors, but all six factors are uncorrelated with each other. The average pairwise correlation in the exhibit below is -5%.

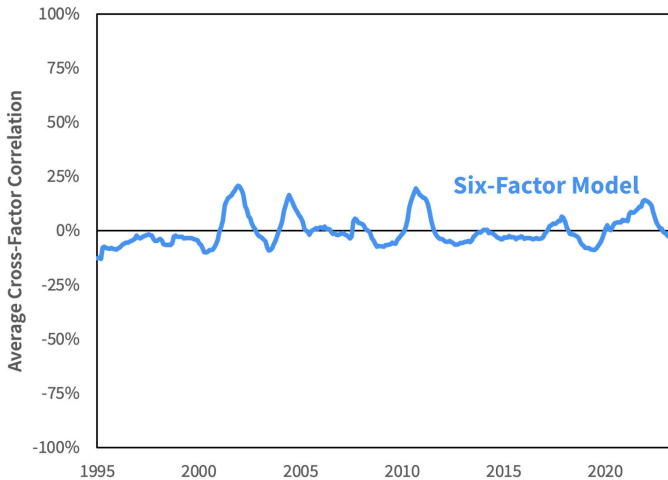
Exhibit 6
Factor Correlation Matrix

	MKT-RF	SMB	HML	RMW	MOM	IHML	
MKT-RF		7%	-3%	-34%	-22%	1%	Market
SMB	7%		13%	-28%	-8%	-14%	Small-Cap
HML	-3%	13%		18%	-33%	9%	Value
RMW	-34%	-28%	18%		9%	11%	Quality
MOM	-22%	-8%	-33%	9%		-6%	Momentum
IHML	1%	-14%	9%	11%	-6%		Intangible Value

Source: Ken French, Sparkline. Daily return correlations. 3/31/1995 to 3/31/2023.

Moreover, as noted in [Ilmanen and Kizer \(2012\)](#), these cross-factor correlations have been stable over time. While cross-asset correlations often spike in crises, factor correlations remained subdued through the 2000, 2008, and 2020 crises.

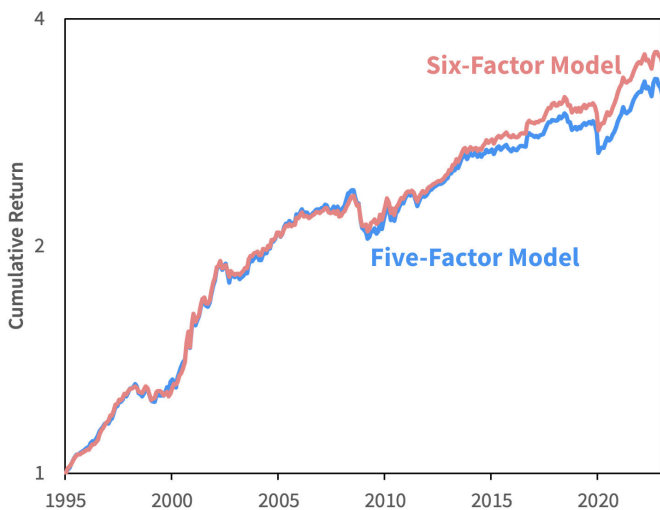
Exhibit 7
Average Factor Correlations



Source: Ken French, Sparkline. Rolling 252-day correlations. Average across all pairs of factors in the Six-Factor Model. From 3/31/1995 to 3/31/2023.

Low and stable correlations suggest that a multi-factor model should enjoy significant diversification benefits. The next exhibit backtests the performance of a strategy that allocates equally to each factor. We show the returns for models both with and without Intangible Value.

Exhibit 8
Multi-Factor Models



Source: Ken French, Sparkline. The Five-Factor Model is an equal-weighted portfolio of MKT-RF, SMB, HML, RMW, and MOM. The Six-Factor Model is the same but also includes IHML. Strategies are rebalanced monthly. No transaction or financing costs. From 3/31/1995 to 3/31/2023. See important backtest disclosure below.

Despite the recent struggles of Size, Value, and Momentum, the Six-Factor Model has continued to chug along, buoyed by strong returns from Quality, Market, and Intangible Value. Intangible Value has been particularly helpful over the past decade as intangible assets have gained in importance.

Applying the Six-Factor Model

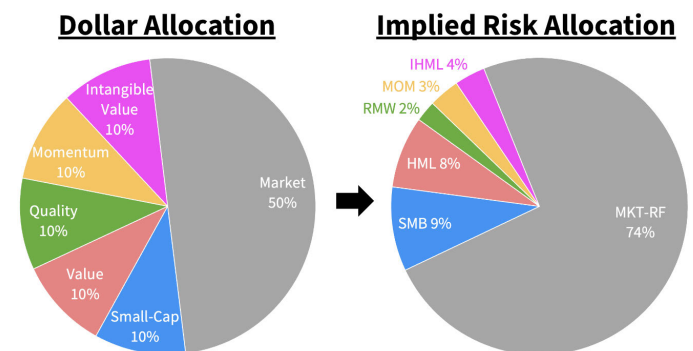
Long-Only Model Portfolio

The strategy above requires the use of shorting. In practice, however, most investors prefer long-only portfolios. While this limits their ability to allocate significant risk to factors other than the Market, this is not a practical worry for most.

For better or worse, since performance tends to be assessed relative to the stock market, investors generally want to keep their tracking error manageable. One way to do this is to start with a portfolio of cheap passive beta and then carve out an allocation to factor strategies.

Let's use the example of an investor who has 50% in equity index funds and 50% split among long-only versions of the other five factors. Since we only own the long side, our non-market factor exposure is roughly halved. But market risk is still 100% since we don't hedge. This implies a risk allocation that is roughly 75% market and 25% other factors.

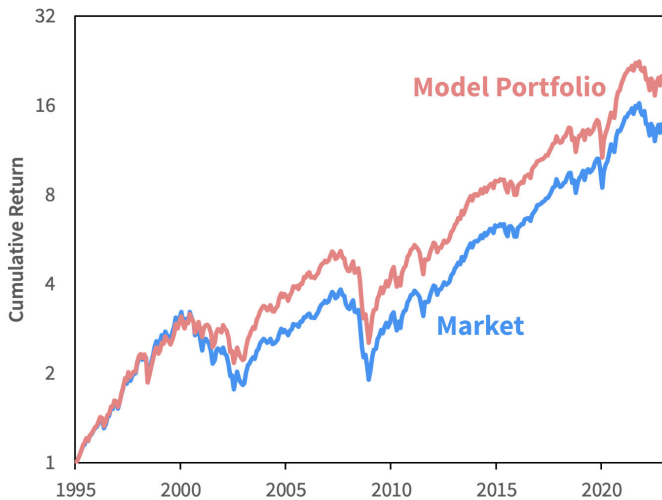
Exhibit 9
Model Portfolio



Source: Ken French, Sparkline. Implied risk allocation is derived from regressions of long-only factor portfolios on the Six-Factor Model. Once we derive the coefficients for each portfolio, we sum to get the total. Portfolios are for illustrative purposes only and do not reflect actual portfolios managed by Sparkline. From 3/31/1995 to 3/31/2023.

Of course, investors can easily increase their total factor risk by allocating more to factor strategies and less to index funds. However, even at the current weights, these small but mighty factor tilts have a noticeable impact on performance.

Exhibit 10
Long-Only Model Portfolio



Source: Ken French, Sparkline. Market is Fama-French Rm-Rf + Rf. Model portfolio is 50% Market + 10% each in the long-side only of the SMB, HML, RMW, MOM, and IHML factors. Strategies are rebalanced monthly. No transaction or financing costs. From 3/31/1995 to 3/31/2023. See important backtest disclosure below.

The factor-tilted portfolio outperformed the market by 1.7% per year with 3.1% tracking error. Investors less sensitive to tracking error could allocate 100% to factor funds and 0% to index funds for 3.4% excess returns and 6.2% tracking error.

Factor ETFs

Over the past decade, exchange-traded funds (ETFs) have attracted trillions of dollars due to their superior liquidity, accessibility, transparency, and tax efficiency. The U.S. ETF market alone has blossomed to \$7 trillion in assets spread across a staggering 1,700 funds.

While more investor choice is great, such an expansive menu can be a bit overwhelming. The factor lens solves this problem by distilling the universe of thousands of ETFs into a more manageable set of just six underlying factors.

In the next exhibit, we build a simple tool to explore ETF factor exposures. It runs regressions of daily ETF returns against those of the six factors. We show the results for several popular factor ETFs.

Exhibit 11
Popular Factor ETF Exposures

ETF Name	Ticker	MKT-RF	SMB	HML	RMW	MOM	IHML
iShares MSCI USA Quality Factor ETF	QUAL	1.02	-0.01	-0.07	0.19	-0.01	-0.04
iShares MSCI USA Momentum Factor ETF	MTUM	1.04	-0.08	-0.13	-0.22	0.49	-0.03
iShares MSCI USA Value Factor ETF	VLUE	0.97	0.23	0.41	0.10	-0.06	0.08
Avantis U.S. Equity ETF	AVUS	1.02	0.15	0.19	0.03	0.02	-0.02
Dimensional US Core Equity Market ETF	DFAU	0.99	0.04	0.07	0.07	0.00	0.00
iShares MSCI USA Size Factor ETF	SIZE	0.98	0.18	0.16	0.05	-0.13	-0.20

Source: S&P, Sparkline. Each row represents a regression of ETF returns on Six-Factor Model returns over the trailing 375 days. Table displays the coefficient for each factor, indicating statistical significance in bold. Not a recommendation to buy or sell securities. As of 3/31/2023.

For each ETF, the table shows the exposure to each of the six factors with bold type indicating statistical significance. As expected, each factor ETF provides exposure to its primary targeted factor. Some ETFs also provide exposure to a secondary factor. For example, all three value ETFs also favor small-caps.

Quest for Intangible Value 🏆

Since none of these popular factor ETFs provide meaningful exposure to Intangible Value, we expand our search to the full ETF universe. Our screen excludes sector, index, leveraged, and inverse ETFs. To avoid spurious results from random noise, we sort by t-statistic (i.e., coefficient divided by standard error). The top 20 results are below.

Exhibit 12
Intangible Value ETFs

ETF Name	Ticker	MKT-RF	SMB	HML	RMW	MOM	IHML
		93.2	0.2	1.5	-2.3	-4.6	8.8
Invesco QQQ	QQQ	80.4	-7.1	-16.5	-0.2	0.7	6.0
iShares Russell 1000 Growth ETF	IWF	124.5	-9.9	-24.3	0.8	3.8	4.9
iShares Russell Top 200 Growth ETF	IWY	98.7	-11.6	-17.5	2.5	3.1	4.9
AdvisorShares Q Dynamic Growth ETF	QPX	70.3	-3.4	-13.6	-0.2	1.4	4.9
Invesco S&P 500 High Beta ETF	SPHB	46.3	5.6	3.6	-5.5	-4.4	4.8
iShares US Small Cap Value Factor ETF	SVAL	79.7	38.2	29.5	10.5	3.5	4.8
Vanguard Russell 1000 Growth ETF	VONG	114.8	-9.1	-23.8	0.8	3.9	4.8
Pacer US Small Cap Cash Cows 100 ETF	CALF	42.2	23.9	7.9	4.5	2.7	4.7
iShares S&P 100 ETF	OEF	121.7	-13.7	-2.3	5.6	-0.2	4.5
Hartford Longevity Economy ETF	HLGE	77.3	9.4	6.4	6.0	-1.7	4.4
Schwab U.S. Large-Cap Growth ETF	SCHG	104.2	-11.2	-24.1	-3.1	1.2	4.3
First Trust Rising Dividend Achievers ETF	RDVY	80.4	5.6	15.5	2.2	-0.8	4.3
Invesco S&P 500 Top 50 ETF	XLG	94.5	-13.5	-7.2	3.5	0.1	4.2
Invesco S&P SmallCap Quality ETF	XSHQ	56.1	29.0	13.1	9.6	-0.6	4.2
Defiance Quantum ETF	QTUM	32.0	2.5	-4.7	-2.4	2.2	4.1
Innovator Growth Accelerated ETF - Oct	QTOC	38.1	-5.4	-8.3	-1.1	0.4	4.1
Fidelity Nasdaq Composite Index ETF	ONEQ	97.1	-3.5	-16.4	-2.2	-0.5	4.0
Vanguard S&P 500 Growth ETF	VOOG	93.8	-11.9	-17.6	2.0	2.9	4.0
Vanguard Mega Cap Growth ETF	MGK	82.5	-10.3	-16.1	0.7	-1.4	4.0

Source: S&P, Sparkline. Each row represents a regression of ETF returns on Six-Factor Model returns over the trailing 375 days. Table displays the t-statistics for each factor. Not a recommendation to buy or sell securities. As of 3/31/2023.

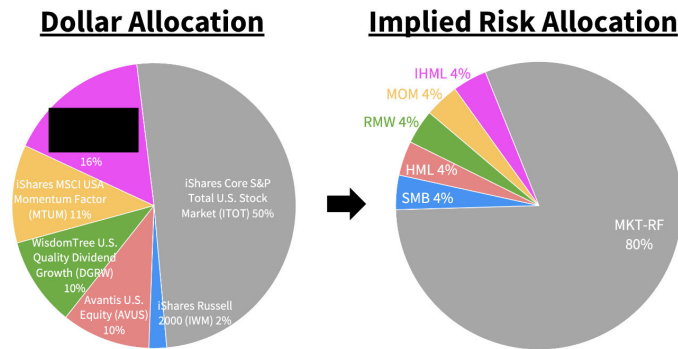
The ETF with the most significant Intangible Value exposure is [redacted]. This makes sense, as the ETF was specifically

created to provide exposure to this factor. In second place is the ubiquitous QQQ. Next, we have a large number of growth funds and a smaller number of value funds. By design, Intangible Value has characteristics of both value and growth funds, although it skews a bit “growthy” today.

Finally, let’s see if we can implement our long-only model portfolio using only ETFs. We repeat this screen for the other five factors, selecting one ETF to represent each category. Rather than allocate equal dollars to each ETF, we optimize weights so that each non-market factor gets equal risk.

The most notable deviation from equal weighting is that we barely need any of our small-cap ETF (IWM), since our value ETF (AVUS) provides both HML and SMB exposure. Once this is done, we achieve a healthy 20% total exposure to the five non-market factors.

Exhibit 13
Model Portfolio Using ETFs



Source: Ken French, Sparkline. Implied risk allocation is derived from regressions on the Six-Factor Model. Once we derive the coefficients, we sum to get the total. Portfolios for illustrative purposes only and do not reflect actual portfolios managed by Sparkline. Not a recommendation to buy or sell securities. As of 3/31/2023.

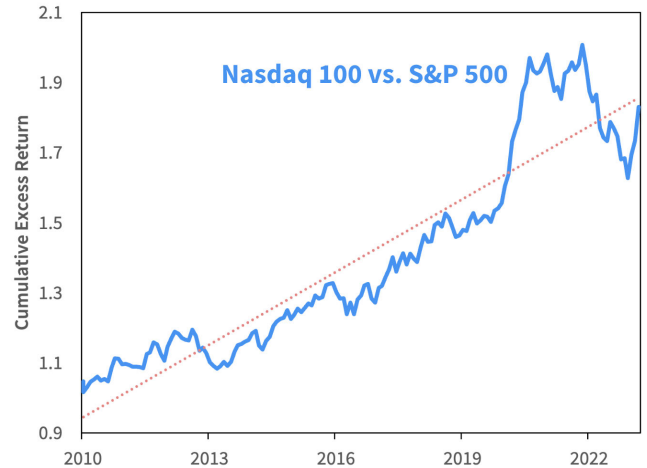
In conclusion, the Six-Factor Model can be implemented with just six ETFs. Of course, this is just a starting point. From here, investors can easily customize the portfolio to their desired level of factor risk and preferred ETF fund families.

Factor-Friendly Innovation

The Innovation Dilemma

In [Value Investing Is Short Tech Disruption](#) (Aug 2020), we argued that a major pain point for factor investors is their chronic underexposure to so-called “innovation stocks,” which are in the midst of a golden era of outperformance. Since 2010, the Nasdaq 100, a common shorthand for innovation stocks, has outgained the S&P 500 by over 70%.

Exhibit 14
Don't Fight Innovation



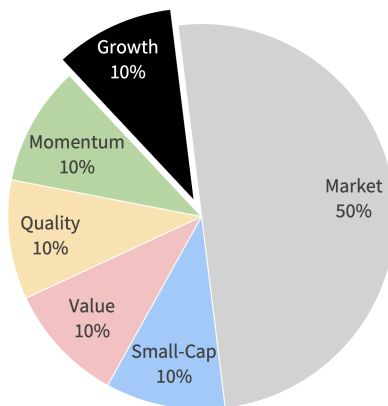
Source: S&P, Sparkline. From 12/31/2009 to 3/31/2023.

Unfortunately, the Five-Factor Model has largely missed out on this boon due to its big underweight to innovative stocks. Its anti-innovation bet is mainly driven by the Value Factor, which, due to its reliance on tangible book value, tends to avoid modern firms with asset-light business models.

With the intangible economy ascendant, this anti-innovation bet is increasingly untenable. Not only does it risk another decade of poor returns, but it also produces portfolios that appear increasingly out of touch with the modern world.

To neutralize this anti-innovation bias, many factor investors have been forced to stray from the purity of their approach. A common “hack” is simply to add an allocation to growth funds, such as Nasdaq 100 (QQQ) or ARK Innovation (ARKK).

Exhibit 15
Growth Hack



Source: Sparkline. Portfolios are for illustrative purposes only and do not reflect actual portfolios managed by Sparkline.

The problem is that growth funds typically have bad factor exposures. To illustrate this, we build an equal-weighted portfolio of four popular growth ETFs (i.e., QQQ, IWF, ARKK, XT) and analyze the exposures of the resulting portfolio.

**Exhibit 16
Growth ETF Exposures**

ETF Name	Ticker	MKT-RF	SMB	HML	RMW	MOM	IHML
Invesco QQQ Trust	QQQ	1.11	-0.12	-0.39	0.09	0.02	0.28
iShares Russell 1000 Growth ETF	IWF	1.06	-0.11	-0.29	0.07	0.01	0.13
ARK Innovation ETF	ARKK	1.26	0.71	-0.95	-1.12	-0.24	0.15
iShares Exponential Technologies ETF	XT	0.95	0.08	-0.18	-0.17	-0.06	0.14
Growth Portfolio		1.14	0.06	-0.46	-0.28	-0.08	0.15

Source: S&P, Sparkline. Each row represents a regression of ETF returns on Six-Factor Model returns. Table displays the coefficient for each factor with statistical significance in bold. Period uses daily data from 3/24/2015 (inception of XT) to 3/31/2023.

The underlying ETFs have Value scores ranging from -0.95 to -0.18 and Quality scores ranging from -1.12 to +0.09. As a result, the composite portfolio has significantly negative exposures to Value and Quality of -0.46 and -0.28. Adding growth funds solves one problem only to create another!

Moreover, this workaround lacks the empirical rigor underpinning the factor framework. Unlike our six factors, research does not support the existence of a “growth factor.” We would love to be able to invest in innovation without abandoning the factor framework.

Factor-Friendly Innovation

Let’s see if the Six-Factor Model can help. The next exhibit compares the exposures of Value, Intangible Value, and Growth relative to the S&P 500. For Value and Intangible Value, we employ long-only factors; for Growth we utilize the basket of four ETFs. We show representative metrics for each of the broad categories of innovation, value and quality.

**Exhibit 17
Innovation, Value and Quality**

Relative to S&P 500		Value	Intangible Value	Growth
Innovation	Tech Company	-22%	7%	10%
	A.I. Company	-16%	14%	4%
	Disruptive Company	-20%	21%	11%
	Patents (% of Assets)	-24%	22%	24%
Value	Book / Price	47%	6%	-12%
	Earnings / Price	4%	1%	-4%
	Sales / Price	40%	13%	-25%
	Free Cash Flow / Price	0%	1%	-2%
Quality	Return on Equity	-9%	1%	-5%
	Return on Assets	-5%	0%	-2%
	Profit Margin	-3%	0%	-9%

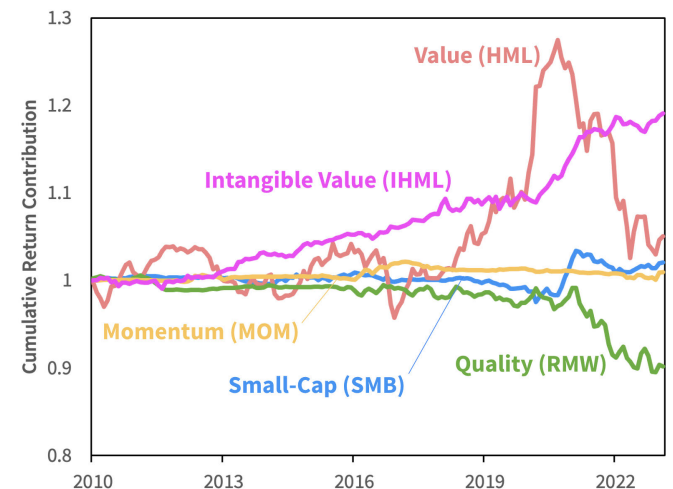
Source: S&P, USPTO, LinkedIn, Sparkline. All figures relative to S&P 500. Calculations weighted by position and do not predict performance. Tech defined as GICS IT sector. A.I. and disruptive companies defined using proprietary classifications. All other metrics are calculated over a trailing 1-year period, with the exception of prices. Patents are scaled by billions. Value is a long-only portfolio of the top tercile stocks on book/market. Intangible value is the same but using intangible value. Universe consists of the top 1000 largest U.S. stocks and portfolios are cap-weighted. Growth is an equal-weighted basket of the holdings of QQQ, IWF, ARKK, and XT. As of 3/31/2023.

In the top panel, we find that Value is indeed short innovation, with large underweights to tech companies and those applying A.I. or other disruptive technologies. On the other hand, both Intangible Value and Growth are staunchly pro-innovation, making them candidates to offset Value’s unwanted anti-innovation bias.

However, the next two panels illustrate the problem with using Growth for this task. Growth has deeply negative exposures to both value and quality, as it tends to own stocks with high prices relative to book value and trailing fundamentals and lower returns on capital.

This is more than just an academic problem. The next exhibit decomposes the Growth ETF portfolio’s historical returns based on its rolling factor exposures.

**Exhibit 18
Growth ETF Attribution**



Source: S&P, Sparkline. We run rolling 750-day regressions of Growth returns on our Six-Factor model. We use the resulting factor exposures and that day’s returns to infer the contribution from each factor. We then roll forward through time to build a cumulative series. Growth is defined as an equal-weighted basket of the holdings of QQQ, IWF, ARKK, and XT. We prorate the portfolio when ARKK or XT are unavailable. Not a recommendation to buy or sell securities. From 12/31/2009 to 3/31/2023.

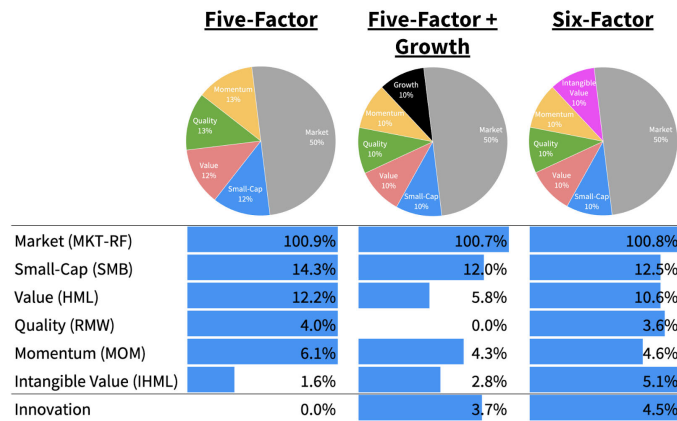
Over this period, the portfolio’s negative exposure to Quality detracted around -10% from its returns. While its negative Value exposure did not lower returns given Value’s ongoing

struggles, it did produce a lot of undesirable volatility and is the primary cause of the portfolio’s current drawdown.

On the other hand, the ETF portfolio’s positive Intangible Value exposure was a big driver of its outperformance. It added +19% to returns without much volatility. One way to think about the Intangible Value Factor is as an attempt to isolate the “good part” of Innovation ETFs without the unwanted drag from shorting Value or Quality.

Lastly, let’s examine the Six-Factor and Innovation exposures for the various portfolios we have built so far.

**Exhibit 19
An Improved Factor Model**



Source: S&P, Sparkline. Portfolio components are the long sides of the MKT-RF, SMB, HML, RMW, MOM and IHML factors. Growth is an equal basket of QQQ, IWF, ARKK, and XT. We compute factor loadings for each portfolio using regressions on the Six-Factor Model. Exposures shown in the table aggregate from these underlying loadings based on the weights in the pie charts above. We also show the innovation score, which we rescale so that the Five-Factor model is not negative but zero. Not a recommendation to buy or sell securities. As of 3/31/2023.

The Five-Factor portfolio is underweight both Intangible Value and Innovation. While adding growth funds helps plug this hole, it also reduces Value and Quality. The Six-Factor portfolio provides the best overall exposures, neutralizing the underweight to Innovation and Intangible Value without sacrificing Value or Quality.

Conclusion

We propose a Six-Factor Model, which includes market, size, value, quality, momentum, and intangible value. Relative to traditional factor models, it offers superior (backtested!) historical performance and more balanced exposure to innovative firms. Furthermore, it can be easily implemented in long-only portfolios using highly accessible ETFs.

The author would like to thank Wes Gray and Jack Vogel for their invaluable help on this research piece.



Kai Wu
Founder & CIO, Sparkline Capital LP

Kai Wu is the founder and Chief Investment Officer of Sparkline Capital, an investment management firm applying state-of-the-art machine learning and computing to uncover alpha in large, unstructured data sets.

Prior to Sparkline, Kai co-founded and co-managed Kaleidoscope Capital, a quantitative hedge fund in Boston. With one other partner, he grew Kaleidoscope to \$350 million in assets from institutional investors. Kai jointly managed all aspects of the company, including technology, investments, operations, trading, investor relations, and recruiting.

Previously, Kai worked at GMO, where he was a member of Jeremy Grantham’s \$40 billion asset allocation team. He also worked closely with the firm’s equity and macro investment teams in Boston, San Francisco, London, and Sydney.

Kai graduated from Harvard College Magna Cum Laude and Phi Beta Kappa.

Factor Definitions

We use the Fama-French definitions for the traditional five factors. Complete definitions for MKT-RF, SMB, HML, and RMW are [here](#) and the definition for MOM is [here](#). We construct IHML as follows:

IHML (Intangible High Minus Low) is the average return on the two high intangible value portfolios minus the average return on the two low intangible value portfolios,

$$IHML = 1/2 (\text{Small High Intangible Value} + \text{Big High Intangible Value}) - 1/2 (\text{Small Low Intangible Value} + \text{Big Low Intangible Value})$$

The Big universe is of the top 1,000 U.S. stocks by market cap, while the Small universe is the next 2,000. High Intangible Value is the top 33% and Low Intangible Value is the bottom 33% of stocks in the applicable universe. Portfolios are cap-weighted.

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Backtest Disclosure

The performance shown reflects the simulated model performance an investor may have obtained had it invested in the manner shown but does not represent performance that any investor actually attained. This performance is not representative of any actual investment strategy or product and is provided solely for informational purposes.

Hypothetical performance has many significant limitations and may not reflect the impact of material economic and market factors if funds were actually managed in the manner shown. Actual performance may differ substantially from simulated model performance. Simulated performance may be prepared with the benefit of hindsight and changes in methodology may have a material impact on the simulated returns presented.

The simulated model performance is adjusted to reflect the reinvestment of dividends and other income. Simulations that include estimated transaction costs assume the payment of the historical bid-ask spread and \$0.01 in commissions. Simulated fees, expenses, and transaction costs do not represent actual costs paid.

Index returns are shown for informational purposes only and/or as a basis of comparison. Indexes are unmanaged and do not reflect management or trading fees. One cannot invest directly in an index. The S&P 500 is a popular gauge of large-cap U.S. equities that includes 500 leading companies. The Russell 1000 Index consists of the approximately top 1000 U.S. stocks by market cap. The Russell 1000 Value (Growth) Index includes those Russell 1000 companies with lower (higher) price-to-book ratios and expected and historical growth rates.

No representation or warranty is made as to the reasonableness of the methodology used or that all methodologies used in achieving

the returns have been stated or fully considered. There can be no assurance that such hypothetical performance is achievable in the future. Past performance is no guarantee of future results.