

Research Article

Keeping It Simple: The Disappearance of Premia for Standard Non-Market Factors

Avanidhar Subrahmanyam* 

Anderson Graduate School of Management, University of California at Los Angeles, Los Angeles, the United States

Abstract

There is some confusion surrounding premia commanded by standard stock market factors. Some research attributes the factors to risk and some other research considers them to be a manifestation of mispricing. This note tries to resolve this confusion. My position is that the premia for factors that are priced should remain stable over time, as there is no reason for investors to stop pricing risk. Conversely, unstable premia that trend downward over time suggest mispricing being arbitrated away. The paper considers premia for five well-known factors based on accounting and market capitalization data, and two factors based on past returns, together with the excess market return. Amongst these eight standard and popular factors, only the profitability and market factors yield a reliable non-zero premium over the last 25 years. Factors based on value, size, real investment, short- and long-term reversal, and momentum, all fail to command significant non-zero premia. The evidence therefore suggests that the original in-sample premia for these factors were driven by mispricing, rather than genuine risk pricing. As time goes on, we would expect much the same to happen to the profitability anomaly. The evidence supports adaptive market efficiency, that is, inefficiencies disappear once discovered.

Keywords

Factors, Risk Premia, Stock Returns

1. Introduction

An important contribution to corporate bond market research is the work of Dickerson et al. (2023a). They argue that amongst many popular risk factors, only the bond market portfolio reliably commands premia in corporate bonds. In a followup paper Dickerson et al. [7] argue that there is no reliable evidence of prior-return-based anomalies in corporate bonds. These results are important, because they indicate that corporate bond prices, for the most part, appear to be set rationally, which accords with the results of Chordia et al. [2]. However, it seems that the stock market permits a large number of anomalies (McLean and Pontiff [14]). How can we

reconcile the evidence in the stock market with that in the bond market?

This note takes a step towards addressing the above question. Specifically, the note argues using a defensible sample period that similar evidence exists for the stock market as that for the bond market. Using a fairly neutral technique and a justifiable sample period, the note uncovers that amongst seven standard and popular factors other than the excess market return, only the RMW (profitability) factor of Fama and French [10] commands a reliable premium. Value, size, real investment, short- and long-term reversal, and

*Corresponding author: subra@anderson.ucla.edu (Avanidhar Subrahmanyam)

Received: 21 September 2025; **Accepted:** 13 November 2025; **Published:** 19 December 2025



Copyright: © The Author(s), 2025. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

momentum, all fail to garner a significant premium. As these other factors do not command a premium statistically different from zero, there is no point in trying to cross-sectionally price them. Note that the one non-market factor that commands a premium corresponds to an anomaly that was discovered relatively recently (Novy-Marx [15]). By the arguments of McLean and Pontiff [14] we would expect that to be among the last to disappear. Thus, the risk versus mispricing debate largely does not apply for the Fama and French [10] factors as well as reversals or momentum, because, aside from profitability, none of the factors carries a significant premium.

2. The Method and Results

Note that in a strict taxonomy (a) a factor is any diversified portfolio, (b) a risk factor is a well-diversified portfolio whose returns are meaningfully related to the covariance matrix of individual asset returns (e.g., via PCA), and (c) a priced risk factor is related to the covariance matrix, yields an alpha net of known factors, and has a reasonable intermediate level of the Sharpe ratio (see Pukthuanthong et al. [16] for further details). This note is merely interested in the (a) concept and whether the traded factor actually commands a premium (i.e., whether the first moment of its returns is reliably different from zero).

2.1. Sample Period and Factors

Now, the sample period is discussed. As we know, the celebrated momentum paper of Jegadeesh and Titman [12]

used the 1962-1989 sample period, and the one used by Fama and French [8] was similar. Accordingly, all the note does is to go backwards from July 2023 to January 1996 (approximately the same number of months as these original papers), and that is my sample period. The choice is simply made in the singular (no other sample period is tried).¹ Also, no subjective choices on factors is made, and the relevant factors are simply downloaded from Ken French's website. The note expresses deep gratitude to Ken for posting these factors publicly, and his methodology is transparent.²

The factors considered are MKT (excess market return), SMB (size/market cap), HML (book/market), RMW (profitability), CMA (investment/asset growth), MOM (momentum), STREV (monthly reversal), and LTREV (long-term reversal). See Fama and French [9], Fama and French [10], Novy-Marx [15], Jegadeesh and Titman [12], Jegadeesh [11], and DeBondt and Thaler [5] for the original sources that develop these factors.

2.2. The Results

Next, the mean return for each of these factors is calculated, together with accompanying *t*-statistic. The latter is the mean divided by the standard error, which is the standard deviation divided by the square root of the number of time-series observations. The results are reported in Table 1 at the end of this document.³ As we can see, the *t*-statistic for every factor except RMW and MKT is below (in most cases well below) the two-tailed 5% threshold. The investment factor CMA is marginally significant (at the 10% level) and of the correct sign.

Table 1. The Mean Return, Standard Deviation of the Return, and the *T*-statistic for Testing the Null that the Return on a Particular Stock Market Factor Equals Zero, over the January 1996 to July 2007 Period. The Factors are The Factors are MKT (Excess Market Return), SMB (Size/Market Cap), HML (Book/Market), RMW (Profitability), CMA (Investment/Asset Growth), MOM (Momentum), STREV (Monthly Reversal), and LTREV (Longterm Reversal). They are Obtained from Kenneth French's Website.

199601-202307	MKT	SMB	HML	RMW	CMA	MOM	STREV	LTREV
Mean	0.704	0.115	0.107	0.391	0.226	0.305	0.293	0.098
StDev	4.623	3.289	3.461	2.826	2.301	5.051	3.759	2.872
t-stat	2.764	0.637	0.56	2.511	1.784	1.096	1.414	0.62

One could bring in concepts like skewness and momentum crashes (Daniel and Moskowitz [3]) to justify why momentum does not work in recent years. Nevertheless, that seems like ex post rationalization. The point is that a practitioner wanting to simply replicate Jegadeesh and Titman [12] using recent data (and the same number of months as their study) would not find any evidence of momentum.

To reiterate, neither reversals nor momentum command premia in the cross-section of stock returns, and neither do

book-market, size, and real investment. And the other important point that bears repeating is that the sample period (non-controversially, it is hoped) consists of the same time span as those in Fama and French [8] and Jegadeesh and Titman [12], going backward from the most recent month of July 2023.

The results have significant implications. First, they support the analyses of McLean and Pontiff [14] that anomalies tend to be arbitrated away once they are discovered. Second, they also raise the issue that if size and

value are risk premia as argued in Berk [1] and Fama and French [9] then it is puzzling that such risk is no longer priced. We do not expect distress risk to disappear, and also do not expect missing risk factors from market cap to be reflected in market cap in periods after the ones where these effects were originally documented.

As a further point, there are likely alternative ways to present results from CRSP/Compustat (Jensen et al. [13]), and one could quibble about Ken French's sorting methods as well. All the note is essentially is that using a defensible sample size and method, most standard factors other than the excess market return do not yield a first moment reliably different from zero, leave alone a Sharpe ratio different from zero.

3. Conclusion

Aside from the recently discovered profitability factor (Novy-Marx [15]), the Fama and French [10] factors, and factors based on past returns, do not command a significant premium over the past 25 years or so. It is cautiously asserted here that what is really going on is that momentum, reversals, value, real investment, and size represented genuine anomalies that simply got arbitrated away via scale expansion of anomaly-based trading. As time goes on, one would expect much the same to happen to the profitability anomaly, and perhaps, as Dickerson et al. [6] argue, we will be back to the CAPM (if anything at all). The evidence is compellingly in favor of adaptive market efficiency (Daniel and Titman [4]), that is, inefficiencies disappear once discovered. What is puzzling perhaps is the time taken for effects such as value and momentum to disappear in the cross-section of stock returns. Overall, the findings are actually good news for quantitative asset management but also suggest that no anomaly is likely to be persistent, once publicized.

Abbreviations

PCA	Principal Components Analysis
MKT	Excess Market Return
HML	Long-short Portfolio return Based on Book/Market
SMB	Small Firm Return Minus Big Firm Return
RMW	Robust Minus Weak Profitability factor
CMA	Conservative Minus Aggressive Investment Factor
MOM	Momentum Factor
STREV	Short-term (monthly) Reversal Factor
LTREV	Long-term (>2 years) Reversal Factor
CAPM	Capital Asset Pricing Model

Author Contributions

Avanidhar Subrahmanyam is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The author declares no conflicts of interest.

References

- [1] Berk, Jonathan B., 1995, A critique of size-related anomalies, *Review of Financial Studies* 8, 275-286. <https://doi.org/10.1093/rfs/8.2.275>
- [2] Chordia, Tarun, Amit Goyal, Yoshio Nozawa, Avanidhar Subrahmanyam, and Qing Tong, 2017, Are capital market anomalies common to equity and corporate bond markets? An empirical investigation, *Journal of Financial and Quantitative Analysis* 52, 1301-1342. <https://doi.org/10.1017/S0022109017000515>
- [3] Daniel, Kent, and Tobias J. Moskowitz, 2016, Momentum crashes, *Journal of Financial Economics* 122, 221-247. <https://doi.org/10.1016/j.jfineco.2015.12.002>
- [4] Daniel, Kent, and Sheridan Titman, 1999, Market efficiency in an irrational world, *Financial Analysts Journal* 55, 28-40 <https://doi.org/10.2469/faj.v55.n6.2312>
- [5] DeBondt, W. F., and R. H. Thaler, 1985, Does the stock market overreact? *Journal of Finance* 40, 793-805. <https://doi.org/10.1111/j.1540-6261.1985.tb05004.x>
- [6] Dickerson, Alexander, Philippe Mueller, and Cesare Robotti, 2023a, Priced risk in corporate bonds, *Journal of Financial Economics* 150, 103707. <https://doi.org/10.1016/j.jfineco.2023.103707>
- [7] Dickerson, Alexander, Philippe Mueller, and Cesare Robotti, 2023b, Common pitfalls in the evaluation of corporate bond strategies, *working paper* Social Science Research Network. <https://dx.doi.org/10.2139/ssrn.4575879>
- [8] Fama, Eugene F., and Kenneth R. French, 1992, The cross-section of expected stock returns, *Journal of Finance* 47, 427-465. <https://doi.org/10.1111/j.1540-6261.1992.tb04398.x>
- [9] Fama, Eugene F., and Kenneth R. French, 1993, Common risk factors in the returns on stocks and bonds, *Journal of Financial Economics* 33, 3-56. [https://doi.org/10.1016/0304-405X\(93\)90023-5](https://doi.org/10.1016/0304-405X(93)90023-5)
- [10] Fama, Eugene F., and Kenneth R. French, 2015, A five-factor asset pricing model, *Journal of Financial Economics* 116, 1-22. <https://doi.org/10.1016/j.jfineco.2014.10.010>
- [11] Jegadeesh, Narasimhan, 1990, Evidence of predictable behavior of security returns, *Journal of Finance* 45, 881-898. <https://doi.org/10.1111/j.1540-6261.1990.tb05110.x>
- [12] Jegadeesh, Narasimhan, and Sheridan Titman, 1993, Returns to buying winners and selling losers: implications for stock market efficiency, *Journal of Finance* 48, 65-91. <https://doi.org/10.1111/j.1540-6261.1993.tb04702.x>
- [13] Jensen, Theis Ingerslev, Bryan Kelly, and Lasse Heje Pedersen, 2023, Is there a replication crisis in finance? *Journal of Finance* 78, 2465-2518. <https://doi.org/10.1111/jofi.13249>

-
- [14] McLean, R David, and Jeffrey Pontiff, 2016, Does academic research destroy stock return predictability? *Journal of Finance* 71, 5-32. <https://doi.org/10.1111/jofi.12365>
- [15] Novy-Marx, Robert, 2013, The other side of value: The gross profitability premium, *Journal of Financial Economics* 108, 1-28. <https://doi.org/10.1016/j.jfineco.2013.01.003>
- [16] Pukthuanthong, Kuntara, Richard Roll, and Avanidhar Subrahmanyam, 2019, A protocol for factor identification, *Review of Financial Studies* 32, 1573-1607. <https://doi.org/10.1093/rfs/hhy093>

1 The length of this sample period is in fact longer than that used in recent corporate bond research (e.g., Dickerson et al. [6]).

2 https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library/det_mom_factor.html.

3 The excel spreadsheet is available at <https://tinyurl.com/3yh7xmas>