



Momentum and funding conditions

Luis Garcia-Feijoo^a, Gerald R. Jensen^b, Tyler K. Jensen^{c,*}

^a Department of Finance, Florida Atlantic University, Boca Raton, FL 33431, USA

^b Department of Economics and Finance, Creighton University, Omaha, NE 68178, USA

^c Department of Finance, Iowa State University, Ames, IA 50011, USA

ARTICLE INFO

Article history:

Received 1 May 2017

Accepted 3 January 2018

Available online 9 January 2018

JEL classification:

G11

G12

Keywords:

Momentum

Funding conditions

Asset prices

ABSTRACT

We find evidence linking return momentum with macroeconomic conditions, namely, the funding environment. We show that winners outperform losers by a significant amount in restrictive funding states, while in expansive states, winners and losers perform similarly. This pattern is consistent with changing investor preferences for winners and losers following signaled shifts in funding availability. One plausible channel for this relation is the interaction between stock-level illiquidity and funding conditions. We find that liquidity risk is significantly priced during restrictive states, especially in loser stocks. Furthermore, loser stocks become more illiquid during restrictive conditions. Both effects help explain the relative performance difference between losers and winners across funding environments. Moreover, the funding environment influences the relationship between momentum and firm characteristics, after controlling for the influence of sentiment, market states and return dispersion. Overall, transitions in funding states appear to encourage investors to revise their factor pricing decisions, which produces inter-temporal variation in momentum.

© 2018 Elsevier B.V. All rights reserved.

1. Introduction

We examine the momentum pattern in stock returns relative to the funding environment. Prior research suggests that shifting market states influence investor pricing decisions and create temporal variation in the momentum premium (Cooper et al., 2004; Avramov and Chordia, 2006; Stivers and Sun, 2010). We extend this line of research by examining three major issues: (i) The relation between the momentum pattern and the funding environment. (ii) The funding environments' influence on the relation between momentum and firm-specific attributes, such as size and liquidity. (iii) The relation between the funding environment and other risk factors that have been shown to affect the momentum pattern. Ultimately, we address the question of whether funding conditions serve as an underlying economic variable that helps to explain the momentum pattern. In our paper, funding conditions are defined by monetary policy developments and are predicated on an extensive theoretical and empirical literature.

The existence of momentum in stock returns is a widely acknowledged phenomenon as witnessed by the widespread application of the Carhart (1997) model, which treats momentum as a

priced factor.¹ The prominence of momentum in stock returns is confirmed by Daniel and Moskowitz (2015) as they show that the return difference between the top and bottom momentum deciles is an astounding 16.5% per year. Knowledge of the momentum pattern has been advanced substantially by numerous studies; however, few studies have investigated the relation between economic conditions and momentum. Furthermore, the studies that have attempted to relate momentum to underlying economic variables have produced largely mixed results.

Motivated by previous evidence, we evaluate several attributes of momentum relative to changes in funding conditions. Bernanke and Gertler (1995) contend that monetary policy influences financial markets via a credit channel mechanism in which changes in the funding environment impact bank lending, firm balance sheet health, and the spread between the cost of internal and external finance. Brunnermeier and Pedersen (2009) link funding conditions directly with the actions of market participants as they propose that the funds available to speculators cause them to alter their holdings of liquid versus illiquid securities. Finally, there has been considerable evidence linking the funding environment with investor pricing decisions (e.g. Jensen et al., 1996; Thorbecke, 1997; Patelis, 1997; Jensen and Moorman, 2010).

* Corresponding author.

E-mail addresses: luis.garcia@fau.edu (L. Garcia-Feijoo), GeraldJensen@creighton.edu (G.R. Jensen), tjensen@iastate.edu (T.K. Jensen).

¹ Studies confirm that momentum exists in other asset markets (see for example Griffin et al., 2003; Okunev and White, 2003; Erb and Harvey, 2006; Moskowitz et al., 2012; Asness et al., 2013; Daniel and Moskowitz, 2015).

The above studies suggest that funding conditions play a prominent role in security pricing. We contend that firm-level illiquidity is a plausible underlying firm characteristic influencing the momentum pattern. Acharya and Pederson (2005) and Lee (2011) establish an association between aggregate illiquidity and stock-level illiquidity, which, when combined with the evidence referenced above, is consistent with the view that investors price stock-level illiquidity differently across funding environments. Furthermore, given the distinct financial characteristics of winners and losers, it is likely that their level of illiquidity diverges across funding conditions, which would create funding-conditions-related momentum patterns. Evidence from Jensen and Moorman (2010) suggests that investors view illiquidity differently across funding states. However, their paper does not investigate how illiquidity impacts other documented stock return patterns such as momentum.

Market capitalization has been shown to play a prominent role in momentum returns (see Hong et al., 2000; Lesmond et al., 2004; Novy-Marx, 2012; Asness et al., 2013). In addition, the model advocated by Sagi and Seasholes (2007) links momentum to firm growth options and sales volatility, which are both likely influenced by the availability of financing. A change in funding conditions, as a macroeconomic influence, is likely to impact investor pricing with respect to return momentum, just as microeconomic factors are shown to influence return momentum in the Sagi and Seasholes model. For these reasons, we evaluate how the pricing of firm characteristics such as illiquidity, size, and book-to-market varies across funding states and how this variation impacts the momentum pattern.

Finally, studies by Cooper et al. (2004), Avramov and Chordia (2006), Stivers and Sun (2010), Moskowitz et al. (2012), Daniel and Moskowitz (2015) and Celiker et al. (2016) present evidence of substantial temporal variation in momentum returns, which suggests that underlying economic conditions play an important role in the pattern's prominence. Avramov and Chordia conclude, "The fact that time-varying alpha captures the impact of past returns points to a potential business-cycle related explanation for the impact of momentum on the cross-section of individual stock returns." Additionally, Wang and Wu (2011) suggest that by allowing time-varying factor loadings in traditional asset pricing models, the momentum premium is much more effectively captured. We contend that funding conditions are a potential explanation for this documented time-variation in momentum.

We provide evidence suggesting that the momentum pattern is conditional on signaled shifts in the funding environment. First, we show that a significant momentum premium exists only when the funding environment is restrictive. Thus, it appears that momentum is only priced during periods when the future availability of funding is threatened. Second, we provide evidence that one reason for the existence of momentum in restrictive funding states is the differential impact of firm-level illiquidity during these states. We find that both stock-level illiquidity increases and that investors become particularly concerned with stock-level illiquidity during restrictive funding conditions. Furthermore, loser firms become significantly more illiquid during restrictive funding conditions. Third, we find evidence of a negative momentum premium during expansive funding states as losers with value characteristics and small size perform well. This finding corresponds with previous research that identifies "momentum crashes." Fourth, we show that the link between the funding environment and the momentum pattern is remarkably consistent across the 1963–2014 sample period. Finally, we show that after controlling for funding conditions, the influence that investor sentiment, market states, and return dispersion have on momentum returns is greatly diminished. In contrast, after adjusting for the influence of sentiment, market states and return dispersion, funding conditions still provide significant information about the momentum premium.

In sum, our results suggest that the previously documented predictability of past returns (momentum) is at least partially captured by funding conditions. This result offers a significant contribution to the literature by providing an economic motivation for the time-varying nature of momentum returns documented in other studies (Cooper et al., 2004; Stivers and Sun, 2010; Daniel and Moskowitz, 2015). Our results suggest that funding conditions are a more comprehensive determinant of momentum profits than these previously suggested alternatives.

Furthermore, our results suggest that the actions taken by investors that lead to momentum patterns are influenced by real economic events. The signals of funding availability provided by the Federal Reserve are important sources of news that investors should (and do²) account for in making pricing decisions. Therefore, we conclude that real economic news about future funding availability induces investors to take actions which result in positive autocorrelation in returns (momentum) when funding conditions are restrictive.

We cannot rule out that behavioral biases enhance the size of the momentum premium, but its existence only during certain periods of time appears directly linked to signals about future economic conditions. For instance, we find differences in the size of the momentum premium based on the state of investor sentiment, consistent with the findings of Antoniou et al. (2013). However, regardless of the state of investor sentiment or the sentiment measure employed, the momentum return is always positive and significant during restrictive funding conditions. This finding suggests that although other factors may influence how investors interpret signals of funding conditions, the funding conditions themselves are the primary determinant of the time-variation in momentum returns.

The remainder of the paper is organized as follows: Section 2 details the prior literature and our incremental contribution relative to prior work, Section 3 explains the data and empirical methods, Section 4 discusses the empirical results and Section 5 concludes.

2. Momentum and funding conditions

Since Jegadeesh and Titman (1993) first documented the profitability of momentum-based trading strategies, numerous alternative explanations have been proposed for the phenomenon. Most explanations rely on behavioral biases engrained in investor trading; examples include: Daniel et al. (1998), Barberis et al. (1998), Hong and Stein (1999), Jegadeesh and Titman (2001), and Grinblatt and Han (2005).³ While less common, there are several studies that offer rational explanations for momentum (see as examples Conrad and Kaul, 1998; Berk et al., 1999; Johnson, 2002; Sagi and Seasholes, 2007).

While most research focuses on the cross-sectional attributes of momentum, several studies identify significant time-variation in the pattern. Cooper et al. (2004) find that momentum returns are substantial following "up-markets", but are negative (although statistically insignificant) following down markets. Further, the authors show that the up/down market classification effectively differentiates momentum returns; however, the macroeconomic vari-

² See, for example, Jensen et al. (1996), Thorbecke (1997), Patelis (1997) and Jensen and Moorman (2010).

³ Daniel et al. (1998) contend that investors are overconfident and suffer self-attribution bias; this combination results in a delayed overreaction to information. Barberis et al. (1998) build a model based on representativeness and conservatism, which results in a delayed reaction to public information. Hong and Stein (1999) claim that communication frictions cause information to diffuse slowly through the investment community. Grinblatt and Han (2005) develop a model in which prospect theory and mental accounting are responsible for both momentum and disposition behavior.

Download English Version:

<https://daneshyari.com/en/article/7356663>

Download Persian Version:

<https://daneshyari.com/article/7356663>

[Daneshyari.com](https://daneshyari.com)