Journal of Banking & Finance 42 (2014) 101–111

Contents lists available at ScienceDirect

Journal of Banking & Finance

journal homepage: www.elsevier.com/locate/jbf

Contrarian flows, consumption and expected stock returns ☆

Yuzhao Zhang *

Spears School of Business, Oklahoma State University, Stillwater, OK 74078, United States

ARTICLE INFO

Article history:
Received 16 May 2013
Accepted 18 January 2014
Available online 31 January 2014

JEL classification:
G12
G17
E21

Keywords:
Return predictability
Consumption growth
Institutional investor

ABSTRACT

We investigate the relation between contrarian flows, consumption growth, and market risk premium. We construct a contrarian flows measure by summing up the capital flows to stocks that go against the total flow of the aggregate market. We show that the contrarian flows are negatively influenced by the same-quarter consumption growth. During bad times, the majority of investors who are affected by the negative shock reduce their equity exposure, and these extra supplies of risky assets are absorbed by contrarian investors who are least affected by the consumption shock. Using quarterly stock market data, we find that the contrarian flows forecast market returns at short-to-intermediate horizons. The predictability stems from the component that is explained by the consumption growth, and therefore the consumption growth contains valuable information about the market risk premium. Moreover, the predictability is stronger for growth stocks than for value stocks, and hence it negatively predicts the value premium. This is because the contrarian flows measure the market risk premium and growth stocks bear more discount rate risk than value stocks. Out-of-sample tests show that the main results are robust to data-snooping bias.

© 2014 Elsevier B.V. All rights reserved.

1. Introduction

A large empirical literature documents evidence of a countercyclical risk premium in aggregate stock returns (Campbell and Shiller, 1988a,b; Fama and French, 1989 and many others). Such a pattern can be explained by a model in which the representative agent's utility function contains a time-varying habit and therefore displays countercyclical risk aversion (Campbell and Cochrane, 1999). Chan and Kogan (2002) proposes another channel in which the consumption affects the risk premium. Despite of the theoretical importance of consumption, there lies a potential problem in the canonical measure of consumption. Ferson and Harvey (1992) has pointed out that the National Income and Product Accounts (NIPA) consumption data may contain self-induce correlation and is too smooth. Moreover, the expenditure data extensively relies on interpolation and extrapolation based on trends.[1] Savov (2011) proposes using garbage as a better proxy for non-durable consumption.[2]

In this paper, we approach this problem by studying the impacts of consumption shocks on investors' demands for stocks and further on the risk premium via the stock demand channel. Consider an economy that contains multiple groups of investors. All groups of investors display a habit type of preference but have different exposures to the aggregate consumption shock. The variation across investors ultimately translates into their different demands for risky assets. We can aggregate them into a representative investor who displays time-varying risk aversion driven by the aggregate consumption growth shocks. In affluent times, investors that experience the most positive shocks become most risk tolerant, and they increase their equity holdings (positive capital flow to stocks), and the groups of investors that experience the lowest (or even negative) shocks reduce their equity holdings (negative capital flow to stocks) because of the high stock price and low risk premium. On the secondary market, the inflows and outflows cancel out. The inflows and outflows are not necessarily identical counting the firms' activities.

We also consider activities in the primary market. In good times, the risk premium is low, and firms react to this by issuing equities to the market to invest in new projects of which the NPVs

---

☆ I am deeply grateful to Michael Brennan, Bob Geske, Mark Grinblatt, Richard Roll, and Rossen Valkanov for guidance, continuous support, and very valuable and detailed comments. I also thank Al Sheen, Udi Peleg and Yan Xu for helpful suggestions. All remaining errors are my own. Please do not circulate or cite without the author's permission.

* Tel.: +1 (405) 744 5089.
E-mail address: yuzhao.zhang@okstate.edu

[1] Triplett (1997) provides a good summary of the statistical issues with the data construction, including benchmarking, non-reporting bias, and residual method.

[2] Da and Yun (2010) chooses the electricity usage as another alternative proxy.

http://dx.doi.org/10.1016/j.jbankfin.2014.01.023
0378-4266/© 2014 Elsevier B.V. All rights reserved.

increase due to lowered risk premium.[3] As a result of the increased supply of new issues, in the aggregate investors as a whole show a positive capital flow to the stock market. The investors that receive the lowest consumption shock reduce their equity holdings (negative flow), which is opposite of the aggregate flow,[4] and those investors act contrarian.[5] Those negative contrarian flows to stocks show that stocks are expensive and predate lower future stock returns. Similar intuition applies during bad times, during which the positive contrarian or less negative flows to stocks imply higher expected stock returns.

Guided by this intuition, we examine all major investor groups' quarterly equity flows and propose a clear classification of all major market participants based upon the direction of their flows. We follow the characterizations as in the Federal Reserve Flow of Funds data[6] to classify all market participants (including all types of institutions and households) into 11 categories. Each quarter, one aggregate group of investors is classified as contrarian if their flows are in the opposite direction from that of the aggregate market.[7] For example, in a quarter in which the corporations issue new shares to the market, investors that reduce their equity holdings are labeled contrarian investors. We classify major market participants into two groups by their flows to the stock market because consumption shocks change investors' preferences, and their preferences ultimately are revealed by their actions in the stock market. We then sum the normalized flows of these contrarian investors to construct the contrarian flows (*CTF*) measure.

The magnitude of contrarian flows is economically and statistically significant, and it also displays a robust negative relationship with consumption growth rate. This confirms the countercyclical property of the contrarian flows and supports the fact that *CTF* captures the effective risk appetite in the aggregate in an economy in which agents have habit-formation type of preferences (Campbell and Cochrane, 1999). In order to test our hypothesis that the *CTF* measures the risk premium, we investigate the empirical relation between the contrarian flows and the CRSP value-weighted index returns using quarterly data from January 1960 to December 2007. We show that the *CTF* does forecast returns of the value-weighted market index over the short-term T-bill rate at one quarter to intermediate horizons. The predictive relation is robust to the addition of other control variables such as dividend yield, short interest rate, net issues, term spread, and default spread. The forecastability gradually increases from short to intermediate horizons and dissipates at longer horizons.

From an economic perspective, it is crucial to discover whether the *CTF* is driven by macroeconomic fundamentals and whether this exact link is the source of the *CTF* predictability. In order to address these questions, we first document that contemporaneous consumption growth significantly determines the *CTF*. We then decompose the *CTF* into the component that is driven by consumption growth and the residual component, and we test which component predicts returns. Intuitively, if the return predictability stems from the fact that consumption shock changes risk aversion, the predictability should directly come from the component that is driven by consumption growth, and we can link the predictability to fundamentals. This helps us to distinguish the *CTF* with the net equity issuance measure, which is often interpreted as investor sentiment (Baker and Wurgler, 2000). The results also show that there is valuable information in the covariation of consumption growth and portfolio flows. Therefore, we establish links between the consumption growth to both investor demands for stocks and expected stock returns.

We also contribute to the literature by documenting the predictability of the value premium by the *CTF* and a fundamental macroeconomic variable, the consumption growth. Growth firms bear more discount rate risk than value firms (Brennan et al., 2004; Campbell and Vuolteenaho, 2004), and therefore we hypothesize that the *CTF* should exhibit stronger predictability for growth stocks than for value stocks. Consistent with this conjecture, we find that the forecastability for growth companies is stronger than for value companies across all size quintiles when we examine the 25 Fama–French size and book-to-market benchmark portfolios. And hence it implies that the *CTF* negatively forecasts the value factor, *HML*. Using quarterly returns of the *HML*, we find that high *CTF* precedes low *HML* factor, and this predictability is again attributed to the component that is explained by consumption growth. This is another novel contribution of this paper since other known macroeconomic return predictors have not been shown to predict the value premium.[8]

The economic intuition of the results is that the consumption shock affects different investors unequally. This motivates us to classify investors by their flows to the stock market rather than by their labels because investors' preferences ultimately are revealed by their actions in the stock market. In our economy, institutions serve as financial intermediaries and the total wealth of the economy is owned by households, directly or indirectly. Various types of institutions represent different clienteles or different objectives of their clienteles. This is the reason why we examine institutions of the same type as whole.[9] This partition by flow distinguishes from the approach of breaking down investors into two large groups, households, and institutions, as in Kaniel et al. (2008). So, empirically who more frequently acts contrarian? We find that brokerage firms and pension funds most frequently act as contrarians and households seldom act as contrarian. This is consistent with the fact that households' direct stock holdings are discretionary and affected more by the consumption shocks than the stock portfolio held by a pension fund.

Finally, we consider additional robustness checks. First, it is also conceivable that the *CTF* measures disagreement among investors, and contrarian investors act against the market because their views on earnings prospects differ from the consensus. If this is the case, the lower returns following high *CTF* might be an artifact resulting from high disagreement predicting low returns (Miller, 1977; Park, 2005). We first notice that the *CTF* display very low correlation with the proxy for disagreement and hence are unlikely to measure disagreement. We further test this possibility by adding earnings forecast dispersion as an additional control in the *CTF* predictive regression, and the forecasting power of the *CTF* is not affected at all. Therefore, the *CTF* does not relate to the degree of divergence in opinions about fundamentals. Second, we perform out-of-sample tests for our main results and find that the *CTF* does predict market returns out of sample, which alleviates the data snooping concern (Goyal and Welch, 2008).

The paper is structured as follows. In Section 2, we describe the data set. In Section 3, we present the predictability results of the

---

[3] This is a standard Q-theory intuition and does not necessarily imply any market inefficiency.

[4] In extreme cases all groups of investors may increase their stock holdings at the same time. But empirically we never observe this uniform action from all types of investors.

[5] Throughout this paper, the term contrarian simply refers to this group of investors' negative flow to equity at a time when there is positive flow to equity in the aggregate. It does not pertain to any behavioral implications.

[6] The flow of funds data has been extensively used in empirical researches, for example Allen and Santomero (2001), Adrian and Shin (2010), Christiano et al. (1996), and Cohen (1999).

[7] Note that the aggregate market flow needs not be equal to 0 since corporations net issue or repurchase shares. Empirically, we observe either issuance or repurchase every quarter.

[8] The exception is the value spread (Cohen et al., 2003).

[9] We do not further break down all types of institutions to a more detailed level also because of the data availability issue. The only type of institution that can be broken down even further is mutual funds.

دریافت فوری ← متن کامل مقاله

ISIArticles
مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات