Ambiguity, Risk, and Sentiment

Di Luo
Business School, University of Dundee, Dundee, SO1 4HN, UK.

November 2023

Abstract

The impact of sentiment on asset prices varies during periods of low and high ambiguity and risk and across countries. Examining stock market returns across 29 countries, we show that predictability from sentiment is more pronounced when ambiguity is low in Australia, Canada, Czech Republic, India, Ireland, Italy, Mexico, Netherlands, Poland, Portugal, Spain, the UK, and the US, while it is more pronounced when ambiguity is high in Austria, Belgium, Brazil, China, Denmark, Finland, France, Germany, Japan, Sweden, and Switzerland. Conversely, the effect of sentiment on returns is amplified when risk is high in Australia, Czech Republic, Ireland, Mexico, Netherlands, Poland, South Korea, Spain, Sweden, the UK, and the US, while it is amplified when risk is low in Austria, Brazil, China, Denmark, Finland, France, Germany, Italy, Japan, Russia, and Switzerland. We find similar patterns on how ambiguity and risk influence the relation between sentiment and asset pricing anomalies. Overall, the underlying mechanism driving the sentiment-return relation is different between ambiguity and risk and across countries.

JEL classification: G12; G14; G30

Keywords: Ambiguity; Risk; Sentiment; Asset pricing

---

*We are grateful to Heiner Beckmeyer and conference participants at the 2023 Financial Markets & Corporate Governance Conference for all their helpful comments and suggestions. We are also grateful for financial support from the National Natural Science Foundation of China (Grants No.71991473 and 71671076). Any remaining errors are our own.
Emails: dluo001@dundee.ac.uk

1 Introduction

Sentiment plays a key role in asset pricing (Baker and Wurgler, 2006). Recently, Birru and Young (2022) advance the relation between sentiment and returns by highlighting the importance of uncertainty in it. They posit and show that the effect of sentiment on returns is more pronounced during periods of high uncertainty.[1] While they refer to uncertainty as "Knightian uncertainty" (Knight, 1921), it is measured by the volatility index (VIX) and idiosyncratic risk.[2] However, Brenner and Izhakian (2018), Izhakian (2020), and Brenner and Izhakian (2021) demonstrate that uncertainty can be decomposed into ambiguity ("unknown unknown") and risk ("known unknown") and highlight the difference between ambiguity and risk in asset pricing.[3] In this paper, we investigate the role of both ambiguity and risk in the impact of sentiment on returns in international stock markets. Our main results show the different effects of ambiguity and risk on the relation between sentiment and returns, which also vary across countries.

We conjecture that sentiment predicting returns is conditional on both ambiguity and risk. Sentiment captures investors' irrational beliefs on firms' future cash flows which deviate from fundamental values (Keynes, 1936). "High" sentiment leads to overly optimistic behaviors while "low" sentiment leads to overly pessimistic behaviors (Bower, 1981; Johnson and Tversky, 1983). When investors make their decisions influenced by sentiment, stock markets can exhibit significant mispricing and high volatility (De Long et al., 1990; Shleifer and Summers, 1990). The

[1] Chung et al. (2012) show the time-varying predictability of sentiment during periods of economic expansion and recession. Ding et al. (2021) find that the effect of uncertainty on returns is stronger when sentiment is high.

[2] The VIX is often used to proxy for uncertainty (Connolly et al., 2005; Bloom, 2009; Bekaert et al., 2013; Bloom, 2014; Williams, 2015; Brenner and Izhakian, 2021).

[3] Brenner and Izhakian (2021) show that the VIX and ambiguity tend to reflect major economic events differently. For instance, ambiguity was high but the VIX was low before the 2008 global financial crisis.

behavioral finance literature shows that psychological biases escalate during periods of high uncertainty (Kahneman and Tversky, 1973; Daniel et al., 1998; Hirshleifer, 2001). For instance, investors are likely to weigh fundamental information as less significant when they receive an exogenous shock of sentiment during periods of high uncertainty, due to the estimation of lower precision of that information (Birru and Young, 2022). Further, when ambiguity is high, investors react more slowly to fundamental information changes and make worse investment decisions, leading to stronger biases (Zhang, 2006; Kumar, 2009).

Knight (1921) highlights the difference between risk and ambiguity. While uncertainty over future outcomes refers to risk, uncertainty over the probability of those outcomes refers to ambiguity.[4] Ambiguity arises since the probabilities of potential outcomes are not directly observable, and evolve dynamically over time (Brenner and Izhakian, 2018). Recent studies (Epstein and Schneider, 2008; Illeditsch, 2011; Ui, 2011; Ju and Miao, 2012; Brenner and Izhakian, 2018) highlight the role of ambiguity in asset pricing and investors' trading behaviors in the US.

To test the impact of both ambiguity and risk on sentiment predicting returns, we measure sentiment using the Baker and Wurgler (2006) sentiment index for the US and the OECD consumer confidence index (from the Organisation for Economic Co-operation and Development) for other countries. While it is difficult to precisely measure uncertainty (Birru and Young, 2022), prior studies often use uncertainty over potential outcomes, e.g., volatility of stock market returns, to proxy for it. Further, the empirical investigation of how ambiguity affects financial markets is impeded by the measurement of ambiguity (Izhakian and Zender, 2014).[5] To capture

[4]Economic theories show that people exhibit ambiguity aversion in addition to risk aversion (Ellsberg, 1961). For instance, decision makers have a higher propensity to choose a bet on a draw from an urn with 100 balls with a known distribution of 50 red and 50 black balls than one with an unknown proportion of red and black balls.

[5]Prior studies have used some proxies for ambiguity. For example, to measure ambiguity, the inflation entropy is employed by Ulrich (2013) and the VIX is used by Williams (2015).

uncertainty over both outcomes and the probability of those outcomes, we use the five-minute stock market data of twenty-nine countries to measure ambiguity and risk, following Brenner and Izhakian (2018).

First, we show that sentiment is more powerful in forecasting returns during periods of low ambiguity than high ambiguity in the US stock market. A potential explanation might be a lack of confidence in investors about the probability of returns when ambiguity is high (Brenner et al., 2011; Bianchi et al., 2018). For instance, when it is high, investors are inclined to make fewer overly optimistic decisions given the high sentiment. This might make relative overpricing less severe and return reversals less strong. Further, in the presence of ambiguous information, portfolio inertia can occur (Illeditsch, 2011; Illeditsch et al., 2021). Thus, the predictability of sentiment for returns might be distorted. On the other hand, sentiment has stronger predictive power for returns during periods of high risk than low risk, consistent with findings from Birru and Young (2022).

Across the global stock markets outside of the US, the predictability of sentiment is more pronounced when ambiguity is low in Australia, Canada, Czech Republic, India, Ireland, Italy, Mexico, Netherlands, Poland, Portugal, Spain, and the UK, while it is more pronounced when ambiguity is high in Austria, Belgium, Brazil, China, Denmark, Finland, France, Germany, Japan, Sweden, and Switzerland. Conversely, the effect of sentiment on returns is amplified when risk is high in Australia, Czech Republic, Ireland, Mexico, Netherlands, Poland, South Korea, Spain, Sweden, and the UK, while it is amplified when risk is low in Austria, Brazil, China, Denmark, Finland, France, Germany, Italy, Japan, Russia, and Switzerland.[6] Our results

[6]Wang et al. (2021) show that culture, market institutions, intelligence, and education play important roles in the different effect of sentiment on returns between developed and emerging markets.

are robust to using the orthogonalized Baker and Wurgler (2006) sentiment index and the aligned Huang et al. (2015) sentiment index for the US sample.

Our results provide evidence of the contrasting effect of sentiment on returns during periods of low and high ambiguity and risk across countries, e.g., between the US and China. This might be due to the fact that US stocks are largely held by institutional investors, while the Chinese stock market has a large proportion of retail investors with a short-term orientation (Bailey et al., 2009; Jiang et al., 2016; Liu et al., 2019, 2020; Leippold et al., 2022; Titman et al., 2022).[7] with trading behaviors in the Chinese stock market more characterized by speculation, sentiment, herding, gambling, and manipulation (Pan et al., 2016; Liu et al., 2019, 2020; Titman et al., 2022).

Second, sentiment plays an important role in cross-sectional returns, in particular, those of speculative stocks (Baker and Wurgler, 2006; Da et al., 2015). For instance, stock returns of firms with high beta and volatility are more affected by sentiment than those with low beta and volatility (Stambaugh et al., 2015; Antoniou et al., 2016; Liu et al., 2018). Following their works, we examine the predictability from sentiment for beta, volatility, and idiosyncratic risk premiums during periods of high and low ambiguity and risk. For the beta premium, we find that the forecast power of sentiment is more prevalent when ambiguity is low in Austria, Belgium, Canada, China, Denmark, France, Germany, India, Italy, Japan, Mexico, Netherlands, Portugal, South Korea, Switzerland, the UK, and the US, while it is more prevalent when ambiguity is high in Australia, Brazil, Finland, Greece, Ireland, New Zealand, Russia, and Sweden. On the contrary, the effect of sentiment on returns is magnified when risk is high in Austria, Belgium,

[7]Approximately 17% of trading volume in the US is associated with retail traders in January 2020 (see https://www.reuters.com/article/us-retail-trading-numbers-idUSKBN29Y2PW), while 84% in China can be attributed to retail traders (Chen et al., 2022a,b).

Canada, China, Denmark, Germany, Greece, India, Mexico, Netherlands, Portugal, South Korea, Spain, Sweden, the UK, and the US, while it is magnified when risk is low in Brazil, Italy, New Zealand, Poland, and Russia. The effect of sentiment on the volatility and idiosyncratic risk premiums exhibits similar patterns.

Third, mispricing premium is associated with sentiment (Yu and Yuan, 2011; Stambaugh et al., 2012, 2015; Shen et al., 2017; Stambaugh and Yuan, 2017). For example, the profits of mispricing anomalies are higher during periods of high sentiment, which are attributed to short-leg rather than long-leg portfolios. Following their studies, we examine the predictability of sentiment for two composite mispricing premiums: namely, the mispricing management and performance premiums, during periods of high and low ambiguity and risk. For the mispricing management premium, we find that the predictive power of sentiment is exacerbated when ambiguity is low in Belgium, France, Portugal, South Korea, and the US, while it is exaggerated when ambiguity is high in Austria, Brazil, Germany, Russian, and Switzerland. By contrast, the effect of sentiment on returns is intensified when risk is high in Belgium, Finland, France, Japan, South Korea, and the US, while it is magnified when risk is low in Brazil, Mexico, Poland, and Switzerland. The effect of sentiment on the mispricing performance premium displays similar patterns.[8]

Finally, we conduct further analyses using the daily Financial and Economic Attitudes Revealed by Search (FEARS) sentiment index (Da et al., 2015) and the daily measures of ambiguity and risk (Ben-Rephael and Izhakian, 2020). We show that sentiment displays significant predictability for market returns and anomaly premiums when ambiguity is low but not when ambiguity is high, consistent with the monthly evidence. On the other hand, sentiment displays

[8]Our results based on anomalies are similar after controlling for the Fama and French (1993) three factors.

significant predictability for market returns and anomaly premiums when risk is high but not when risk is low, consistent with Da et al. (2015) and Birru and Young (2022).

We make several contributions to the literature. First, we contribute on the predictability of sentiment for stock market returns (Brown and Cliff, 2005; Baker and Wurgler, 2006, 2007; Baker et al., 2012; Da et al., 2015). For example, Baker et al. (2012) show that sentiment exhibits contrarian predictability for returns in global stock markets including Canada, France, Germany, Japan, the UK, and the US. However, we provide novel evidence for sentiment predictability conditional on ambiguity and risk. Second, our study relates to prior studies on the importance of sentiment for speculative stocks, e.g., high volatility stocks, (Baker and Wurgler, 2006, 2007; Baker et al., 2012; Da et al., 2015). For instance, Baker et al. (2012) find that in global markets, sentiment is significantly associated with the volatility premium. Our results show that the impact of sentiment on speculative stock valuations varies during ambiguous and risky times. Third, while the literature documents that sentiment helps to explain the asset pricing anomaly (Yu and Yuan, 2011; Stambaugh et al., 2012, 2015; Shen et al., 2017), we demonstrate the role of sentiment in understanding the mispricing premiums as conditional on ambiguity and risk. Forth, we contribute to the literature on asset pricing anomalies in the international markets (Bekaert et al., 2009; Fama and French, 2012; Asness et al., 2013; Fama and French, 2017; Lu et al., 2017; Jacobs and Müller, 2020; Tobek and Hronec, 2021; Jensen et al., 2022). Finally, our work relates to the importance of ambiguity in asset pricing (Chen and Epstein, 2002; Epstein and Schneider, 2008; Leippold et al., 2008; Epstein and Schneider, 2010; Illeditsch, 2011; Ui, 2011; Ju and Miao, 2012; Drechsler, 2013; Bianchi et al., 2018; Brenner and Izhakian, 2018; Collard et al., 2018; Illeditsch et al., 2021).

Our paper closely relates to Birru and Young (2022), which highlights the time-varying importance of sentiment on returns when sentiment interacts with uncertainty. We extend their work by decomposing uncertainty into ambiguity and risk, and by conducting empirical tests on international stock markets.

The remainder of the paper proceeds as follows. Section 2 discusses the construction of the ambiguity measure. In Section 3, we describe the data and sample. We present the empirical results, conduct robustness tests, and offer explanations for the results, in Section 4. Section 5 concludes the paper.

2 The ambiguity and risk measures

As noted, ambiguity refers to situations where an agent's subjective knowledge about the likelihoods of contingent events is consistent with multiple probability distributions. Following Izhakian (2020), we define ambiguity as

$$\mho^2[r] = \int E[\varphi(r)]Var[\varphi(r)]dr, \tag{1}$$

where r is the return, $\varphi(r)$ is the marginal probability, $E[\ ]$ is the expectation of probability, and $Var[\ ]$ is the variance of probability. While risk can be measured by the volatility of returns, ambiguity can be measured by the volatility of probabilities (Rothschild and Stiglitz, 1970). By construction, $\mho^2[r]$ is independent of risk, attitudes toward risk, and/or attitude toward ambiguity, and it takes into account the variance of all the moments of the outcome distribution (Brenner and Izhakian, 2018).

2.1 Monthly measure

In this subsection, we estimate the monthly ambiguity and risk measures used in the main tests. Specifically, we use the five-minute prices to compute returns thereby minimizing microstructure effects as per Andersen et al. (2001). We require at least 12 observations in a day. We also exclude observations with log returns outside the range of -10% to 10% within five minutes to mitigate any potential erroneous orders likely to be axed by the exchange (Brenner and Izhakian, 2018). For each day, we use the five-minute returns to calculate the daily mean (μ) and volatility (σ) of returns and normalize μ and σ based on the number of intraday observations. Following Scholes and Williams (1977), we estimate σ with the non-synchronous trading adjustment. Specifically, σ is computed as

$$\sigma_t^2 = \sum_{i=1}^{N_t}(r_{i,t} - E[r_{i,t}])^2 + \sum_{i=2}^{N_t}(r_{i,t} - E[r_{i,t}])(r_{i,t-1} - E[r_{i,t-1}]), \tag{2}$$

where there are N_t five-minute returns and $r_{i,t}$ is the return on day t.

Following Brenner and Izhakian (2018), we assume that the distribution of intraday returns is normal. Next, we calculate the cumulative probability of favorable returns ($P(r \geq r_f) = 1 - \Phi(r_f; \mu, \sigma)$) for each day. We consider any return greater than the risk-free rate to be favorable.

The return distribution is represented by a histogram. Specifically, we first separate daily returns ranging from -6% to $+6\%$ to 60 bins. Each bin is 0.2% width. Second, we estimate the probability of returns being in each bin. Third, we calculate the probability of returns

being outside of -6% and $+6\%$. Fourth, we separately calculate the mean and variance of the probability for each of the 62 bins. Finally, we estimate the degree of ambiguity in a month as

$$\begin{aligned}\mho^2[r] &= \frac{1}{\omega(1-\omega)} \times \Bigg\{ E\big[\Phi(r_0;\mu,\sigma)\big] Var\big[\Phi(r_0;\mu,\sigma)\big] \\ &+ \sum_{i=1}^{60} E\big[\Phi(r_i;\mu,\sigma) - \Phi(r_{i-1};\mu,\sigma)\big] \times Var\big[\Phi(r_i;\mu,\sigma) - \Phi(r_{i-1};\mu,\sigma)\big] \\ &+ E\big[1-\Phi(r_{60};\mu,\sigma)\big] Var\big[1-\Phi(r_{60};\mu,\sigma)\big] \Bigg\}, \end{aligned} \tag{3}$$

where $r_0 = -0.06$ and $\omega = r_i - r_{i-1} = 0.002$. We measure risk as σ using daily returns.

2.2 Daily measure

In this subsection, we estimate the daily ambiguity and risk measures used in the robustness tests for the US sample. Specifically, we estimate the daily ambiguity following Ben-Rephael and Izhakian (2020). Specifically, we use the one-minute returns and calculate the mean and variance of one-minute returns in 15 minutes. We exclude returns with fewer than 10 one-minute returns in any 15-minute interval, and with fewer than ten intraday return distributions. Extreme returns which are higher than 5% or lower than 5% log returns over 30 seconds are also removed, since these can be due to improper orders. We ten separate returns ranging from -100% to $+1000\%$ to 1000 bins. Each bin has a 0.2% width. Second, we estimate the probability of returns being in each bin. Third, we calculate the probability of returns being outside of -100% and $+100\%$. Fourth, we separately calculate the mean and variance of the probability for each of the 1002 bins. Finally, we estimate the degree of ambiguity in a day similar to Eq. (3) as

$$
\begin{aligned}
\mho^2[r] &= \frac{1}{\sqrt{\omega(1-\omega)}} \times \Bigg\{ E\big[\Phi(r_0;\mu,\sigma)\big] Var\big[\Phi(r_0;\mu,\sigma)\big] \\
&+ \sum_{i=1}^{1000} E\big[\Phi(r_i;\mu,\sigma) - \Phi(r_{i-1};\mu,\sigma)\big] \times Var\big[\Phi(r_i;\mu,\sigma) - \Phi(r_{i-1};\mu,\sigma)\big] \\
&+ E\big[1 - \Phi(r_{1000};\mu,\sigma)\big] Var\big[1 - \Phi(r_{1000};\mu,\sigma)\big] \Bigg\}. \qquad (4)
\end{aligned}
$$

Similarly, we also use the one-minute returns to calculate the daily risk. Specifically, in each 15-minute interval, we calculate the standard deviation of one-minute intraday returns, and then calculate the daily risk as the mean of these values in a day.

3 Data

We obtain the five-minute data of global stock market indices across 29 countries from Refinitiv Datascope. Appendix Table A.1 provides a detailed description of the stock market index in each country and the sample period. We obtain the daily and monthly data of global stock market indices across 29 countries from Refinitiv. We use the treasury bill rate (RF) as the risk-free rate, taken from Kenneth French's website.[9] We obtain the Fama and French (1993) three factors in the international financial markets from the AQR website.[10]

We obtain the beta, volatility, idiosyncratic risk, mispricing management, and mispricing performance premiums of each sample country based on the capped value weighted portfolios as in Jensen et al. (2022).[11] For each anomaly, the portfolio is rebalanced monthly and formed based on each characteristic by sorting stocks to terciles using non-micro stocks in each country.

[9] See http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/

[10] See https://www.aqr.com/Insights/Datasets

[11] See https://jkpfactors.com/

Non-micro stocks are defined as those with a market capitalization greater than 20% of NYSE stocks, similar to the definition of microcap stocks in Fama and French (2008).

Specifically, the beta portfolios are formed based on the 60-month Capital Asset Pricing Model (CAPM) of Sharpe (1964) and Lintner (1965). The beta premium is documented by Friend and Blume (1970), Black et al. (1972), and Frazzini and Pedersen (2014). The volatility and idiosyncratic risk portfolios are formed based on the 21-day return volatility and Fama and French (1993) three-factor model, respectively. Ang et al. (2006, 2009) highlight the low-risk premium in the US and international financial markets.

The mispricing management portfolios are formed based on the average of six characteristics, namely operating accruals (Sloan, 1996), net operating assets (Hirshleifer et al., 2004), equity net payout (Daniel and Titman, 2006), asset growth (Cooper et al., 2008), change of property, plans, and equipment (PPE) and inventory (Lyandres et al., 2008), and net stock issues (Pontiff and Woodgate, 2008). The mispricing performance portfolios are formed based on the average of four characteristics, namely price momentum over the previous 12 months (Jegadeesh and Titman, 1993),[12] the Ohlson O-score (Dichev, 1998), return on assets (Balakrishnan et al., 2010), and gross profitability (Novy-Marx, 2013).

We obtain the Baker and Wurgler (2006) sentiment index to measure US sentiment from Jeffrey Wurgler's website[13] and the OECD consumer confidence index to measure other countries' sentiment.[14] The Baker and Wurgler (2006) sentiment index is constructed by the first principal component of five variables, namely the value-weighted dividend premium, first-day returns

[12] Antoniou et al. (2013) show that the momentum premium is higher at times of high sentiment than of low sentiment.

[13] See http://people.stern.nyu.edu/jwurgler/

[14] See https://data.oecd.org/leadind/consumer-confidence-index-cci.htm. Previous studies (Wang et al., 2021) use the consumer confidence index to measure sentiment in global stock markets.

of initial public offerings (IPOs), IPO volume, closed-end fund discount, and equity share in new issues.footnoteIzhakian and Zender (2014) highlight the role of ambiguity and risk in IPO pricing. Izhakian et al. (2022) show that ambiguity and risk have different implications for equity financing decisions. We obtain the aforementioned Da et al. (2015) daily FEARS sentiment index from Zhi Da's website.[15]

Table 1 presents the descriptive statistics for the main variables. For the US stock market, the average market returns is 0.8% per month between 1996 and 2021, consistent with the 0.8% between 1993 and 2016 as reported in Brenner and Izhakian (2018). The ambiguity of market returns has a mean of 1.092 per month, similar to the 0.986 in Brenner and Izhakian (2018). The risk of market returns has a mean of 4.1% per month, again similar to the 4.9% in Brenner and Izhakian (2018). Across global stock markets, Czech Republic has the lowest average market returns (0.1% per month), while Brazil has the highest (1.4% per month). For ambiguity across global markets, Brazil has the lowest mean of 0.693 per month, while New Zealand has the highest mean of 1.882 per month. Regarding the risk across the global markets, New Zealand has the lowest mean at 2.9% per month, while Greece has the highest mean at 7.5% per month.

[Table 1 about here]

Table 2 presents the correlations between the main variables. For the US stock market, the market returns are positively correlated with ambiguity at 0.16, consistent with Brenner and Izhakian (2018). Conversely, the market returns are negatively correlated with risk at -0.33, consistent with Harvey (2001) Nelson (1991), and Brenner and Izhakian (2018). Further, sentiment is negatively correlated with ambiguity at -0.13, suggesting that high sentiment is associated with low ambiguity. On the other hand, sentiment is positively correlated with risk

[15]See https://www3.nd.edu/ zda//

at 0.06, indicating that high sentiment is associated with high risk, in line with Birru and Young (2022). The correlation magnitude (0.06) is small, suggesting that sentiment may not vary significantly during periods of low and high risk, consistent with Birru and Young (2022).

Across the global stock markets, the market returns are most negatively correlated with ambiguity at -0.31 for Brazil, while they are most positively correlated with ambiguity at 0.27 for Finland. Overall, the correlation between returns and ambiguity can be either negative or positive, depending on the country. This suggests that the impact of ambiguity on returns can vary across countries. On the other hand, the market returns are all negatively correlated with risk, ranging between -0.59 for Russia and -0.02 for China.

Sentiment is most negatively correlated with ambiguity at -0.13 for the US, while it is most positively correlated with ambiguity at 0.58 for Russia. Overall, the correlation between sentiment and ambiguity can be either negative or positive, depending on the country. This suggests that the effect of ambiguity on the relation between sentiment and returns can vary across countries. On the other hand, sentiment is only positively correlated with risk at 0.06 for the US. For all other countries, sentiment is all negatively correlated with risk, ranging between -0.49 for Finland and -0.01 for Mexico.

[Table 2 about here]

4 Empirical results

4.1 Market returns

In this subsection, we examine how ambiguity influences the relation between sentiment and market returns. The economic mechanism for the sentiment and returns association is that high

sentiment is likely to drive prices too far above the fundamental valuations, so a price correction is expected in the future (Brown and Cliff, 2005; Baker and Wurgler, 2006, 2007; Baker et al., 2012; Huang et al., 2015). This implies predictability of sentiment for returns. For example, during times of high sentiment, investors are inclined to make overly optimistic decisions, generating relative over-valuations. By contrast, during times of low sentiment, investors are inclined to make overly pessimistic decisions, generating relative under-valuations.

Although theoretically predicting the relation between sentiment and market returns is intuitive, empirical evidence shows that such a relation tends to be less significant (Baker and Wurgler, 2007; Birru and Young, 2022). More importantly, Birru and Young (2022) show that the predictability of sentiment for returns only switches on during periods of high uncertainty. While uncertainty is measured by return volatility (Birru and Young, 2022), an important aspect of uncertainty, namely ambiguity (Knight, 1921), is not explored in Birru and Young (2022). We conjecture that the predictability of sentiment for returns varies during periods of low and high ambiguity and risk.

Specifically, to examine how the pricing correction induced by sentiment depends on ambiguity and risk, we run the following regression during periods of high and low ambiguity and risk

$$R_{t+1,t+\tau} = \beta_0 + \beta_1 Sentiment_t + \epsilon_{t+1,t+\tau}, \tag{5}$$

where $R_{t+1,t+\tau}$ denotes the future τ-month (τ=3, 6, 9, or 12) cumulative excess market returns or anomaly premiums. That is, we examine the predictability of sentiment for returns over the subsequent three, six, nine, or twelve months. We standardize sentiment to have a mean of

zero and a variance of one. High ambiguity (risk) is identified as the periods above the median of ambiguity (risk) and low ambiguity (risk) is identified as the periods below the median of ambiguity (risk), for each country.

Table 3 presents the predictive regression results for the excess market returns at times of low and high ambiguity.[16] The sentiment coefficient is significantly negative at the 1% level during periods of low ambiguity, suggesting that high sentiment tends to drive asset prices too high, thus leading to lower returns in the future, consistent with Brown and Cliff (2005), Baker and Wurgler (2006), Baker and Wurgler (2007), Baker et al. (2012), and Huang et al. (2015). Specifically, a one-standard-deviation increase in sentiment is associated with -0.021 ($t = -3.99$), -0.041 ($t = -7.12$), -0.058 ($t = -7.99$), and -0.078 ($t = -9.67$) return correction over the subsequent three, six, nine, and twelve months, respectively.

The economic mechanism behind this might be that investors are insufficiently confident about the probability of returns when ambiguity is high (Brenner et al., 2011; Bianchi et al., 2018). For example, at times of high ambiguity, investors are likely to exhibit less overly optimistic behaviors despite high sentiment, thus leading to relative overpricing and a less severe correction in future returns. Further, Illeditsch (2011) and Illeditsch et al. (2021) show that portfolio inertia occurs when information is ambiguous. Therefore, the predictability of sentiment for returns might be distorted.

Conversely, the sentiment coefficient is positive for the one- and three-month returns and insignificant for the six-month returns during periods of high ambiguity. Further, the sentiment coefficient is significantly different between times of low and high ambiguity at the 1% level for

[16] Appendix Table A.2 reports the predictive regression results for the excess market returns during the full sample period. The sentiment coefficient is largely negative, consistent with the literature (Wang et al., 2021).

the one- and three-month returns. Specifically, a one-standard-deviation increase in sentiment is associated with a -0.034 ($t = -4.01$) and -0.043 ($t = -2.60$) return correction difference between the periods of low and high ambiguity over the subsequent three and six months.

Interestingly, for the Chinese stock market (the second largest in the world), the sentiment coefficient is significantly negative at the 10% level for the subsequent six-month returns and at the 5% level for the subsequent nine- and twelve-month returns during periods of high ambiguity. Conversely, the sentiment coefficient is insignificant during periods of low ambiguity. Further, the sentiment coefficient is significantly different between times of low and high ambiguity at the 10% level for the subsequent nine- and twelve-month returns. Taken together, the effect of ambiguity on the relation between sentiment and returns leans in opposite directions for the US and China stock markets. This might be because the former attracts more institutional investors than the latter, which tends to be dominated by retail investors (Bailey et al., 2009; Jiang et al., 2016; Liu et al., 2019, 2020; Leippold et al., 2022; Titman et al., 2022). Investors' order executions tend to exhibit behaviors such as speculation, sentiment, herding, gambling, and manipulation (Pan et al., 2016; Liu et al., 2019, 2020; Titman et al., 2022).

Across global stock markets outside the US and China, the predictability of sentiment is more pronounced when ambiguity is low in Australia, Canada, Czech Republic, India, Ireland, Italy, Mexico, Netherlands, Poland, Portugal, Spain, and the UK, while it is more pronounced when ambiguity is high in Austria, Belgium, Brazil, Denmark, Finland, France, Germany, Japan, Sweden, and Switzerland. Overall, how ambiguity drives the relation between sentiment and returns varies significantly across countries.[17]

[17]Prior studies show that stock market engagement varies largely across countries (Miles et al., 1999; Allen and Gale, 2000; Guiso et al., 2002; Rajan and Zingales, 2003; Perotti and Von Thadden, 2006), which might be a plausible explanation

[Table 3 about here]

Table 4 presents the predictive regression results for the excess market returns at times of low and high risk. For the US stock market, the sentiment coefficient is significantly negative at least at the 1% level during periods of high risk, suggesting that the effect of sentiment on returns is more prevalent during periods of high uncertainty, consistent with Birru and Young (2022). Specifically, a one-standard-deviation increase in sentiment is associated with a -0.015 ($t = -2.68$), -0.035 ($t = -5.99$), -0.059 ($t = -7.41$), and -0.077 ($t = -9.16$) return reversal over the subsequent three, six, nine, and twelve months, respectively. The economic mechanism behind this could be that noisy traders value signals from asset fundamentals less than signals from sentiment during periods of high uncertainty (Birru and Young, 2022). Further, arbitrage costs are likely to be high during periods of high uncertainty, which limits rational arbitrageurs' ability to correct the mispricing from sentiment induced by noisy traders. Conversely, the sentiment coefficient is insignificant for the three-month returns and marginally significant for the six-month returns during periods of low risk.

Interestingly, for the Chinese stock market, the sentiment coefficient is significantly negative at the 5% level for the subsequent nine- and twelve-month returns during periods of low risk. Conversely, the sentiment coefficient is insignificant during periods of high risk. Taken together, the impact of risk on the relation between sentiment and returns inverts between the US and China stock markets.

Across global stock markets outside of the US and China, the effect of sentiment on returns is amplified when risk is high in Australia, Czech Republic, Ireland, Mexico, Netherlands, Poland,

for the cross-country variations. Wang et al. (2021) demonstrate that the impact of sentiment on returns varies between developed and emerging markets due to the influence of culture, market institutions, intelligence, and education.

South Korea, Spain, Sweden, and the UK, while it is amplified when risk is low in Austria, Brazil, Denmark, Finland, France, Germany, Italy, Japan, Russia, and Switzerland. Overall, how risk influences the relation between sentiment and returns differs significantly across countries. Our evidence provides new insights to the proposition that sentiment has significant forecasting power for asset prices at times of high uncertainty (Birru and Young, 2022) because we show that the predictability of sentiment for returns differs between the two uncertainty measures, namely ambiguity and risk, and varies across countries.

[Table 4 about here]

In untabulated results, we also use the orthogonalization-based sentiment index of Baker and Wurgler (2006), where each of five components is orthogonalized to the industrial production index, nominal durables consumption, nominal nondurables consumption, nominal services consumption, National Bureau of Economic Research (NBER) recession indicator, employment, and consumer price index. Prior studies show that macroeconomic conditions play an important role in the relation between sentiment and returns (Garcia, 2013; Birru and Young, 2022).[18] Our results are robust to using this alternative sentiment measure for the US sample. In another untabulated set of results, we use the aligned sentiment measure (Huang et al., 2015), which is estimated using the partial least squares method.[19] Our results remain robust to using this aligned sentiment measure for the US sample.

[18]The literature documents that ambiguity and risk are associated with business cycles (Ilut and Schneider, 2014; Backus et al., 2015; Jahan-Parvar and Liu, 2014; Altug et al., 2020).

[19]We obtain the aligned sentiment measure of Huang et al. (2015) from Guofu Zhou's Website: http://apps.olin.wustl.edu/faculty/zhou/.

4.2 Beta, volatility, and idiosyncratic risk premiums

In this subsection, we examine how ambiguity affects the association between sentiment and the cross-sectional returns. Baker and Wurgler (2006) and Da et al. (2015) find that sentiment helps to understand the cross-sectional returns, especially from speculative stocks. For instance, Stambaugh et al. (2015), Antoniou et al. (2016), and Liu et al. (2018) show that sentiment plays an important role in explaining the beta and volatility premiums. Following these works, we examine whether sentiment shows forecast power for the beta, volatility, and idiosyncratic risk premiums during periods of high and low ambiguity and risk.

Table 5 presents the predictive regression results for the beta premium at times of low and high ambiguity. Antoniou et al. (2016) show that the beta premium is more pronounced when sentiment is high. Thus, the estimated sentiment coefficient should be positive based on Eq. (5). Specifically, for the US stock market, the sentiment coefficient is significantly positive at the 1% level during periods of low ambiguity, suggesting that sentiment is helpful to account for the beta premium, consistent with Antoniou et al. (2016). Specifically, a one-standard-deviation increase in sentiment is associated with a 0.035 ($t = 3.52$), 0.060 ($t = 6.20$), 0.085 ($t = 7.07$), and 0.108 ($t = 8.41$) beta premium increase over the subsequent three, six, nine, and twelve months, respectively.

Conversely, the sentiment coefficient is insignificant for the three-, six-, and nine-month returns and marginally significant for the twelve-month beta premium during periods of high ambiguity. Further, the sentiment coefficient is significantly different between times of low and high ambiguity at the level of 5% or better for the three- and twelve-month beta premiums. Specifically, a one-standard-deviation increase in sentiment is associated with a 0.035 ($t = 2.79$)

and 0.067 ($t = 2.52$) beta premium difference between the periods of low and high ambiguity over the subsequent three and twelve months, respectively.

Across global stock markets outside of the US, the forecast power of sentiment is more prevalent when ambiguity is low in Austria, Belgium, Canada, China, Denmark, France, Germany, India, Italy, Japan, Mexico, Netherlands, Portugal, South Korea, Switzerland, and the UK, while it is more prevalent when ambiguity is high in Australia, Brazil, Finland, Greece, Ireland, New Zealand, Russian, and Sweden. Overall, how ambiguity drives the association between sentiment and the beta premiums varies significantly across countries.

[Table 5 about here]

Table 6 presents the predictive regression results for the beta premium at times of low and high risk. For the US stock market, the sentiment coefficient is significantly positive at the 1% level during periods of high risk. Specifically, a one-standard-deviation increase in sentiment is associated with a 0.030 ($t = 3.28$), 0.056 ($t = 5.80$), 0.087 ($t = 6.60$), and 0.104 ($t = 8.85$) beta premium increase over the subsequent three, six, nine, and twelve months, respectively.

Conversely, the sentiment coefficient is insignificantly negative for the three-month beta premium during periods of low risk. Further, the sentiment coefficient is significantly different between times of low and high risk at the 5% level for the nine-month beta premium. Specifically, a one-standard-deviation increase in sentiment is associated with a -0.047 ($t = -2.09$) beta premium difference between the periods of low and high risk over the subsequent nine months. This suggests that risk has a firmer grip on the effect of sentiment on the beta premium, consistent with Birru and Young (2022).

Across global stock markets outside of the US, the effect of sentiment on returns is magnified when risk is high in Austria, Belgium, Canada, China, Denmark, Germany, Greece, India, Mexico, Netherlands, Portugal, South Korea, Spain, Sweden, and the UK, while it is magnified when risk is low in Brazil, Italy, New Zealand, Poland, and Russia.

[Table 6 about here]

Appendix Tables A.3, A.4, A.5, and A.6 present the predictive regression results for the volatility premium at times of low and high ambiguity, the volatility premium at times of low and high risk, the idiosyncratic risk premium at times of low and high ambiguity, and the idiosyncratic risk premium at times of low and high risk, respectively. The effect of sentiment on the volatility and idiosyncratic risk premiums exhibits similar patterns.

[Tables A.3, A.4, A.5, and A.6 about here]

4.3 Mispricing management and mispricing performance premiums

In this subsection, we examine the role of ambiguity in the relation between sentiment and mispricing premiums. Yu and Yuan (2011), Stambaugh et al. (2012), Stambaugh et al. (2015), Shen et al. (2017), and Stambaugh and Yuan (2017) show that mispricing premiums are attributed to sentiment. Following their studies, we examine the predictability of sentiment for two composite mispricing premiums: the mispricing management and performance premiums, during periods of high and low ambiguity and risk.

Table 7 presents the predictive regression results for the mispricing management premium at times of low and high ambiguity. Stambaugh et al. (2015) and Stambaugh and Yuan (2017) show

that the anomaly profits are higher when sentiment is high. Thus, the estimated sentiment coefficient should be positive, based on Eq. (5). Specifically, for the US stock market, the sentiment coefficient is significantly positive at the 1% level during periods of low ambiguity, suggesting that sentiment is helpful to account for the mispricing management premium, consistent with Stambaugh et al. (2015) and Stambaugh and Yuan (2017). Specifically, a one-standard-deviation increase in sentiment is associated with a 0.025 ($t = 3.92$), 0.044 ($t = 5.72$), 0.063 ($t = 5.98$), and 0.076 ($t = 5.78$) mispricing management premium increase over the subsequent three, six, nine, and twelve months, respectively.

Conversely, the sentiment coefficient is insignificant for the three-, six-, nine-, and twelve-month mispricing management premium during periods of high ambiguity. Further, the sentiment coefficient is significantly different between times of low and high ambiguity at the level of 5% or better except over the one-month returns. Specifically, a one-standard-deviation increase in sentiment is associated with a 0.020 ($t = 2.55$), 0.034 ($t = 2.93$), 0.055 ($t = 3.63$), and 0.069 ($t = 3.54$) mispricing management premium difference between the periods of low and high ambiguity over the subsequent three, six, nine, and twelve months, respectively.

Across global stock markets outside of the US, the predictive power of sentiment for the mispricing management premium is exaggerated when ambiguity is low in Belgium, France, Portugal, and South Korea, while it is exaggerated when ambiguity is high in Austria, Brazil, Germany, Russian, and Switzerland.

[Table 7 about here]

Table 8 presents the predictive regression results for the mispricing management premium when risk is low and high. For the US stock market, the sentiment coefficient is significantly

positive at the 1% level during periods of high risk for the three-, six-, nine-, and twelve-month mispricing management premiums. Specifically, a one-standard-deviation increase in sentiment is associated with a 0.019 ($t = 3.66$), 0.039 ($t = 6.31$), 0.060 ($t = 6.08$), and 0.071 ($t = 6.34$) mispricing management premium increase over the subsequent one month.

The sentiment coefficient is significantly positive at the 10% level for the three-month mispricing management premium and at the 5% level for the six-, nine, and twelve-month mispricing management premium during periods of low risk. Although the sentiment coefficient is significant, its significance level appears to be lower during times of low risk.

Across global stock markets outside of the US, the effect of sentiment on returns for the mispricing management premium is intensified when risk is high in Belgium, Finland, France, Japan, and South Korea, while it is magnified when risk is low in Brazil, Mexico, Poland, and Switzerland. The effect of sentiment on the mispricing performance premium displays similar patterns.

[Table 8 about here]

Appendix Tables A.7 and A.8 present the predictive regression results for the mispricing performance premium when ambiguity is low and high, and when risk is low and high. The effect of sentiment on the mispricing performance premium displays similar patterns.

[Tables A.7 and A.8 about here]

4.4 Risk factors

In this subsection, we conduct robustness tests by controlling for the Fama and French (1993) three factors, namely market, size, and book-to-market factors. Specifically, we run the following regression during periods of high and low ambiguity and risk

$$R_{t+1,t+\tau} = \beta_0 + \beta_1 Sentiment_t + \beta_2 f_{MKT,t} + \beta_3 f_{SMB,t} + \beta_4 f_{HML,t} + \epsilon_{t+1,t+\tau}, \tag{6}$$

where f_{MKT} is the market factor, f_{SMB} is the size factor, and f_{HML} is the book-to-market factor.

Appendix Tables A.9, A.10, A.11, A.12, A.13, A.14, A.15, A.16, A.17, and A.18 present the predictive regression results for the anomaly profits when ambiguity is low and high, and when risk is low and high.[20] The effect of sentiment on anomaly profits exhibits similar patterns after controlling for the market, size, and book-to-market factors.

[Tables A.9, A.10, A.11, A.12, A.13, A.14, A.15, A.16, A.17, and A.18 about here]

4.5 Daily evidence

In this subsection, we conduct robustness tests by using the daily FEARS sentiment index of Da et al. (2015) and daily ambiguity and risk measures as described in subsection 2.2. Specifically, we run the following regression during periods of high and low ambiguity and risk

$$R_{t+1,t+\tau} = \beta_0 + \beta_1 Sentiment_t + \epsilon_{t+1,t+\tau}, \tag{7}$$

[20]The number of countries decreases due to the risk factors availability.

where $R_{t+1,t+\tau}$ denotes the future τ-month (τ=1, 2, 3, or 5) cumulative excess market returns or anomaly premiums. That is, we examine the predictability of sentiment for returns over the subsequent one, two, three, or five days.

Table 9 presents the predictive regression results for the US daily market returns and anomaly premiums when ambiguity is low and high. For the market returns, the sentiment coefficient is significant at the 1% level when ambiguity is low. The positive coefficient is consistent with Da et al. (2015) and Birru and Young (2022). Specifically, a one-standard-deviation increase in sentiment is associated with a 0.002 (t = 2.86), 0.004 (t = 3.40), 0.003 (t = 2.92), and 0.004 (t = 2.78) return increase over the subsequent one, two, three, and five days, respectively.

Conversely, the sentiment coefficient is insignificant when ambiguity is high. Further, the sentiment coefficient is significantly different between times of low and high ambiguity at the 1% level. Specifically, a one-standard-deviation increase in sentiment is associated with a 0.002 (t = 2.76), 0.004 (t = 3.14), 0.003 (t = 2.71), and 0.004 (t = 2.73) return increase difference between the periods of low and high ambiguity over the subsequent one, two, three, and five days, respectively.

Similarly, for the anomaly premiums, the sentiment coefficient is generally significant when ambiguity is low but becomes insignificant when ambiguity is high. The significant sentiment coefficient is negative, consistent with Da et al. (2015) and Birru and Young (2022).

[Table 9 about here]

Table 10 presents the predictive regression results for the US daily market returns and anomaly premiums when risk is low and high. For the market returns, the sentiment coefficient is significant at the 1% level when risk is high. The positive coefficient is consistent with

Da et al. (2015) and Birru and Young (2022). Specifically, a one-standard-deviation increase in sentiment is associated with a 0.003 ($t = 3.04$), 0.004 ($t = 3.61$), 0.003 ($t = 3.11$), and 0.004 ($t = 2.94$) return increase over the subsequent one, two, three, and five days, respectively.

Conversely, the sentiment coefficient is insignificant when ambiguity is high. Further, the sentiment coefficient is significantly different between times of low and high ambiguity at the 1% level. Specifically, a one-standard-deviation increase in sentiment is associated with a -0.003 ($t = -3.05$), -0.004 ($t = -3.46$), -0.003 ($t = -2.99$), and -0.005 ($t = -2.97$) return increase difference between the periods of low and high ambiguity over the subsequent one, two, three, and five days, respectively.

Similarly, for the anomaly premiums, the sentiment coefficient is generally significant when risk is high but becomes insignificant when risk is low. The significant sentiment coefficient is negative, consistent with Da et al. (2015) and Birru and Young (2022).

[Table 10 about here]

We also conduct robustness tests by controlling for the Fama and French (1993) three factors, namely market, size, and book-to-market factors. The results are similar, as shown in Appendix Tables A.19 and A.20.

[Tables A.19 and A.20 about here]

5 Conclusion

Uncertainty encompasses both ambiguity and risk. While the role of risk in driving the effect of sentiment on returns is known, the literature is largely silent on the role of ambiguity in the

relation between sentiment and returns. In this paper, we show that ambiguity and risk play distinct roles in the sentiment-return relation. For example, in the US market, that relation is more prevalent at times of low ambiguity than of high ambiguity, while it is more prevalent at times of high risk than of low risk. The impact of ambiguity and risk on the sentiment-return relation also varies across countries. In contrast to the US market, in the Chinese market, that relation is more prevalent at times of high ambiguity than of low ambiguity, while it is more prevalent at times of low risk than of high risk. We find similar patterns for the importance of ambiguity and risk on the relation between sentiment and anomaly profits. Overall, how uncertainty drives the association between sentiment and returns depends on the uncertainty measurement and varies significantly across countries.

Our work has important implications. While sentiment is widely used to predict returns, we show that the predictability of sentiment for returns differs between two conceptually distinct measures of uncertainty, namely ambiguity and risk, and varies across countries. Therefore, investors should take into account both ambiguity and risk, as well as the countries they invest in, to assure profits come to fruition.

References

Allen, F., Gale, D., 2000. Comparing Financial Systems. MIT press.

Altug, S., Collard, F., Cakmaklı, C., Mukerji, S., Özsöylev, H., 2020. Ambiguous business cycles: A quantitative assessment. Review of Economic Dynamics 38, 220–237.

Andersen, T. G., Bollerslev, T., Diebold, F. X., Ebens, H., 2001. The distribution of realized stock return volatility. Journal of Financial Economics 61, 43–76.

Ang, A., Hodrick, R. J., Xing, Y., Zhang, X., 2006. The cross-section of volatility and expected returns. Journal of Finance 61, 259–299.

Ang, A., Hodrick, R. J., Xing, Y., Zhang, X., 2009. High idiosyncratic volatility and low returns: International and further US evidence. Journal of Financial Economics 91, 1–23.

Antoniou, C., Doukas, J. A., Subrahmanyam, A., 2013. Cognitive dissonance, sentiment, and momentum. Journal of Financial and Quantitative Analysis 48, 245–275.

Antoniou, C., Doukas, J. A., Subrahmanyam, A., 2016. Investor sentiment, beta, and the cost of equity capital. Management Science 62, 347–367.

Asness, C. S., Moskowitz, T. J., Pedersen, L. H., 2013. Value and momentum everywhere. Journal of Finance 68, 929–985.

Backus, D., Ferriere, A., Zin, S., 2015. Risk and ambiguity in models of business cycles. Journal of Monetary Economics 69, 42–63.

Bailey, W., Cai, J., Cheung, Y. L., Wang, F., 2009. Stock returns, order imbalances, and commonality: Evidence on individual, institutional, and proprietary investors in China. Journal of Banking & Finance 33, 9–19.

Baker, M., Wurgler, J., 2006. Investor sentiment and the cross-section of stock returns. Journal of Finance 61, 1645–1680.

Baker, M., Wurgler, J., 2007. Investor sentiment in the stock market. Journal of Economic Perspectives 21, 129–152.

Baker, M., Wurgler, J., Yuan, Y., 2012. Global, local, and contagious investor sentiment. Journal of Financial Economics 104, 272–287.

Balakrishnan, K., Bartov, E., Faurel, L., 2010. Post loss/profit announcement drift. Journal of Accounting and Economics 50, 20–41.

Bekaert, G., Hodrick, R. J., Zhang, X., 2009. International stock return comovements. Journal of Finance 64, 2591–2626.

Bekaert, G., Hoerova, M., Duca, M. L., 2013. Risk, uncertainty and monetary policy. Journal of Monetary Economics 60, 771–788.

Ben-Rephael, A., Izhakian, Y. Y., 2020. Should I stay or should I go? Trading behavior under ambiguity. Working Paper.

Bianchi, F., Ilut, C. L., Schneider, M., 2018. Uncertainty shocks, asset supply and pricing over the business cycle. Review of Economic Studies 85, 810–854.

Birru, J., Young, T., 2022. Sentiment and uncertainty. Journal of Financial Economics 146, 1148–1169.

Black, F., Jensen, M. C., Scholes, M., 1972. The capital asset pricing model: Some empirical tests. Studies in the Theory of Capital Markets 81, 79–121.

Bloom, N., 2009. The impact of uncertainty shocks. Econometrica 77, 623–685.

Bloom, N., 2014. Fluctuations in uncertainty. Journal of Economic Perspectives 28, 153–76.

Bower, G. H., 1981. Mood and memory. American Psychologist 36, 129.

Brenner, M., Izhakian, Y., 2018. Asset pricing and ambiguity: Empirical evidence. Journal of Financial Economics 130, 503–531.

Brenner, M., Izhakian, Y., Sade, O., 2011. Ambiguity and overconfidence. Working Paper.

Brenner, M., Izhakian, Y. Y., 2021. Risk and ambiguity in turbulent times. Quarterly Journal of Finance, forthcoming .

Brown, G. W., Cliff, M. T., 2005. Investor sentiment and asset valuation. Journal of Business 78, 405–440.

Chen, W., Liang, S., Shi, D., 2022a. What drives stock prices in a bubble? Working Paper.

Chen, W., Liang, S., Shi, D., 2022b. Who chases returns? Evidence from the Chinese stock market. Working Paper.

Chen, Z., Epstein, L., 2002. Ambiguity, risk, and asset returns in continuous time. Econometrica 70, 1403–1443.

Chung, S.-L., Hung, C.-H., Yeh, C.-Y., 2012. When does investor sentiment predict stock returns? Journal of Empirical Finance 19, 217–240.

Collard, F., Mukerji, S., Sheppard, K., Tallon, J.-M., 2018. Ambiguity and the historical equity premium. Quantitative Economics 9, 945–993.

Connolly, R., Stivers, C., Sun, L., 2005. Stock market uncertainty and the stock-bond return relation. Journal of Financial and Quantitative Analysis 40, 161–194.

Cooper, M. J., Gulen, H., Schill, M. J., 2008. Asset growth and the cross-section of stock returns. Journal of Finance 63, 1609–1651.

Da, Z., Engelberg, J., Gao, P., 2015. The sum of all FEARS investor sentiment and asset prices. Review of Financial Studies 28, 1–32.

Daniel, K., Hirshleifer, D., Subrahmanyam, A., 1998. Investor psychology and security market under-and overreactions. Journal of Finance 53, 1839–1885.

Daniel, K., Titman, S., 2006. Market reactions to tangible and intangible information. Journal of Finance 61, 1605–1643.

De Long, J. B., Shleifer, A., Summers, L. H., Waldmann, R. J., 1990. Noise trader risk in financial markets. Journal of Political Economy 98, 703–738.

Dichev, I. D., 1998. Is the risk of bankruptcy a systematic risk? Journal of Finance 53, 1131–1147.

Ding, W., Mazouz, K., Wang, Q., 2021. Volatility timing, sentiment, and the short-term profitability of VIX-based cross-sectional trading strategies. Journal of Empirical Finance 63, 42–56.

Drechsler, I., 2013. Uncertainty, time-varying fear, and asset prices. Journal of Finance 68, 1843–1889.

Ellsberg, D., 1961. Risk, ambiguity, and the savage axioms. Quarterly Journal of Economics pp. 643–669.

Epstein, L. G., Schneider, M., 2008. Ambiguity, information quality, and asset pricing. Journal of Finance 63, 197–228.

Epstein, L. G., Schneider, M., 2010. Ambiguity and asset markets. Annual Review of Financial Economics 2, 315–346.

Fama, E. F., French, K. R., 1993. Common risk factors in the returns on stocks and bonds. Journal of Financial Economics 33, 3–56.

Fama, E. F., French, K. R., 2008. Dissecting anomalies. Journal of Finance 63, 1653–1678.

Fama, E. F., French, K. R., 2012. Size, value, and momentum in international stock returns. Journal of Financial Economics 105, 457–472.

Fama, E. F., French, K. R., 2017. International tests of a five-factor asset pricing model. Journal of Financial Economics 123, 441–463.

Frazzini, A., Pedersen, L. H., 2014. Betting against beta. Journal of Financial Economics 111, 1–25.

Friend, I., Blume, M., 1970. Measurement of portfolio performance under uncertainty. American Economic Review 60, 561–575.

Garcia, D., 2013. Sentiment during recessions. Journal of Finance 68, 1267–1300.

Guiso, L., Haliassos, M., Jappelli, T., 2002. Household Portfolios. MIT press.

Harvey, C. R., 2001. The specification of conditional expectations. Journal of Empirical Finance 8, 573–637.

Hirshleifer, D., 2001. Investor psychology and asset pricing. Journal of Finance 56, 1533–1597.

Hirshleifer, D., Hou, K., Teoh, S. H., Zhang, Y., 2004. Do investors overvalue firms with bloated balance sheets? Journal of Accounting and Economics 38, 297–331.

Huang, D., Jiang, F., Tu, J., Zhou, G., 2015. Investor sentiment aligned: A powerful predictor of stock returns. Review of Financial Studies 28, 791–837.

Illeditsch, P. K., 2011. Ambiguous information, portfolio inertia, and excess volatility. Journal of Finance 66, 2213–2247.

Illeditsch, P. K., Ganguli, J. V., Condie, S., 2021. Information inertia. Journal of Finance 76, 443–479.

Ilut, C. L., Schneider, M., 2014. Ambiguous business cycles. American Economic Review 104, 2368–99.

Izhakian, Y., 2020. A theoretical foundation of ambiguity measurement. Journal of Economic Theory 187, 105001.

Izhakian, Y., Yermack, D., Zender, J. F., 2022. Ambiguity and the tradeoff theory of capital structure. Management Science 68, 4090–4111.

Izhakian, Y. Y., Zender, J. F., 2014. Initial public offerings under ambiguity. Working Paper.

Jacobs, H., Müller, S., 2020. Anomalies across the globe: Once public, no longer existent? Journal of Financial Economics 135, 213–230.

Jahan-Parvar, M. R., Liu, H., 2014. Ambiguity aversion and asset prices in production economies. Review of Financial Studies 27, 3060–3097.

Jegadeesh, N., Titman, S., 1993. Returns to buying winners and selling losers: Implications for stock market efficiency. Journal of Finance 48, 65–91.

Jensen, T. I., Kelly, B. T., Pedersen, L. H., 2022. Is there a replication crisis in finance? Journal of Finance, forthcoming.

Jiang, J., Qian, K., Gong, F., 2016. Institutional holdings' structure analysis in China (translated from Mandarin). Unpublished working paper. Shenwan Hongyuan Research, Co .

Johnson, E. J., Tversky, A., 1983. Affect, generalization, and the perception of risk. Journal of personality & social psychology 45, 20.

Ju, N., Miao, J., 2012. Ambiguity, learning, and asset returns. Econometrica 80, 559–591.

Kahneman, D., Tversky, A., 1973. On the psychology of prediction. Psychological Review 80, 237.

Keynes, J. M., 1936. The general theory of interest, employment and money.

Knight, F. H., 1921. Risk, Uncertainty and Profit, vol. 31. Houghton Mifflin.

Kumar, A., 2009. Hard-to-value stocks, behavioral biases, and informed trading. Journal of Financial and Quantitative Analysis 44, 1375–1401.

Leippold, M., Trojani, F., Vanini, P., 2008. Learning and asset prices under ambiguous information. Review of Financial Studies 21, 2565–2597.

Leippold, M., Wang, Q., Zhou, W., 2022. Machine learning in the Chinese stock market. Journal of Financial Economics 145, 64–82.

Lintner, J., 1965. Security prices, risk, and maximal gains from diversification. Journal of Finance 20, 587–615.

Liu, J., Stambaugh, R. F., Yuan, Y., 2018. Absolving beta of volatility's effects. Journal of Financial Economics 128, 1–15.

Liu, J., Stambaugh, R. F., Yuan, Y., 2019. Size and value in China. Journal of Financial Economics 134, 48–69.

Liu, Y., Zhou, G., Zhu, Y., 2020. Trend factor in China. Working Paper.

Lu, X., Stambaugh, R. F., Yuan, Y., 2017. Anomalies abroad: Beyond data mining. Working Paper.

Lyandres, E., Sun, L., Zhang, L., 2008. The new issues puzzle: Testing the investment-based explanation. Review of Financial Studies 21, 2825–2855.

Miles, D., Timmermann, A., de Haan, J., Pagano, M., 1999. Risk sharing and transition costs in the reform of pension systems in Europe. Economic Policy 14, 253–286.

Nelson, D. B., 1991. Conditional heteroskedasticity in asset returns: A new approach. Econometrica 59, 347–370.

Novy-Marx, R., 2013. The other side of value: The gross profitability premium. Journal of Financial Economics 108, 1–28.

Pan, L., Tang, Y., Xu, J., 2016. Speculative trading and stock returns. Review of Finance 20, 1835–1865.

Perotti, E. C., Von Thadden, E.-L., 2006. The political economy of corporate control and labor rents. Journal of Political Economy 114, 145–175.

Pontiff, J., Woodgate, A., 2008. Share issuance and cross-sectional returns. Journal of Finance 63, 921–945.

Rajan, R. G., Zingales, L., 2003. The great reversals: the politics of financial development in the twentieth century. Journal of Financial Economics 69, 5–50.

Rothschild, M., Stiglitz, J. E., 1970. Increasing risk: I. a definition. Journal of Economic Theory 2, 225–243.

Scholes, M., Williams, J., 1977. Estimating betas from nonsynchronous data. Journal of Financial Economics 5, 309–327.

Sharpe, W. F., 1964. Capital asset prices: A theory of market equilibrium under conditions of risk. Journal of Finance 19, 425–442.

Shen, J., Yu, J., Zhao, S., 2017. Investor sentiment and economic forces. Journal of Monetary Economics 86, 1–21.

Shleifer, A., Summers, L. H., 1990. The noise trader approach to finance. Journal of Economic Perspectives 4, 19–33.

Sloan, R. G., 1996. Do stock prices fully reflect information in accruals and cash flows about future earnings? Accounting Review 71, 289–315.

Stambaugh, R. F., Yu, J., Yuan, Y., 2012. The short of it: Investor sentiment and anomalies. Journal of Financial Economics 104, 288–302.

Stambaugh, R. F., Yu, J., Yuan, Y., 2015. Arbitrage asymmetry and the idiosyncratic volatility puzzle. Journal of Finance 70, 1903–1948.

Stambaugh, R. F., Yuan, Y., 2017. Mispricing factors. Review of Financial Studies 30, 1270–1315.

Titman, S., Wei, C., Zhao, B., 2022. Corporate actions and the manipulation of retail investors in China: An analysis of stock splits. Journal of Financial Economics 145, 762–787.

Tobek, O., Hronec, M., 2021. Does it pay to follow anomalies research? Machine learning approach with international evidence. Journal of Financial Markets 56, 100588.

Ui, T., 2011. The ambiguity premium vs. the risk premium under limited market participation. Review of Finance 15, 245–275.

Ulrich, M., 2013. Inflation ambiguity and the term structure of US government bonds. Journal of Monetary Economics 60, 295–309.

Wang, W., Su, C., Duxbury, D., 2021. Investor sentiment and stock returns: Global evidence. Journal of Empirical Finance 63, 365–391.

White, H., 1980. A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. Econometrica 48, 817–838.

Williams, C. D., 2015. Asymmetric responses to earnings news: A case for ambiguity. Accounting Review 90, 785–817.

Yu, J., Yuan, Y., 2011. Investor sentiment and the mean–variance relation. Journal of Financial Economics 100, 367–381.

Zhang, X. F., 2006. Information uncertainty and stock returns. Journal of Finance 61, 105–137.

Table 1 Descriptive statistics

This table reports descriptive statistics for the following variables. R^M is the market returns. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Ambiguity is the variance of probability based on the five-minute returns. Risk is the variance of returns based on the five-minute returns. We present the mean, standard deviation, Q1 (bottom 25%), median, and Q3 (top 25%).

	Mean	Stdev	Q1	Medium	Q3
Australia R^M	0.004	0.043	-0.018	0.008	0.029
Australia Sentiment	100.258	0.974	99.635	100.166	100.968
Australia Ambiguity	1.236	0.378	0.998	1.226	1.471
Australia Risk	0.035	0.021	0.022	0.030	0.043
Austria R^M	0.007	0.066	-0.029	0.011	0.049
Austria Sentiment	99.679	0.891	99.119	99.690	100.239
Austria Ambiguity	0.915	0.281	0.729	0.882	1.061
Austria Risk	0.052	0.035	0.031	0.045	0.062
Belgium R^M	0.005	0.052	-0.021	0.010	0.034
Belgium Sentiment	100.524	0.907	99.913	100.545	101.179
Belgium Ambiguity	1.026	0.368	0.757	0.997	1.221
Belgium Risk	0.048	0.032	0.027	0.040	0.059
Brazil R^M	0.014	0.085	-0.034	0.017	0.068
Brazil Sentiment	100.086	1.881	98.523	99.791	101.699
Brazil Ambiguity	0.693	0.443	0.503	0.605	0.706
Brazil Risk	0.070	0.037	0.045	0.062	0.084
Canada R^M	0.005	0.044	-0.017	0.011	0.034
Canada Sentiment	100.104	1.372	99.160	100.050	101.320
Canada Ambiguity	1.375	0.448	1.050	1.385	1.736
Canada Risk	0.036	0.024	0.022	0.030	0.043
China R^M	0.006	0.075	-0.039	0.001	0.046
China Sentiment	99.887	2.338	98.007	99.737	100.932
China Ambiguity	0.753	0.252	0.554	0.712	0.918
China Risk	0.055	0.033	0.033	0.047	0.066
Czech Republic R^M	0.001	0.059	-0.023	0.005	0.030
Czech Republic Sentiment	100.665	2.091	99.432	100.942	102.527
Czech Republic Ambiguity	1.031	0.289	0.848	1.006	1.213
Czech Republic Risk	0.047	0.039	0.027	0.038	0.050
Denmark R^M	0.008	0.046	-0.015	0.011	0.037
Denmark Sentiment	100.870	0.674	100.366	100.957	101.404
Denmark Ambiguity	1.098	0.346	0.841	1.058	1.337
Denmark Risk	0.044	0.028	0.028	0.037	0.053
Finland R^M	0.004	0.055	-0.023	0.010	0.039
Finland Sentiment	99.738	1.638	98.581	99.827	100.945
Finland Ambiguity	0.988	0.291	0.776	1.002	1.201
Finland Risk	0.051	0.029	0.031	0.045	0.060
France R^M	0.006	0.057	-0.025	0.011	0.042
France Sentiment	99.630	1.428	98.588	99.619	100.712
France Ambiguity	0.856	0.307	0.619	0.799	1.098
France Risk	0.052	0.032	0.030	0.045	0.064
Germany R^M	0.008	0.062	-0.024	0.016	0.044
Germany Sentiment	99.995	1.313	98.773	100.235	101.115
Germany Ambiguity	0.874	0.362	0.591	0.815	1.092
Germany Risk	0.053	0.033	0.031	0.045	0.064
Greece R^M	0.004	0.093	-0.049	0.003	0.055
Greece Sentiment	99.536	2.722	97.471	100.332	101.798
Greece Ambiguity	0.794	0.363	0.538	0.712	0.967
Greece Risk	0.075	0.043	0.043	0.063	0.094

Table 1 (continued)

	Mean	Stdev	Q1	Medium	Q3
Hungary R^M	0.010	0.076	-0.029	0.010	0.051
Hungary Sentiment	100.425	1.788	99.198	100.627	101.835
Hungary Ambiguity	0.780	0.298	0.605	0.708	0.850
Hungary Risk	0.060	0.039	0.037	0.049	0.069
India R^M	0.009	0.051	-0.013	0.008	0.040
India Sentiment	99.984	4.125	98.470	100.875	102.450
India Ambiguity	1.170	0.294	0.977	1.166	1.373
India Risk	0.040	0.020	0.028	0.037	0.049
Ireland R^M	0.006	0.060	-0.020	0.011	0.044
Ireland Sentiment	100.902	2.179	99.574	101.538	102.525
Ireland Ambiguity	0.967	0.408	0.707	0.912	1.109
Ireland Risk	0.050	0.033	0.031	0.041	0.060
Italy R^M	0.005	0.069	-0.031	0.008	0.045
Italy Sentiment	99.583	1.699	98.194	99.814	100.880
Italy Ambiguity	0.831	0.249	0.658	0.819	0.975
Italy Risk	0.056	0.031	0.039	0.050	0.066
Japan R^M	0.003	0.063	-0.032	0.006	0.043
Japan Sentiment	99.524	1.306	98.737	99.608	100.456
Japan Ambiguity	0.900	0.368	0.611	0.810	1.123
Japan Risk	0.053	0.029	0.036	0.048	0.065
Mexico R^M	0.010	0.053	-0.019	0.014	0.040
Mexico Sentiment	99.918	2.451	98.242	99.957	101.935
Mexico Ambiguity	1.062	0.298	0.843	1.045	1.256
Mexico Risk	0.048	0.029	0.030	0.041	0.060
Netherlands R^M	0.006	0.060	-0.020	0.013	0.039
Netherlands Sentiment	100.317	1.134	99.527	100.396	101.233
Netherlands Ambiguity	0.934	0.315	0.686	0.903	1.162
Netherlands Risk	0.050	0.033	0.029	0.043	0.060
New Zealand R^M	0.004	0.038	-0.014	0.004	0.025
New Zealand Sentiment	99.798	0.813	99.216	99.807	100.333
New Zealand Ambiguity	1.882	0.429	1.591	1.908	2.169
New Zealand Risk	0.029	0.018	0.019	0.025	0.035
Poland R^M	0.008	0.063	-0.023	0.014	0.046
Poland Sentiment	100.059	1.528	98.649	100.029	101.452
Poland Ambiguity	1.001	0.259	0.820	0.992	1.161
Poland Risk	0.048	0.026	0.033	0.043	0.058
Portugal R^M	0.003	0.061	-0.032	0.006	0.045
Portugal Sentiment	99.363	2.220	98.061	99.838	100.941
Portugal Ambiguity	1.014	0.376	0.761	0.934	1.155
Portugal Risk	0.048	0.029	0.029	0.042	0.059
Russia R^M	0.013	0.063	-0.018	0.023	0.053
Russia Sentiment	98.824	1.487	97.505	99.058	99.933
Russia Ambiguity	0.928	0.205	0.790	0.903	1.054
Russia Risk	0.042	0.026	0.029	0.036	0.049
South Korea R^M	0.010	0.067	-0.028	0.011	0.047
South Korea Sentiment	100.021	1.198	99.442	100.052	100.717
South Korea Ambiguity	0.860	0.360	0.578	0.768	1.067
South Korea Risk	0.058	0.038	0.033	0.046	0.074
Spain R^M	0.005	0.063	-0.030	0.007	0.043
Spain Sentiment	100.013	2.911	97.508	100.782	102.267
Spain Ambiguity	0.785	0.291	0.556	0.727	0.942
Spain Risk	0.055	0.031	0.033	0.048	0.067

Table 1 (continued)

	Mean	Stdev	Q1	Medium	Q3
Sweden R^M	0.008	0.055	-0.017	0.019	0.038
Sweden Sentiment	100.340	1.168	99.541	100.354	101.195
Sweden Ambiguity	1.059	0.344	0.809	1.056	1.300
Sweden Risk	0.046	0.031	0.027	0.037	0.059
Switzerland R^M	0.006	0.050	-0.017	0.009	0.033
Switzerland Sentiment	100.315	1.604	99.333	100.308	101.465
Switzerland Ambiguity	1.035	0.317	0.802	1.043	1.247
Switzerland Risk	0.043	0.029	0.025	0.037	0.052
UK R^M	0.003	0.047	-0.021	0.009	0.032
UK Sentiment	100.523	2.011	99.843	100.999	102.082
UK Ambiguity	0.989	0.372	0.697	0.938	1.237
UK Risk	0.042	0.027	0.025	0.037	0.052
US R^M	0.008	0.045	-0.016	0.012	0.035
US Sentiment	0.078	0.688	-0.321	-0.110	0.240
US Ambiguity	1.092	0.451	0.740	1.022	1.344
US Risk	0.041	0.026	0.024	0.037	0.051

Table 2 Correlation

This table reports correlations for the following variables. R^M is the market returns. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Ambiguity is the variance of probability based on the five-minute returns.

	Australia R^M	Australia Sentiment	Australia Ambiguity	Australi
Australia Sentiment	0.20	1.00		
Australia Ambiguity	0.23	0.44	1.00	
Australia Risk	-0.45	-0.36	-0.63	1.0
	Austria R^M	Austria Sentiment	Austria Ambiguity	Austria
Austria Sentiment	0.05	1.00		
Austria Ambiguity	-0.07	-0.10	1.00	
Austria Risk	-0.48	-0.31	-0.03	1.0
	Belgium R^M	Belgium Sentiment	Belgium Ambiguity	Belgium
Belgium Sentiment	0.10	1.00		
Belgium Ambiguity	0.24	0.24	1.00	
Belgium Risk	-0.36	-0.24	-0.51	1.0
	Brazil R^M	Brazil Sentiment	Brazil Ambiguity	Brazil
Brazil Sentiment	-0.04	1.00		
Brazil Ambiguity	-0.31	-0.01	1.00	
Brazil Risk	-0.27	-0.21	0.51	1.0
	Canada R^M	Canada Sentiment	Canada Ambiguity	Canada
Canada Sentiment	0.06	1.00		
Canada Ambiguity	0.18	0.49	1.00	
Canada Risk	-0.54	-0.46	-0.54	1.0
	China R^M	China Sentiment	China Ambiguity	China
China Sentiment	0.01	1.00		
China Ambiguity	-0.10	0.34	1.00	
China Risk	-0.02	-0.14	-0.32	1.0
	Czech Republic R^M	Czech Republic Sentiment	Czech Republic Ambiguity	Czech Repu
Czech Republic Sentiment	0.06	1.00		
Czech Republic Ambiguity	0.10	0.32	1.00	
Czech Republic Risk	-0.30	-0.24	-0.11	1.0
	Denmark R^M	Denmark Sentiment	Denmark Ambiguity	Denmark
Denmark Sentiment	0.24	1.00		
Denmark Ambiguity	0.23	0.45	1.00	
Denmark Risk	-0.36	-0.32	-0.52	1.0
	Finland R^M	Finland Sentiment	Finland Ambiguity	Finland
Finland Sentiment	0.24	1.00		
Finland Ambiguity	0.27	0.41	1.00	
Finland Risk	-0.32	-0.49	-0.56	1.0
	France R^M	France Sentiment	France Ambiguity	France
France Sentiment	0.04	1.00		
France Ambiguity	0.19	0.02	1.00	
France Risk	-0.44	-0.07	-0.60	1.0
	Germany R^M	Germany Sentiment	Germany Ambiguity	Germany
Germany Sentiment	-0.01	1.00		
Germany Ambiguity	0.10	-0.00	1.00	
Germany Risk	-0.41	-0.23	-0.36	1.0
	Greece R^M	Greece Sentiment	Greece Ambiguity	Greece
Greece Sentiment	0.07	1.00		
Greece Ambiguity	-0.11	0.27	1.00	
Greece Risk	-0.09	-0.18	0.00	1.0

Table 2 (continued)

	Hungary R^M	Hungary Sentiment	Hungary Ambiguity	Hungary Risk
Hungary Sentiment	0.02	1.00		
Hungary Ambiguity	0.07	0.13	1.00	
Hungary Risk	-0.23	-0.26	0.09	1.00
	India R^M	India Sentiment	India Ambiguity	India Risk
India Sentiment	-0.04	1.00		
India Ambiguity	0.14	0.11	1.00	
India Risk	-0.27	-0.08	-0.39	1.00
	Ireland R^M	Ireland Sentiment	Ireland Ambiguity	Ireland Risk
Ireland Sentiment	0.06	1.00		
Ireland Ambiguity	0.06	0.37	1.00	
Ireland Risk	-0.44	-0.32	-0.20	1.00
	Italy R^M	Italy Sentiment	Italy Ambiguity	Italy Risk
Italy Sentiment	0.01	1.00		
Italy Ambiguity	0.05	0.48	1.00	
Italy Risk	-0.34	-0.31	-0.42	1.00
	Japan R^M	Japan Sentiment	Japan Ambiguity	Japan Risk
Japan Sentiment	0.11	1.00		
Japan Ambiguity	0.07	0.11	1.00	
Japan Risk	-0.39	-0.34	-0.16	1.00
	Mexico R^M	Mexico Sentiment	Mexico Ambiguity	Mexico Risk
Mexico Sentiment	0.03	1.00		
Mexico Ambiguity	0.08	0.00	1.00	
Mexico Risk	-0.35	-0.01	-0.40	1.00
	Netherlands R^M	Netherlands Sentiment	Netherlands Ambiguity	Netherlands Risk
Netherlands Sentiment	0.08	1.00		
Netherlands Ambiguity	0.07	0.12	1.00	
Netherlands Risk	-0.49	-0.16	-0.38	1.00
	NewZealand R^M	NewZealand Sentiment	NewZealand Ambiguity	NewZealand Risk
New Zealand Sentiment	0.07	1.00		
New Zealand Ambiguity	0.19	0.47	1.00	
New Zealand Risk	-0.48	-0.31	-0.54	1.00
	Poland R^M	Poland Sentiment	Poland Ambiguity	Poland Risk
Poland Sentiment	-0.11	1.00		
Poland Ambiguity	-0.01	0.14	1.00	
Poland Risk	-0.37	-0.05	-0.51	1.00
	Portugal R^M	Portugal Sentiment	Portugal Ambiguity	Portugal Risk
Portugal Sentiment	0.09	1.00		
Portugal Ambiguity	0.24	0.28	1.00	
Portugal Risk	-0.34	-0.13	-0.54	1.00
	Russia R^M	Russia Sentiment	Russia Ambiguity	Russia Risk
Russia Sentiment	-0.11	1.00		
Russia Ambiguity	-0.02	0.58	1.00	
Russia Risk	-0.59	-0.15	-0.40	1.00
	SouthKorea R^M	SouthKorea Sentiment	SouthKorea Ambiguity	SouthKorea Risk
South Korea Sentiment	0.04	1.00		
South Korea Ambiguity	-0.02	0.13	1.00	
South Korea Risk	-0.13	-0.18	-0.42	1.00
	Spain R^M	Spain Sentiment	Spain Ambiguity	Spain Risk
Spain Sentiment	0.06	1.00		
Spain Ambiguity	0.08	0.21	1.00	
Spain Risk	-0.31	-0.28	-0.39	1.00

Table 2 (continued)

	Sweden R^M	Sweden Sentiment	Sweden Ambiguity	Sweden Risk
Sweden Sentiment	0.17	1.00		
Sweden Ambiguity	0.26	0.23	1.00	
Sweden Risk	-0.47	-0.40	-0.55	1.00
	Switzerland R^M	Switzerland Sentiment	Switzerland Ambiguity	Switzerland Risk
Switzerland Sentiment	-0.06	1.00		
Switzerland Ambiguity	0.18	0.15	1.00	
Switzerland Risk	-0.51	-0.13	-0.48	1.00
	UK R^M	UK Sentiment	UK Ambiguity	UK Risk
UK Sentiment	0.02	1.00		
UK Ambiguity	0.10	0.11	1.00	
UK Risk	-0.45	-0.17	-0.45	1.00
	US R^M	US Sentiment	US Ambiguity	US Risk
US Sentiment	-0.07	1.00		
US Ambiguity	0.16	-0.13	1.00	
US Risk	-0.33	0.06	-0.43	1.00

Table 3

Sentiment and market returns during periods of low and high ambiguity

This tables reports the results from regressing future market returns against sentiment during periods of low and high ambiguity. We use future market returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and the High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Ambiguity	0.008	0.002	-0.023	-0.053***
	(0.92)	(0.11)	(-1.38)	(-3.16)
Observations	129	128	126	125
R^2	0.01	0.00	0.02	0.10
Australia High Ambiguity	0.009	0.014	0.021*	0.030**
	(1.12)	(1.44)	(1.75)	(2.19)
Observations	129	127	126	124
R^2	0.02	0.02	0.03	0.05
Australia Low-High Ambiguity	-0.002	-0.013	-0.044**	-0.083***
	(-0.14)	(-0.75)	(-2.15)	(-3.83)
Austria Low Ambiguity	-0.002	-0.020	-0.040	-0.060**
	(-0.12)	(-0.79)	(-1.40)	(-2.16)
Observations	155	153	152	150
R^2	0.00	0.01	0.03	0.05
Austria High Ambiguity	-0.014	-0.051***	-0.096***	-0.138***
	(-1.27)	(-3.53)	(-5.80)	(-8.31)
Observations	154	153	151	150
R^2	0.01	0.10	0.21	0.28
Austria Low-High Ambiguity	0.012	0.030	0.056*	0.078**
	(0.64)	(1.03)	(1.71)	(2.38)
Belgium Low Ambiguity	-0.000	-0.010	-0.035*	-0.063***
	(-0.05)	(-0.66)	(-1.88)	(-3.35)
Observations	155	153	152	150
R^2	0.00	0.00	0.03	0.07
Belgium High Ambiguity	-0.007	-0.023**	-0.040***	-0.074***
	(-1.09)	(-2.50)	(-3.69)	(-6.05)
Observations	154	153	151	150
R^2	0.01	0.04	0.07	0.16
Belgium Low-High Ambiguity	0.006	0.013	0.005	0.011
	(0.55)	(0.72)	(0.23)	(0.50)
Brazil Low Ambiguity	0.007	-0.006	-0.028	-0.050**
	(0.56)	(-0.36)	(-1.32)	(-2.01)
Observations	155	153	152	150
R^2	0.00	0.00	0.01	0.02
Brazil High Ambiguity	-0.042***	-0.066***	-0.098***	-0.132***
	(-3.32)	(-4.15)	(-5.29)	(-5.41)
Observations	154	153	151	150
R^2	0.07	0.08	0.13	0.15
Brazil Low-High Ambiguity	0.049***	0.060***	0.070**	0.081**
	(2.78)	(2.65)	(2.47)	(2.33)
Canada Low Ambiguity	-0.009	-0.024**	-0.052***	-0.067***
	(-1.21)	(-2.34)	(-4.14)	(-4.60)
Observations	117	115	114	112
R^2	0.01	0.04	0.12	0.15
Canada High Ambiguity	-0.004	-0.015*	-0.015	-0.024*
	(-0.51)	(-1.68)	(-1.28)	(-1.74)
Observations	116	115	113	112
R^2	0.00	0.02	0.01	0.03
Canada Low-High Ambiguity	-0.005	-0.009	-0.037**	-0.044**
	(-0.49)	(-0.63)	(-2.17)	(-2.18)
China Low Ambiguity	-0.004	0.011	0.020	0.033
	(-0.34)	(0.51)	(0.70)	(0.92)
Observations	130	129	127	126
R^2	0.00	0.00	0.00	0.00
China High Ambiguity	0.002	-0.022*	-0.040**	-0.047**
	(0.21)	(-1.89)	(-2.29)	(-2.35)
Observations	130	128	127	125
R^2	0.00	0.02	0.02	0.02
China Low-High Ambiguity	-0.006	0.033	0.060*	0.080*
	(-0.39)	(1.35)	(1.79)	(1.95)
Czech Republic Low Ambiguity	-0.004	-0.023	-0.034*	-0.035*
	(-0.35)	(-1.58)	(-1.90)	(-1.71)
Observations	94	92	91	89
R^2	0.00	0.01	0.02	0.01

Table 3 (continued)

Czech Republic High Ambiguity	0.002	0.006	0.006	0.018
	(0.21)	(0.47)	(0.44)	(1.33)
Observations	93	92	90	89
R^2	0.00	0.00	0.00	0.02
Czech Republic Low-High Ambiguity	-0.006	-0.029	-0.040*	-0.052**
	(-0.40)	(-1.47)	(-1.79)	(-2.16)
Denmark Low Ambiguity	0.017	0.031	0.018	-0.005
	(1.05)	(1.31)	(0.68)	(-0.19)
Observations	96	95	93	92
R^2	0.02	0.04	0.01	0.00
Denmark High Ambiguity	0.014	-0.000	-0.014	-0.048**
	(1.08)	(-0.00)	(-0.80)	(-2.45)
Observations	96	94	93	91
R^2	0.03	0.00	0.01	0.06
Denmark Low-High Ambiguity	0.003	0.031	0.033	0.042
	(0.13)	(1.04)	(1.01)	(1.24)
Finland Low Ambiguity	0.019	0.013	0.002	-0.037
	(1.38)	(0.66)	(0.11)	(-1.66)
Observations	96	95	93	92
R^2	0.02	0.01	0.00	0.02
Finland High Ambiguity	0.001	-0.003	-0.029**	-0.051***
	(0.12)	(-0.18)	(-2.16)	(-3.69)
Observations	96	94	93	91
R^2	0.00	0.00	0.05	0.12
Finland Low-High Ambiguity	0.018	0.015	0.031	0.015
	(1.07)	(0.64)	(1.28)	(0.56)
France Low Ambiguity	-0.004	-0.013	-0.023	-0.042**
	(-0.49)	(-0.92)	(-1.32)	(-2.28)
Observations	155	153	152	150
R^2	0.00	0.01	0.01	0.04
France High Ambiguity	-0.012*	-0.033***	-0.064***	-0.075***
	(-1.70)	(-3.35)	(-5.29)	(-5.45)
Observations	154	153	151	150
R^2	0.01	0.06	0.13	0.13
France Low-High Ambiguity	0.008	0.021	0.041*	0.032
	(0.72)	(1.21)	(1.96)	(1.40)
Germany Low Ambiguity	-0.002	-0.019	-0.039**	-0.046**
	(-0.17)	(-1.26)	(-2.20)	(-2.41)
Observations	155	153	152	150
R^2	0.00	0.01	0.03	0.03
Germany High Ambiguity	-0.023***	-0.047***	-0.074***	-0.108***
	(-3.65)	(-5.13)	(-7.18)	(-9.60)
Observations	154	153	151	150
R^2	0.06	0.12	0.20	0.30
Germany Low-High Ambiguity	0.021	0.028	0.035*	0.063***
	(1.56)	(1.55)	(1.71)	(2.84)
Greece Low Ambiguity	-0.002	0.008	0.010	0.011
	(-0.17)	(0.37)	(0.34)	(0.28)
Observations	154	153	151	150
R^2	0.00	0.00	0.00	0.00
Greece High Ambiguity	0.012	0.000	-0.014	-0.014
	(0.72)	(0.01)	(-0.42)	(-0.40)
Observations	154	152	151	149
R^2	0.00	0.00	0.00	0.00
Greece Low-High Ambiguity	-0.015	0.008	0.024	0.025
	(-0.67)	(0.24)	(0.54)	(0.48)
Hungary Low Ambiguity	0.005	0.007	0.006	0.024
	(0.38)	(0.38)	(0.23)	(0.82)
Observations	147	146	144	143
R^2	0.00	0.00	0.00	0.01
Hungary High Ambiguity	-0.014	-0.023	-0.022	-0.007
	(-0.99)	(-0.98)	(-0.80)	(-0.22)
Observations	147	145	144	142
R^2	0.01	0.01	0.01	0.00
Hungary Low-High Ambiguity	0.019	0.030	0.028	0.032
	(0.99)	(0.99)	(0.75)	(0.71)
India Low Ambiguity	-0.005	-0.034***	-0.074***	-0.098***
	(-0.49)	(-3.78)	(-7.08)	(-8.22)
Observations	48	46	45	43
R^2	0.01	0.14	0.45	0.53
India High Ambiguity	-0.022	-0.039**	-0.047*	-0.053*
	(-1.48)	(-2.17)	(-1.96)	(-1.75)
Observations	47	46	44	43
R^2	0.05	0.13	0.12	0.10

Table 3 (continued)

India Low-High Ambiguity	0.017	0.005	-0.027	-0.045
	(0.91)	(0.25)	(-1.05)	(-1.38)
Ireland Low Ambiguity	-0.013	-0.025**	-0.039***	-0.046***
	(-1.54)	(-2.15)	(-3.18)	(-3.37)
Observations	155	153	152	150
R^2	0.01	0.02	0.03	0.03
Ireland High Ambiguity	0.011	0.006	-0.006	-0.024
	(0.84)	(0.32)	(-0.33)	(-1.20)
Observations	154	153	151	150
R^2	0.01	0.00	0.00	0.01
Ireland Low-High Ambiguity	-0.024	-0.031	-0.032	-0.022
	(-1.56)	(-1.47)	(-1.40)	(-0.93)
Italy Low Ambiguity	-0.018	-0.037**	-0.050***	-0.055***
	(-1.53)	(-2.51)	(-3.20)	(-3.48)
Observations	74	73	71	70
R^2	0.03	0.06	0.08	0.08
Italy High Ambiguity	-0.001	-0.016	-0.032*	-0.038*
	(-0.07)	(-0.93)	(-1.68)	(-1.73)
Observations	74	72	71	69
R^2	0.00	0.01	0.03	0.03
Italy Low-High Ambiguity	-0.017	-0.021	-0.018	-0.017
	(-0.96)	(-0.92)	(-0.72)	(-0.62)
Japan Low Ambiguity	0.008	-0.012	-0.033*	-0.050**
	(0.67)	(-0.67)	(-1.70)	(-2.29)
Observations	155	153	152	150
R^2	0.00	0.00	0.03	0.04
Japan High Ambiguity	-0.010	-0.019	-0.034**	-0.052***
	(-1.28)	(-1.57)	(-2.30)	(-3.60)
Observations	154	153	151	150
R^2	0.01	0.01	0.03	0.05
Japan Low-High Ambiguity	0.018	0.007	0.001	0.002
	(1.25)	(0.34)	(0.04)	(0.09)
Mexico Low Ambiguity	-0.008	-0.023*	-0.030*	-0.042**
	(-1.05)	(-1.82)	(-1.86)	(-2.22)
Observations	123	122	120	119
R^2	0.01	0.03	0.03	0.04
Mexico High Ambiguity	0.002	0.016	0.034*	0.057**
	(0.16)	(1.05)	(1.89)	(2.26)
Observations	123	121	120	118
R^2	0.00	0.01	0.03	0.05
Mexico Low-High Ambiguity	-0.010	-0.038**	-0.064***	-0.099***
	(-0.77)	(-1.98)	(-2.65)	(-3.14)
Netherlands Low Ambiguity	-0.003	-0.018	-0.038***	-0.060***
	(-0.42)	(-1.59)	(-2.81)	(-4.18)
Observations	155	153	152	150
R^2	0.00	0.01	0.04	0.08
Netherlands High Ambiguity	0.002	-0.006	-0.020*	-0.031**
	(0.29)	(-0.59)	(-1.66)	(-2.07)
Observations	154	153	151	150
R^2	0.00	0.00	0.01	0.02
Netherlands Low-High Ambiguity	-0.006	-0.012	-0.018	-0.030
	(-0.50)	(-0.80)	(-0.99)	(-1.43)
New Zealand Low Ambiguity	0.003	0.010	0.008	0.002
	(0.36)	(0.73)	(0.44)	(0.09)
Observations	87	86	84	83
R^2	0.00	0.01	0.00	0.00
New Zealand High Ambiguity	-0.008	-0.012	-0.011	-0.009
	(-1.63)	(-1.51)	(-0.95)	(-0.68)
Observations	87	85	84	82
R^2	0.02	0.02	0.01	0.01
New Zealand Low-High Ambiguity	0.011	0.022	0.019	0.010
	(1.18)	(1.39)	(0.90)	(0.47)
Poland Low Ambiguity	-0.034***	-0.070***	-0.102***	-0.127***
	(-3.30)	(-4.48)	(-5.04)	(-5.27)
Observations	123	121	120	118
R^2	0.09	0.17	0.20	0.21
Poland High Ambiguity	-0.025**	-0.048***	-0.071***	-0.079***
	(-2.44)	(-3.18)	(-3.97)	(-3.71)
Observations	122	121	119	118
R^2	0.05	0.09	0.12	0.11
Poland Low-High Ambiguity	-0.009	-0.022	-0.031	-0.048
	(-0.64)	(-1.03)	(-1.16)	(-1.50)
Portugal Low Ambiguity	-0.011	-0.029***	-0.046***	-0.050***
	(-1.58)	(-2.89)	(-3.79)	(-3.83)
Observations	155	153	152	150
R^2	0.01	0.04	0.07	0.07

Table 3 (continued)

Portugal High Ambiguity	0.023	0.048**	0.048*	0.028
	(1.37)	(2.01)	(1.79)	(0.93)
Observations	154	153	151	150
R^2	0.02	0.03	0.02	0.00
Portugal Low-High Ambiguity	-0.034*	-0.077***	-0.094***	-0.078**
	(-1.88)	(-2.99)	(-3.19)	(-2.39)
Russia Low Ambiguity	-0.047***	-0.053***	-0.082***	-0.097***
	(-3.18)	(-5.55)	(-7.90)	(-5.35)
Observations	22	20	19	17
R^2	0.31	0.40	0.45	0.42
Russia High Ambiguity	-0.027	-0.071**	-0.094***	-0.061
	(-0.85)	(-2.37)	(-2.98)	(-1.21)
Observations	21	20	18	17
R^2	0.03	0.19	0.25	0.12
Russia Low-High Ambiguity	-0.021	0.018	0.012	-0.036
	(-0.59)	(0.58)	(0.36)	(-0.66)
South Korea Low Ambiguity	-0.019*	-0.066***	-0.106***	-0.137***
	(-1.93)	(-4.81)	(-5.86)	(-6.89)
Observations	137	136	134	133
R^2	0.02	0.11	0.20	0.28
South Korea High Ambiguity	-0.026**	-0.058***	-0.099***	-0.131***
	(-2.57)	(-3.36)	(-4.67)	(-5.95)
Observations	137	135	134	132
R^2	0.06	0.12	0.22	0.31
South Korea Low-High Ambiguity	0.008	-0.008	-0.007	-0.006
	(0.54)	(-0.36)	(-0.25)	(-0.21)
Spain Low Ambiguity	-0.005	-0.029**	-0.047***	-0.056***
	(-0.61)	(-2.31)	(-3.36)	(-4.07)
Observations	155	153	152	150
R^2	0.00	0.04	0.08	0.09
Spain High Ambiguity	-0.000	0.010	-0.005	-0.024
	(-0.04)	(0.56)	(-0.27)	(-1.05)
Observations	154	153	151	150
R^2	0.00	0.00	0.00	0.01
Spain Low-High Ambiguity	-0.005	-0.039*	-0.042*	-0.032
	(-0.34)	(-1.76)	(-1.70)	(-1.22)
Sweden Low Ambiguity	0.010	0.002	-0.021	-0.058**
	(0.83)	(0.10)	(-1.02)	(-2.53)
Observations	96	95	93	92
R^2	0.01	0.00	0.01	0.07
Sweden High Ambiguity	0.003	-0.005	-0.035*	-0.066***
	(0.27)	(-0.34)	(-1.69)	(-2.77)
Observations	96	94	93	91
R^2	0.00	0.00	0.05	0.11
Sweden Low-High Ambiguity	0.007	0.007	0.014	0.008
	(0.40)	(0.29)	(0.49)	(0.24)
Switzerland Low Ambiguity	-0.014**	-0.034***	-0.054***	-0.080***
	(-2.26)	(-4.17)	(-6.27)	(-8.43)
Observations	155	153	152	150
R^2	0.03	0.08	0.14	0.22
Switzerland High Ambiguity	-0.029***	-0.065***	-0.107***	-0.148***
	(-5.04)	(-7.09)	(-9.42)	(-12.87)
Observations	154	153	151	150
R^2	0.12	0.26	0.38	0.48
Switzerland Low-High Ambiguity	0.014*	0.030**	0.053***	0.068***
	(1.68)	(2.47)	(3.72)	(4.56)
UK Low Ambiguity	-0.010	-0.024**	-0.043***	-0.056***
	(-1.44)	(-2.50)	(-3.83)	(-4.99)
Observations	155	153	152	150
R^2	0.02	0.05	0.11	0.15
UK High Ambiguity	0.004	0.006	0.011	0.007
	(0.61)	(0.76)	(1.04)	(0.44)
Observations	154	153	151	150
R^2	0.00	0.00	0.01	0.00
UK Low-High Ambiguity	-0.014	-0.031**	-0.053***	-0.063***
	(-1.48)	(-2.41)	(-3.51)	(-3.38)
US Low Ambiguity	-0.021***	-0.041***	-0.058***	-0.078***
	(-3.99)	(-7.12)	(-7.99)	(-9.67)
Observations	155	153	152	150
R^2	0.08	0.13	0.17	0.21
US High Ambiguity	0.013*	0.002	-0.024	-0.061**
	(1.97)	(0.16)	(-0.95)	(-2.29)
Observations	154	153	151	150
R^2	0.03	0.00	0.02	0.08
US Low-High Ambiguity	-0.034***	-0.043***	-0.034	-0.017
	(-4.01)	(-2.60)	(-1.28)	(-0.60)

Table 4

Sentiment and market returns during periods of low and high risk

This tables reports the results from regressing future market returns against sentiment during periods of low and high risk. We use future market returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Risk as the periods below the medium of risk and High Risk as the periods above the medium of risk. Numbers in parentheses are t-statistics based on Newey and West's (1987) standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Risk	0.007	0.016	0.015	0.018
	(1.20)	(1.52)	(1.19)	(1.30)
Observations	129	128	126	125
R^2	0.02	0.03	0.02	0.02
Australia High Risk	0.007	-0.002	-0.024	-0.055***
	(0.76)	(-0.17)	(-1.40)	(-3.01)
Observations	129	127	126	124
R^2	0.01	0.00	0.02	0.10
Australia Low-High Risk	-0.000	0.019	0.040*	0.073***
	(-0.01)	(1.05)	(1.83)	(3.17)
Austria Low Risk	-0.028***	-0.065***	-0.096***	-0.128***
	(-4.07)	(-6.80)	(-5.33)	(-6.61)
Observations	155	153	152	150
R^2	0.07	0.18	0.21	0.26
Austria High Risk	0.008	-0.011	-0.045	-0.079***
	(0.48)	(-0.44)	(-1.60)	(-2.88)
Observations	154	153	151	150
R^2	0.00	0.00	0.03	0.07
Austria Low-High Risk	-0.036**	-0.053*	-0.051	-0.048
	(-1.99)	(-1.94)	(-1.52)	(-1.43)
Belgium Low Risk	-0.008	-0.017*	-0.037***	-0.061***
	(-1.36)	(-1.85)	(-3.14)	(-4.33)
Observations	155	153	152	150
R^2	0.01	0.02	0.06	0.10
Belgium High Risk	-0.005	-0.025	-0.048**	-0.087***
	(-0.47)	(-1.54)	(-2.60)	(-4.57)
Observations	154	153	151	150
R^2	0.00	0.02	0.05	0.13
Belgium Low-High Risk	-0.003	0.008	0.011	0.026
	(-0.29)	(0.42)	(0.50)	(1.09)
Brazil Low Risk	-0.020*	-0.030**	-0.067***	-0.086***
	(-1.83)	(-2.04)	(-3.28)	(-3.84)
Observations	155	153	152	150
R^2	0.02	0.02	0.07	0.10
Brazil High Risk	-0.014	-0.030*	-0.047**	-0.079***
	(-1.03)	(-1.75)	(-2.24)	(-2.89)
Observations	154	153	151	150
R^2	0.01	0.01	0.02	0.04
Brazil Low-High Risk	-0.005	-0.000	-0.019	-0.007
	(-0.30)	(-0.00)	(-0.66)	(-0.20)
Canada Low Risk	-0.010	-0.021**	-0.028**	-0.031**
	(-1.49)	(-2.29)	(-2.33)	(-2.22)
Observations	117	115	114	112
R^2	0.02	0.03	0.04	0.04
Canada High Risk	-0.005	-0.019*	-0.041***	-0.057***
	(-0.60)	(-1.77)	(-3.24)	(-3.91)
Observations	116	115	113	112
R^2	0.00	0.03	0.08	0.12
Canada Low-High Risk	-0.006	-0.002	0.013	0.026
	(-0.53)	(-0.16)	(0.77)	(1.29)
China Low Risk	-0.001	-0.019	-0.039**	-0.049**
	(-0.13)	(-1.63)	(-2.10)	(-2.11)
Observations	130	129	127	126
R^2	0.00	0.01	0.02	0.01
China High Risk	-0.008	-0.012	-0.010	-0.007
	(-0.79)	(-0.76)	(-0.57)	(-0.32)
Observations	130	128	127	125
R^2	0.00	0.00	0.00	0.00
China Low-High Risk	0.007	-0.006	-0.029	-0.042
	(0.56)	(-0.32)	(-1.11)	(-1.38)
Czech Republic Low Risk	-0.005	0.007	0.011	0.002
	(-0.61)	(0.59)	(0.78)	(0.12)
Observations	94	92	91	89
R^2	0.01	0.00	0.01	0.00

Table 4 (continued)

Czech Republic High Risk	-0.006	-0.034**	-0.038**	-0.028
	(-0.43)	(-2.11)	(-2.09)	(-1.38)
Observations	93	92	90	89
R^2	0.00	0.02	0.02	0.01
Czech Republic Low-High Risk	0.001	0.041**	0.048**	0.030
	(0.07)	(2.04)	(2.13)	(1.18)
Denmark Low Risk	-0.007	-0.011	-0.022	-0.048**
	(-0.76)	(-0.60)	(-0.98)	(-2.17)
Observations	96	95	93	92
R^2	0.01	0.01	0.02	0.07
Denmark High Risk	0.028*	0.036	0.026	0.000
	(1.86)	(1.56)	(1.01)	(0.01)
Observations	96	94	93	91
R^2	0.07	0.05	0.02	0.00
Denmark Low-High Risk	-0.035**	-0.047	-0.048	-0.048
	(-1.98)	(-1.60)	(-1.41)	(-1.37)
Finland Low Risk	0.008	0.010	-0.014	-0.040**
	(0.83)	(0.56)	(-0.69)	(-2.09)
Observations	96	95	93	92
R^2	0.01	0.01	0.01	0.05
Finland High Risk	0.009	0.004	-0.000	-0.035
	(0.61)	(0.19)	(-0.00)	(-1.53)
Observations	96	94	93	91
R^2	0.00	0.00	0.00	0.02
Finland Low-High Risk	-0.001	0.006	-0.014	-0.005
	(-0.08)	(0.22)	(-0.48)	(-0.16)
France Low Risk	-0.010	-0.024*	-0.040**	-0.059***
	(-1.19)	(-1.72)	(-2.32)	(-3.22)
Observations	155	153	152	150
R^2	0.01	0.03	0.05	0.08
France High Risk	-0.006	-0.019	-0.036**	-0.050***
	(-0.63)	(-1.43)	(-2.21)	(-2.81)
Observations	154	153	151	150
R^2	0.00	0.02	0.04	0.05
France Low-High Risk	-0.004	-0.005	-0.004	-0.008
	(-0.35)	(-0.25)	(-0.18)	(-0.32)
Germany Low Risk	-0.018***	-0.043***	-0.066***	-0.101***
	(-2.99)	(-4.52)	(-5.75)	(-7.92)
Observations	155	153	152	150
R^2	0.04	0.10	0.15	0.24
Germany High Risk	-0.004	-0.023	-0.050***	-0.057***
	(-0.39)	(-1.54)	(-2.97)	(-3.23)
Observations	154	153	151	150
R^2	0.00	0.01	0.05	0.05
Germany Low-High Risk	-0.014	-0.020	-0.016	-0.044**
	(-1.08)	(-1.15)	(-0.80)	(-1.99)
Greece Low Risk	-0.017	-0.017	-0.009	0.004
	(-1.14)	(-0.69)	(-0.32)	(0.12)
Observations	154	153	151	150
R^2	0.01	0.00	0.00	0.00
Greece High Risk	0.015	0.027	0.024	0.027
	(1.00)	(1.19)	(0.80)	(0.74)
Observations	154	152	151	149
R^2	0.01	0.01	0.00	0.00
Greece Low-High Risk	-0.032	-0.044	-0.033	-0.023
	(-1.52)	(-1.31)	(-0.81)	(-0.46)
Hungary Low Risk	-0.003	0.024*	0.035*	0.070***
	(-0.37)	(1.67)	(1.90)	(3.61)
Observations	147	146	144	143
R^2	0.00	0.02	0.02	0.06
Hungary High Risk	-0.005	-0.033	-0.044	-0.046
	(-0.35)	(-1.46)	(-1.58)	(-1.41)
Observations	147	145	144	142
R^2	0.00	0.02	0.03	0.02
Hungary Low-High Risk	0.002	0.057**	0.079**	0.116***
	(0.11)	(2.12)	(2.37)	(3.07)
India Low Risk	-0.021*	-0.036**	-0.052***	-0.064**
	(-1.69)	(-2.24)	(-2.75)	(-2.61)
Observations	48	46	45	43
R^2	0.05	0.12	0.20	0.16
India High Risk	-0.004	-0.033***	-0.072***	-0.094***
	(-0.34)	(-3.15)	(-6.03)	(-7.24)
Observations	47	46	44	43
R^2	0.00	0.13	0.36	0.47

Table 4 (continued)

India Low-High Risk	-0.017	-0.003	0.020	0.030
	(-0.99)	(-0.14)	(0.89)	(1.09)
Ireland Low Risk	-0.005	-0.001	-0.009	-0.015
	(-0.51)	(-0.05)	(-0.54)	(-0.83)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.00
Ireland High Risk	-0.003	-0.020	-0.032**	-0.050***
	(-0.33)	(-1.53)	(-2.58)	(-3.61)
Observations	154	153	151	150
R^2	0.00	0.01	0.02	0.04
Ireland Low-High Risk	-0.001	0.019	0.023	0.034
	(-0.11)	(1.02)	(1.10)	(1.49)
Italy Low Risk	-0.018*	-0.035***	-0.062***	-0.078***
	(-1.82)	(-2.71)	(-4.52)	(-4.93)
Observations	74	73	71	70
R^2	0.04	0.07	0.17	0.20
Italy High Risk	-0.012	-0.026	-0.028	-0.022
	(-0.78)	(-1.43)	(-1.46)	(-1.14)
Observations	74	72	71	69
R^2	0.01	0.02	0.02	0.01
Italy Low-High Risk	-0.007	-0.009	-0.034	-0.057**
	(-0.38)	(-0.38)	(-1.45)	(-2.28)
Japan Low Risk	-0.008	-0.014	-0.028*	-0.041**
	(-0.84)	(-0.99)	(-1.91)	(-2.56)
Observations	155	153	152	150
R^2	0.00	0.01	0.02	0.03
Japan High Risk	0.005	-0.006	-0.027	-0.039*
	(0.41)	(-0.37)	(-1.33)	(-1.81)
Observations	154	153	151	150
R^2	0.00	0.00	0.01	0.02
Japan Low-High Risk	-0.012	-0.008	-0.000	-0.001
	(-0.84)	(-0.37)	(-0.01)	(-0.05)
Mexico Low Risk	0.010	0.016	0.019	0.036*
	(1.55)	(1.32)	(1.31)	(1.79)
Observations	123	122	120	119
R^2	0.01	0.01	0.01	0.03
Mexico High Risk	-0.015	-0.028**	-0.031*	-0.045**
	(-1.57)	(-2.08)	(-1.85)	(-2.24)
Observations	123	121	120	118
R^2	0.02	0.04	0.03	0.04
Mexico Low-High Risk	0.024**	0.044**	0.050**	0.081***
	(2.17)	(2.43)	(2.25)	(2.85)
Netherlands Low Risk	-0.002	-0.008	-0.020	-0.035**
	(-0.29)	(-0.84)	(-1.65)	(-2.58)
Observations	155	153	152	150
R^2	0.00	0.00	0.01	0.03
Netherlands High Risk	0.000	-0.017	-0.039***	-0.057***
	(0.03)	(-1.35)	(-2.75)	(-3.60)
Observations	154	153	151	150
R^2	0.00	0.01	0.04	0.06
Netherlands Low-High Risk	-0.002	0.009	0.019	0.022
	(-0.18)	(0.59)	(1.03)	(1.05)
New Zealand Low Risk	0.004	0.013	0.010	0.001
	(0.49)	(0.84)	(0.47)	(0.05)
Observations	87	86	84	83
R^2	0.00	0.02	0.01	0.00
New Zealand High Risk	0.005	0.007	0.015	0.011
	(0.62)	(0.49)	(0.83)	(0.58)
Observations	87	85	84	82
R^2	0.00	0.00	0.01	0.01
New Zealand Low-High Risk	-0.001	0.005	-0.005	-0.010
	(-0.09)	(0.24)	(-0.19)	(-0.36)
Poland Low Risk	-0.027***	-0.052***	-0.082***	-0.099***
	(-2.73)	(-3.18)	(-4.21)	(-4.42)
Observations	123	121	120	118
R^2	0.07	0.11	0.15	0.15
Poland High Risk	-0.033***	-0.068***	-0.095***	-0.116***
	(-3.25)	(-4.84)	(-5.15)	(-5.13)
Observations	122	121	119	118
R^2	0.08	0.16	0.19	0.19
Poland Low-High Risk	0.006	0.015	0.013	0.016
	(0.44)	(0.71)	(0.47)	(0.51)
Portugal Low Risk	-0.000	0.002	-0.005	-0.011
	(-0.01)	(0.15)	(-0.30)	(-0.56)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.00

Table 4 (continued)

Portugal High Risk	0.008	0.003	-0.005	-0.013
	(0.84)	(0.21)	(-0.29)	(-0.77)
Observations	154	153	151	150
R^2	0.00	0.00	0.00	0.00
Portugal Low-High Risk	-0.008	-0.001	-0.000	0.001
	(-0.54)	(-0.03)	(-0.02)	(0.05)
Russia Low Risk	-0.043**	-0.088***	-0.103***	-0.118***
	(-2.28)	(-4.83)	(-7.84)	(-4.14)
Observations	22	20	19	17
R^2	0.23	0.50	0.52	0.51
Russia High Risk	-0.034	-0.051***	-0.106***	-0.099***
	(-1.68)	(-2.91)	(-4.21)	(-5.25)
Observations	21	20	18	17
R^2	0.12	0.27	0.48	0.42
Russia Low-High Risk	-0.009	-0.037	0.003	-0.019
	(-0.33)	(-1.46)	(0.11)	(-0.55)
South Korea Low Risk	-0.016	-0.037**	-0.070***	-0.094***
	(-1.28)	(-1.99)	(-2.68)	(-4.05)
Observations	137	136	134	133
R^2	0.03	0.06	0.14	0.23
South Korea High Risk	-0.024**	-0.078***	-0.124***	-0.161***
	(-2.52)	(-5.58)	(-7.26)	(-8.04)
Observations	137	135	134	132
R^2	0.03	0.14	0.24	0.33
South Korea Low-High Risk	0.008	0.041*	0.054*	0.067**
	(0.50)	(1.78)	(1.73)	(2.17)
Spain Low Risk	0.004	0.012	-0.004	-0.027
	(0.31)	(0.61)	(-0.17)	(-0.99)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.01
Spain High Risk	-0.004	-0.024*	-0.038***	-0.043***
	(-0.47)	(-1.93)	(-2.69)	(-2.96)
Observations	154	153	151	150
R^2	0.00	0.03	0.05	0.04
Spain Low-High Risk	0.008	0.037	0.034	0.016
	(0.52)	(1.55)	(1.18)	(0.50)
Sweden Low Risk	0.011	0.021	0.002	-0.020
	(0.96)	(1.27)	(0.10)	(-0.88)
Observations	96	95	93	92
R^2	0.01	0.03	0.00	0.01
Sweden High Risk	0.005	-0.010	-0.035	-0.077***
	(0.41)	(-0.52)	(-1.64)	(-3.20)
Observations	96	94	93	91
R^2	0.00	0.00	0.03	0.12
Sweden Low-High Risk	0.006	0.031	0.037	0.057*
	(0.35)	(1.23)	(1.23)	(1.71)
Switzerland Low Risk	-0.028***	-0.063***	-0.094***	-0.127***
	(-5.12)	(-7.38)	(-8.71)	(-9.95)
Observations	155	153	152	150
R^2	0.12	0.25	0.32	0.38
Switzerland High Risk	-0.015**	-0.035***	-0.059***	-0.091***
	(-2.29)	(-4.14)	(-6.35)	(-8.39)
Observations	154	153	151	150
R^2	0.03	0.08	0.16	0.27
Switzerland Low-High Risk	-0.013	-0.027**	-0.035**	-0.035**
	(-1.55)	(-2.28)	(-2.45)	(-2.11)
UK Low Risk	-0.006	-0.001	-0.002	0.002
	(-0.78)	(-0.10)	(-0.15)	(0.15)
Observations	155	153	152	150
R^2	0.01	0.00	0.00	0.00
UK High Risk	-0.005	-0.021**	-0.036***	-0.054***
	(-0.81)	(-2.32)	(-3.52)	(-4.89)
Observations	154	153	151	150
R^2	0.00	0.04	0.09	0.14
UK Low-High Risk	-0.001	0.020	0.034*	0.056***
	(-0.12)	(1.33)	(1.95)	(3.01)
US Low Risk	-0.008	-0.022*	-0.033**	-0.068***
	(-1.17)	(-1.68)	(-2.14)	(-3.86)
Observations	155	153	152	150
R^2	0.01	0.04	0.05	0.13
US High Risk	-0.015***	-0.035***	-0.059***	-0.077***
	(-2.68)	(-5.99)	(-7.41)	(-9.16)
Observations	154	153	151	150
R^2	0.04	0.10	0.17	0.21
US Low-High Risk	0.008	0.013	0.026	0.009
	(0.87)	(0.87)	(1.48)	(0.46)

Table 5

Sentiment and beta premium during periods of low and high ambiguity

This tables reports the results from regressing future beta premium against sentiment during periods of low and high ambiguity. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and the High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Ambiguity	-0.012	-0.014	0.001	0.017
	(-1.07)	(-0.89)	(0.09)	(1.04)
Observations	129	128	126	125
R^2	0.02	0.01	0.00	0.01
Australia High Ambiguity	-0.009	-0.017**	-0.023**	-0.021
	(-1.38)	(-2.06)	(-2.00)	(-1.44)
Observations	129	127	126	124
R^2	0.02	0.04	0.04	0.02
Australia Low-High Ambiguity	-0.003	0.003	0.024	0.038*
	(-0.23)	(0.16)	(1.24)	(1.74)
Austria Low Ambiguity	0.013	0.020	0.052***	0.074***
	(1.07)	(0.99)	(2.92)	(5.60)
Observations	155	153	152	150
R^2	0.01	0.02	0.08	0.17
Austria High Ambiguity	-0.004	0.017	0.028*	0.040**
	(-0.46)	(1.34)	(1.86)	(2.34)
Observations	154	153	151	150
R^2	0.00	0.01	0.03	0.04
Austria Low-High Ambiguity	0.018	0.003	0.024	0.034
	(1.13)	(0.14)	(1.02)	(1.56)
Belgium Low Ambiguity	0.018	0.028	0.056***	0.092***
	(1.35)	(1.30)	(2.63)	(4.92)
Observations	155	153	152	150
R^2	0.02	0.02	0.05	0.12
Belgium High Ambiguity	-0.002	0.007	0.018**	0.032***
	(-0.51)	(1.10)	(2.12)	(3.20)
Observations	154	153	151	150
R^2	0.00	0.01	0.02	0.05
Belgium Low-High Ambiguity	0.020	0.021	0.038*	0.059***
	(1.44)	(0.95)	(1.68)	(2.81)
Brazil Low Ambiguity	0.006	0.019	0.028	0.031
	(0.58)	(1.21)	(1.45)	(1.25)
Observations	122	120	119	117
R^2	0.00	0.01	0.02	0.01
Brazil High Ambiguity	0.031***	0.057***	0.089***	0.122***
	(2.84)	(4.06)	(5.21)	(6.51)
Observations	121	120	118	117
R^2	0.08	0.13	0.18	0.24
Brazil Low-High Ambiguity	-0.024	-0.039*	-0.061**	-0.091***
	(-1.56)	(-1.87)	(-2.34)	(-2.95)
Canada Low Ambiguity	0.016*	0.031**	0.057***	0.064***
	(1.79)	(2.61)	(4.14)	(4.80)
Observations	117	115	114	112
R^2	0.02	0.05	0.13	0.15
Canada High Ambiguity	-0.003	0.002	-0.013	-0.032
	(-0.22)	(0.12)	(-0.51)	(-0.99)
Observations	116	115	113	112
R^2	0.00	0.00	0.00	0.02
Canada Low-High Ambiguity	0.018	0.029	0.070**	0.097***
	(1.28)	(1.24)	(2.37)	(2.76)
China Low Ambiguity	0.016**	0.009	0.001	0.003
	(2.49)	(0.96)	(0.10)	(0.30)
Observations	130	129	127	126
R^2	0.03	0.01	0.00	0.00
China High Ambiguity	-0.006	-0.010	-0.017**	-0.029***
	(-1.17)	(-1.52)	(-2.16)	(-3.32)
Observations	130	128	127	125
R^2	0.01	0.01	0.02	0.05
China Low-High Ambiguity	0.022***	0.018	0.018	0.032**
	(2.69)	(1.65)	(1.47)	(2.44)
Denmark Low Ambiguity	-0.006	-0.002	0.029	0.067***
	(-0.35)	(-0.11)	(1.65)	(3.69)
Observations	96	95	93	92
R^2	0.00	0.00	0.03	0.11

Table 5 (continued)

Denmark High Ambiguity	-0.001	0.004	0.002	0.003
	(-0.10)	(0.24)	(0.10)	(0.14)
Observations	96	94	93	91
R^2	0.00	0.00	0.00	0.00
Denmark Low-High Ambiguity	-0.005	-0.006	0.027	0.064**
	(-0.27)	(-0.24)	(0.99)	(2.16)
Finland Low Ambiguity	0.001	0.002	0.002	0.018
	(0.09)	(0.15)	(0.19)	(1.27)
Observations	96	95	93	92
R^2	0.00	0.00	0.00	0.02
Finland High Ambiguity	-0.001	0.010	0.024*	0.032**
	(-0.17)	(0.83)	(1.83)	(2.44)
Observations	96	94	93	91
R^2	0.00	0.01	0.05	0.08
Finland Low-High Ambiguity	0.002	-0.008	-0.021	-0.015
	(0.17)	(-0.46)	(-1.18)	(-0.77)
France Low Ambiguity	0.016**	0.031***	0.046***	0.064***
	(2.21)	(2.81)	(3.96)	(5.74)
Observations	155	153	152	150
R^2	0.04	0.07	0.11	0.19
France High Ambiguity	0.008	0.019**	0.027***	0.024**
	(1.30)	(2.15)	(3.21)	(2.27)
Observations	154	153	151	150
R^2	0.01	0.04	0.07	0.04
France Low-High Ambiguity	0.008	0.012	0.018	0.041***
	(0.89)	(0.85)	(1.26)	(2.66)
Germany Low Ambiguity	0.020*	0.045***	0.067***	0.081***
	(1.68)	(3.17)	(4.51)	(5.36)
Observations	155	153	152	150
R^2	0.03	0.08	0.13	0.16
Germany High Ambiguity	0.013***	0.038***	0.059***	0.079***
	(2.68)	(5.31)	(6.66)	(7.90)
Observations	154	153	151	150
R^2	0.04	0.16	0.20	0.25
Germany Low-High Ambiguity	0.007	0.006	0.008	0.002
	(0.55)	(0.40)	(0.45)	(0.11)
Greece Low Ambiguity	-0.032**	-0.048***	-0.056***	-0.074***
	(-2.42)	(-3.04)	(-2.79)	(-3.33)
Observations	149	147	146	144
R^2	0.04	0.04	0.04	0.06
Greece High Ambiguity	0.011	0.039*	0.050**	0.018
	(0.56)	(1.80)	(2.15)	(0.75)
Observations	148	147	145	144
R^2	0.00	0.03	0.03	0.00
Greece Low-High Ambiguity	-0.043*	-0.087***	-0.106***	-0.092***
	(-1.78)	(-3.25)	(-3.45)	(-2.81)
India Low Ambiguity	-0.005	0.036**	0.057**	0.043**
	(-0.30)	(2.17)	(2.66)	(2.49)
Observations	48	46	45	43
R^2	0.00	0.09	0.12	0.06
India High Ambiguity	0.026	-0.002	-0.012	0.001
	(1.11)	(-0.04)	(-0.33)	(0.03)
Observations	47	46	44	43
R^2	0.05	0.00	0.00	0.00
India Low-High Ambiguity	-0.031	0.037	0.069	0.041
	(-1.09)	(0.84)	(1.63)	(0.94)
Ireland Low Ambiguity	0.020	0.032	0.034	0.049
	(0.81)	(1.10)	(0.96)	(1.30)
Observations	155	153	152	150
R^2	0.01	0.01	0.01	0.01
Ireland High Ambiguity	-0.034	-0.069	0.036	0.086***
	(-1.10)	(-1.15)	(0.97)	(2.98)
Observations	154	153	151	150
R^2	0.02	0.02	0.01	0.06
Ireland Low-High Ambiguity	0.054	0.101	-0.003	-0.037
	(1.36)	(1.52)	(-0.05)	(-0.79)

Table 5 (continued)

Italy Low Ambiguity	0.028***	0.050***	0.066***	0.073***
	(3.16)	(3.58)	(4.26)	(5.17)
Observations	74	73	71	70
R^2	0.12	0.15	0.18	0.19
Italy High Ambiguity	0.016	0.032***	0.048***	0.061***
	(1.56)	(2.83)	(3.79)	(3.96)
Observations	74	72	71	69
R^2	0.03	0.08	0.11	0.12
Italy Low-High Ambiguity	0.012	0.017	0.018	0.011
	(0.87)	(0.97)	(0.88)	(0.54)
Japan Low Ambiguity	0.012	0.031**	0.058***	0.091***
	(1.27)	(2.46)	(5.31)	(8.28)
Observations	155	153	152	150
R^2	0.01	0.04	0.11	0.21
Japan High Ambiguity	0.009*	0.023***	0.037***	0.047***
	(1.79)	(2.84)	(4.20)	(5.08)
Observations	154	153	151	150
R^2	0.02	0.06	0.10	0.12
Japan Low-High Ambiguity	0.003	0.008	0.021	0.044***
	(0.31)	(0.52)	(1.53)	(3.04)
Mexico Low Ambiguity	0.011	0.032***	0.036***	0.045***
	(1.44)	(3.60)	(3.15)	(3.77)
Observations	123	122	120	119
R^2	0.02	0.09	0.08	0.11
Mexico High Ambiguity	0.012	-0.013	-0.014	-0.028**
	(1.28)	(-1.29)	(-1.64)	(-1.99)
Observations	123	121	120	118
R^2	0.02	0.02	0.02	0.04
Mexico Low-High Ambiguity	-0.002	0.045***	0.051***	0.072***
	(-0.12)	(3.36)	(3.50)	(3.96)
Netherlands Low Ambiguity	0.022***	0.055***	0.080***	0.098***
	(2.77)	(4.62)	(6.35)	(7.44)
Observations	155	153	152	150
R^2	0.04	0.12	0.19	0.24
Netherlands High Ambiguity	0.019**	0.038***	0.062***	0.074***
	(2.38)	(4.42)	(6.13)	(6.65)
Observations	154	153	151	150
R^2	0.04	0.10	0.18	0.19
Netherlands Low-High Ambiguity	0.003	0.017	0.017	0.024
	(0.31)	(1.15)	(1.07)	(1.40)
New Zealand Low Ambiguity	0.009	0.021*	0.034**	0.054***
	(1.24)	(1.81)	(2.13)	(3.46)
Observations	87	86	84	83
R^2	0.02	0.05	0.08	0.15
New Zealand High Ambiguity	0.034***	0.069***	0.089***	0.116***
	(3.88)	(4.86)	(4.84)	(6.76)
Observations	87	85	84	82
R^2	0.21	0.32	0.33	0.40
New Zealand Low-High Ambiguity	-0.026**	-0.048***	-0.055**	-0.061***
	(-2.24)	(-2.61)	(-2.23)	(-2.65)
Poland Low Ambiguity	0.014	0.024	0.038**	0.041*
	(1.60)	(1.63)	(2.05)	(1.92)
Observations	123	121	120	118
R^2	0.01	0.02	0.03	0.03
Poland High Ambiguity	0.005	0.015	0.023	0.030
	(0.68)	(1.12)	(1.12)	(1.12)
Observations	122	121	119	118
R^2	0.00	0.01	0.02	0.02
Poland Low-High Ambiguity	0.008	0.009	0.015	0.012
	(0.70)	(0.43)	(0.53)	(0.34)
Portugal Low Ambiguity	0.024***	0.052***	0.085***	0.106***
	(2.75)	(3.73)	(4.76)	(5.49)
Observations	145	143	142	140
R^2	0.05	0.10	0.17	0.21

Table 5 (continued)

Portugal High Ambiguity	0.003	-0.002	-0.021	-0.000
	(0.26)	(-0.10)	(-1.11)	(-0.02)
Observations	144	143	141	140
R^2	0.00	0.00	0.01	0.00
Portugal Low-High Ambiguity	0.021	0.054**	0.105***	0.107***
	(1.31)	(2.54)	(4.10)	(3.14)
Russia Low Ambiguity	0.003	0.017	0.026	0.028
	(0.16)	(1.11)	(1.71)	(1.43)
Observations	22	20	19	17
R^2	0.00	0.04	0.19	0.11
Russia High Ambiguity	0.039**	0.060***	0.073**	0.051**
	(2.24)	(3.87)	(2.54)	(2.78)
Observations	21	20	18	17
R^2	0.22	0.37	0.24	0.18
Russia Low-High Ambiguity	-0.036	-0.043*	-0.047	-0.023
	(-1.51)	(-1.95)	(-1.45)	(-0.84)
South Korea Low Ambiguity	0.024***	0.032***	0.042***	0.049***
	(2.73)	(3.42)	(3.44)	(3.05)
Observations	137	136	134	133
R^2	0.07	0.08	0.09	0.08
South Korea High Ambiguity	0.013	0.028*	0.041***	0.047***
	(1.35)	(1.81)	(2.80)	(2.80)
Observations	137	135	134	132
R^2	0.02	0.04	0.07	0.06
South Korea Low-High Ambiguity	0.010	0.004	0.001	0.002
	(0.77)	(0.22)	(0.04)	(0.10)
Spain Low Ambiguity	0.016**	0.040***	0.057***	0.066***
	(2.09)	(3.69)	(4.64)	(4.96)
Observations	155	153	152	150
R^2	0.04	0.10	0.14	0.14
Spain High Ambiguity	0.016**	0.024*	0.050***	0.079***
	(1.98)	(1.71)	(2.84)	(4.14)
Observations	154	153	151	150
R^2	0.03	0.03	0.07	0.12
Spain Low-High Ambiguity	-0.001	0.016	0.007	-0.013
	(-0.08)	(0.89)	(0.32)	(-0.56)
Sweden Low Ambiguity	-0.010	-0.010	0.002	0.020*
	(-0.97)	(-0.62)	(0.14)	(1.81)
Observations	96	95	93	92
R^2	0.02	0.01	0.00	0.03
Sweden High Ambiguity	0.001	0.008	0.026	0.036**
	(0.17)	(0.82)	(1.57)	(2.04)
Observations	96	94	93	91
R^2	0.00	0.01	0.06	0.10
Sweden Low-High Ambiguity	-0.011	-0.019	-0.024	-0.016
	(-0.93)	(-0.96)	(-1.12)	(-0.75)
Switzerland Low Ambiguity	0.026***	0.060***	0.080***	0.104***
	(3.07)	(6.07)	(7.23)	(8.27)
Observations	155	153	152	150
R^2	0.07	0.17	0.20	0.26
Switzerland High Ambiguity	0.013**	0.023***	0.050***	0.075***
	(2.00)	(2.73)	(4.66)	(6.48)
Observations	154	153	151	150
R^2	0.03	0.05	0.14	0.21
Switzerland Low-High Ambiguity	0.013	0.037***	0.030*	0.028
	(1.26)	(2.88)	(1.93)	(1.65)
UK Low Ambiguity	0.021**	0.032**	0.047***	0.062***
	(2.16)	(2.35)	(3.72)	(5.01)
Observations	155	153	152	150
R^2	0.06	0.06	0.10	0.14
UK High Ambiguity	-0.005	0.008	0.014	0.014
	(-0.82)	(0.62)	(0.94)	(0.97)
Observations	154	153	151	150
R^2	0.01	0.01	0.02	0.02
UK Low-High Ambiguity	0.025**	0.024	0.033*	0.047**
	(2.27)	(1.29)	(1.69)	(2.49)
US Low Ambiguity	0.035***	0.060***	0.085***	0.108***
	(3.52)	(6.20)	(7.07)	(8.41)
Observations	155	153	152	150
R^2	0.11	0.19	0.26	0.30
US High Ambiguity	-0.000	0.030	0.048	0.041*
	(-0.00)	(1.46)	(1.60)	(1.78)
Observations	154	153	151	150
R^2	0.00	0.03	0.05	0.03
US Low-High Ambiguity	0.035***	0.030	0.038	0.067**
	(2.79)	(1.33)	(1.17)	(2.52)

Table 6

Sentiment and beta premium during periods of low and high risk

This tables reports the results from regressing future beta premium against sentiment during periods of low and high risk. We use future market returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Risk as the periods above the medium of risk and High Risk as the periods above the medium of risk. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Risk	-0.015*	-0.028**	-0.029***	-0.025**
	(-1.84)	(-2.20)	(-2.66)	(-2.05)
Observations	129	128	126	125
R^2	0.05	0.08	0.07	0.04
Australia High Risk	-0.007	-0.006	0.007	0.019
	(-0.61)	(-0.38)	(0.42)	(1.08)
Observations	129	127	126	124
R^2	0.01	0.00	0.00	0.01
Australia Low-High Risk	-0.008	-0.022	-0.036*	-0.044**
	(-0.59)	(-1.08)	(-1.80)	(-2.04)
Austria Low Risk	0.002	0.015*	0.032***	0.039***
	(0.41)	(1.91)	(3.89)	(4.12)
Observations	155	153	152	150
R^2	0.00	0.02	0.05	0.07
Austria High Risk	0.005	0.018	0.045**	0.072***
	(0.33)	(0.82)	(2.08)	(3.78)
Observations	154	153	151	150
R^2	0.00	0.01	0.04	0.10
Austria Low-High Risk	-0.002	-0.003	-0.012	-0.033
	(-0.16)	(-0.13)	(-0.53)	(-1.55)
Belgium Low Risk	0.001	-0.006	0.005	0.024***
	(0.24)	(-0.53)	(0.39)	(2.66)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.03
Belgium High Risk	0.014	0.042**	0.071***	0.103***
	(1.09)	(2.08)	(3.69)	(5.23)
Observations	154	153	151	150
R^2	0.01	0.05	0.09	0.15
Belgium Low-High Risk	-0.013	-0.047**	-0.066***	-0.079***
	(-0.91)	(-2.09)	(-2.83)	(-3.65)
Brazil Low Risk	0.021**	0.047***	0.070***	0.116***
	(2.05)	(3.47)	(4.17)	(6.08)
Observations	122	120	119	117
R^2	0.04	0.11	0.15	0.25
Brazil High Risk	0.018	0.025	0.041**	0.031
	(1.53)	(1.64)	(2.05)	(1.26)
Observations	121	120	118	117
R^2	0.02	0.02	0.03	0.01
Brazil Low-High Risk	0.003	0.022	0.029	0.085***
	(0.20)	(1.08)	(1.13)	(2.74)
Canada Low Risk	-0.002	-0.005	-0.000	-0.020
	(-0.20)	(-0.24)	(-0.02)	(-0.74)
Observations	117	115	114	112
R^2	0.00	0.00	0.00	0.01
Canada High Risk	0.017**	0.035***	0.055***	0.059***
	(2.07)	(3.20)	(4.27)	(4.36)
Observations	116	115	113	112
R^2	0.03	0.07	0.14	0.13
Canada Low-High Risk	-0.020	-0.040*	-0.055**	-0.079***
	(-1.30)	(-1.80)	(-2.09)	(-2.61)
China Low Risk	-0.008	-0.017**	-0.024***	-0.030***
	(-1.57)	(-2.57)	(-2.78)	(-3.15)
Observations	130	129	127	126
R^2	0.02	0.04	0.04	0.05
China High Risk	0.012**	0.013*	0.003	-0.003
	(2.12)	(1.66)	(0.34)	(-0.42)
Observations	130	128	127	125
R^2	0.02	0.01	0.00	0.00
China Low-High Risk	-0.020***	-0.030***	-0.026**	-0.027**
	(-2.62)	(-2.92)	(-2.22)	(-2.11)
Denmark Low Risk	0.011	0.001	0.003	0.012
	(1.17)	(0.08)	(0.17)	(0.71)
Observations	96	95	93	92
R^2	0.02	0.00	0.00	0.00

Table 6 (continued)

Denmark High Risk	-0.015	0.005	0.030*	0.057***
	(-0.97)	(0.21)	(1.68)	(3.06)
Observations	96	94	93	91
R^2	0.02	0.00	0.03	0.08
Denmark Low-High Risk	0.027	-0.003	-0.027	-0.045*
	(1.44)	(-0.12)	(-1.07)	(-1.77)
Finland Low Risk	-0.017	-0.009	0.017*	0.023**
	(-1.57)	(-0.90)	(1.68)	(2.07)
Observations	96	95	93	92
R^2	0.04	0.01	0.03	0.04
Finland High Risk	0.017	0.018	0.013	0.030*
	(1.49)	(1.25)	(0.84)	(1.89)
Observations	96	94	93	91
R^2	0.04	0.02	0.01	0.04
Finland Low-High Risk	-0.034**	-0.027	0.004	-0.007
	(-2.16)	(-1.53)	(0.23)	(-0.39)
France Low Risk	0.016**	0.021**	0.024***	0.043***
	(2.42)	(2.08)	(2.64)	(3.96)
Observations	155	153	152	150
R^2	0.05	0.04	0.06	0.12
France High Risk	0.011	0.030***	0.049***	0.054***
	(1.48)	(2.79)	(4.21)	(4.51)
Observations	154	153	151	150
R^2	0.02	0.07	0.13	0.14
France Low-High Risk	0.005	-0.009	-0.025*	-0.011
	(0.49)	(-0.61)	(-1.69)	(-0.71)
Germany Low Risk	0.011**	0.026***	0.046***	0.069***
	(1.98)	(2.94)	(4.97)	(6.84)
Observations	155	153	152	150
R^2	0.02	0.06	0.12	0.20
Germany High Risk	0.020*	0.051***	0.076***	0.087***
	(1.70)	(4.13)	(5.66)	(6.27)
Observations	154	153	151	150
R^2	0.03	0.11	0.17	0.17
Germany Low-High Risk	-0.009	-0.026*	-0.031*	-0.018
	(-0.72)	(-1.67)	(-1.88)	(-1.03)
Greece Low Risk	-0.002	0.003	0.013	-0.027
	(-0.11)	(0.11)	(0.48)	(-0.87)
Observations	149	147	146	144
R^2	0.00	0.00	0.00	0.01
Greece High Risk	-0.021	-0.034**	-0.062***	-0.076***
	(-1.56)	(-2.38)	(-3.36)	(-3.77)
Observations	148	147	145	144
R^2	0.02	0.03	0.06	0.07
Greece Low-High Risk	0.019	0.037	0.074**	0.049
	(0.89)	(1.32)	(2.31)	(1.35)
India Low Risk	0.015	0.003	-0.002	0.005
	(0.75)	(0.08)	(-0.05)	(0.15)
Observations	48	46	45	43
R^2	0.02	0.00	0.00	0.00
India High Risk	-0.002	0.035*	0.060**	0.050**
	(-0.11)	(1.87)	(2.54)	(2.65)
Observations	47	46	44	43
R^2	0.00	0.09	0.14	0.08
India Low-High Risk	0.017	-0.032	-0.061	-0.045
	(0.63)	(-0.84)	(-1.46)	(-1.12)
Ireland Low Risk	-0.016	0.009	-0.004	0.054*
	(-0.80)	(0.29)	(-0.10)	(1.82)
Observations	155	153	152	150
R^2	0.01	0.00	0.00	0.03
Ireland High Risk	0.011	0.007	0.058*	0.081**
	(0.42)	(0.19)	(1.68)	(2.07)
Observations	154	153	151	150
R^2	0.00	0.00	0.02	0.02
Ireland Low-High Risk	-0.027	0.002	-0.062	-0.027
	(-0.81)	(0.04)	(-1.12)	(-0.56)

Table 6 (continued)

Italy Low Risk	0.030***	0.053***	0.081***	0.094***
	(4.05)	(5.44)	(6.96)	(7.79)
Observations	74	73	71	70
R^2	0.15	0.22	0.30	0.36
Italy High Risk	0.014	0.030**	0.038***	0.047***
	(1.57)	(2.50)	(3.33)	(3.58)
Observations	74	72	71	69
R^2	0.03	0.05	0.07	0.07
Italy Low-High Risk	0.017	0.023	0.042**	0.047***
	(1.42)	(1.47)	(2.59)	(2.62)
Japan Low Risk	0.014**	0.027***	0.044***	0.055***
	(2.34)	(2.96)	(4.87)	(5.05)
Observations	155	153	152	150
R^2	0.03	0.05	0.10	0.10
Japan High Risk	0.007	0.024**	0.049***	0.074***
	(0.77)	(2.00)	(4.35)	(7.53)
Observations	154	153	151	150
R^2	0.01	0.03	0.09	0.18
Japan Low-High Risk	0.007	0.003	-0.005	-0.019
	(0.71)	(0.19)	(-0.36)	(-1.28)
Mexico Low Risk	0.001	-0.004	-0.009	-0.014
	(0.20)	(-0.53)	(-1.18)	(-1.55)
Observations	123	122	120	119
R^2	0.00	0.00	0.01	0.02
Mexico High Risk	0.018*	0.033***	0.041***	0.046***
	(1.90)	(3.46)	(3.37)	(3.50)
Observations	123	121	120	118
R^2	0.04	0.10	0.10	0.10
Mexico Low-High Risk	-0.017	-0.037***	-0.050***	-0.060***
	(-1.60)	(-3.10)	(-3.48)	(-3.76)
Netherlands Low Risk	0.016**	0.031***	0.045***	0.069***
	(2.13)	(3.22)	(4.52)	(6.83)
Observations	155	153	152	150
R^2	0.04	0.06	0.10	0.20
Netherlands High Risk	0.025***	0.063***	0.096***	0.103***
	(2.95)	(5.46)	(7.62)	(7.72)
Observations	154	153	151	150
R^2	0.05	0.17	0.26	0.26
Netherlands Low-High Risk	-0.008	-0.033**	-0.051***	-0.034**
	(-0.72)	(-2.18)	(-3.20)	(-2.02)
New Zealand Low Risk	0.019**	0.039***	0.057***	0.085***
	(2.39)	(2.80)	(3.36)	(4.49)
Observations	87	86	84	83
R^2	0.08	0.14	0.21	0.34
New Zealand High Risk	0.016*	0.036**	0.045*	0.062***
	(1.83)	(2.19)	(1.98)	(2.94)
Observations	87	85	84	82
R^2	0.05	0.10	0.10	0.14
New Zealand Low-High Risk	0.003	0.003	0.012	0.023
	(0.24)	(0.14)	(0.42)	(0.80)
Poland Low Risk	0.012	0.030**	0.056***	0.059***
	(1.48)	(2.21)	(3.01)	(2.67)
Observations	123	121	120	118
R^2	0.02	0.05	0.10	0.08
Poland High Risk	0.010	0.014	0.013	0.017
	(1.18)	(0.98)	(0.66)	(0.70)
Observations	122	121	119	118
R^2	0.01	0.01	0.00	0.00
Poland Low-High Risk	0.002	0.015	0.043	0.043
	(0.13)	(0.77)	(1.60)	(1.30)
Portugal Low Risk	0.005	0.034**	0.050***	0.074***
	(0.53)	(2.45)	(3.27)	(3.97)
Observations	145	143	142	140
R^2	0.00	0.05	0.07	0.11

Table 6 (continued)

Portugal High Risk	0.029***	0.045***	0.067***	0.086***
	(3.22)	(3.24)	(3.65)	(4.18)
Observations	144	143	141	140
R^2	0.07	0.08	0.10	0.12
Portugal Low-High Risk	-0.023*	-0.012	-0.017	-0.012
	(-1.72)	(-0.60)	(-0.73)	(-0.44)
Russia Low Risk	0.007	0.040***	0.062***	0.066***
	(0.36)	(3.13)	(3.40)	(3.53)
Observations	22	20	19	17
R^2	0.01	0.42	0.40	0.52
Russia High Risk	0.002	0.028	0.050**	0.040
	(0.12)	(1.58)	(2.25)	(1.52)
Observations	21	20	18	17
R^2	0.00	0.10	0.29	0.14
Russia Low-High Risk	0.005	0.012	0.011	0.026
	(0.20)	(0.53)	(0.40)	(0.81)
South Korea Low Risk	-0.006	0.001	0.014	0.016
	(-1.16)	(0.13)	(1.34)	(1.44)
Observations	137	136	134	133
R^2	0.01	0.00	0.01	0.01
South Korea High Risk	0.033***	0.046***	0.054***	0.067***
	(3.56)	(4.17)	(4.05)	(3.92)
Observations	137	135	134	132
R^2	0.11	0.13	0.12	0.11
South Korea Low-High Risk	-0.039***	-0.045***	-0.040**	-0.051**
	(-3.68)	(-3.25)	(-2.31)	(-2.52)
Spain Low Risk	0.012*	0.016	0.034**	0.049**
	(1.66)	(1.30)	(2.44)	(2.39)
Observations	155	153	152	150
R^2	0.02	0.01	0.04	0.05
Spain High Risk	0.016**	0.041***	0.061***	0.072***
	(2.15)	(3.79)	(4.80)	(5.45)
Observations	154	153	151	150
R^2	0.04	0.10	0.14	0.16
Spain Low-High Risk	-0.004	-0.025	-0.027	-0.024
	(-0.43)	(-1.55)	(-1.44)	(-0.97)
Sweden Low Risk	-0.002	-0.013	-0.008	0.007
	(-0.33)	(-1.01)	(-0.47)	(0.47)
Observations	96	95	93	92
R^2	0.00	0.02	0.01	0.00
Sweden High Risk	-0.007	-0.000	0.017	0.034***
	(-0.64)	(-0.01)	(1.17)	(2.83)
Observations	96	94	93	91
R^2	0.01	0.00	0.02	0.10
Sweden Low-High Risk	0.004	-0.012	-0.024	-0.027
	(0.34)	(-0.59)	(-1.12)	(-1.40)
Switzerland Low Risk	0.024***	0.035***	0.058***	0.081***
	(3.24)	(3.89)	(5.71)	(7.75)
Observations	155	153	152	150
R^2	0.08	0.10	0.18	0.27
Switzerland High Risk	0.019**	0.053***	0.077***	0.102***
	(2.28)	(5.20)	(6.46)	(7.74)
Observations	154	153	151	150
R^2	0.04	0.14	0.18	0.24
Switzerland Low-High Risk	0.005	-0.018	-0.019	-0.021
	(0.44)	(-1.29)	(-1.20)	(-1.26)
UK Low Risk	0.007	-0.005	0.007	0.021*
	(0.82)	(-0.35)	(0.61)	(1.83)
Observations	155	153	152	150
R^2	0.01	0.00	0.00	0.02
UK High Risk	0.015	0.036***	0.048***	0.056***
	(1.64)	(2.85)	(3.86)	(4.50)
Observations	154	153	151	150
R^2	0.03	0.09	0.11	0.13
UK Low-High Risk	-0.009	-0.040**	-0.041**	-0.034**
	(-0.71)	(-2.18)	(-2.40)	(-2.01)
US Low Risk	0.015	0.040**	0.040**	0.075***
	(0.97)	(2.06)	(2.22)	(2.64)
Observations	155	153	152	150
R^2	0.02	0.06	0.05	0.10
US High Risk	0.030***	0.056***	0.087***	0.104***
	(3.28)	(5.80)	(6.60)	(8.85)
Observations	154	153	151	150
R^2	0.10	0.16	0.25	0.30
US Low-High Risk	-0.015	-0.016	-0.047**	-0.029
	(-0.83)	(-0.74)	(-2.09)	(-0.95)

Table 7

Sentiment and mispricing management premium during periods of low and high ambiguity

This tables reports the results from regressing future mispricing management premium premium against sentiment during periods of low and high ambiguity. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and the High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Ambiguity	-0.019**	-0.039***	-0.044***	-0.041***
	(-2.45)	(-3.49)	(-3.90)	(-3.26)
Observations	129	128	126	125
R^2	0.08	0.15	0.13	0.08
Australia High Ambiguity	0.002	0.005	0.005	0.010
	(0.32)	(0.64)	(0.48)	(0.81)
Observations	129	127	126	124
R^2	0.00	0.00	0.00	0.01
Australia Low-High Ambiguity	-0.020**	-0.044***	-0.049***	-0.051***
	(-2.23)	(-3.15)	(-3.15)	(-2.85)
Austria Low Ambiguity	-0.018	-0.036*	-0.039*	-0.028
	(-1.63)	(-1.81)	(-1.73)	(-1.25)
Observations	155	153	152	150
R^2	0.05	0.07	0.05	0.02
Austria High Ambiguity	-0.003	0.008	0.029**	0.047***
	(-0.43)	(0.72)	(2.16)	(3.62)
Observations	154	153	151	150
R^2	0.00	0.01	0.04	0.09
Austria Low-High Ambiguity	-0.015	-0.044*	-0.068**	-0.075***
	(-1.12)	(-1.93)	(-2.59)	(-2.88)
Belgium Low Ambiguity	0.015**	0.026***	0.038***	0.055***
	(2.24)	(2.73)	(3.24)	(4.17)
Observations	155	153	152	150
R^2	0.04	0.07	0.10	0.15
Belgium High Ambiguity	0.008*	0.019***	0.031***	0.040***
	(1.92)	(2.71)	(4.01)	(4.59)
Observations	154	153	151	150
R^2	0.02	0.05	0.10	0.13
Belgium Low-High Ambiguity	0.006	0.007	0.007	0.015
	(0.81)	(0.59)	(0.48)	(0.96)
Brazil Low Ambiguity	-0.009	0.001	0.001	0.009
	(-0.93)	(0.07)	(0.05)	(0.49)
Observations	131	129	128	126
R^2	0.01	0.00	0.00	0.00
Brazil High Ambiguity	0.027***	0.041***	0.071***	0.085***
	(2.74)	(3.08)	(4.44)	(4.03)
Observations	130	129	127	126
R^2	0.07	0.06	0.12	0.13
Brazil Low-High Ambiguity	-0.037***	-0.040**	-0.071***	-0.075***
	(-2.61)	(-2.17)	(-3.07)	(-2.65)
Canada Low Ambiguity	-0.005	-0.009	-0.011	-0.013
	(-0.69)	(-0.87)	(-0.87)	(-0.97)
Observations	117	115	114	112
R^2	0.01	0.01	0.01	0.02
Canada High Ambiguity	-0.014*	-0.031**	-0.047***	-0.066***
	(-1.84)	(-2.52)	(-3.04)	(-3.62)
Observations	116	115	113	112
R^2	0.05	0.09	0.14	0.21
Canada Low-High Ambiguity	0.010	0.022	0.035*	0.052**
	(0.96)	(1.40)	(1.76)	(2.31)
China Low Ambiguity	-0.007*	-0.017***	-0.028***	-0.037***
	(-1.91)	(-3.87)	(-4.32)	(-5.44)
Observations	130	129	127	126
R^2	0.03	0.08	0.13	0.17
China High Ambiguity	-0.011***	-0.020***	-0.024***	-0.030***
	(-3.25)	(-4.10)	(-3.71)	(-3.61)
Observations	130	128	127	125
R^2	0.08	0.15	0.14	0.15
China Low-High Ambiguity	0.003	0.003	-0.004	-0.007
	(0.68)	(0.42)	(-0.42)	(-0.68)
Denmark Low Ambiguity	-0.009	-0.025**	-0.024*	-0.019
	(-0.95)	(-2.30)	(-1.78)	(-1.10)
Observations	96	95	93	92
R^2	0.01	0.04	0.02	0.01

Table 7 (continued)

Denmark High Ambiguity	0.008	0.021**	0.014	0.005
	(1.43)	(2.03)	(1.13)	(0.36)
Observations	96	94	93	91
R^2	0.02	0.03	0.01	0.00
Denmark Low-High Ambiguity	-0.018	-0.045***	-0.037**	-0.024
	(-1.53)	(-3.06)	(-2.08)	(-1.08)
Finland Low Ambiguity	0.004	0.020*	0.034***	0.037***
	(0.39)	(1.97)	(3.23)	(3.44)
Observations	96	95	93	92
R^2	0.00	0.04	0.09	0.14
Finland High Ambiguity	0.008	0.017*	0.032***	0.044***
	(1.35)	(1.83)	(2.65)	(3.21)
Observations	96	94	93	91
R^2	0.02	0.04	0.09	0.12
Finland Low-High Ambiguity	-0.005	0.004	0.001	-0.007
	(-0.40)	(0.26)	(0.08)	(-0.39)
France Low Ambiguity	0.016***	0.033***	0.052***	0.071***
	(4.69)	(6.74)	(8.92)	(9.77)
Observations	155	153	152	150
R^2	0.16	0.28	0.40	0.47
France High Ambiguity	-0.005	-0.011	-0.014*	-0.009
	(-1.62)	(-1.54)	(-1.74)	(-0.97)
Observations	154	153	151	150
R^2	0.01	0.02	0.03	0.01
France Low-High Ambiguity	0.021***	0.043***	0.065***	0.080***
	(4.63)	(5.16)	(6.67)	(6.76)
Germany Low Ambiguity	0.001	0.003	0.010	0.012
	(0.20)	(0.41)	(0.90)	(0.90)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.00
Germany High Ambiguity	0.006	0.018***	0.023***	0.026***
	(1.63)	(4.19)	(3.90)	(3.37)
Observations	154	153	151	150
R^2	0.02	0.09	0.08	0.07
Germany Low-High Ambiguity	-0.005	-0.015	-0.014	-0.014
	(-0.80)	(-1.54)	(-1.11)	(-0.86)
Greece Low Ambiguity	-0.015	-0.035**	-0.057***	-0.072***
	(-1.17)	(-2.09)	(-3.07)	(-3.33)
Observations	138	136	135	133
R^2	0.01	0.04	0.07	0.08
Greece High Ambiguity	-0.001	0.009	0.027	0.014
	(-0.05)	(0.67)	(1.56)	(0.65)
Observations	137	136	134	133
R^2	0.00	0.00	0.03	0.00
Greece Low-High Ambiguity	-0.014	-0.044**	-0.084***	-0.087***
	(-0.82)	(-2.05)	(-3.31)	(-2.79)
India Low Ambiguity	-0.001	-0.005	-0.008**	-0.009*
	(-0.35)	(-1.24)	(-2.07)	(-1.99)
Observations	48	46	45	43
R^2	0.00	0.03	0.05	0.04
India High Ambiguity	-0.005	-0.012*	-0.017***	-0.023***
	(-0.96)	(-1.71)	(-2.95)	(-4.70)
Observations	47	46	44	43
R^2	0.02	0.06	0.15	0.26
India Low-High Ambiguity	0.004	0.006	0.009	0.015**
	(0.61)	(0.78)	(1.26)	(2.18)
Ireland Low Ambiguity	0.003	0.001	0.006	0.022
	(0.17)	(0.06)	(0.20)	(0.65)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.00
Ireland High Ambiguity	-0.030***	-0.060***	-0.069***	-0.055*
	(-3.30)	(-3.74)	(-2.82)	(-1.77)
Observations	154	153	151	150
R^2	0.06	0.11	0.10	0.05
Ireland Low-High Ambiguity	0.033*	0.061**	0.075**	0.077*
	(1.79)	(2.22)	(1.99)	(1.67)

Table 7 (continued)

Italy Low Ambiguity	-0.003	-0.007	-0.013**	-0.021***
	(-0.72)	(-1.26)	(-2.06)	(-2.84)
Observations	74	73	71	70
R^2	0.01	0.02	0.04	0.08
Italy High Ambiguity	-0.004	-0.009	-0.021**	-0.041***
	(-0.70)	(-1.28)	(-2.35)	(-3.68)
Observations	74	72	71	69
R^2	0.01	0.02	0.05	0.14
Italy Low-High Ambiguity	0.001	0.002	0.009	0.020
	(0.07)	(0.22)	(0.80)	(1.48)
Japan Low Ambiguity	-0.001	0.004	0.008	0.008
	(-0.25)	(0.86)	(1.51)	(1.36)
Observations	155	153	152	150
R^2	0.00	0.00	0.01	0.01
Japan High Ambiguity	-0.001	-0.004	-0.005	0.000
	(-0.52)	(-0.92)	(-1.03)	(0.04)
Observations	154	153	151	150
R^2	0.00	0.01	0.01	0.00
Japan Low-High Ambiguity	0.001	0.008	0.013*	0.008
	(0.14)	(1.25)	(1.82)	(0.96)
Mexico Low Ambiguity	-0.006	-0.009	-0.008	-0.003
	(-1.20)	(-1.27)	(-1.07)	(-0.30)
Observations	123	122	120	119
R^2	0.01	0.01	0.01	0.00
Mexico High Ambiguity	-0.010*	-0.027***	-0.038***	-0.046***
	(-1.73)	(-3.48)	(-3.70)	(-3.78)
Observations	123	121	120	118
R^2	0.02	0.06	0.09	0.10
Mexico Low-High Ambiguity	0.004	0.018*	0.029**	0.043***
	(0.48)	(1.76)	(2.27)	(2.76)
Netherlands Low Ambiguity	0.006	0.012	0.026***	0.039***
	(1.04)	(1.52)	(2.68)	(3.65)
Observations	155	153	152	150
R^2	0.01	0.02	0.05	0.09
Netherlands High Ambiguity	0.009	0.020***	0.024***	0.031***
	(1.44)	(2.76)	(2.83)	(2.71)
Observations	154	153	151	150
R^2	0.02	0.05	0.05	0.05
Netherlands Low-High Ambiguity	-0.003	-0.008	0.002	0.008
	(-0.39)	(-0.69)	(0.15)	(0.53)
New Zealand Low Ambiguity	-0.013**	-0.030***	-0.036***	-0.033***
	(-2.23)	(-2.97)	(-3.77)	(-3.87)
Observations	87	86	84	83
R^2	0.03	0.07	0.09	0.10
New Zealand High Ambiguity	-0.010	-0.015	-0.005	0.007
	(-1.17)	(-1.34)	(-0.33)	(0.32)
Observations	87	85	84	82
R^2	0.02	0.03	0.00	0.00
New Zealand Low-High Ambiguity	-0.003	-0.015	-0.031	-0.040*
	(-0.28)	(-1.04)	(-1.64)	(-1.81)
Poland Low Ambiguity	0.012**	0.026***	0.034***	0.034***
	(2.33)	(3.89)	(3.61)	(2.98)
Observations	123	121	120	118
R^2	0.04	0.11	0.12	0.09
Poland High Ambiguity	0.012**	0.011	0.014	0.013
	(2.42)	(1.46)	(1.54)	(1.21)
Observations	122	121	119	118
R^2	0.05	0.02	0.02	0.01
Poland Low-High Ambiguity	-0.001	0.014	0.020	0.021
	(-0.08)	(1.40)	(1.54)	(1.31)
Portugal Low Ambiguity	0.017**	0.030***	0.033***	0.035**
	(2.09)	(2.84)	(2.84)	(2.47)
Observations	141	139	138	136
R^2	0.03	0.05	0.05	0.04
Portugal High Ambiguity	-0.016*	-0.027**	-0.023	-0.026
	(-1.76)	(-2.18)	(-1.51)	(-1.60)
Observations	140	139	137	136
R^2	0.03	0.03	0.02	0.02
Portugal Low-High Ambiguity	0.033***	0.057***	0.055***	0.061***
	(2.70)	(3.50)	(2.92)	(2.83)

Table 7 (continued)

Russia Low Ambiguity	0.006	-0.028	-0.053*	-0.075***
	(0.36)	(-1.33)	(-1.94)	(-4.03)
Observations	22	20	19	17
R^2	0.01	0.08	0.24	0.54
Russia High Ambiguity	0.031*	0.015	-0.018	-0.045
	(1.92)	(0.67)	(-0.51)	(-1.35)
Observations	21	20	18	17
R^2	0.13	0.02	0.02	0.23
Russia Low-High Ambiguity	-0.024	-0.043	-0.035	-0.030
	(-1.02)	(-1.40)	(-0.77)	(-0.77)
South Korea Low Ambiguity	-0.002	-0.001	0.003	0.018**
	(-0.38)	(-0.19)	(0.38)	(2.41)
Observations	137	136	134	133
R^2	0.00	0.00	0.00	0.03
South Korea High Ambiguity	-0.002	-0.005	0.004	0.011
	(-0.26)	(-0.42)	(0.29)	(0.94)
Observations	137	135	134	132
R^2	0.00	0.00	0.00	0.01
South Korea Low-High Ambiguity	-0.001	0.003	-0.001	0.007
	(-0.09)	(0.25)	(-0.05)	(0.50)
Spain Low Ambiguity	-0.002	0.004	0.006	0.011
	(-0.42)	(0.49)	(0.56)	(0.94)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.01
Spain High Ambiguity	-0.008	-0.033***	-0.040***	-0.045***
	(-1.45)	(-3.95)	(-3.55)	(-2.99)
Observations	154	153	151	150
R^2	0.02	0.12	0.12	0.09
Spain Low-High Ambiguity	0.006	0.036***	0.046***	0.056***
	(0.79)	(3.27)	(3.04)	(2.96)
Sweden Low Ambiguity	0.012**	0.022***	0.032***	0.039***
	(2.27)	(4.07)	(5.04)	(5.77)
Observations	96	95	93	92
R^2	0.08	0.16	0.21	0.23
Sweden High Ambiguity	0.009	0.023**	0.044***	0.065***
	(1.37)	(2.50)	(4.33)	(5.00)
Observations	96	94	93	91
R^2	0.03	0.09	0.20	0.28
Sweden Low-High Ambiguity	0.003	-0.001	-0.012	-0.026*
	(0.31)	(-0.05)	(-1.04)	(-1.79)
Switzerland Low Ambiguity	-0.007**	-0.017***	-0.021***	-0.020***
	(-2.21)	(-4.13)	(-4.33)	(-3.20)
Observations	155	153	152	150
R^2	0.04	0.12	0.12	0.08
Switzerland High Ambiguity	0.007*	0.021***	0.031***	0.039***
	(1.86)	(4.26)	(5.40)	(5.82)
Observations	154	153	151	150
R^2	0.03	0.10	0.15	0.17
Switzerland Low-High Ambiguity	-0.014***	-0.038***	-0.052***	-0.059***
	(-2.87)	(-5.93)	(-6.92)	(-6.42)
UK Low Ambiguity	-0.001	-0.000	0.005	0.014
	(-0.26)	(-0.00)	(0.70)	(1.53)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.01
UK High Ambiguity	-0.004	-0.011*	-0.020***	-0.026***
	(-1.28)	(-1.92)	(-2.69)	(-2.77)
Observations	154	153	151	150
R^2	0.01	0.03	0.07	0.08
UK Low-High Ambiguity	0.003	0.011	0.025**	0.039***
	(0.45)	(1.19)	(2.36)	(3.07)
US Low Ambiguity	0.025***	0.044***	0.063***	0.076***
	(3.92)	(5.72)	(5.98)	(5.78)
Observations	155	153	152	150
R^2	0.15	0.22	0.25	0.23
US High Ambiguity	0.005	0.010	0.008	0.007
	(1.12)	(1.19)	(0.72)	(0.49)
Observations	154	153	151	150
R^2	0.01	0.01	0.00	0.00
US Low-High Ambiguity	0.020**	0.034***	0.055***	0.069***
	(2.55)	(2.93)	(3.63)	(3.54)

Table 8

Sentiment and mispricing management premium during periods of low and high risk

This tables reports the results from regressing future mispricing management premium against sentiment during periods of low and high risk. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Risk as the periods below the medium of risk and High Risk as the periods above the medium of risk. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Risk	-0.013**	-0.022*	-0.022*	-0.018
	(-2.05)	(-1.89)	(-1.84)	(-1.38)
Observations	129	128	126	125
R^2	0.06	0.06	0.04	0.02
Australia High Risk	-0.009	-0.023**	-0.028**	-0.026*
	(-1.15)	(-2.03)	(-2.38)	(-1.89)
Observations	129	127	126	124
R^2	0.02	0.05	0.05	0.03
Australia Low-High Risk	-0.004	0.000	0.006	0.008
	(-0.41)	(0.02)	(0.36)	(0.45)
Austria Low Risk	-0.002	-0.002	0.000	0.007
	(-0.48)	(-0.33)	(0.01)	(0.66)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.00
Austria High Risk	-0.017	-0.021	-0.007	0.016
	(-1.40)	(-0.99)	(-0.32)	(0.67)
Observations	154	153	151	150
R^2	0.03	0.02	0.00	0.01
Austria Low-High Risk	0.014	0.018	0.008	-0.009
	(1.11)	(0.84)	(0.29)	(-0.33)
Belgium Low Risk	0.005	0.010*	0.022***	0.030***
	(1.22)	(1.75)	(3.47)	(4.21)
Observations	155	153	152	150
R^2	0.01	0.02	0.06	0.09
Belgium High Risk	0.020***	0.038***	0.053***	0.070***
	(2.97)	(3.71)	(4.34)	(5.03)
Observations	154	153	151	150
R^2	0.08	0.12	0.16	0.22
Belgium Low-High Risk	-0.016**	-0.028**	-0.031**	-0.040**
	(-2.03)	(-2.40)	(-2.27)	(-2.53)
Brazil Low Risk	0.012	0.034***	0.055***	0.071***
	(1.61)	(3.45)	(4.12)	(4.48)
Observations	131	129	128	126
R^2	0.02	0.08	0.13	0.16
Brazil High Risk	0.003	0.003	0.010	0.014
	(0.30)	(0.21)	(0.53)	(0.63)
Observations	130	129	127	126
R^2	0.00	0.00	0.00	0.00
Brazil Low-High Risk	0.009	0.031*	0.045**	0.057**
	(0.66)	(1.78)	(2.01)	(2.06)
Canada Low Risk	-0.018***	-0.042***	-0.061***	-0.074***
	(-2.94)	(-4.42)	(-5.76)	(-6.20)
Observations	117	115	114	112
R^2	0.10	0.18	0.26	0.29
Canada High Risk	-0.005	-0.007	-0.011	-0.018
	(-0.72)	(-0.76)	(-0.85)	(-1.31)
Observations	116	115	113	112
R^2	0.01	0.01	0.01	0.03
Canada Low-High Risk	-0.013	-0.035**	-0.050***	-0.056***
	(-1.48)	(-2.59)	(-3.08)	(-3.08)
China Low Risk	-0.009***	-0.017***	-0.020***	-0.023**
	(-2.69)	(-3.32)	(-2.85)	(-2.53)
Observations	130	129	127	126
R^2	0.07	0.11	0.09	0.08
China High Risk	-0.007**	-0.016***	-0.025***	-0.037***
	(-2.21)	(-3.45)	(-3.83)	(-4.72)
Observations	130	128	127	125
R^2	0.03	0.09	0.14	0.20
China Low-High Risk	-0.002	-0.001	0.005	0.014
	(-0.44)	(-0.12)	(0.53)	(1.19)
Denmark Low Risk	0.003	-0.010	-0.024**	-0.025*
	(0.51)	(-1.02)	(-2.23)	(-1.84)
Observations	96	95	93	92
R^2	0.00	0.01	0.02	0.02

Table 8 (continued)

Denmark High Risk	-0.009	-0.006	0.002	-0.001
	(-0.91)	(-0.45)	(0.12)	(-0.06)
Observations	96	94	93	91
R^2	0.01	0.00	0.00	0.00
Denmark Low-High Risk	0.012	-0.005	-0.026	-0.024
	(1.05)	(-0.30)	(-1.52)	(-1.13)
Finland Low Risk	-0.009	0.005	0.021*	0.033**
	(-1.10)	(0.47)	(1.89)	(2.40)
Observations	96	95	93	92
R^2	0.02	0.00	0.04	0.08
Finland High Risk	0.017*	0.032***	0.038***	0.037***
	(1.81)	(3.00)	(3.25)	(3.27)
Observations	96	94	93	91
R^2	0.05	0.08	0.10	0.11
Finland Low-High Risk	-0.026**	-0.027*	-0.017	-0.004
	(-2.09)	(-1.82)	(-1.07)	(-0.23)
France Low Risk	0.006	0.010	0.014	0.027**
	(1.34)	(1.37)	(1.57)	(2.10)
Observations	155	153	152	150
R^2	0.02	0.02	0.03	0.05
France High Risk	0.012***	0.026***	0.043***	0.060***
	(3.64)	(4.81)	(6.47)	(7.79)
Observations	154	153	151	150
R^2	0.09	0.16	0.26	0.34
France Low-High Risk	-0.006	-0.015*	-0.029**	-0.033**
	(-1.13)	(-1.69)	(-2.59)	(-2.18)
Germany Low Risk	0.007**	0.012**	0.019**	0.025***
	(2.21)	(2.10)	(2.57)	(2.74)
Observations	155	153	152	150
R^2	0.01	0.02	0.02	0.03
Germany High Risk	0.000	0.009	0.019	0.019
	(0.02)	(1.10)	(1.63)	(1.30)
Observations	154	153	151	150
R^2	0.00	0.01	0.01	0.01
Germany Low-High Risk	0.007	0.003	-0.000	0.006
	(1.02)	(0.29)	(-0.01)	(0.36)
Greece Low Risk	-0.006	-0.007	-0.017	-0.028
	(-0.52)	(-0.49)	(-0.87)	(-1.35)
Observations	138	136	135	133
R^2	0.00	0.00	0.01	0.02
Greece High Risk	-0.016	-0.031*	-0.044**	-0.060***
	(-1.28)	(-1.90)	(-2.48)	(-2.74)
Observations	137	136	134	133
R^2	0.01	0.03	0.05	0.06
Greece Low-High Risk	0.010	0.024	0.027	0.032
	(0.63)	(1.13)	(1.05)	(1.05)
India Low Risk	-0.005	-0.014**	-0.016***	-0.023***
	(-1.02)	(-2.36)	(-3.29)	(-5.33)
Observations	48	46	45	43
R^2	0.02	0.09	0.14	0.20
India High Risk	-0.000	-0.003	-0.008**	-0.008**
	(-0.10)	(-0.70)	(-2.02)	(-2.11)
Observations	47	46	44	43
R^2	0.00	0.01	0.05	0.05
India Low-High Risk	-0.005	-0.011	-0.008	-0.014**
	(-0.80)	(-1.51)	(-1.31)	(-2.46)
Ireland Low Risk	-0.028**	-0.011	-0.042	-0.002
	(-2.04)	(-0.40)	(-1.28)	(-0.05)
Observations	155	153	152	150
R^2	0.04	0.00	0.02	0.00
Ireland High Risk	-0.005	-0.033*	-0.022	-0.031
	(-0.35)	(-1.70)	(-0.84)	(-0.99)
Observations	154	153	151	150
R^2	0.00	0.02	0.01	0.01
Ireland Low-High Risk	-0.022	0.023	-0.020	0.030
	(-1.10)	(0.69)	(-0.47)	(0.60)

Table 8 (continued)

Italy Low Risk	-0.010**	-0.014**	-0.023***	-0.039***
	(-2.12)	(-2.35)	(-3.16)	(-4.61)
Observations	74	73	71	70
R^2	0.05	0.04	0.09	0.17
Italy High Risk	-0.003	-0.012*	-0.021***	-0.029***
	(-0.60)	(-1.87)	(-2.77)	(-3.32)
Observations	74	72	71	69
R^2	0.00	0.04	0.08	0.11
Italy Low-High Risk	-0.007	-0.003	-0.002	-0.010
	(-0.89)	(-0.29)	(-0.18)	(-0.85)
Japan Low Risk	-0.000	-0.002	-0.001	0.002
	(-0.05)	(-0.39)	(-0.24)	(0.35)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.00
Japan High Risk	0.001	0.006	0.012**	0.013**
	(0.26)	(1.48)	(2.36)	(2.40)
Observations	154	153	151	150
R^2	0.00	0.01	0.03	0.02
Japan Low-High Risk	-0.001	-0.008	-0.013*	-0.010
	(-0.22)	(-1.30)	(-1.78)	(-1.20)
Mexico Low Risk	-0.004	-0.014**	-0.026***	-0.037***
	(-0.77)	(-2.01)	(-2.66)	(-3.56)
Observations	123	122	120	119
R^2	0.00	0.02	0.04	0.07
Mexico High Risk	-0.009	-0.012*	-0.011	-0.001
	(-1.63)	(-1.76)	(-1.37)	(-0.13)
Observations	123	121	120	118
R^2	0.02	0.02	0.01	0.00
Mexico Low-High Risk	0.005	-0.002	-0.015	-0.035**
	(0.66)	(-0.21)	(-1.20)	(-2.41)
Netherlands Low Risk	0.003	0.013*	0.019**	0.039***
	(0.58)	(1.76)	(2.16)	(3.23)
Observations	155	153	152	150
R^2	0.00	0.02	0.03	0.08
Netherlands High Risk	0.010*	0.016*	0.030***	0.032***
	(1.67)	(1.92)	(2.97)	(2.91)
Observations	154	153	151	150
R^2	0.02	0.03	0.06	0.06
Netherlands Low-High Risk	-0.006	-0.003	-0.011	0.006
	(-0.82)	(-0.28)	(-0.81)	(0.39)
New Zealand Low Risk	-0.013**	-0.023**	-0.023*	-0.020
	(-2.24)	(-2.54)	(-1.77)	(-1.33)
Observations	87	86	84	83
R^2	0.06	0.08	0.05	0.03
New Zealand High Risk	-0.012	-0.032**	-0.039***	-0.040***
	(-1.41)	(-2.48)	(-2.85)	(-3.16)
Observations	87	85	84	82
R^2	0.02	0.07	0.08	0.08
New Zealand Low-High Risk	-0.001	0.009	0.016	0.020
	(-0.14)	(0.56)	(0.87)	(1.03)
Poland Low Risk	0.012**	0.011	0.011	0.007
	(2.42)	(1.46)	(1.14)	(0.68)
Observations	123	121	120	118
R^2	0.05	0.02	0.01	0.00
Poland High Risk	0.011**	0.025***	0.034***	0.037***
	(2.19)	(3.71)	(3.81)	(3.31)
Observations	122	121	119	118
R^2	0.04	0.10	0.12	0.10
Poland Low-High Risk	0.002	-0.013	-0.023*	-0.030*
	(0.21)	(-1.28)	(-1.78)	(-1.95)
Portugal Low Risk	0.014*	0.015	0.021	0.006
	(1.86)	(1.33)	(1.41)	(0.39)
Observations	141	139	138	136
R^2	0.03	0.01	0.02	0.00
Portugal High Risk	0.004	0.014	0.019	0.030**
	(0.52)	(1.33)	(1.62)	(2.10)
Observations	140	139	137	136
R^2	0.00	0.01	0.02	0.03
Portugal Low-High Risk	0.010	0.001	0.003	-0.024
	(0.85)	(0.06)	(0.14)	(-1.14)

Table 8 (continued)

Russia Low Risk	0.002	-0.011	-0.039*	-0.050**
	(0.14)	(-0.55)	(-1.75)	(-2.84)
Observations	22	20	19	17
R^2	0.00	0.02	0.16	0.37
Russia High Risk	0.002	-0.029	-0.044*	-0.063***
	(0.10)	(-1.31)	(-1.90)	(-3.23)
Observations	21	20	18	17
R^2	0.00	0.10	0.22	0.46
Russia Low-High Risk	0.001	0.018	0.005	0.012
	(0.02)	(0.59)	(0.15)	(0.47)
South Korea Low Risk	-0.006	-0.013*	-0.006	0.000
	(-0.97)	(-1.79)	(-0.73)	(0.03)
Observations	137	136	134	133
R^2	0.02	0.03	0.00	0.00
South Korea High Risk	-0.002	0.001	0.008	0.022***
	(-0.24)	(0.17)	(0.84)	(2.71)
Observations	137	135	134	132
R^2	0.00	0.00	0.01	0.04
South Korea Low-High Risk	-0.004	-0.014	-0.014	-0.022*
	(-0.48)	(-1.31)	(-1.11)	(-1.87)
Spain Low Risk	-0.011	-0.022*	-0.024*	-0.025
	(-1.60)	(-1.77)	(-1.76)	(-1.61)
Observations	155	153	152	150
R^2	0.02	0.05	0.04	0.03
Spain High Risk	0.000	0.002	0.002	0.004
	(0.02)	(0.24)	(0.19)	(0.34)
Observations	154	153	151	150
R^2	0.00	0.00	0.00	0.00
Spain Low-High Risk	-0.011	-0.024*	-0.025	-0.029
	(-1.30)	(-1.65)	(-1.52)	(-1.49)
Sweden Low Risk	0.007	0.017*	0.038***	0.061***
	(1.35)	(1.84)	(3.91)	(4.97)
Observations	96	95	93	92
R^2	0.02	0.05	0.18	0.26
Sweden High Risk	0.013**	0.024***	0.033***	0.037***
	(2.25)	(4.41)	(4.84)	(5.26)
Observations	96	94	93	91
R^2	0.08	0.18	0.20	0.21
Sweden Low-High Risk	-0.005	-0.008	0.005	0.024*
	(-0.70)	(-0.74)	(0.43)	(1.71)
Switzerland Low Risk	-0.000	0.012**	0.019***	0.023***
	(-0.05)	(2.38)	(2.73)	(3.10)
Observations	155	153	152	150
R^2	0.00	0.04	0.06	0.07
Switzerland High Risk	-0.003	-0.013***	-0.016***	-0.012
	(-0.97)	(-2.78)	(-2.92)	(-1.55)
Observations	154	153	151	150
R^2	0.01	0.06	0.06	0.02
Switzerland Low-High Risk	0.003	0.025***	0.035***	0.035***
	(0.60)	(3.63)	(3.94)	(3.30)
UK Low Risk	-0.010*	-0.019**	-0.023***	-0.020*
	(-1.86)	(-1.98)	(-2.76)	(-1.81)
Observations	155	153	152	150
R^2	0.04	0.05	0.06	0.02
UK High Risk	0.001	0.003	0.007	0.011
	(0.15)	(0.43)	(0.91)	(1.28)
Observations	154	153	151	150
R^2	0.00	0.00	0.01	0.01
UK Low-High Risk	-0.011	-0.021*	-0.030***	-0.031**
	(-1.46)	(-1.90)	(-2.66)	(-2.21)
US Low Risk	0.024*	0.044**	0.049**	0.077**
	(1.88)	(2.08)	(2.14)	(2.15)
Observations	155	153	152	150
R^2	0.09	0.12	0.11	0.13
US High Risk	0.019***	0.039***	0.060***	0.071***
	(3.66)	(6.31)	(6.08)	(6.34)
Observations	154	153	151	150
R^2	0.14	0.22	0.24	0.24
US Low-High Risk	0.005	0.005	-0.011	0.006
	(0.35)	(0.24)	(-0.45)	(0.16)

Table 9

Sentiment and returns during periods of low and high ambiguity: US daily evidence

This tables reports the results from regressing future returns against sentiment during periods of low and high ambiguity. We use future returns over one-, two-, three-, and five-day period: R^M_{t+1}, R^M_{t+2}, R^M_{t+3}, and R^M_{t+5}. We use the Da et al. (2015) FEARS sentiment index. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+1}	R^M_{t+2}	R^M_{t+3}	R^M_{t+5}
Market Low Ambiguity	0.002***	0.004***	0.003***	0.004***
	(2.86)	(3.40)	(2.92)	(2.78)
Observations	945	944	944	943
R^2	0.01	0.02	0.01	0.01
Market High Ambiguity	0.000	0.000	0.000	-0.000
	(0.13)	(0.56)	(0.25)	(-0.27)
Observations	944	944	943	942
R^2	0.00	0.00	0.00	0.00
Market Low-High Ambiguity	0.002***	0.004***	0.003***	0.004***
	(2.76)	(3.14)	(2.71)	(2.73)
Beta Low Ambiguity	-0.001**	-0.002**	-0.002*	-0.002**
	(-2.18)	(-2.20)	(-1.74)	(-2.15)
Observations	945	944	944	943
R^2	0.01	0.01	0.00	0.01
Beta High Ambiguity	0.000	-0.000	-0.000	-0.000
	(0.64)	(-0.38)	(-0.44)	(-0.56)
Observations	944	944	943	942
R^2	0.00	0.00	0.00	0.00
Beta Low-High Ambiguity	-0.001**	-0.002**	-0.001	-0.002*
	(-2.27)	(-1.99)	(-1.49)	(-1.78)
Volatility Low Ambiguity	-0.001**	-0.002***	-0.002***	-0.004***
	(-2.18)	(-3.06)	(-2.60)	(-2.85)
Observations	945	944	944	943
R^2	0.01	0.01	0.01	0.01
Volatility High Ambiguity	0.000	-0.000	-0.000	-0.000
	(0.52)	(-0.64)	(-0.54)	(-0.33)
Observations	944	944	943	942
R^2	0.00	0.00	0.00	0.00
Volatility Low-High Ambiguity	-0.002**	-0.002***	-0.002**	-0.003**
	(-2.24)	(-2.72)	(-2.24)	(-2.52)
Idiosyncratic risk Low Ambiguity	-0.001	-0.001**	-0.001*	-0.002**
	(-1.52)	(-2.24)	(-1.92)	(-2.12)
Observations	945	944	944	943
R^2	0.00	0.01	0.00	0.01
Idiosyncratic risk High Ambiguity	0.000	-0.000	-0.000	-0.000
	(0.96)	(-0.44)	(-0.29)	(-0.29)
Observations	944	944	943	942
R^2	0.00	0.00	0.00	0.00
Idiosyncratic risk Low-High Ambiguity	-0.001*	-0.001**	-0.001*	-0.002*
	(-1.73)	(-1.97)	(-1.66)	(-1.83)
Mispricing management Low Ambiguity	-0.000	-0.000	-0.000	-0.001
	(-0.95)	(-0.94)	(-0.81)	(-1.21)
Observations	945	944	944	943
R^2	0.00	0.00	0.00	0.00
Mispricing management High Ambiguity	0.000	-0.000	0.000	-0.000
	(0.24)	(-0.24)	(0.10)	(-0.03)
Observations	944	944	943	942
R^2	0.00	0.00	0.00	0.00
Mispricing management Low-High Ambiguity	-0.000	-0.000	-0.000	-0.001
	(-0.97)	(-0.81)	(-0.80)	(-1.12)
Mispricing performance Low Ambiguity	-0.000	-0.000	-0.001	-0.002**
	(-1.02)	(-0.81)	(-1.22)	(-2.35)
Observations	945	944	944	943
R^2	0.00	0.00	0.00	0.01
Mispricing performance High Ambiguity	0.000	0.000	-0.000	0.000
	(1.22)	(1.15)	(-0.01)	(0.81)
Observations	944	944	943	942
R^2	0.00	0.00	0.00	0.00
Mispricing performance Low-High Ambiguity	-0.001	-0.001	-0.001	-0.002**
	(-1.26)	(-1.07)	(-1.17)	(-2.49)

Table 10

Sentiment and returns during periods of low and high risk: US daily evidence

This tables reports the results from regressing future returns against sentiment during periods of low and high ambiguity. We use future returns over one-, two-, three-, and five-day period: R^M_{t+1}, R^M_{t+2}, R^M_{t+3}, and R^M_{t+5}. We use the Da et al. (2015) FEARS sentiment index. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Risk as the periods below the medium of risk and High Risk as the periods above the medium of risk. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+1}	R^M_{t+2}	R^M_{t+3}	R^M_{t+5}
Market Low Risk	-0.000	0.000	-0.000	-0.000
	(-0.38)	(0.08)	(-0.12)	(-0.58)
Observations	945	944	944	943
R^2	0.00	0.00	0.00	0.00
Market High Risk	0.003***	0.004***	0.003***	0.004***
	(3.04)	(3.61)	(3.11)	(2.94)
Observations	944	944	943	942
R^2	0.02	0.02	0.01	0.01
Market Low-High Risk	-0.003***	-0.004***	-0.003***	-0.005***
	(-3.05)	(-3.46)	(-2.99)	(-2.97)
Beta Low Risk	0.000	-0.000	-0.000	-0.000
	(0.86)	(-0.15)	(-0.25)	(-0.24)
Observations	945	944	944	943
R^2	0.00	0.00	0.00	0.00
Beta High Risk	-0.001**	-0.002**	-0.002*	-0.003**
	(-2.29)	(-2.31)	(-1.82)	(-2.33)
Observations	944	944	943	942
R^2	0.01	0.01	0.00	0.01
Beta Low-High Risk	0.001**	0.002**	0.002	0.003**
	(2.44)	(2.15)	(1.64)	(2.07)
Volatility Low Risk	0.000	-0.000	-0.000	-0.000
	(0.38)	(-0.51)	(-0.55)	(-0.12)
Observations	945	944	944	943
R^2	0.00	0.00	0.00	0.00
Volatility High Risk	-0.001**	-0.002***	-0.002***	-0.004***
	(-2.13)	(-3.12)	(-2.60)	(-2.98)
Observations	944	944	943	942
R^2	0.01	0.01	0.01	0.01
Volatility Low-High Risk	0.002**	0.002***	0.002**	0.004***
	(2.16)	(2.82)	(2.24)	(2.72)
Idiosyncratic risk Low Risk	0.000	-0.000	-0.000	-0.000
	(0.69)	(-0.53)	(-0.46)	(-0.18)
Observations	945	944	944	943
R^2	0.00	0.00	0.00	0.00
Idiosyncratic risk High Risk	-0.001	-0.001**	-0.001*	-0.002**
	(-1.42)	(-2.20)	(-1.83)	(-2.19)
Observations	944	944	943	942
R^2	0.00	0.01	0.00	0.01
Idiosyncratic risk Low-High Risk	0.001	0.001*	0.001	0.002*
	(1.55)	(1.91)	(1.52)	(1.94)
Mispricing management Low Risk	0.000	-0.000	0.000	-0.000
	(0.44)	(-0.11)	(0.14)	(-0.03)
Observations	945	944	944	943
R^2	0.00	0.00	0.00	0.00
Mispricing management High Risk	-0.000	-0.000	-0.000	-0.001
	(-1.05)	(-1.00)	(-0.82)	(-1.21)
Observations	944	944	943	942
R^2	0.00	0.00	0.00	0.00
Mispricing management Low-High Risk	0.000	0.000	0.000	0.001
	(1.14)	(0.91)	(0.82)	(1.13)
Mispricing performance Low Risk	0.000	0.000	-0.000	0.000
	(0.77)	(1.15)	(-0.02)	(0.94)
Observations	945	944	944	943
R^2	0.00	0.00	0.00	0.00
Mispricing performance High Risk	-0.000	-0.000	-0.001	-0.002**
	(-0.87)	(-0.80)	(-1.21)	(-2.39)
Observations	944	944	943	942
R^2	0.00	0.00	0.00	0.01
Mispricing performance Low-High Risk	0.000	0.001	0.001	0.002**
	(1.00)	(1.04)	(1.17)	(2.56)

Appendix

Table A.1
Country stock market index

Country	Index	Sample period
Australia	S&P/ASX 200	April 2000-December 2021
Austria	AUSTRIAN TRADED	January 1996-December 2021
Belgium	BEL 20	January 1996-December 2021
Brazil	BRAZIL BOVESPA	January 1996-December 2021
Canada	S&P/TSX COMPOSITE	May 2002-December 2021
China	SHANGHAI SE A SHARE	February 2000-December 2021
Czech Republic	PRAGUE SE PX	March 2006-December 2021
Denmark	OMX COPENHAGEN	Octorber 2005-December 2021
Finland	OMX HELSINKI	Octorber 2005-December 2021
France	FRANCE CAC 40	January 1996-December 2021
Germany	DAX PERFORMANCE	January 1996-December 2021
Greece	ATHEX COMPOSITE	January 1996-December 2021
Hungary	Budapest Stock Exchange (BUX)	April 1997-December 2021
India	NIFTY 50	August 2012-September 2020
Ireland	ISEQ ALL SHARE	January 1996-December 2021
Italy	FTSE MIB	June 2009-December 2021
Japan	NIKKEI 225	January 1996-December 2021
Mexico	MEXICO IPC	April 2001-December 2021
Netherlands	AEX INDEX	January 1996-December 2021
New Zealand	S&P/NZX 50	April 2007-December 2021
Poland	WARSAW GENERAL	May 2001-December 2021
Portugal	PORTUGAL PSI 20	January 1996-December 2021
Russia	MOEX RUSSIA	March 2018-December 2021
South Korea	Korea KOSPI 200	December 1998-December 2021
Spain	IBEX 35	January 1996-December 2021
Sweden	OMX STOCKHOLM	October 2005-December 2021
Switzerland	SWISS MARKET	January 1996-December 2021
UK	FTSE 100	January 1996-December 2021
US	SPDR S&P 500 ETF	January 1996-December 2021

Table A.2

Sentiment and market returns

This tables reports the results from regressing future market returns against sentiment during the full sample period. We use future market returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and the High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia	0.008	0.006	-0.004	-0.017
	(1.32)	(0.70)	(-0.31)	(-1.35)
Observations	258	255	252	249
R^2	0.01	0.00	0.00	0.01
Austria	-0.008	-0.036**	-0.070***	-0.102***
	(-0.88)	(-2.52)	(-4.27)	(-6.17)
Observations	309	306	303	300
R^2	0.00	0.04	0.09	0.14
Belgium	-0.003	-0.015*	-0.035***	-0.064***
	(-0.45)	(-1.67)	(-3.22)	(-5.45)
Observations	309	306	303	300
R^2	0.00	0.01	0.04	0.09
Brazil	-0.018**	-0.037***	-0.064***	-0.091***
	(-2.12)	(-3.41)	(-4.70)	(-5.40)
Observations	309	306	303	300
R^2	0.01	0.03	0.05	0.07
Canada	-0.007	-0.019**	-0.035***	-0.046***
	(-1.18)	(-2.33)	(-3.67)	(-4.55)
Observations	233	230	227	224
R^2	0.01	0.03	0.07	0.09
China	-0.004	-0.015	-0.024*	-0.025*
	(-0.69)	(-1.61)	(-1.91)	(-1.71)
Observations	260	257	254	251
R^2	0.00	0.00	0.00	0.00
Czech Republic	-0.000	-0.006	-0.013	-0.011
	(-0.04)	(-0.65)	(-1.19)	(-0.93)
Observations	187	184	181	178
R^2	0.00	0.00	0.00	0.00
Denmark	0.014	0.016	0.006	-0.017
	(1.40)	(1.00)	(0.34)	(-0.94)
Observations	192	189	186	183
R^2	0.02	0.01	0.00	0.01
Finland	0.013	0.010	-0.002	-0.031**
	(1.52)	(0.85)	(-0.18)	(-2.24)
Observations	192	189	186	183
R^2	0.02	0.01	0.00	0.02
France	-0.007	-0.021**	-0.038***	-0.053***
	(-1.16)	(-2.15)	(-3.16)	(-4.13)
Observations	309	306	303	300
R^2	0.01	0.02	0.04	0.06
Germany	-0.012*	-0.032***	-0.055***	-0.076***
	(-1.73)	(-3.67)	(-5.41)	(-7.02)
Observations	309	306	303	300
R^2	0.01	0.04	0.08	0.11
Greece	0.006	0.011	0.014	0.020
	(0.58)	(0.70)	(0.68)	(0.83)
Observations	308	305	302	299
R^2	0.00	0.00	0.00	0.00
Hungary	-0.002	-0.006	-0.006	0.008
	(-0.27)	(-0.40)	(-0.35)	(0.35)
Observations	294	291	288	285
R^2	0.00	0.00	0.00	0.00
India	-0.011	-0.034***	-0.061***	-0.080***
	(-1.30)	(-3.62)	(-5.51)	(-6.27)
Observations	95	92	89	86
R^2	0.02	0.12	0.25	0.30
Ireland	-0.002	-0.006	-0.012	-0.020*
	(-0.26)	(-0.65)	(-1.18)	(-1.69)
Observations	309	306	303	300
R^2	0.00	0.00	0.00	0.01
Italy	-0.016*	-0.034***	-0.051***	-0.059***
	(-1.86)	(-3.18)	(-4.54)	(-4.82)
Observations	148	145	142	139
R^2	0.02	0.05	0.08	0.08

Table A.2 (continued)

Japan	0.002	-0.008	-0.022*	-0.033**
	(0.24)	(-0.73)	(-1.67)	(-2.47)
Observations	309	306	303	300
R^2	0.00	0.00	0.01	0.02
Mexico	-0.005	-0.010	-0.011	-0.013
	(-0.81)	(-1.06)	(-0.83)	(-0.83)
Observations	246	243	240	237
R^2	0.00	0.00	0.00	0.00
Netherlands	-0.001	-0.013	-0.030***	-0.046***
	(-0.12)	(-1.60)	(-3.15)	(-4.40)
Observations	309	306	303	300
R^2	0.00	0.01	0.03	0.04
New Zealand	0.004	0.009	0.011	0.008
	(0.73)	(0.87)	(0.87)	(0.65)
Observations	174	171	168	165
R^2	0.00	0.01	0.01	0.00
Poland	-0.031***	-0.062***	-0.091***	-0.110***
	(-4.40)	(-6.03)	(-6.97)	(-7.18)
Observations	245	242	239	236
R^2	0.08	0.14	0.17	0.18
Portugal	0.006	0.006	-0.002	-0.006
	(0.84)	(0.54)	(-0.13)	(-0.51)
Observations	309	306	303	300
R^2	0.00	0.00	0.00	0.00
Russia	-0.039***	-0.069***	-0.104***	-0.111***
	(-2.90)	(-5.46)	(-7.95)	(-6.60)
Observations	43	40	37	34
R^2	0.17	0.38	0.51	0.45
South Korea	-0.022***	-0.063***	-0.102***	-0.134***
	(-3.06)	(-5.82)	(-7.43)	(-9.35)
Observations	274	271	268	265
R^2	0.03	0.12	0.20	0.29
Spain	-0.001	-0.011	-0.025**	-0.035***
	(-0.09)	(-1.11)	(-2.16)	(-3.01)
Observations	309	306	303	300
R^2	0.00	0.01	0.02	0.02
Sweden	0.007	-0.000	-0.024	-0.060***
	(0.78)	(-0.04)	(-1.48)	(-3.37)
Observations	192	189	186	183
R^2	0.01	0.00	0.02	0.08
Switzerland	-0.020***	-0.045***	-0.073***	-0.103***
	(-4.50)	(-7.40)	(-10.05)	(-11.96)
Observations	309	306	303	300
R^2	0.06	0.13	0.22	0.30
UK	-0.006	-0.015**	-0.026***	-0.036***
	(-1.11)	(-2.03)	(-3.02)	(-3.99)
Observations	309	306	303	300
R^2	0.01	0.02	0.04	0.06
US	-0.012***	-0.031***	-0.052***	-0.073***
	(-2.74)	(-5.86)	(-7.66)	(-9.71)
Observations	309	306	303	300
R^2	0.03	0.08	0.13	0.18

Table A.3

Sentiment and volatility premium during periods of low and high ambiguity

This tables reports the results from regressing future volatility premium against sentiment during periods of low and high ambiguity. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and the High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Ambiguity	-0.015	-0.026*	-0.022	-0.019
	(-1.57)	(-1.89)	(-1.55)	(-1.26)
Observations	129	128	126	125
R^2	0.03	0.05	0.02	0.01
Australia High Ambiguity	-0.004	-0.002	-0.002	0.006
	(-0.42)	(-0.15)	(-0.13)	(0.32)
Observations	129	127	126	124
R^2	0.00	0.00	0.00	0.00
Australia Low-High Ambiguity	-0.012	-0.025	-0.020	-0.025
	(-0.90)	(-1.32)	(-0.97)	(-1.06)
Austria Low Ambiguity	0.004	-0.020	-0.013	0.008
	(0.28)	(-0.67)	(-0.47)	(0.38)
Observations	155	153	152	150
R^2	0.00	0.01	0.00	0.00
Austria High Ambiguity	0.002	0.040***	0.063***	0.072***
	(0.17)	(3.13)	(4.86)	(4.77)
Observations	154	153	151	150
R^2	0.00	0.08	0.14	0.12
Austria Low-High Ambiguity	0.002	-0.060*	-0.076**	-0.065**
	(0.11)	(-1.87)	(-2.53)	(-2.55)
Belgium Low Ambiguity	0.017	0.045**	0.088***	0.144***
	(1.42)	(2.40)	(4.78)	(8.08)
Observations	155	153	152	150
R^2	0.02	0.06	0.18	0.35
Belgium High Ambiguity	0.013**	0.022**	0.035***	0.040***
	(2.31)	(2.33)	(2.82)	(3.12)
Observations	154	153	151	150
R^2	0.05	0.05	0.07	0.07
Belgium Low-High Ambiguity	0.004	0.024	0.053**	0.104***
	(0.28)	(1.13)	(2.36)	(4.75)
Brazil Low Ambiguity	0.019***	0.038***	0.055***	0.074***
	(2.72)	(3.63)	(4.39)	(5.18)
Observations	139	138	136	135
R^2	0.03	0.07	0.10	0.14
Brazil High Ambiguity	0.014	0.037***	0.075***	0.099***
	(1.57)	(3.24)	(7.18)	(7.44)
Observations	139	137	136	134
R^2	0.02	0.06	0.18	0.22
Brazil Low-High Ambiguity	0.005	0.000	-0.020	-0.025
	(0.45)	(0.02)	(-1.21)	(-1.27)
Canada Low Ambiguity	0.013	0.023*	0.043***	0.049***
	(1.44)	(1.76)	(2.86)	(3.17)
Observations	117	115	114	112
R^2	0.02	0.03	0.07	0.08
Canada High Ambiguity	-0.025**	-0.038*	-0.067**	-0.091**
	(-2.09)	(-1.69)	(-2.21)	(-2.61)
Observations	116	115	113	112
R^2	0.05	0.05	0.09	0.12
Canada Low-High Ambiguity	0.039**	0.061**	0.109***	0.141***
	(2.53)	(2.35)	(3.26)	(3.68)
China Low Ambiguity	0.007	0.006	-0.001	0.001
	(1.03)	(0.74)	(-0.12)	(0.09)
Observations	128	126	125	123
R^2	0.01	0.00	0.00	0.00
China High Ambiguity	-0.006	-0.016**	-0.017*	-0.022**
	(-0.99)	(-2.22)	(-1.86)	(-2.13)
Observations	127	126	124	123
R^2	0.01	0.04	0.03	0.04
China Low-High Ambiguity	0.013	0.022**	0.016	0.023
	(1.42)	(2.02)	(1.12)	(1.38)
Denmark Low Ambiguity	-0.013	-0.024	-0.002	0.022
	(-0.96)	(-1.30)	(-0.13)	(1.26)
Observations	96	95	93	92
R^2	0.02	0.02	0.00	0.01

Table A.3 (continued)

Denmark High Ambiguity	0.004	0.010	0.022	0.028
	(0.64)	(0.69)	(1.23)	(1.28)
Observations	96	94	93	91
R^2	0.00	0.00	0.01	0.01
Denmark Low-High Ambiguity	-0.018	-0.034	-0.025	-0.006
	(-1.14)	(-1.45)	(-0.99)	(-0.20)
Finland Low Ambiguity	0.003	0.004	0.004	0.022
	(0.30)	(0.30)	(0.32)	(1.58)
Observations	96	95	93	92
R^2	0.00	0.00	0.00	0.02
Finland High Ambiguity	0.007	0.025***	0.050***	0.068***
	(0.93)	(2.92)	(4.58)	(5.06)
Observations	96	94	93	91
R^2	0.01	0.07	0.20	0.27
Finland Low-High Ambiguity	-0.004	-0.021	-0.046***	-0.046**
	(-0.29)	(-1.32)	(-2.64)	(-2.33)
France Low Ambiguity	0.027***	0.054***	0.082***	0.111***
	(2.64)	(3.59)	(4.46)	(5.28)
Observations	155	153	152	150
R^2	0.07	0.12	0.17	0.22
France High Ambiguity	0.006	0.022***	0.038***	0.038***
	(1.29)	(2.80)	(5.24)	(4.28)
Observations	154	153	151	150
R^2	0.01	0.07	0.15	0.11
France Low-High Ambiguity	0.021*	0.032*	0.044**	0.073***
	(1.83)	(1.91)	(2.23)	(3.18)
Germany Low Ambiguity	0.019*	0.048***	0.083***	0.107***
	(1.69)	(3.16)	(4.37)	(4.40)
Observations	155	153	152	150
R^2	0.02	0.04	0.05	0.05
Germany High Ambiguity	-0.008*	-0.003	-0.001	-0.002
	(-1.89)	(-0.42)	(-0.18)	(-0.25)
Observations	154	153	151	150
R^2	0.02	0.00	0.00	0.00
Germany Low-High Ambiguity	0.028**	0.051***	0.085***	0.109***
	(2.26)	(3.07)	(4.10)	(4.20)
Greece Low Ambiguity	-0.042***	-0.094***	-0.150***	-0.195***
	(-2.95)	(-4.64)	(-5.09)	(-4.76)
Observations	153	152	150	149
R^2	0.07	0.14	0.17	0.16
Greece High Ambiguity	-0.043*	-0.058*	-0.076*	-0.139***
	(-1.83)	(-1.96)	(-1.77)	(-3.08)
Observations	153	151	150	148
R^2	0.06	0.06	0.06	0.15
Greece Low-High Ambiguity	0.001	-0.036	-0.074	-0.056
	(0.02)	(-1.00)	(-1.42)	(-0.91)
India Low Ambiguity	0.004	0.020**	0.035**	0.024*
	(0.33)	(2.34)	(2.37)	(1.77)
Observations	48	46	45	43
R^2	0.00	0.08	0.13	0.05
India High Ambiguity	0.007	-0.005	-0.011	-0.004
	(0.45)	(-0.20)	(-0.52)	(-0.19)
Observations	47	46	44	43
R^2	0.01	0.00	0.01	0.00
India Low-High Ambiguity	-0.003	0.025	0.045*	0.028
	(-0.14)	(0.95)	(1.81)	(1.07)
Ireland Low Ambiguity	0.025	0.051**	0.051*	0.067**
	(1.31)	(2.18)	(1.77)	(2.13)
Observations	143	142	140	139
R^2	0.02	0.03	0.02	0.02
Ireland High Ambiguity	-0.015	-0.034	0.049*	0.101***
	(-0.71)	(-0.88)	(1.81)	(4.50)
Observations	143	141	140	138
R^2	0.01	0.01	0.04	0.12
Ireland Low-High Ambiguity	0.040	0.085*	0.002	-0.034
	(1.40)	(1.90)	(0.04)	(-0.88)

Table A.3 (continued)

Italy Low Ambiguity	0.010	0.021*	0.030**	0.035***
	(1.03)	(1.84)	(2.64)	(3.03)
Observations	74	73	71	70
R^2	0.01	0.05	0.08	0.09
Italy High Ambiguity	-0.006	-0.009	-0.010	-0.015
	(-0.75)	(-0.86)	(-0.73)	(-0.89)
Observations	74	72	71	69
R^2	0.01	0.01	0.01	0.01
Italy Low-High Ambiguity	0.015	0.030*	0.040**	0.050**
	(1.27)	(1.92)	(2.25)	(2.46)
Japan Low Ambiguity	0.014*	0.036***	0.060***	0.087***
	(1.88)	(3.53)	(6.16)	(7.79)
Observations	155	153	152	150
R^2	0.02	0.07	0.13	0.22
Japan High Ambiguity	0.003	0.007	0.012*	0.018**
	(0.82)	(1.21)	(1.67)	(2.41)
Observations	154	153	151	150
R^2	0.00	0.01	0.03	0.05
Japan Low-High Ambiguity	0.011	0.028**	0.048***	0.069***
	(1.35)	(2.39)	(3.99)	(5.10)
Mexico Low Ambiguity	0.021***	0.047***	0.060***	0.073***
	(3.04)	(5.27)	(5.96)	(6.78)
Observations	123	122	120	119
R^2	0.07	0.15	0.18	0.26
Mexico High Ambiguity	0.014***	0.006	0.010	-0.004
	(2.78)	(0.72)	(0.99)	(-0.33)
Observations	123	121	120	118
R^2	0.03	0.00	0.01	0.00
Mexico Low-High Ambiguity	0.008	0.041***	0.050***	0.077***
	(0.88)	(3.40)	(3.41)	(4.46)
Netherlands Low Ambiguity	0.024**	0.063***	0.096***	0.120***
	(2.26)	(3.88)	(4.56)	(4.98)
Observations	155	153	152	150
R^2	0.04	0.12	0.17	0.20
Netherlands High Ambiguity	0.008	0.016	0.028**	0.036**
	(0.97)	(1.57)	(2.32)	(2.09)
Observations	154	153	151	150
R^2	0.01	0.02	0.04	0.05
Netherlands Low-High Ambiguity	0.016	0.047**	0.068***	0.083***
	(1.15)	(2.42)	(2.80)	(2.80)
New Zealand Low Ambiguity	-0.007	-0.021**	-0.021*	-0.011
	(-1.05)	(-2.37)	(-1.89)	(-0.97)
Observations	87	86	84	83
R^2	0.01	0.05	0.04	0.01
New Zealand High Ambiguity	-0.001	0.003	0.013	0.038**
	(-0.07)	(0.25)	(0.86)	(2.00)
Observations	87	85	84	82
R^2	0.00	0.00	0.01	0.05
New Zealand Low-High Ambiguity	-0.006	-0.024	-0.035*	-0.049**
	(-0.59)	(-1.63)	(-1.82)	(-2.21)
Poland Low Ambiguity	0.008	0.018	0.028*	0.026
	(1.13)	(1.66)	(1.90)	(1.46)
Observations	123	121	120	118
R^2	0.01	0.02	0.03	0.02
Poland High Ambiguity	0.010	0.015	0.014	0.013
	(1.16)	(1.59)	(1.28)	(1.02)
Observations	122	121	119	118
R^2	0.02	0.03	0.02	0.01
Poland Low-High Ambiguity	-0.002	0.004	0.014	0.012
	(-0.16)	(0.24)	(0.78)	(0.56)
Portugal Low Ambiguity	0.004	0.003	0.013	0.022
	(0.46)	(0.23)	(0.74)	(1.07)
Observations	154	152	151	149
R^2	0.00	0.00	0.00	0.01
Portugal High Ambiguity	-0.009	-0.015	-0.014	0.007
	(-0.70)	(-0.88)	(-0.71)	(0.30)
Observations	153	152	150	149
R^2	0.00	0.00	0.00	0.00
Portugal Low-High Ambiguity	0.013	0.018	0.027	0.015
	(0.84)	(0.83)	(1.02)	(0.47)

Table A.3 (continued)

Russia Low Ambiguity	0.024**	0.057***	0.084***	0.086***
	(2.58)	(4.17)	(4.52)	(4.38)
Observations	22	20	19	17
R^2	0.23	0.36	0.52	0.58
Russia High Ambiguity	0.065***	0.075	0.126**	0.137**
	(3.29)	(1.63)	(2.25)	(2.67)
Observations	21	20	18	17
R^2	0.30	0.28	0.45	0.63
Russia Low-High Ambiguity	-0.041*	-0.018	-0.042	-0.051
	(-1.89)	(-0.37)	(-0.72)	(-0.92)
South Korea Low Ambiguity	0.006	-0.004	-0.005	0.010
	(0.75)	(-0.35)	(-0.39)	(0.77)
Observations	137	136	134	133
R^2	0.01	0.00	0.00	0.00
South Korea High Ambiguity	0.000	0.006	-0.001	-0.005
	(0.04)	(0.37)	(-0.05)	(-0.24)
Observations	137	135	134	132
R^2	0.00	0.00	0.00	0.00
South Korea Low-High Ambiguity	0.006	-0.010	-0.004	0.015
	(0.51)	(-0.50)	(-0.18)	(0.62)
Spain Low Ambiguity	0.010	0.025***	0.040***	0.043***
	(1.32)	(2.82)	(3.79)	(3.79)
Observations	155	153	152	150
R^2	0.02	0.06	0.11	0.09
Spain High Ambiguity	0.001	-0.008	-0.015	0.003
	(0.08)	(-0.63)	(-0.93)	(0.20)
Observations	154	153	151	150
R^2	0.00	0.01	0.01	0.00
Spain Low-High Ambiguity	0.009	0.034**	0.055***	0.039*
	(0.80)	(2.10)	(2.87)	(1.93)
Sweden Low Ambiguity	0.004	0.008	0.018*	0.031***
	(0.41)	(0.58)	(1.67)	(3.81)
Observations	96	95	93	92
R^2	0.00	0.01	0.04	0.12
Sweden High Ambiguity	-0.006	0.002	0.023	0.042**
	(-1.03)	(0.20)	(1.35)	(2.53)
Observations	96	94	93	91
R^2	0.01	0.00	0.04	0.11
Sweden Low-High Ambiguity	0.010	0.006	-0.005	-0.011
	(0.91)	(0.32)	(-0.25)	(-0.61)
Switzerland Low Ambiguity	0.018**	0.037***	0.050***	0.057***
	(2.22)	(3.68)	(4.43)	(4.93)
Observations	155	153	152	150
R^2	0.04	0.08	0.09	0.10
Switzerland High Ambiguity	0.001	0.014	0.033**	0.055***
	(0.20)	(1.63)	(2.52)	(3.06)
Observations	154	153	151	150
R^2	0.00	0.02	0.06	0.11
Switzerland Low-High Ambiguity	0.017	0.022*	0.017	0.002
	(1.55)	(1.68)	(1.01)	(0.11)
UK Low Ambiguity	0.013	0.018	0.027**	0.040***
	(1.40)	(1.33)	(2.00)	(2.83)
Observations	155	153	152	150
R^2	0.02	0.02	0.03	0.05
UK High Ambiguity	-0.010	0.000	0.002	-0.005
	(-1.60)	(0.03)	(0.13)	(-0.32)
Observations	154	153	151	150
R^2	0.03	0.00	0.00	0.00
UK Low-High Ambiguity	0.023**	0.017	0.025	0.045**
	(2.05)	(0.92)	(1.22)	(2.08)
US Low Ambiguity	0.049***	0.083***	0.120***	0.150***
	(3.92)	(6.10)	(6.76)	(7.71)
Observations	155	153	152	150
R^2	0.13	0.23	0.27	0.29
US High Ambiguity	0.018**	0.065***	0.090***	0.079***
	(2.17)	(3.19)	(3.29)	(4.65)
Observations	154	153	151	150
R^2	0.04	0.15	0.17	0.11
US Low-High Ambiguity	0.031**	0.018	0.030	0.071***
	(2.11)	(0.75)	(0.94)	(2.75)

Table A.4

Sentiment and volatility premium during periods of low and high risk

This tables reports the results from regressing future volatility premium against sentiment during periods of low and high risk. We use future market returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Risk as the periods below the medium of risk and High Risk as the periods above the medium of risk. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Risk	-0.014*	-0.024*	-0.022*	-0.018
	(-1.90)	(-1.90)	(-1.76)	(-1.28)
Observations	129	128	126	125
R^2	0.04	0.04	0.03	0.01
Australia High Risk	-0.008	-0.012	-0.009	-0.006
	(-0.79)	(-0.81)	(-0.57)	(-0.32)
Observations	129	127	126	124
R^2	0.01	0.01	0.00	0.00
Australia Low-High Risk	-0.006	-0.011	-0.013	-0.012
	(-0.45)	(-0.58)	(-0.62)	(-0.53)
Austria Low Risk	0.013***	0.028***	0.033***	0.027**
	(3.13)	(4.50)	(3.50)	(2.30)
Observations	155	153	152	150
R^2	0.04	0.07	0.05	0.02
Austria High Risk	-0.008	-0.006	0.019	0.059***
	(-0.41)	(-0.20)	(0.67)	(2.70)
Observations	154	153	151	150
R^2	0.00	0.00	0.01	0.05
Austria Low-High Risk	0.021	0.035	0.014	-0.032
	(1.11)	(1.11)	(0.46)	(-1.30)
Belgium Low Risk	0.020***	0.024**	0.047***	0.063***
	(3.60)	(2.11)	(2.90)	(4.07)
Observations	155	153	152	150
R^2	0.09	0.04	0.11	0.15
Belgium High Risk	0.009	0.038**	0.074***	0.113***
	(0.78)	(2.11)	(4.60)	(6.47)
Observations	154	153	151	150
R^2	0.01	0.05	0.13	0.24
Belgium Low-High Risk	0.011	-0.013	-0.027	-0.051**
	(0.83)	(-0.62)	(-1.19)	(-2.17)
Brazil Low Risk	0.006	0.031***	0.055***	0.085***
	(0.81)	(2.85)	(4.44)	(6.47)
Observations	139	138	136	135
R^2	0.00	0.06	0.12	0.20
Brazil High Risk	0.029***	0.044***	0.070***	0.076***
	(3.49)	(3.99)	(5.96)	(4.80)
Observations	139	137	136	134
R^2	0.05	0.07	0.13	0.12
Brazil Low-High Risk	-0.023**	-0.013	-0.015	0.009
	(-2.07)	(-0.85)	(-0.91)	(0.41)
Canada Low Risk	-0.016	-0.036**	-0.047***	-0.070***
	(-1.33)	(-2.32)	(-2.89)	(-3.36)
Observations	117	115	114	112
R^2	0.02	0.05	0.06	0.09
Canada High Risk	0.013	0.025*	0.039**	0.041**
	(1.45)	(1.98)	(2.56)	(2.52)
Observations	116	115	113	112
R^2	0.02	0.03	0.05	0.05
Canada Low-High Risk	-0.028*	-0.061***	-0.085***	-0.110***
	(-1.93)	(-3.05)	(-3.86)	(-4.19)
China Low Risk	-0.011*	-0.017**	-0.018*	-0.012
	(-1.75)	(-2.23)	(-1.78)	(-1.03)
Observations	128	126	125	123
R^2	0.03	0.04	0.02	0.01
China High Risk	0.008	0.003	-0.006	-0.017
	(1.16)	(0.33)	(-0.64)	(-1.66)
Observations	127	126	124	123
R^2	0.01	0.00	0.00	0.02
China Low-High Risk	-0.019**	-0.020*	-0.012	0.004
	(-2.05)	(-1.81)	(-0.87)	(0.28)
Denmark Low Risk	0.008	-0.001	-0.003	0.007
	(1.15)	(-0.04)	(-0.16)	(0.41)
Observations	96	95	93	92
R^2	0.01	0.00	0.00	0.00

Table A.4 (continued)

Denmark High Risk	-0.019	-0.018	0.009	0.022
	(-1.33)	(-0.89)	(0.58)	(1.29)
Observations	96	94	93	91
R^2	0.03	0.01	0.00	0.01
Denmark Low-High Risk	0.027*	0.018	-0.012	-0.015
	(1.71)	(0.73)	(-0.50)	(-0.66)
Finland Low Risk	0.009	0.018	0.043**	0.067***
	(0.95)	(1.32)	(2.31)	(3.80)
Observations	96	95	93	92
R^2	0.01	0.03	0.10	0.23
Finland High Risk	-0.001	0.003	-0.001	0.011
	(-0.11)	(0.23)	(-0.11)	(0.86)
Observations	96	94	93	91
R^2	0.00	0.00	0.00	0.01
Finland Low-High Risk	0.010	0.015	0.044**	0.056**
	(0.69)	(0.77)	(2.02)	(2.55)
France Low Risk	0.015*	0.027*	0.031**	0.054***
	(1.69)	(1.92)	(2.16)	(2.94)
Observations	155	153	152	150
R^2	0.04	0.05	0.07	0.13
France High Risk	0.023**	0.052***	0.090***	0.105***
	(2.25)	(3.65)	(4.86)	(4.93)
Observations	154	153	151	150
R^2	0.05	0.13	0.20	0.21
France Low-High Risk	-0.008	-0.025	-0.059**	-0.050*
	(-0.57)	(-1.27)	(-2.55)	(-1.78)
Germany Low Risk	-0.001	-0.005	0.000	0.000
	(-0.28)	(-0.65)	(0.02)	(0.05)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.00
Germany High Risk	0.012	0.047***	0.083***	0.103***
	(1.03)	(3.22)	(4.16)	(4.10)
Observations	154	153	151	150
R^2	0.01	0.04	0.06	0.06
Germany Low-High Risk	-0.013	-0.051***	-0.082***	-0.103***
	(-1.06)	(-3.16)	(-3.85)	(-3.79)
Greece Low Risk	-0.023	-0.051*	-0.073**	-0.124**
	(-1.47)	(-1.71)	(-2.02)	(-2.35)
Observations	153	152	150	149
R^2	0.03	0.05	0.06	0.10
Greece High Risk	-0.057***	-0.106***	-0.166***	-0.223***
	(-3.63)	(-5.55)	(-5.48)	(-5.81)
Observations	153	151	150	148
R^2	0.11	0.19	0.20	0.23
Greece Low-High Risk	0.034	0.054	0.093*	0.099
	(1.50)	(1.53)	(1.96)	(1.52)
India Low Risk	0.003	-0.004	-0.001	0.001
	(0.26)	(-0.20)	(-0.06)	(0.07)
Observations	48	46	45	43
R^2	0.00	0.00	0.00	0.00
India High Risk	0.006	0.023**	0.035**	0.027*
	(0.45)	(2.38)	(2.10)	(1.80)
Observations	47	46	44	43
R^2	0.01	0.09	0.11	0.06
India Low-High Risk	-0.003	-0.027	-0.036	-0.026
	(-0.14)	(-1.29)	(-1.47)	(-1.07)
Ireland Low Risk	0.005	0.019	0.028	0.086***
	(0.33)	(0.72)	(0.87)	(2.93)
Observations	143	142	140	139
R^2	0.00	0.01	0.01	0.08
Ireland High Risk	0.015	0.031	0.066**	0.078**
	(0.71)	(1.13)	(2.30)	(2.43)
Observations	143	141	140	138
R^2	0.00	0.01	0.03	0.03
Ireland Low-High Risk	-0.010	-0.012	-0.038	0.008
	(-0.37)	(-0.31)	(-0.87)	(0.18)

Table A.4 (continued)

Italy Low Risk	0.002	0.013	0.023*	0.025*
	(0.23)	(1.38)	(1.97)	(1.83)
Observations	74	73	71	70
R^2	0.00	0.02	0.05	0.05
Italy High Risk	0.005	0.007	0.008	0.015
	(0.50)	(0.59)	(0.78)	(1.28)
Observations	74	72	71	69
R^2	0.00	0.00	0.01	0.01
Italy Low-High Risk	-0.003	0.006	0.015	0.010
	(-0.21)	(0.35)	(0.95)	(0.55)
Japan Low Risk	0.010**	0.021***	0.030***	0.037***
	(2.27)	(2.83)	(3.35)	(3.68)
Observations	155	153	152	150
R^2	0.02	0.04	0.06	0.07
Japan High Risk	0.006	0.021**	0.041***	0.063***
	(0.84)	(2.12)	(4.31)	(6.21)
Observations	154	153	151	150
R^2	0.01	0.03	0.08	0.16
Japan Low-High Risk	0.004	-0.000	-0.012	-0.026*
	(0.52)	(-0.02)	(-0.89)	(-1.83)
Mexico Low Risk	0.013***	0.021***	0.031***	0.025**
	(2.71)	(3.49)	(4.02)	(2.59)
Observations	123	122	120	119
R^2	0.03	0.03	0.06	0.05
Mexico High Risk	0.022***	0.044***	0.055***	0.067***
	(2.96)	(4.51)	(5.09)	(5.31)
Observations	123	121	120	118
R^2	0.08	0.15	0.18	0.20
Mexico Low-High Risk	-0.010	-0.022*	-0.024*	-0.042***
	(-1.07)	(-1.95)	(-1.81)	(-2.66)
Netherlands Low Risk	0.014	0.029**	0.034**	0.061***
	(1.49)	(2.46)	(2.51)	(3.01)
Observations	155	153	152	150
R^2	0.02	0.04	0.05	0.09
Netherlands High Risk	0.021**	0.056***	0.096***	0.103***
	(1.98)	(3.43)	(4.34)	(4.32)
Observations	154	153	151	150
R^2	0.03	0.10	0.18	0.17
Netherlands Low-High Risk	-0.007	-0.026	-0.062**	-0.042
	(-0.51)	(-1.31)	(-2.37)	(-1.33)
New Zealand Low Risk	-0.001	-0.011	0.007	0.023
	(-0.16)	(-0.92)	(0.52)	(1.48)
Observations	87	86	84	83
R^2	0.00	0.01	0.00	0.02
New Zealand High Risk	-0.010	-0.022**	-0.032**	-0.021
	(-1.42)	(-2.11)	(-2.22)	(-1.45)
Observations	87	85	84	82
R^2	0.02	0.05	0.06	0.02
New Zealand Low-High Risk	0.009	0.011	0.039**	0.044**
	(0.95)	(0.71)	(2.02)	(2.08)
Poland Low Risk	0.005	0.010	0.020	0.024**
	(0.67)	(0.96)	(1.64)	(2.03)
Observations	123	121	120	118
R^2	0.01	0.01	0.02	0.03
Poland High Risk	0.010	0.018*	0.016	0.011
	(1.38)	(1.71)	(1.10)	(0.58)
Observations	122	121	119	118
R^2	0.02	0.03	0.01	0.00
Poland Low-High Risk	-0.005	-0.008	0.004	0.013
	(-0.45)	(-0.54)	(0.19)	(0.61)
Portugal Low Risk	0.002	-0.004	0.009	0.030
	(0.18)	(-0.22)	(0.44)	(1.33)
Observations	154	152	151	149
R^2	0.00	0.00	0.00	0.01
Portugal High Risk	-0.005	-0.004	-0.002	0.003
	(-0.53)	(-0.25)	(-0.12)	(0.14)
Observations	153	152	150	149
R^2	0.00	0.00	0.00	0.00
Portugal Low-High Risk	0.007	-0.000	0.011	0.027
	(0.49)	(-0.00)	(0.41)	(0.90)

Table A.4 (continued)

Russia Low Risk	0.013	0.048**	0.089***	0.096***
	(0.80)	(2.24)	(3.81)	(3.48)
Observations	22	20	19	17
R^2	0.03	0.22	0.47	0.59
Russia High Risk	0.024*	0.051***	0.086***	0.104***
	(1.99)	(3.13)	(3.75)	(4.67)
Observations	21	20	18	17
R^2	0.16	0.33	0.50	0.69
Russia Low-High Risk	-0.011	-0.004	0.003	-0.007
	(-0.55)	(-0.14)	(0.10)	(-0.20)
South Korea Low Risk	-0.016**	-0.023**	-0.020**	-0.025**
	(-2.18)	(-2.53)	(-2.02)	(-2.00)
Observations	137	136	134	133
R^2	0.05	0.04	0.03	0.03
South Korea High Risk	0.013	0.009	0.003	0.019
	(1.54)	(0.70)	(0.17)	(1.22)
Observations	137	135	134	132
R^2	0.02	0.01	0.00	0.01
South Korea Low-High Risk	-0.029**	-0.032**	-0.023	-0.044**
	(-2.59)	(-2.01)	(-1.24)	(-2.20)
Spain Low Risk	-0.003	-0.014	-0.013	-0.003
	(-0.38)	(-1.08)	(-0.82)	(-0.16)
Observations	155	153	152	150
R^2	0.00	0.01	0.01	0.00
Spain High Risk	0.011	0.027***	0.041***	0.043***
	(1.46)	(3.08)	(3.98)	(3.90)
Observations	154	153	151	150
R^2	0.02	0.07	0.12	0.10
Spain Low-High Risk	-0.014	-0.041**	-0.054***	-0.046*
	(-1.20)	(-2.59)	(-2.82)	(-1.96)
Sweden Low Risk	-0.003	-0.008	-0.000	0.020
	(-0.53)	(-0.79)	(-0.03)	(1.48)
Observations	96	95	93	92
R^2	0.00	0.01	0.00	0.03
Sweden High Risk	0.004	0.014	0.030**	0.041***
	(0.47)	(0.93)	(2.54)	(4.55)
Observations	96	94	93	91
R^2	0.00	0.02	0.09	0.20
Sweden Low-High Risk	-0.008	-0.021	-0.030*	-0.021
	(-0.68)	(-1.22)	(-1.65)	(-1.29)
Switzerland Low Risk	-0.001	0.019*	0.036***	0.042***
	(-0.13)	(1.86)	(2.77)	(2.77)
Observations	155	153	152	150
R^2	0.00	0.03	0.06	0.07
Switzerland High Risk	0.021***	0.035***	0.050***	0.068***
	(2.75)	(3.56)	(4.29)	(5.08)
Observations	154	153	151	150
R^2	0.05	0.08	0.09	0.13
Switzerland Low-High Risk	-0.022*	-0.016	-0.014	-0.026
	(-1.93)	(-1.14)	(-0.78)	(-1.29)
UK Low Risk	-0.010	-0.022*	-0.015	-0.008
	(-1.19)	(-1.88)	(-1.40)	(-0.64)
Observations	155	153	152	150
R^2	0.02	0.04	0.01	0.00
UK High Risk	0.013	0.026**	0.033**	0.038***
	(1.49)	(2.12)	(2.42)	(2.68)
Observations	154	153	151	150
R^2	0.03	0.05	0.05	0.05
UK Low-High Risk	-0.023*	-0.048***	-0.048***	-0.046**
	(-1.90)	(-2.83)	(-2.77)	(-2.46)
US Low Risk	0.041*	0.089***	0.093***	0.145***
	(1.85)	(2.79)	(3.21)	(3.11)
Observations	155	153	152	150
R^2	0.08	0.19	0.17	0.22
US High Risk	0.040***	0.074***	0.119***	0.140***
	(3.73)	(6.31)	(6.51)	(8.37)
Observations	154	153	151	150
R^2	0.12	0.22	0.28	0.30
US Low-High Risk	0.001	0.015	-0.026	0.005
	(0.05)	(0.45)	(-0.77)	(0.10)

Table A.5

Sentiment and idiosyncratic risk premium during periods of low and high ambiguity

This tables reports the results from regressing future idiosyncratic risk premium premium against sentiment during periods of low and high ambiguity. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and the High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Ambiguity	-0.006	-0.013	-0.006	-0.003
	(-0.66)	(-1.06)	(-0.50)	(-0.23)
Observations	129	128	126	125
R^2	0.01	0.01	0.00	0.00
Australia High Ambiguity	-0.003	0.000	-0.000	0.004
	(-0.42)	(0.04)	(-0.02)	(0.24)
Observations	129	127	126	124
R^2	0.00	0.00	0.00	0.00
Australia Low-High Ambiguity	-0.003	-0.013	-0.006	-0.007
	(-0.21)	(-0.78)	(-0.31)	(-0.33)
Austria Low Ambiguity	-0.011	-0.029	-0.039*	-0.041**
	(-1.02)	(-1.65)	(-1.87)	(-2.22)
Observations	93	91	90	88
R^2	0.02	0.06	0.07	0.07
Austria High Ambiguity	-0.007	0.005	0.020	0.036**
	(-0.64)	(0.31)	(1.35)	(2.56)
Observations	92	91	89	88
R^2	0.01	0.00	0.03	0.08
Austria Low-High Ambiguity	-0.004	-0.033	-0.058**	-0.076***
	(-0.27)	(-1.43)	(-2.30)	(-3.32)
Belgium Low Ambiguity	0.005	0.015	0.044**	0.069***
	(0.48)	(0.87)	(2.33)	(3.71)
Observations	151	150	148	147
R^2	0.00	0.01	0.06	0.11
Belgium High Ambiguity	0.006	0.012	0.013	0.013
	(0.89)	(1.45)	(1.53)	(1.36)
Observations	151	149	148	146
R^2	0.01	0.02	0.01	0.01
Belgium Low-High Ambiguity	-0.000	0.003	0.031	0.056***
	(-0.03)	(0.15)	(1.50)	(2.65)
Brazil Low Ambiguity	0.010	0.025**	0.047***	0.066***
	(1.30)	(2.34)	(3.59)	(4.81)
Observations	94	93	91	90
R^2	0.01	0.04	0.10	0.15
Brazil High Ambiguity	0.022**	0.042***	0.085***	0.122***
	(2.62)	(3.03)	(6.54)	(7.80)
Observations	94	92	91	89
R^2	0.07	0.09	0.26	0.36
Brazil Low-High Ambiguity	-0.013	-0.017	-0.039**	-0.056***
	(-1.10)	(-0.96)	(-2.10)	(-2.67)
Canada Low Ambiguity	0.018**	0.030***	0.051***	0.058***
	(2.59)	(3.44)	(4.34)	(4.24)
Observations	117	115	114	112
R^2	0.04	0.07	0.13	0.14
Canada High Ambiguity	-0.010	-0.015	-0.040*	-0.060**
	(-0.90)	(-0.81)	(-1.75)	(-2.21)
Observations	116	115	113	112
R^2	0.01	0.01	0.04	0.06
Canada Low-High Ambiguity	0.028**	0.045**	0.091***	0.118***
	(2.12)	(2.23)	(3.57)	(3.87)
China Low Ambiguity	0.001	-0.002	-0.009	-0.010
	(0.09)	(-0.29)	(-0.75)	(-0.73)
Observations	119	117	116	114
R^2	0.00	0.00	0.00	0.00
China High Ambiguity	-0.012**	-0.025***	-0.031***	-0.043***
	(-2.22)	(-3.59)	(-3.32)	(-3.77)
Observations	118	117	115	114
R^2	0.05	0.12	0.09	0.13
China Low-High Ambiguity	0.013	0.023**	0.022	0.033*
	(1.59)	(2.18)	(1.49)	(1.89)
Denmark Low Ambiguity	-0.007	-0.019**	-0.024**	-0.022
	(-1.23)	(-2.42)	(-2.05)	(-1.59)
Observations	92	91	89	88
R^2	0.01	0.04	0.04	0.02

Table A.5 (continued)

Denmark High Ambiguity	0.004	0.004	-0.001	-0.012
	(0.63)	(0.34)	(-0.06)	(-0.57)
Observations	92	90	89	87
R^2	0.00	0.00	0.00	0.00
Denmark Low-High Ambiguity	-0.011	-0.023*	-0.023	-0.010
	(-1.27)	(-1.65)	(-1.16)	(-0.41)
Finland Low Ambiguity	0.005	0.016	0.033***	0.060***
	(0.57)	(1.58)	(3.00)	(5.70)
Observations	90	89	87	86
R^2	0.00	0.02	0.08	0.22
Finland High Ambiguity	0.005	0.017*	0.025***	0.023*
	(0.74)	(1.96)	(2.66)	(1.83)
Observations	90	88	87	85
R^2	0.01	0.04	0.07	0.04
Finland Low-High Ambiguity	-0.000	-0.000	0.008	0.037**
	(-0.00)	(-0.02)	(0.54)	(2.21)
France Low Ambiguity	0.018**	0.033***	0.048***	0.063***
	(2.08)	(2.68)	(3.20)	(3.65)
Observations	155	153	152	150
R^2	0.05	0.07	0.09	0.12
France High Ambiguity	0.005	0.015***	0.018***	0.017**
	(1.45)	(2.72)	(3.06)	(2.40)
Observations	154	153	151	150
R^2	0.01	0.05	0.06	0.05
France Low-High Ambiguity	0.013	0.018	0.030*	0.045**
	(1.38)	(1.33)	(1.87)	(2.44)
Germany Low Ambiguity	0.016**	0.040***	0.071***	0.090***
	(2.11)	(3.72)	(4.96)	(4.57)
Observations	155	153	152	150
R^2	0.02	0.03	0.05	0.05
Germany High Ambiguity	-0.006	-0.003	-0.007	-0.011
	(-1.52)	(-0.48)	(-0.95)	(-1.27)
Observations	154	153	151	150
R^2	0.01	0.00	0.01	0.01
Germany Low-High Ambiguity	0.022**	0.043***	0.078***	0.101***
	(2.56)	(3.50)	(4.86)	(4.69)
Greece Low Ambiguity	0.017	0.002	0.003	-0.011
	(1.11)	(0.15)	(0.19)	(-0.89)
Observations	49	48	46	45
R^2	0.03	0.00	0.00	0.01
Greece High Ambiguity	-0.007	0.017	-0.006	-0.011
	(-0.64)	(1.21)	(-0.30)	(-0.47)
Observations	49	47	46	44
R^2	0.01	0.02	0.00	0.01
Greece Low-High Ambiguity	0.024	-0.015	0.010	-0.001
	(1.27)	(-0.76)	(0.36)	(-0.02)
India Low Ambiguity	0.007	0.020***	0.036***	0.038***
	(1.41)	(4.25)	(5.61)	(5.46)
Observations	48	46	45	43
R^2	0.03	0.17	0.34	0.30
India High Ambiguity	0.008	0.013	0.015	0.025*
	(0.89)	(0.95)	(1.22)	(1.74)
Observations	47	46	44	43
R^2	0.02	0.03	0.03	0.07
India Low-High Ambiguity	-0.001	0.007	0.021	0.013
	(-0.08)	(0.51)	(1.49)	(0.80)
Ireland Low Ambiguity	0.040*	0.051*	0.031	0.020
	(1.76)	(1.85)	(0.87)	(0.57)
Observations	36	35	33	32
R^2	0.10	0.09	0.02	0.01
Ireland High Ambiguity	-0.026	-0.055***	-0.042	-0.033
	(-1.23)	(-3.04)	(-1.69)	(-0.80)
Observations	36	34	33	31
R^2	0.05	0.18	0.07	0.03
Ireland Low-High Ambiguity	0.065**	0.106***	0.073*	0.054
	(2.12)	(3.21)	(1.69)	(0.98)

Table A.5 (continued)

Italy Low Ambiguity	0.007	0.013	0.022**	0.029**
	(1.00)	(1.40)	(2.07)	(2.45)
Observations	74	73	71	70
R^2	0.01	0.03	0.07	0.09
Italy High Ambiguity	0.000	0.001	-0.003	-0.007
	(0.03)	(0.08)	(-0.24)	(-0.43)
Observations	74	72	71	69
R^2	0.00	0.00	0.00	0.00
Italy Low-High Ambiguity	0.007	0.013	0.026	0.036*
	(0.75)	(0.90)	(1.44)	(1.80)
Japan Low Ambiguity	0.017***	0.040***	0.060***	0.083***
	(3.18)	(5.16)	(7.23)	(8.25)
Observations	155	153	152	150
R^2	0.06	0.12	0.17	0.24
Japan High Ambiguity	0.005	0.010**	0.017***	0.026***
	(1.65)	(2.25)	(2.83)	(3.58)
Observations	154	153	151	150
R^2	0.01	0.03	0.06	0.09
Japan Low-High Ambiguity	0.012**	0.030***	0.043***	0.056***
	(2.00)	(3.40)	(4.24)	(4.54)
Mexico Low Ambiguity	0.007	0.021**	0.032***	0.032***
	(1.26)	(2.57)	(3.13)	(2.76)
Observations	107	106	104	103
R^2	0.01	0.04	0.07	0.06
Mexico High Ambiguity	0.024***	0.035***	0.041***	0.054**
	(3.37)	(3.84)	(3.31)	(2.61)
Observations	107	105	104	102
R^2	0.08	0.09	0.08	0.10
Mexico Low-High Ambiguity	-0.017*	-0.014	-0.009	-0.022
	(-1.89)	(-1.13)	(-0.56)	(-0.91)
Netherlands Low Ambiguity	0.026***	0.061***	0.086***	0.102***
	(2.86)	(4.35)	(4.76)	(5.06)
Observations	155	153	152	150
R^2	0.06	0.15	0.19	0.22
Netherlands High Ambiguity	0.013	0.026**	0.042***	0.054***
	(1.50)	(2.56)	(3.78)	(3.62)
Observations	154	153	151	150
R^2	0.03	0.06	0.11	0.12
Netherlands Low-High Ambiguity	0.013	0.034**	0.044**	0.048*
	(1.07)	(1.99)	(2.08)	(1.90)
Poland Low Ambiguity	0.020*	0.024	0.023	-0.002
	(1.82)	(1.31)	(1.04)	(-0.08)
Observations	47	45	44	42
R^2	0.06	0.04	0.02	0.00
Poland High Ambiguity	0.021**	0.016	0.011	0.029**
	(2.24)	(1.04)	(0.63)	(2.21)
Observations	46	45	43	42
R^2	0.10	0.03	0.01	0.12
Poland Low-High Ambiguity	-0.001	0.008	0.012	-0.030
	(-0.06)	(0.35)	(0.44)	(-1.24)
Portugal Low Ambiguity	0.024*	0.041**	0.085***	0.147***
	(1.99)	(2.24)	(3.18)	(3.70)
Observations	39	38	36	35
R^2	0.09	0.10	0.21	0.37
Portugal High Ambiguity	-0.007	0.009	0.016	0.056
	(-0.38)	(0.29)	(0.33)	(0.94)
Observations	39	37	36	34
R^2	0.00	0.00	0.01	0.12
Portugal Low-High Ambiguity	0.031	0.033	0.069	0.091
	(1.44)	(0.96)	(1.27)	(1.27)

Table A.5 (continued)

Russia Low Ambiguity	0.028**	0.038***	0.073***	0.090***
	(2.20)	(3.16)	(4.16)	(4.76)
Observations	22	20	19	17
R^2	0.23	0.23	0.45	0.54
Russia High Ambiguity	0.039**	0.033	0.022	0.061
	(2.17)	(1.03)	(0.56)	(1.15)
Observations	21	20	18	17
R^2	0.14	0.05	0.01	0.08
Russia Low-High Ambiguity	-0.011	0.005	0.050	0.029
	(-0.50)	(0.14)	(1.15)	(0.51)
South Korea Low Ambiguity	0.011*	0.007	-0.000	0.003
	(1.86)	(0.91)	(-0.05)	(0.39)
Observations	131	130	128	127
R^2	0.03	0.01	0.00	0.00
South Korea High Ambiguity	-0.005	-0.005	-0.017	-0.032**
	(-0.71)	(-0.36)	(-1.40)	(-2.55)
Observations	131	129	128	126
R^2	0.00	0.00	0.02	0.05
South Korea Low-High Ambiguity	0.016*	0.011	0.017	0.035**
	(1.73)	(0.77)	(1.14)	(2.32)
Spain Low Ambiguity	-0.001	0.002	0.004	0.002
	(-0.26)	(0.27)	(0.48)	(0.17)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.00
Spain High Ambiguity	-0.009	-0.024***	-0.037**	-0.033*
	(-1.16)	(-2.68)	(-2.48)	(-1.89)
Observations	154	153	151	150
R^2	0.01	0.05	0.06	0.03
Spain Low-High Ambiguity	0.008	0.026**	0.041**	0.035*
	(0.82)	(2.28)	(2.37)	(1.71)
Sweden Low Ambiguity	-0.003	-0.005	0.004	0.006
	(-0.48)	(-0.60)	(0.47)	(0.72)
Observations	96	95	93	92
R^2	0.00	0.01	0.00	0.01
Sweden High Ambiguity	0.005	0.017*	0.024**	0.045***
	(0.83)	(1.88)	(2.38)	(3.64)
Observations	96	94	93	91
R^2	0.01	0.06	0.09	0.21
Sweden Low-High Ambiguity	-0.008	-0.021*	-0.020	-0.039***
	(-0.94)	(-1.81)	(-1.54)	(-2.65)
Switzerland Low Ambiguity	0.013*	0.025***	0.036***	0.036***
	(1.76)	(2.70)	(3.34)	(3.25)
Observations	155	153	152	150
R^2	0.02	0.04	0.06	0.05
Switzerland High Ambiguity	0.004	0.013	0.025*	0.048**
	(0.51)	(1.47)	(1.69)	(2.18)
Observations	154	153	151	150
R^2	0.00	0.02	0.04	0.08
Switzerland Low-High Ambiguity	0.009	0.012	0.011	-0.012
	(0.90)	(0.90)	(0.60)	(-0.49)
UK Low Ambiguity	0.011	0.012	0.019	0.029**
	(1.26)	(0.98)	(1.54)	(2.31)
Observations	155	153	152	150
R^2	0.02	0.01	0.02	0.03
UK High Ambiguity	-0.007	0.006	0.010	0.002
	(-1.34)	(0.59)	(0.76)	(0.18)
Observations	154	153	151	150
R^2	0.02	0.01	0.01	0.00
UK Low-High Ambiguity	0.017*	0.006	0.010	0.027
	(1.76)	(0.35)	(0.54)	(1.44)
US Low Ambiguity	0.044***	0.075***	0.109***	0.134***
	(3.87)	(6.04)	(6.62)	(7.56)
Observations	155	153	152	150
R^2	0.13	0.22	0.26	0.28
US High Ambiguity	0.026***	0.070***	0.084***	0.067***
	(3.78)	(4.03)	(3.63)	(4.66)
Observations	154	153	151	150
R^2	0.10	0.19	0.16	0.08
US Low-High Ambiguity	0.018	0.005	0.026	0.066***
	(1.39)	(0.23)	(0.91)	(2.91)

Table A.6

Sentiment and idiosyncratic risk premium during periods of low and high risk

This tables reports the results from regressing future idiosyncratic risk premium against sentiment during periods of low and high risk. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Risk as the periods below the medium of risk and High Risk as the periods above the medium of risk. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Risk	-0.013**	-0.021**	-0.019*	-0.017
	(-2.02)	(-1.99)	(-1.84)	(-1.43)
Observations	129	128	126	125
R^2	0.04	0.04	0.03	0.02
Australia High Risk	0.001	0.002	0.006	0.008
	(0.11)	(0.12)	(0.43)	(0.54)
Observations	129	127	126	124
R^2	0.00	0.00	0.00	0.00
Australia Low-High Risk	-0.014	-0.022	-0.025	-0.025
	(-1.22)	(-1.31)	(-1.45)	(-1.29)
Austria Low Risk	-0.015*	-0.026*	-0.039**	-0.022*
	(-1.74)	(-1.95)	(-2.35)	(-1.70)
Observations	93	91	90	88
R^2	0.05	0.07	0.11	0.04
Austria High Risk	-0.005	0.001	0.021	0.027
	(-0.41)	(0.07)	(0.98)	(1.30)
Observations	92	91	89	88
R^2	0.00	0.00	0.02	0.02
Austria Low-High Risk	-0.010	-0.027	-0.060**	-0.049**
	(-0.61)	(-1.10)	(-2.22)	(-2.00)
Belgium Low Risk	0.013**	0.016	0.020	0.025**
	(2.06)	(1.53)	(1.52)	(2.29)
Observations	151	150	148	147
R^2	0.04	0.02	0.03	0.04
Belgium High Risk	-0.003	0.006	0.035**	0.057***
	(-0.30)	(0.39)	(2.32)	(3.03)
Observations	151	149	148	146
R^2	0.00	0.00	0.04	0.07
Belgium Low-High Risk	0.016	0.009	-0.015	-0.032
	(1.31)	(0.48)	(-0.75)	(-1.48)
Brazil Low Risk	0.006	0.032***	0.069***	0.087***
	(0.82)	(2.73)	(5.26)	(6.48)
Observations	94	93	91	90
R^2	0.01	0.09	0.28	0.31
Brazil High Risk	0.021**	0.032***	0.056***	0.089***
	(2.49)	(2.72)	(4.17)	(5.65)
Observations	94	92	91	89
R^2	0.05	0.05	0.10	0.20
Brazil Low-High Risk	-0.015	0.001	0.014	-0.002
	(-1.33)	(0.03)	(0.72)	(-0.08)
Canada Low Risk	-0.006	-0.017	-0.030**	-0.049***
	(-0.60)	(-1.33)	(-2.33)	(-2.89)
Observations	117	115	114	112
R^2	0.00	0.01	0.03	0.05
Canada High Risk	0.018***	0.033***	0.047***	0.050***
	(2.72)	(3.77)	(3.97)	(3.65)
Observations	116	115	113	112
R^2	0.05	0.07	0.10	0.09
Canada Low-High Risk	-0.024**	-0.050***	-0.077***	-0.099***
	(-2.02)	(-3.20)	(-4.40)	(-4.53)
China Low Risk	-0.011**	-0.020**	-0.021**	-0.025*
	(-2.03)	(-2.45)	(-2.13)	(-1.88)
Observations	119	117	116	114
R^2	0.04	0.05	0.04	0.03
China High Risk	-0.003	-0.012*	-0.023**	-0.036***
	(-0.47)	(-1.68)	(-2.29)	(-3.38)
Observations	118	117	115	114
R^2	0.00	0.02	0.04	0.07
China Low-High Risk	-0.009	-0.008	0.002	0.011
	(-1.06)	(-0.75)	(0.17)	(0.64)
Denmark Low Risk	-0.008	-0.018*	-0.035**	-0.037*
	(-1.20)	(-1.70)	(-2.58)	(-1.99)
Observations	92	91	89	88
R^2	0.01	0.03	0.06	0.05

Table A.6 (continued)

Denmark High Risk	-0.005	-0.016**	-0.012	-0.020
	(-0.92)	(-2.08)	(-1.06)	(-1.63)
Observations	92	90	89	87
R^2	0.01	0.03	0.01	0.02
Denmark Low-High Risk	-0.002	-0.002	-0.024	-0.017
	(-0.28)	(-0.16)	(-1.33)	(-0.76)
Finland Low Risk	-0.006	0.013	0.027***	0.032**
	(-0.55)	(1.06)	(2.64)	(2.51)
Observations	90	89	87	86
R^2	0.01	0.02	0.08	0.08
Finland High Risk	0.008	0.015	0.029**	0.050***
	(1.02)	(1.47)	(2.42)	(3.84)
Observations	90	88	87	85
R^2	0.01	0.02	0.06	0.13
Finland Low-High Risk	-0.014	-0.002	-0.002	-0.018
	(-1.08)	(-0.15)	(-0.13)	(-1.02)
France Low Risk	0.010	0.016	0.015	0.028**
	(1.33)	(1.41)	(1.21)	(1.98)
Observations	155	153	152	150
R^2	0.03	0.03	0.02	0.06
France High Risk	0.016*	0.033***	0.053***	0.058***
	(1.86)	(2.86)	(3.48)	(3.31)
Observations	154	153	151	150
R^2	0.04	0.09	0.12	0.11
France Low-High Risk	-0.006	-0.017	-0.038*	-0.030
	(-0.53)	(-1.02)	(-1.93)	(-1.33)
Germany Low Risk	-0.000	-0.002	0.001	-0.002
	(-0.06)	(-0.38)	(0.19)	(-0.22)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.00
Germany High Risk	0.011	0.038***	0.065***	0.081***
	(1.43)	(3.58)	(4.18)	(3.91)
Observations	154	153	151	150
R^2	0.01	0.04	0.05	0.05
Germany Low-High Risk	-0.011	-0.040***	-0.064***	-0.083***
	(-1.30)	(-3.31)	(-3.71)	(-3.64)
Greece Low Risk	0.016	-0.014	-0.015	-0.010
	(1.03)	(-0.61)	(-0.67)	(-0.43)
Observations	49	48	46	45
R^2	0.02	0.01	0.01	0.00
Greece High Risk	-0.001	0.008	0.003	-0.012
	(-0.05)	(0.69)	(0.20)	(-0.95)
Observations	49	47	46	44
R^2	0.00	0.01	0.00	0.02
Greece Low-High Risk	0.016	-0.022	-0.018	0.002
	(0.80)	(-0.86)	(-0.66)	(0.06)
India Low Risk	0.009	0.014	0.021*	0.028**
	(1.25)	(1.44)	(1.90)	(2.36)
Observations	48	46	45	43
R^2	0.03	0.04	0.06	0.10
India High Risk	0.006	0.020***	0.036***	0.040***
	(1.06)	(3.30)	(4.93)	(5.22)
Observations	47	46	44	43
R^2	0.03	0.14	0.30	0.30
India Low-High Risk	0.003	-0.006	-0.015	-0.012
	(0.32)	(-0.48)	(-1.12)	(-0.84)
Ireland Low Risk	0.001	-0.013	-0.032	-0.028
	(0.09)	(-0.54)	(-1.07)	(-0.69)
Observations	36	35	33	32
R^2	0.00	0.01	0.04	0.02
Ireland High Risk	0.004	0.002	0.004	-0.020
	(0.15)	(0.08)	(0.12)	(-0.53)
Observations	36	34	33	31
R^2	0.00	0.00	0.00	0.01
Ireland Low-High Risk	-0.002	-0.015	-0.036	-0.007
	(-0.08)	(-0.41)	(-0.81)	(-0.13)

Table A.6 (continued)

Italy Low Risk	0.002	0.007	0.015	0.015
	(0.52)	(0.88)	(1.34)	(1.26)
Observations	74	73	71	70
R^2	0.00	0.01	0.03	0.02
Italy High Risk	0.006	0.009	0.005	0.016
	(0.66)	(0.81)	(0.46)	(1.29)
Observations	74	72	71	69
R^2	0.01	0.01	0.00	0.02
Italy Low-High Risk	-0.003	-0.001	0.010	-0.001
	(-0.33)	(-0.10)	(0.64)	(-0.05)
Japan Low Risk	0.012***	0.023***	0.034***	0.045***
	(3.29)	(3.70)	(4.25)	(4.60)
Observations	155	153	152	150
R^2	0.04	0.06	0.09	0.11
Japan High Risk	0.010*	0.024***	0.039***	0.057***
	(1.92)	(3.41)	(5.08)	(6.52)
Observations	154	153	151	150
R^2	0.02	0.07	0.11	0.17
Japan Low-High Risk	0.002	-0.001	-0.005	-0.012
	(0.40)	(-0.13)	(-0.46)	(-0.93)
Mexico Low Risk	0.015***	0.041***	0.050***	0.056***
	(2.84)	(4.58)	(4.29)	(3.66)
Observations	107	106	104	103
R^2	0.04	0.15	0.15	0.15
Mexico High Risk	0.009	0.012	0.023**	0.025*
	(1.29)	(1.51)	(2.28)	(1.95)
Observations	107	105	104	102
R^2	0.01	0.01	0.04	0.03
Mexico Low-High Risk	0.006	0.029**	0.026*	0.032
	(0.74)	(2.39)	(1.72)	(1.59)
Netherlands Low Risk	0.012	0.028***	0.031***	0.060***
	(1.52)	(2.70)	(2.67)	(3.39)
Observations	155	153	152	150
R^2	0.02	0.06	0.06	0.12
Netherlands High Risk	0.028***	0.061***	0.098***	0.100***
	(2.95)	(4.30)	(5.16)	(5.00)
Observations	154	153	151	150
R^2	0.07	0.16	0.24	0.21
Netherlands Low-High Risk	-0.016	-0.033*	-0.067***	-0.041
	(-1.29)	(-1.88)	(-2.99)	(-1.52)
Poland Low Risk	0.023***	0.023	0.007	0.013
	(2.69)	(1.15)	(0.34)	(0.73)
Observations	47	45	44	42
R^2	0.14	0.04	0.00	0.02
Poland High Risk	0.021	0.023	0.032	0.009
	(1.62)	(1.35)	(1.43)	(0.44)
Observations	46	45	43	42
R^2	0.06	0.04	0.04	0.00
Poland Low-High Risk	0.002	-0.000	-0.025	0.004
	(0.14)	(-0.01)	(-0.81)	(0.14)
Portugal Low Risk	-0.021	-0.035	0.036	0.019
	(-1.49)	(-1.17)	(0.78)	(0.26)
Observations	39	38	36	35
R^2	0.04	0.04	0.03	0.01
Portugal High Risk	0.021	0.045**	0.057**	0.137***
	(1.64)	(2.47)	(2.18)	(3.32)
Observations	39	37	36	34
R^2	0.06	0.13	0.12	0.33
Portugal Low-High Risk	-0.042**	-0.080**	-0.021	-0.118
	(-2.21)	(-2.28)	(-0.39)	(-1.41)

Table A.6 (continued)

Russia Low Risk	0.035**	0.033	0.036	0.045
	(2.15)	(1.70)	(1.73)	(1.66)
Observations	22	20	19	17
R^2	0.21	0.11	0.10	0.11
Russia High Risk	0.018	0.025	0.023	0.060**
	(1.45)	(1.47)	(0.89)	(2.20)
Observations	21	20	18	17
R^2	0.12	0.08	0.04	0.17
Russia Low-High Risk	0.018	0.008	0.013	-0.015
	(0.88)	(0.33)	(0.38)	(-0.40)
South Korea Low Risk	-0.012	-0.026***	-0.032***	-0.038***
	(-1.61)	(-2.85)	(-3.56)	(-4.52)
Observations	131	130	128	127
R^2	0.03	0.07	0.08	0.08
South Korea High Risk	0.014**	0.018**	0.010	0.008
	(2.36)	(2.16)	(1.14)	(0.93)
Observations	131	129	128	126
R^2	0.04	0.04	0.01	0.01
South Korea Low-High Risk	-0.026***	-0.044***	-0.041***	-0.046***
	(-2.72)	(-3.56)	(-3.37)	(-3.79)
Spain Low Risk	-0.011	-0.032**	-0.045**	-0.048**
	(-1.07)	(-2.16)	(-2.17)	(-1.99)
Observations	155	153	152	150
R^2	0.02	0.06	0.06	0.05
Spain High Risk	-0.001	0.004	0.008	0.006
	(-0.23)	(0.57)	(1.03)	(0.58)
Observations	154	153	151	150
R^2	0.00	0.00	0.01	0.00
Spain Low-High Risk	-0.010	-0.035**	-0.053**	-0.053**
	(-0.86)	(-2.21)	(-2.39)	(-2.06)
Sweden Low Risk	-0.005	0.001	0.007	0.018
	(-0.86)	(0.07)	(0.51)	(1.55)
Observations	96	95	93	92
R^2	0.01	0.00	0.01	0.04
Sweden High Risk	0.003	0.002	0.010	0.014*
	(0.42)	(0.19)	(1.24)	(1.70)
Observations	96	94	93	91
R^2	0.00	0.00	0.02	0.03
Sweden Low-High Risk	-0.007	-0.001	-0.003	0.004
	(-0.88)	(-0.07)	(-0.20)	(0.25)
Switzerland Low Risk	-0.005	0.012	0.023*	0.033*
	(-0.62)	(1.28)	(1.67)	(1.84)
Observations	155	153	152	150
R^2	0.00	0.02	0.03	0.04
Switzerland High Risk	0.019***	0.026***	0.039***	0.048***
	(2.87)	(2.82)	(3.47)	(3.32)
Observations	154	153	151	150
R^2	0.06	0.05	0.07	0.07
Switzerland Low-High Risk	-0.023**	-0.013	-0.016	-0.016
	(-2.32)	(-1.01)	(-0.88)	(-0.68)
UK Low Risk	-0.009	-0.016	-0.007	-0.002
	(-1.31)	(-1.40)	(-0.71)	(-0.19)
Observations	155	153	152	150
R^2	0.02	0.02	0.00	0.00
UK High Risk	0.012	0.021*	0.025**	0.029**
	(1.49)	(1.82)	(2.04)	(2.25)
Observations	154	153	151	150
R^2	0.03	0.04	0.03	0.03
UK Low-High Risk	-0.021**	-0.037**	-0.032**	-0.031*
	(-1.98)	(-2.28)	(-2.01)	(-1.89)
US Low Risk	0.044**	0.089***	0.088***	0.131***
	(2.13)	(3.02)	(3.33)	(3.16)
Observations	155	153	152	150
R^2	0.11	0.21	0.17	0.21
US High Risk	0.037***	0.067***	0.108***	0.124***
	(3.78)	(6.38)	(6.41)	(8.16)
Observations	154	153	151	150
R^2	0.12	0.22	0.27	0.28
US Low-High Risk	0.007	0.022	-0.020	0.007
	(0.30)	(0.71)	(-0.64)	(0.15)

Table A.7

Sentiment and mispricing performance premium during periods of low and high ambiguity

This tables reports the results from regressing future mispricing performance premium premium against sentiment during periods of low and high ambiguity. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and the High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Ambiguity	0.006	0.025***	0.049***	0.068***
	(1.02)	(2.92)	(4.69)	(5.99)
Observations	129	128	126	125
R^2	0.01	0.08	0.18	0.26
Australia High Ambiguity	-0.002	-0.008*	-0.003	0.006
	(-0.57)	(-1.69)	(-0.40)	(0.71)
Observations	129	127	126	124
R^2	0.00	0.02	0.00	0.01
Australia Low-High Ambiguity	0.008	0.034***	0.052***	0.062***
	(1.16)	(3.37)	(4.12)	(4.37)
Austria Low Ambiguity	0.003	-0.006	0.020	0.060***
	(0.22)	(-0.26)	(0.92)	(3.45)
Observations	155	153	152	150
R^2	0.00	0.00	0.01	0.08
Austria High Ambiguity	-0.012	-0.001	0.007	0.010
	(-1.38)	(-0.04)	(0.35)	(0.45)
Observations	154	153	151	150
R^2	0.03	0.00	0.00	0.00
Austria Low-High Ambiguity	0.015	-0.005	0.014	0.050*
	(0.91)	(-0.20)	(0.48)	(1.78)
Belgium Low Ambiguity	-0.001	0.005	0.017	0.038**
	(-0.05)	(0.24)	(0.78)	(2.12)
Observations	155	153	152	150
R^2	0.00	0.00	0.01	0.02
Belgium High Ambiguity	0.001	0.004	0.010	0.014
	(0.19)	(0.47)	(0.87)	(1.21)
Observations	154	153	151	150
R^2	0.00	0.00	0.01	0.01
Belgium Low-High Ambiguity	-0.002	0.001	0.007	0.024
	(-0.12)	(0.06)	(0.30)	(1.11)
Brazil Low Ambiguity	-0.013	-0.015	-0.023*	-0.044**
	(-1.46)	(-1.30)	(-1.66)	(-2.18)
Observations	155	153	152	150
R^2	0.01	0.01	0.01	0.03
Brazil High Ambiguity	0.034***	0.054***	0.087***	0.122***
	(3.51)	(4.23)	(5.72)	(6.78)
Observations	154	153	151	150
R^2	0.07	0.08	0.15	0.20
Brazil Low-High Ambiguity	-0.047***	-0.069***	-0.111***	-0.166***
	(-3.56)	(-4.01)	(-5.33)	(-6.15)
Canada Low Ambiguity	0.027***	0.056***	0.088***	0.102***
	(4.03)	(6.30)	(9.41)	(10.42)
Observations	117	115	114	112
R^2	0.16	0.31	0.46	0.51
Canada High Ambiguity	0.019***	0.041***	0.056***	0.075***
	(2.83)	(3.44)	(3.96)	(4.47)
Observations	116	115	113	112
R^2	0.06	0.14	0.19	0.22
Canada Low-High Ambiguity	0.009	0.015	0.032*	0.027
	(0.93)	(1.03)	(1.87)	(1.40)
China Low Ambiguity	0.017**	0.012	0.020*	0.034**
	(2.17)	(1.10)	(1.73)	(2.16)
Observations	130	129	127	126
R^2	0.03	0.01	0.02	0.03
China High Ambiguity	0.011**	0.032***	0.042***	0.054***
	(2.14)	(3.97)	(4.12)	(4.55)
Observations	130	128	127	125
R^2	0.03	0.12	0.11	0.14
China Low-High Ambiguity	0.006	-0.020	-0.022	-0.020
	(0.59)	(-1.54)	(-1.46)	(-1.04)
Denmark Low Ambiguity	0.001	0.001	0.034**	0.060***
	(0.09)	(0.08)	(2.54)	(4.48)
Observations	96	95	93	92
R^2	0.00	0.00	0.04	0.10

Table A.7 (continued)

Denmark High Ambiguity	-0.007	0.013	0.041**	0.063***
	(-0.64)	(0.92)	(2.39)	(3.29)
Observations	96	94	93	91
R^2	0.01	0.01	0.07	0.12
Denmark Low-High Ambiguity	0.009	-0.012	-0.007	-0.003
	(0.49)	(-0.55)	(-0.32)	(-0.11)
Finland Low Ambiguity	0.023**	0.034***	0.037**	0.061***
	(2.22)	(2.69)	(2.49)	(3.46)
Observations	96	95	93	92
R^2	0.06	0.07	0.06	0.10
Finland High Ambiguity	-0.004	0.009	0.025**	0.030**
	(-0.60)	(0.88)	(2.12)	(2.42)
Observations	96	94	93	91
R^2	0.00	0.01	0.03	0.04
Finland Low-High Ambiguity	0.027**	0.025	0.012	0.031
	(2.18)	(1.60)	(0.62)	(1.42)
France Low Ambiguity	0.012*	0.023**	0.037***	0.049***
	(1.90)	(2.33)	(3.26)	(4.59)
Observations	155	153	152	150
R^2	0.02	0.04	0.08	0.14
France High Ambiguity	0.009**	0.027***	0.043***	0.054***
	(2.55)	(4.24)	(6.40)	(6.01)
Observations	154	153	151	150
R^2	0.03	0.12	0.20	0.23
France Low-High Ambiguity	0.003	-0.004	-0.006	-0.005
	(0.44)	(-0.37)	(-0.47)	(-0.35)
Germany Low Ambiguity	0.013	0.024**	0.036***	0.045***
	(1.45)	(2.03)	(2.73)	(3.14)
Observations	155	153	152	150
R^2	0.02	0.03	0.05	0.06
Germany High Ambiguity	-0.007**	-0.003	-0.006	-0.009
	(-2.02)	(-0.79)	(-0.98)	(-1.33)
Observations	154	153	151	150
R^2	0.03	0.00	0.01	0.01
Germany Low-High Ambiguity	0.019**	0.027**	0.042***	0.054***
	(2.07)	(2.18)	(2.89)	(3.41)
Greece Low Ambiguity	-0.062***	-0.107***	-0.161***	-0.213***
	(-4.87)	(-6.69)	(-8.01)	(-7.94)
Observations	153	152	150	149
R^2	0.14	0.22	0.30	0.31
Greece High Ambiguity	-0.014	-0.016	-0.020	-0.047
	(-0.62)	(-0.59)	(-0.62)	(-1.58)
Observations	153	151	150	148
R^2	0.01	0.00	0.00	0.02
Greece Low-High Ambiguity	-0.047*	-0.091***	-0.141***	-0.166***
	(-1.80)	(-2.90)	(-3.71)	(-4.16)
India Low Ambiguity	-0.001	0.031**	0.051***	0.046***
	(-0.07)	(2.35)	(2.93)	(3.20)
Observations	48	46	45	43
R^2	0.00	0.11	0.14	0.10
India High Ambiguity	0.028	0.016	0.012	0.004
	(1.33)	(0.49)	(0.41)	(0.12)
Observations	47	46	44	43
R^2	0.08	0.01	0.01	0.00
India Low-High Ambiguity	-0.029	0.014	0.039	0.042
	(-1.18)	(0.40)	(1.15)	(1.22)
Ireland Low Ambiguity	0.026	0.049**	0.060**	0.067**
	(1.37)	(2.11)	(2.10)	(2.24)
Observations	155	153	152	150
R^2	0.02	0.03	0.03	0.03
Ireland High Ambiguity	-0.003	-0.003	0.057**	0.102***
	(-0.21)	(-0.10)	(2.54)	(5.43)
Observations	154	153	151	150
R^2	0.00	0.00	0.05	0.13
Ireland Low-High Ambiguity	0.029	0.052	0.003	-0.035
	(1.19)	(1.40)	(0.07)	(-1.00)

Table A.7 (continued)

Italy Low Ambiguity	0.009	0.016	0.029*	0.048**
	(0.92)	(1.08)	(1.68)	(2.46)
Observations	74	73	71	70
R^2	0.01	0.01	0.03	0.06
Italy High Ambiguity	0.016*	0.032**	0.042*	0.031
	(1.67)	(2.19)	(1.97)	(1.17)
Observations	74	72	71	69
R^2	0.04	0.08	0.07	0.03
Italy Low-High Ambiguity	-0.007	-0.016	-0.012	0.017
	(-0.47)	(-0.75)	(-0.46)	(0.52)
Japan Low Ambiguity	0.004	0.009	0.016**	0.029***
	(0.69)	(1.13)	(2.02)	(3.13)
Observations	155	153	152	150
R^2	0.00	0.00	0.01	0.02
Japan High Ambiguity	0.004	0.013*	0.019**	0.017**
	(1.10)	(1.80)	(2.59)	(2.29)
Observations	154	153	151	150
R^2	0.01	0.03	0.06	0.04
Japan Low-High Ambiguity	-0.000	-0.004	-0.003	0.012
	(-0.05)	(-0.40)	(-0.23)	(0.99)
Mexico Low Ambiguity	0.020***	0.040***	0.050***	0.057***
	(2.63)	(3.82)	(4.17)	(4.19)
Observations	123	122	120	119
R^2	0.06	0.10	0.10	0.11
Mexico High Ambiguity	0.007	-0.002	-0.003	-0.009
	(1.03)	(-0.24)	(-0.26)	(-0.56)
Observations	123	121	120	118
R^2	0.01	0.00	0.00	0.00
Mexico Low-High Ambiguity	0.012	0.042***	0.053***	0.067***
	(1.22)	(2.93)	(3.16)	(3.09)
Netherlands Low Ambiguity	0.018**	0.039***	0.049***	0.047***
	(2.46)	(3.77)	(3.56)	(2.71)
Observations	155	153	152	150
R^2	0.04	0.10	0.10	0.07
Netherlands High Ambiguity	-0.007	-0.006	0.005	0.024
	(-0.87)	(-0.50)	(0.43)	(1.57)
Observations	154	153	151	150
R^2	0.01	0.00	0.00	0.02
Netherlands Low-High Ambiguity	0.025**	0.045***	0.043**	0.023
	(2.30)	(2.87)	(2.33)	(1.02)
New Zealand Low Ambiguity	0.011**	0.011	0.007	0.005
	(2.23)	(1.35)	(0.72)	(0.58)
Observations	87	86	84	83
R^2	0.04	0.02	0.00	0.00
New Zealand High Ambiguity	-0.003	0.004	0.000	-0.013
	(-0.51)	(0.59)	(0.01)	(-1.13)
Observations	87	85	84	82
R^2	0.00	0.00	0.00	0.01
New Zealand Low-High Ambiguity	0.014*	0.008	0.007	0.018
	(1.80)	(0.71)	(0.51)	(1.25)
Poland Low Ambiguity	-0.002	-0.003	-0.009	-0.019
	(-0.25)	(-0.29)	(-0.63)	(-1.13)
Observations	123	121	120	118
R^2	0.00	0.00	0.00	0.01
Poland High Ambiguity	0.000	0.010	0.033*	0.047**
	(0.05)	(0.76)	(1.79)	(2.33)
Observations	122	121	119	118
R^2	0.00	0.01	0.04	0.07
Poland Low-High Ambiguity	-0.002	-0.013	-0.042*	-0.066**
	(-0.22)	(-0.76)	(-1.80)	(-2.51)
Portugal Low Ambiguity	-0.018**	-0.021*	-0.015	-0.016
	(-2.17)	(-1.73)	(-0.89)	(-0.84)
Observations	155	153	152	150
R^2	0.03	0.02	0.01	0.01
Portugal High Ambiguity	-0.016	-0.066***	-0.121***	-0.158***
	(-1.10)	(-2.74)	(-4.53)	(-4.19)
Observations	154	153	151	150
R^2	0.01	0.10	0.20	0.19
Portugal Low-High Ambiguity	-0.002	0.044*	0.106***	0.142***
	(-0.14)	(1.65)	(3.34)	(3.34)

Table A.7 (continued)

Russia Low Ambiguity	0.026**	0.053***	0.064***	0.035
	(2.47)	(5.78)	(3.88)	(1.15)
Observations	22	20	19	17
R^2	0.28	0.56	0.44	0.12
Russia High Ambiguity	0.002	0.070	0.134	0.156
	(0.05)	(1.70)	(1.71)	(1.49)
Observations	21	20	18	17
R^2	0.00	0.16	0.36	0.36
Russia Low-High Ambiguity	0.024	-0.017	-0.070	-0.120
	(0.75)	(-0.41)	(-0.88)	(-1.11)
South Korea Low Ambiguity	0.020**	0.031***	0.039***	0.044***
	(2.23)	(3.57)	(4.50)	(4.61)
Observations	137	136	134	133
R^2	0.05	0.09	0.10	0.10
South Korea High Ambiguity	0.028***	0.050***	0.070***	0.068***
	(4.02)	(4.49)	(5.65)	(4.63)
Observations	137	135	134	132
R^2	0.13	0.17	0.22	0.17
South Korea Low-High Ambiguity	-0.009	-0.020	-0.031**	-0.024
	(-0.77)	(-1.38)	(-2.06)	(-1.37)
Spain Low Ambiguity	-0.003	0.003	0.006	0.003
	(-0.44)	(0.25)	(0.46)	(0.17)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.00
Spain High Ambiguity	-0.012	-0.030**	-0.037**	-0.031
	(-1.29)	(-2.10)	(-2.14)	(-1.61)
Observations	154	153	151	150
R^2	0.02	0.07	0.06	0.03
Spain Low-High Ambiguity	0.008	0.033*	0.044**	0.034
	(0.71)	(1.82)	(1.97)	(1.39)
Sweden Low Ambiguity	0.004	0.010	0.022**	0.035***
	(0.51)	(0.90)	(2.46)	(4.78)
Observations	96	95	93	92
R^2	0.00	0.02	0.07	0.18
Sweden High Ambiguity	-0.000	0.015	0.018	0.011
	(-0.01)	(1.59)	(1.37)	(0.80)
Observations	96	94	93	91
R^2	0.00	0.04	0.04	0.02
Sweden Low-High Ambiguity	0.004	-0.005	0.004	0.024
	(0.37)	(-0.38)	(0.24)	(1.59)
Switzerland Low Ambiguity	0.012	0.028***	0.021**	0.020*
	(1.65)	(3.53)	(2.28)	(1.88)
Observations	155	153	152	150
R^2	0.02	0.08	0.03	0.02
Switzerland High Ambiguity	-0.001	-0.018**	-0.011	-0.013
	(-0.20)	(-2.13)	(-0.98)	(-1.38)
Observations	154	153	151	150
R^2	0.00	0.04	0.01	0.02
Switzerland Low-High Ambiguity	0.013	0.046***	0.031**	0.032**
	(1.35)	(3.99)	(2.20)	(2.32)
UK Low Ambiguity	0.017**	0.023**	0.030***	0.032***
	(2.49)	(2.46)	(3.12)	(3.16)
Observations	155	153	152	150
R^2	0.05	0.05	0.06	0.06
UK High Ambiguity	-0.017***	-0.004	-0.002	-0.009
	(-2.99)	(-0.50)	(-0.19)	(-0.78)
Observations	154	153	151	150
R^2	0.12	0.00	0.00	0.01
UK Low-High Ambiguity	0.034***	0.027**	0.032**	0.041***
	(3.82)	(2.22)	(2.16)	(2.61)
US Low Ambiguity	0.025***	0.043***	0.062***	0.080***
	(5.40)	(9.70)	(10.56)	(12.61)
Observations	155	153	152	150
R^2	0.18	0.28	0.34	0.37
US High Ambiguity	0.014**	0.042***	0.069***	0.070***
	(2.46)	(4.20)	(4.71)	(4.24)
Observations	154	153	151	150
R^2	0.05	0.14	0.20	0.15
US Low-High Ambiguity	0.011	0.001	-0.006	0.011
	(1.47)	(0.07)	(-0.40)	(0.60)

Table A.8

Sentiment and mispricing performance premium during periods of low and high risk

This tables reports the results from regressing future mispricing performance premium against sentiment during periods of low and high risk. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Risk as the periods below the medium of risk and High Risk as the periods above the medium of risk. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Risk	0.001	-0.001	0.009	0.017*
	(0.32)	(-0.09)	(1.08)	(1.79)
Observations	129	128	126	125
R^2	0.00	0.00	0.01	0.04
Australia High Risk	0.006	0.025***	0.046***	0.069***
	(1.00)	(2.66)	(4.13)	(5.33)
Observations	129	127	126	124
R^2	0.01	0.08	0.15	0.24
Australia Low-High Risk	-0.004	-0.026**	-0.037***	-0.052***
	(-0.58)	(-2.21)	(-2.65)	(-3.23)
Austria Low Risk	-0.014***	-0.027***	-0.025**	-0.021
	(-3.21)	(-4.24)	(-2.59)	(-1.62)
Observations	155	153	152	150
R^2	0.05	0.07	0.03	0.02
Austria High Risk	-0.000	0.012	0.045*	0.084***
	(-0.02)	(0.52)	(1.81)	(4.06)
Observations	154	153	151	150
R^2	0.00	0.00	0.04	0.14
Austria Low-High Risk	-0.014	-0.040	-0.069***	-0.105***
	(-0.89)	(-1.60)	(-2.62)	(-4.30)
Belgium Low Risk	-0.001	-0.011	-0.008	0.003
	(-0.19)	(-1.01)	(-0.57)	(0.23)
Observations	155	153	152	150
R^2	0.00	0.01	0.00	0.00
Belgium High Risk	0.000	0.017	0.035*	0.050***
	(0.02)	(0.85)	(1.80)	(2.74)
Observations	154	153	151	150
R^2	0.00	0.01	0.02	0.04
Belgium Low-High Risk	-0.001	-0.028	-0.043*	-0.047**
	(-0.09)	(-1.22)	(-1.78)	(-2.20)
Brazil Low Risk	0.009	0.023**	0.033***	0.058***
	(1.20)	(2.36)	(2.69)	(3.07)
Observations	155	153	152	150
R^2	0.01	0.03	0.05	0.07
Brazil High Risk	0.003	-0.002	0.001	-0.018
	(0.25)	(-0.18)	(0.07)	(-0.82)
Observations	154	153	151	150
R^2	0.00	0.00	0.00	0.00
Brazil Low-High Risk	0.006	0.025	0.031	0.075***
	(0.51)	(1.52)	(1.50)	(2.64)
Canada Low Risk	0.029***	0.044***	0.058***	0.066***
	(3.57)	(3.20)	(3.98)	(3.93)
Observations	117	115	114	112
R^2	0.14	0.14	0.19	0.19
Canada High Risk	0.026***	0.060***	0.093***	0.115***
	(4.11)	(7.16)	(11.10)	(13.24)
Observations	116	115	113	112
R^2	0.17	0.37	0.54	0.59
Canada Low-High Risk	0.002	-0.016	-0.035**	-0.050***
	(0.21)	(-1.00)	(-2.08)	(-2.65)
China Low Risk	0.007	0.020**	0.034***	0.043***
	(1.17)	(2.05)	(2.86)	(3.33)
Observations	130	129	127	126
R^2	0.01	0.04	0.07	0.07
China High Risk	0.017***	0.024***	0.027***	0.045***
	(2.80)	(3.17)	(2.87)	(3.28)
Observations	130	128	127	125
R^2	0.04	0.05	0.04	0.08
China Low-High Risk	-0.011	-0.003	0.007	-0.002
	(-1.27)	(-0.28)	(0.44)	(-0.11)
Denmark Low Risk	-0.003	-0.005	0.017	0.029
	(-0.30)	(-0.39)	(1.12)	(1.60)
Observations	96	95	93	92
R^2	0.00	0.00	0.02	0.03

Table A.8 (continued)

Denmark High Risk	-0.004	0.012	0.042***	0.073***
	(-0.31)	(0.66)	(2.74)	(4.94)
Observations	96	94	93	91
R^2	0.00	0.01	0.07	0.15
Denmark Low-High Risk	0.001	-0.017	-0.025	-0.044*
	(0.09)	(-0.76)	(-1.15)	(-1.92)
Finland Low Risk	0.008	0.018	0.041***	0.052***
	(0.80)	(1.61)	(3.31)	(3.34)
Observations	96	95	93	92
R^2	0.01	0.03	0.09	0.10
Finland High Risk	0.016	0.029**	0.030*	0.050***
	(1.60)	(2.16)	(1.87)	(2.72)
Observations	96	94	93	91
R^2	0.03	0.04	0.03	0.06
Finland Low-High Risk	-0.008	-0.011	0.011	0.002
	(-0.57)	(-0.60)	(0.55)	(0.08)
France Low Risk	0.015***	0.025***	0.033***	0.047***
	(2.91)	(2.84)	(4.17)	(5.57)
Observations	155	153	152	150
R^2	0.07	0.08	0.13	0.21
France High Risk	0.008	0.023**	0.042***	0.051***
	(1.25)	(2.40)	(3.56)	(4.34)
Observations	154	153	151	150
R^2	0.01	0.05	0.10	0.13
France Low-High Risk	0.008	0.002	-0.008	-0.003
	(0.92)	(0.16)	(-0.58)	(-0.23)
Germany Low Risk	-0.002	-0.004	-0.004	-0.004
	(-0.65)	(-0.85)	(-0.87)	(-0.60)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.00
Germany High Risk	0.009	0.024**	0.035***	0.041***
	(0.97)	(2.17)	(2.76)	(2.93)
Observations	154	153	151	150
R^2	0.01	0.04	0.05	0.05
Germany Low-High Risk	-0.011	-0.028**	-0.039***	-0.044***
	(-1.13)	(-2.33)	(-2.89)	(-2.93)
Greece Low Risk	-0.009	-0.012	-0.027	-0.069*
	(-0.56)	(-0.50)	(-0.94)	(-1.75)
Observations	153	152	150	149
R^2	0.00	0.00	0.01	0.04
Greece High Risk	-0.067***	-0.121***	-0.170***	-0.222***
	(-4.77)	(-7.41)	(-8.24)	(-9.40)
Observations	153	151	150	148
R^2	0.15	0.26	0.33	0.37
Greece Low-High Risk	0.058***	0.109***	0.143***	0.153***
	(2.66)	(3.81)	(4.00)	(3.35)
India Low Risk	0.022	0.020	0.022	0.014
	(1.16)	(0.84)	(0.88)	(0.57)
Observations	48	46	45	43
R^2	0.06	0.03	0.03	0.01
India High Risk	-0.000	0.030*	0.053**	0.050***
	(-0.03)	(1.81)	(2.57)	(2.94)
Observations	47	46	44	43
R^2	0.00	0.09	0.13	0.10
India Low-High Risk	0.023	-0.010	-0.031	-0.036
	(0.93)	(-0.36)	(-0.97)	(-1.18)
Ireland Low Risk	0.005	0.047**	0.059*	0.105***
	(0.34)	(1.99)	(1.97)	(4.38)
Observations	155	153	152	150
R^2	0.00	0.04	0.04	0.15
Ireland High Risk	0.016	0.022	0.049*	0.066**
	(0.91)	(0.93)	(1.82)	(2.22)
Observations	154	153	151	150
R^2	0.01	0.01	0.02	0.03
Ireland Low-High Risk	-0.011	0.025	0.010	0.038
	(-0.46)	(0.74)	(0.25)	(1.00)

Table A.8 (continued)

Italy Low Risk	0.023**	0.042***	0.065***	0.072***
	(2.24)	(3.96)	(5.29)	(4.07)
Observations	74	73	71	70
R^2	0.08	0.18	0.24	0.18
Italy High Risk	-0.007	-0.004	-0.004	0.008
	(-0.71)	(-0.23)	(-0.18)	(0.33)
Observations	74	72	71	69
R^2	0.01	0.00	0.00	0.00
Italy Low-High Risk	0.030**	0.047**	0.069***	0.064**
	(2.09)	(2.13)	(2.72)	(2.17)
Japan Low Risk	0.001	0.005	0.010	0.013
	(0.23)	(0.62)	(0.98)	(1.23)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.01
Japan High Risk	0.003	0.008	0.015**	0.019**
	(0.53)	(1.04)	(2.06)	(2.57)
Observations	154	153	151	150
R^2	0.00	0.01	0.02	0.02
Japan Low-High Risk	-0.002	-0.002	-0.005	-0.006
	(-0.21)	(-0.22)	(-0.36)	(-0.46)
Mexico Low Risk	0.006	0.017**	0.021**	0.026**
	(1.23)	(2.15)	(2.22)	(2.15)
Observations	123	122	120	119
R^2	0.01	0.02	0.02	0.03
Mexico High Risk	0.022***	0.035***	0.045***	0.048***
	(2.66)	(3.11)	(3.45)	(3.11)
Observations	123	121	120	118
R^2	0.06	0.09	0.09	0.07
Mexico Low-High Risk	-0.017*	-0.018	-0.024	-0.022
	(-1.76)	(-1.31)	(-1.49)	(-1.14)
Netherlands Low Risk	0.001	0.002	0.001	0.022
	(0.08)	(0.18)	(0.10)	(1.34)
Observations	155	153	152	150
R^2	0.00	0.00	0.00	0.02
Netherlands High Risk	0.014*	0.036***	0.055***	0.047***
	(1.74)	(3.30)	(3.84)	(2.82)
Observations	154	153	151	150
R^2	0.02	0.08	0.11	0.07
Netherlands Low-High Risk	-0.013	-0.034**	-0.054***	-0.025
	(-1.22)	(-2.31)	(-2.94)	(-1.07)
New Zealand Low Risk	-0.003	-0.011*	-0.013**	-0.014
	(-0.62)	(-1.92)	(-2.04)	(-1.57)
Observations	87	86	84	83
R^2	0.00	0.03	0.02	0.01
New Zealand High Risk	0.016**	0.022**	0.015	0.011
	(2.59)	(2.29)	(1.39)	(0.97)
Observations	87	85	84	82
R^2	0.07	0.06	0.02	0.01
New Zealand Low-High Risk	-0.019**	-0.032***	-0.028**	-0.024*
	(-2.45)	(-2.95)	(-2.23)	(-1.73)
Poland Low Risk	0.004	0.017	0.045***	0.052***
	(0.59)	(1.51)	(2.70)	(2.97)
Observations	123	121	120	118
R^2	0.00	0.02	0.08	0.09
Poland High Risk	-0.001	-0.006	-0.017	-0.021
	(-0.16)	(-0.49)	(-1.08)	(-1.09)
Observations	122	121	119	118
R^2	0.00	0.00	0.01	0.01
Poland Low-High Risk	0.005	0.023	0.062***	0.072***
	(0.50)	(1.38)	(2.72)	(2.81)
Portugal Low Risk	-0.012	-0.039*	-0.048**	-0.053*
	(-1.14)	(-1.92)	(-2.05)	(-1.80)
Observations	155	153	152	150
R^2	0.01	0.05	0.05	0.04
Portugal High Risk	-0.020**	-0.030**	-0.041**	-0.054**
	(-2.32)	(-2.46)	(-2.31)	(-2.58)
Observations	154	153	151	150
R^2	0.04	0.04	0.04	0.05
Portugal Low-High Risk	0.008	-0.009	-0.008	0.002
	(0.58)	(-0.37)	(-0.26)	(0.05)

Table A.8 (continued)

Russia Low Risk	0.002	0.034	0.060*	0.045
	(0.15)	(1.48)	(1.95)	(0.98)
Observations	22	20	19	17
R^2	0.00	0.10	0.16	0.08
Russia High Risk	0.016	0.030	0.040*	0.056
	(1.16)	(1.53)	(1.78)	(1.56)
Observations	21	20	18	17
R^2	0.07	0.10	0.16	0.18
Russia Low-High Risk	-0.013	0.005	0.020	-0.011
	(-0.62)	(0.15)	(0.52)	(-0.19)
South Korea Low Risk	0.013*	0.028***	0.052***	0.068***
	(1.86)	(3.50)	(5.05)	(6.16)
Observations	137	136	134	133
R^2	0.03	0.08	0.16	0.23
South Korea High Risk	0.026***	0.043***	0.046***	0.042***
	(2.80)	(4.34)	(4.41)	(3.68)
Observations	137	135	134	132
R^2	0.07	0.14	0.12	0.08
South Korea Low-High Risk	-0.013	-0.015	0.007	0.027*
	(-1.12)	(-1.21)	(0.45)	(1.67)
Spain Low Risk	-0.013	-0.036**	-0.043**	-0.049**
	(-1.45)	(-2.54)	(-2.49)	(-2.06)
Observations	155	153	152	150
R^2	0.03	0.08	0.07	0.06
Spain High Risk	-0.001	0.006	0.008	0.007
	(-0.20)	(0.59)	(0.64)	(0.46)
Observations	154	153	151	150
R^2	0.00	0.00	0.00	0.00
Spain Low-High Risk	-0.012	-0.042**	-0.051**	-0.056**
	(-0.99)	(-2.39)	(-2.36)	(-2.01)
Sweden Low Risk	0.008	0.009	0.004	0.006
	(1.52)	(1.14)	(0.34)	(0.78)
Observations	96	95	93	92
R^2	0.02	0.02	0.00	0.01
Sweden High Risk	0.002	0.013	0.027***	0.038***
	(0.21)	(1.09)	(3.01)	(4.75)
Observations	96	94	93	91
R^2	0.00	0.03	0.10	0.20
Sweden Low-High Risk	0.006	-0.004	-0.023	-0.032***
	(0.64)	(-0.27)	(-1.65)	(-2.75)
Switzerland Low Risk	0.005	-0.010	-0.009	-0.008
	(0.73)	(-1.10)	(-0.84)	(-0.87)
Observations	155	153	152	150
R^2	0.01	0.01	0.01	0.00
Switzerland High Risk	0.007	0.023***	0.020**	0.016
	(0.98)	(2.79)	(2.15)	(1.57)
Observations	154	153	151	150
R^2	0.01	0.06	0.03	0.02
Switzerland Low-High Risk	-0.002	-0.033***	-0.029**	-0.024*
	(-0.15)	(-2.70)	(-2.06)	(-1.74)
UK Low Risk	0.001	-0.008	-0.008	-0.012
	(0.12)	(-1.02)	(-0.90)	(-1.01)
Observations	155	153	152	150
R^2	0.00	0.01	0.01	0.01
UK High Risk	0.009	0.025***	0.032***	0.032***
	(1.33)	(2.71)	(3.30)	(3.16)
Observations	154	153	151	150
R^2	0.02	0.06	0.07	0.06
UK Low-High Risk	-0.009	-0.033***	-0.040***	-0.044***
	(-0.92)	(-2.72)	(-3.02)	(-2.80)
US Low Risk	0.017***	0.045***	0.054***	0.071***
	(2.78)	(5.39)	(5.59)	(5.02)
Observations	155	153	152	150
R^2	0.08	0.19	0.19	0.19
US High Risk	0.023***	0.041***	0.064***	0.080***
	(5.03)	(9.04)	(9.63)	(12.61)
Observations	154	153	151	150
R^2	0.16	0.26	0.33	0.38
US Low-High Risk	-0.006	0.004	-0.009	-0.008
	(-0.82)	(0.44)	(-0.81)	(-0.53)

Table A.9

Sentiment and beta premium during periods of low and high ambiguity: controlling for risk factors

This tables reports the results from regressing future beta premium against sentiment and the Fama–French three factors (market, size, and book-to-market) during periods of low and high ambiguity. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and the High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Ambiguity	-0.010	-0.015	-0.001	0.015
	(-1.02)	(-0.99)	(-0.06)	(0.90)
Observations	129	128	126	125
R^2	0.12	0.04	0.03	0.04
Australia High Ambiguity	-0.016***	-0.027***	-0.035***	-0.033**
	(-2.74)	(-3.85)	(-4.09)	(-2.56)
Observations	129	127	126	124
R^2	0.12	0.14	0.13	0.07
Australia Low-High Ambiguity	0.005	0.011	0.034*	0.048**
	(0.48)	(0.66)	(1.90)	(2.30)
Austria Low Ambiguity	0.012	0.018	0.051***	0.072***
	(0.91)	(0.86)	(2.82)	(5.13)
Observations	155	153	152	150
R^2	0.04	0.03	0.08	0.19
Austria High Ambiguity	-0.002	0.015	0.021	0.029*
	(-0.20)	(1.27)	(1.56)	(1.97)
Observations	154	153	151	150
R^2	0.01	0.02	0.09	0.13
Austria Low-High Ambiguity	0.014	0.003	0.030	0.043**
	(0.87)	(0.14)	(1.34)	(2.09)
Belgium Low Ambiguity	0.018	0.026	0.054**	0.093***
	(1.31)	(1.20)	(2.41)	(4.91)
Observations	155	153	152	150
R^2	0.04	0.05	0.08	0.14
Belgium High Ambiguity	-0.001	0.007	0.014*	0.029***
	(-0.24)	(1.18)	(1.96)	(3.21)
Observations	154	153	151	150
R^2	0.03	0.02	0.06	0.07
Belgium Low-High Ambiguity	0.019	0.019	0.040*	0.064***
	(1.31)	(0.86)	(1.68)	(3.08)
Canada Low Ambiguity	0.012	0.030**	0.054***	0.060***
	(1.16)	(2.30)	(3.82)	(4.05)
Observations	117	115	114	112
R^2	0.05	0.06	0.15	0.18
Canada High Ambiguity	-0.001	0.000	-0.017	-0.038
	(-0.11)	(0.01)	(-0.70)	(-1.40)
Observations	116	115	113	112
R^2	0.01	0.03	0.02	0.05
Canada Low-High Ambiguity	0.013	0.030	0.071**	0.098***
	(0.85)	(1.35)	(2.53)	(3.17)
Denmark Low Ambiguity	-0.005	-0.001	0.030*	0.065***
	(-0.30)	(-0.06)	(1.73)	(3.30)
Observations	96	95	93	92
R^2	0.05	0.00	0.05	0.12
Denmark High Ambiguity	-0.004	-0.002	-0.007	-0.005
	(-0.48)	(-0.14)	(-0.37)	(-0.21)
Observations	96	94	93	91
R^2	0.04	0.03	0.04	0.03
Denmark Low-High Ambiguity	-0.001	0.001	0.037	0.070**
	(-0.06)	(0.04)	(1.44)	(2.37)
Finland Low Ambiguity	0.002	0.003	0.007	0.023
	(0.13)	(0.20)	(0.50)	(1.65)
Observations	96	95	93	92
R^2	0.02	0.04	0.05	0.11
Finland High Ambiguity	-0.004	0.005	0.021*	0.029**
	(-0.55)	(0.42)	(1.71)	(2.32)
Observations	96	94	93	91
R^2	0.04	0.10	0.11	0.12
Finland Low-High Ambiguity	0.006	-0.002	-0.014	-0.006
	(0.39)	(-0.11)	(-0.81)	(-0.31)

Table A.9 (continued)

France Low Ambiguity	0.015**	0.030***	0.044***	0.062***
	(2.11)	(2.71)	(3.80)	(5.33)
Observations	155	153	152	150
R^2	0.04	0.08	0.13	0.22
France High Ambiguity	0.009	0.020**	0.029***	0.025**
	(1.53)	(2.33)	(3.43)	(2.33)
Observations	154	153	151	150
R^2	0.05	0.07	0.14	0.07
France Low-High Ambiguity	0.006	0.010	0.015	0.037**
	(0.66)	(0.68)	(1.03)	(2.37)
Germany Low Ambiguity	0.018	0.040***	0.065***	0.080***
	(1.47)	(2.77)	(4.50)	(5.51)
Observations	155	153	152	150
R^2	0.10	0.15	0.20	0.23
Germany High Ambiguity	0.013**	0.037***	0.058***	0.078***
	(2.45)	(5.30)	(6.59)	(7.93)
Observations	154	153	151	150
R^2	0.05	0.23	0.24	0.27
Germany Low-High Ambiguity	0.005	0.003	0.007	0.002
	(0.40)	(0.17)	(0.42)	(0.10)
Greece Low Ambiguity	-0.032**	-0.051***	-0.060***	-0.074***
	(-2.45)	(-3.23)	(-3.10)	(-3.38)
Observations	148	146	145	143
R^2	0.06	0.06	0.08	0.08
Greece High Ambiguity	0.017	0.042*	0.050**	0.014
	(0.89)	(1.91)	(2.11)	(0.60)
Observations	139	138	136	135
R^2	0.07	0.05	0.04	0.01
Greece Low-High Ambiguity	-0.049**	-0.093***	-0.110***	-0.088***
	(-2.10)	(-3.44)	(-3.60)	(-2.73)
Ireland Low Ambiguity	0.022	0.034	0.037	0.051
	(0.82)	(1.16)	(1.03)	(1.32)
Observations	155	153	152	150
R^2	0.02	0.04	0.02	0.01
Ireland High Ambiguity	-0.023	-0.059	0.035	0.085***
	(-0.94)	(-1.10)	(0.91)	(2.98)
Observations	154	153	151	150
R^2	0.17	0.06	0.02	0.07
Ireland Low-High Ambiguity	0.044	0.094	0.003	-0.034
	(1.24)	(1.53)	(0.05)	(-0.71)
Italy Low Ambiguity	0.029***	0.050***	0.066***	0.073***
	(3.16)	(3.59)	(4.08)	(4.95)
Observations	74	73	71	70
R^2	0.14	0.16	0.18	0.19
Italy High Ambiguity	0.016	0.029**	0.039**	0.056**
	(1.44)	(2.33)	(2.16)	(2.20)
Observations	74	72	71	69
R^2	0.04	0.08	0.14	0.17
Italy Low-High Ambiguity	0.012	0.021	0.026	0.016
	(0.85)	(1.11)	(1.08)	(0.56)
Japan Low Ambiguity	0.012	0.030**	0.059***	0.092***
	(1.29)	(2.37)	(5.04)	(7.95)
Observations	155	153	152	150
R^2	0.05	0.08	0.13	0.22
Japan High Ambiguity	0.009**	0.022***	0.035***	0.048***
	(1.98)	(2.75)	(4.13)	(4.99)
Observations	154	153	151	150
R^2	0.03	0.06	0.12	0.13
Japan Low-High Ambiguity	0.003	0.008	0.023	0.044***
	(0.26)	(0.50)	(1.62)	(2.92)
Netherlands Low Ambiguity	0.022***	0.055***	0.079***	0.100***
	(2.67)	(4.51)	(6.17)	(7.53)
Observations	155	153	152	150
R^2	0.04	0.12	0.19	0.26
Netherlands High Ambiguity	0.020**	0.038***	0.062***	0.074***
	(2.38)	(4.45)	(6.25)	(6.88)
Observations	154	153	151	150
R^2	0.06	0.11	0.23	0.26
Netherlands Low-High Ambiguity	0.002	0.017	0.018	0.026
	(0.20)	(1.13)	(1.09)	(1.53)

Table A.9 (continued)

New Zealand Low Ambiguity	0.009	0.023**	0.038**	0.059***
	(1.29)	(2.08)	(2.49)	(4.09)
Observations	87	86	84	83
R^2	0.04	0.12	0.16	0.26
New Zealand High Ambiguity	0.034***	0.067***	0.084***	0.116***
	(3.87)	(4.68)	(4.56)	(6.61)
Observations	87	85	84	82
R^2	0.22	0.32	0.37	0.43
New Zealand Low-High Ambiguity	-0.025**	-0.044**	-0.046*	-0.057**
	(-2.18)	(-2.41)	(-1.94)	(-2.50)
Portugal Low Ambiguity	0.027***	0.056***	0.089***	0.110***
	(3.20)	(3.94)	(4.97)	(5.57)
Observations	145	143	142	140
R^2	0.09	0.13	0.19	0.22
Portugal High Ambiguity	0.005	0.003	-0.018	0.004
	(0.40)	(0.23)	(-0.98)	(0.13)
Observations	144	143	141	140
R^2	0.02	0.07	0.02	0.03
Portugal Low-High Ambiguity	0.022	0.052**	0.108***	0.106***
	(1.37)	(2.56)	(4.14)	(3.09)
Spain Low Ambiguity	0.015**	0.039***	0.057***	0.065***
	(2.03)	(3.59)	(4.50)	(4.81)
Observations	155	153	152	150
R^2	0.04	0.10	0.14	0.14
Spain High Ambiguity	0.018*	0.028*	0.056***	0.086***
	(1.97)	(1.92)	(3.31)	(4.63)
Observations	154	153	151	150
R^2	0.05	0.07	0.13	0.18
Spain Low-High Ambiguity	-0.003	0.011	0.001	-0.021
	(-0.25)	(0.63)	(0.03)	(-0.91)
Sweden Low Ambiguity	-0.008	-0.012	-0.000	0.020*
	(-0.78)	(-0.74)	(-0.01)	(1.76)
Observations	96	95	93	92
R^2	0.07	0.05	0.05	0.05
Sweden High Ambiguity	-0.001	0.004	0.019	0.031*
	(-0.10)	(0.38)	(1.21)	(1.82)
Observations	96	94	93	91
R^2	0.05	0.06	0.09	0.12
Sweden Low-High Ambiguity	-0.007	-0.015	-0.019	-0.011
	(-0.59)	(-0.83)	(-0.93)	(-0.53)
Switzerland Low Ambiguity	0.025***	0.058***	0.078***	0.103***
	(2.91)	(5.71)	(6.93)	(8.21)
Observations	155	153	152	150
R^2	0.10	0.18	0.20	0.27
Switzerland High Ambiguity	0.012*	0.022**	0.048***	0.077***
	(1.84)	(2.50)	(4.43)	(6.50)
Observations	154	153	151	150
R^2	0.05	0.05	0.16	0.24
Switzerland Low-High Ambiguity	0.013	0.036***	0.030*	0.026
	(1.24)	(2.70)	(1.91)	(1.50)
UK Low Ambiguity	0.020**	0.030**	0.045***	0.059***
	(2.04)	(2.17)	(3.51)	(4.78)
Observations	155	153	152	150
R^2	0.08	0.11	0.15	0.17
UK High Ambiguity	-0.005	0.004	0.008	0.009
	(-0.84)	(0.44)	(0.82)	(0.85)
Observations	154	153	151	150
R^2	0.01	0.14	0.24	0.22
UK Low-High Ambiguity	0.025**	0.025	0.037**	0.051***
	(2.17)	(1.49)	(2.23)	(3.17)
US Low Ambiguity	0.032***	0.057***	0.086***	0.108***
	(3.14)	(5.72)	(6.99)	(8.45)
Observations	155	153	152	150
R^2	0.14	0.22	0.27	0.32
US High Ambiguity	0.000	0.029	0.046	0.041*
	(0.02)	(1.52)	(1.60)	(1.77)
Observations	154	153	151	150
R^2	0.00	0.08	0.10	0.06
US Low-High Ambiguity	0.032**	0.028	0.040	0.067**
	(2.50)	(1.33)	(1.28)	(2.52)

Table A.10

Sentiment and beta premium during periods of low and high risk: controlling for risk factors
This tables reports the results from regressing future beta premium against sentiment and the Fama–French three factors (market, size, and book-to-market) during periods of low and high risk. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Risk as the periods below the medium of risk and High Risk as the periods above the medium of risk. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Risk	-0.014*	-0.027**	-0.027**	-0.023*
	(-1.90)	(-2.29)	(-2.45)	(-1.73)
Observations	129	128	126	125
R^2	0.10	0.11	0.08	0.05
Australia High Risk	-0.007	-0.009	0.002	0.015
	(-0.71)	(-0.56)	(0.14)	(0.85)
Observations	129	127	126	124
R^2	0.12	0.04	0.06	0.04
Australia Low-High Risk	-0.007	-0.018	-0.029	-0.038*
	(-0.53)	(-0.94)	(-1.47)	(-1.71)
Austria Low Risk	0.003	0.015*	0.033***	0.041***
	(0.44)	(1.88)	(3.86)	(4.42)
Observations	155	153	152	150
R^2	0.01	0.03	0.09	0.14
Austria High Risk	0.006	0.018	0.045**	0.071***
	(0.43)	(0.84)	(2.12)	(3.80)
Observations	154	153	151	150
R^2	0.03	0.01	0.05	0.10
Austria Low-High Risk	-0.003	-0.003	-0.012	-0.031
	(-0.22)	(-0.13)	(-0.51)	(-1.46)
Belgium Low Risk	0.001	-0.005	0.006	0.025***
	(0.24)	(-0.43)	(0.46)	(2.71)
Observations	155	153	152	150
R^2	0.01	0.02	0.01	0.03
Belgium High Risk	0.014	0.038*	0.063***	0.095***
	(1.10)	(1.91)	(3.22)	(4.96)
Observations	154	153	151	150
R^2	0.04	0.07	0.12	0.18
Belgium Low-High Risk	-0.013	-0.043*	-0.057**	-0.071***
	(-0.91)	(-1.89)	(-2.41)	(-3.32)
Canada Low Risk	-0.005	-0.018	-0.015	-0.040*
	(-0.43)	(-1.04)	(-0.73)	(-1.73)
Observations	117	115	114	112
R^2	0.04	0.11	0.08	0.14
Canada High Risk	0.014	0.035***	0.054***	0.058***
	(1.59)	(3.03)	(4.36)	(4.17)
Observations	116	115	113	112
R^2	0.08	0.09	0.17	0.15
Canada Low-High Risk	-0.019	-0.053**	-0.069***	-0.098***
	(-1.26)	(-2.54)	(-2.91)	(-3.62)
Denmark Low Risk	0.012	0.002	0.004	0.013
	(1.27)	(0.11)	(0.24)	(0.71)
Observations	96	95	93	92
R^2	0.03	0.01	0.00	0.01
Denmark High Risk	-0.014	0.002	0.024	0.050**
	(-0.94)	(0.11)	(1.28)	(2.38)
Observations	96	94	93	91
R^2	0.06	0.01	0.08	0.11
Denmark Low-High Risk	0.026	-0.001	-0.020	-0.038
	(1.48)	(-0.03)	(-0.76)	(-1.36)
Finland Low Risk	-0.017	-0.010	0.015	0.021*
	(-1.66)	(-0.92)	(1.41)	(1.89)
Observations	96	95	93	92
R^2	0.06	0.01	0.07	0.06
Finland High Risk	0.022**	0.022	0.018	0.040***
	(2.08)	(1.63)	(1.24)	(2.66)
Observations	96	94	93	91
R^2	0.13	0.13	0.08	0.17
Finland Low-High Risk	-0.039***	-0.032*	-0.003	-0.019
	(-2.65)	(-1.85)	(-0.18)	(-1.02)

Table A.10 (continued)

France Low Risk	0.015**	0.021**	0.024**	0.042***
	(2.38)	(2.07)	(2.56)	(3.90)
Observations	155	153	152	150
R^2	0.09	0.07	0.07	0.13
France High Risk	0.011	0.030***	0.049***	0.052***
	(1.40)	(2.73)	(4.18)	(4.25)
Observations	154	153	151	150
R^2	0.03	0.08	0.15	0.17
France Low-High Risk	0.005	-0.009	-0.025*	-0.010
	(0.49)	(-0.59)	(-1.69)	(-0.61)
Germany Low Risk	0.010*	0.026***	0.046***	0.072***
	(1.75)	(2.83)	(4.88)	(7.06)
Observations	155	153	152	150
R^2	0.03	0.07	0.12	0.22
Germany High Risk	0.017	0.048***	0.074***	0.084***
	(1.48)	(3.80)	(5.54)	(6.01)
Observations	154	153	151	150
R^2	0.12	0.19	0.24	0.23
Germany Low-High Risk	-0.008	-0.022	-0.027*	-0.012
	(-0.59)	(-1.39)	(-1.67)	(-0.69)
Greece Low Risk	0.003	0.006	0.022	-0.019
	(0.18)	(0.27)	(0.85)	(-0.61)
Observations	143	141	140	138
R^2	0.01	0.01	0.02	0.03
Greece High Risk	-0.023	-0.041***	-0.074***	-0.086***
	(-1.63)	(-2.79)	(-3.99)	(-4.30)
Observations	144	143	141	140
R^2	0.03	0.07	0.12	0.11
Greece Low-High Risk	0.026	0.047*	0.096***	0.067*
	(1.19)	(1.69)	(3.03)	(1.79)
Ireland Low Risk	-0.010	0.014	-0.005	0.060**
	(-0.54)	(0.40)	(-0.12)	(2.04)
Observations	155	153	152	150
R^2	0.02	0.01	0.00	0.04
Ireland High Risk	0.017	0.005	0.052	0.079**
	(0.65)	(0.14)	(1.45)	(2.01)
Observations	154	153	151	150
R^2	0.07	0.01	0.03	0.03
Ireland Low-High Risk	-0.026	0.009	-0.057	-0.019
	(-0.84)	(0.17)	(-0.99)	(-0.39)
Italy Low Risk	0.032***	0.057***	0.083***	0.101***
	(4.33)	(5.42)	(6.44)	(8.04)
Observations	74	73	71	70
R^2	0.16	0.23	0.30	0.38
Italy High Risk	0.013	0.031**	0.038***	0.050***
	(1.46)	(2.45)	(3.04)	(3.57)
Observations	74	72	71	69
R^2	0.03	0.07	0.07	0.08
Italy Low-High Risk	0.018	0.026	0.044**	0.051***
	(1.56)	(1.59)	(2.45)	(2.73)
Japan Low Risk	0.013**	0.024***	0.041***	0.051***
	(2.24)	(2.68)	(4.38)	(4.49)
Observations	155	153	152	150
R^2	0.07	0.10	0.17	0.18
Japan High Risk	0.006	0.022*	0.049***	0.074***
	(0.67)	(1.77)	(4.05)	(7.11)
Observations	154	153	151	150
R^2	0.04	0.08	0.12	0.18
Japan Low-High Risk	0.007	0.003	-0.008	-0.023
	(0.71)	(0.18)	(-0.53)	(-1.47)
Netherlands Low Risk	0.017**	0.031***	0.048***	0.072***
	(2.20)	(3.19)	(4.82)	(6.72)
Observations	155	153	152	150
R^2	0.04	0.06	0.11	0.21
Netherlands High Risk	0.025***	0.064***	0.096***	0.103***
	(3.10)	(5.66)	(7.51)	(7.71)
Observations	154	153	151	150
R^2	0.05	0.17	0.27	0.28
Netherlands Low-High Risk	-0.008	-0.033**	-0.048***	-0.032*
	(-0.69)	(-2.22)	(-2.98)	(-1.86)

Table A.10 (continued)

New Zealand Low Risk	0.018**	0.038***	0.055***	0.085***
	(2.24)	(2.78)	(3.55)	(4.97)
Observations	87	86	84	83
R^2	0.10	0.15	0.24	0.36
New Zealand High Risk	0.016*	0.036**	0.046**	0.063***
	(1.94)	(2.36)	(2.12)	(3.08)
Observations	87	85	84	82
R^2	0.10	0.19	0.19	0.23
New Zealand Low-High Risk	0.002	0.002	0.009	0.022
	(0.17)	(0.08)	(0.34)	(0.83)
Portugal Low Risk	0.008	0.041***	0.056***	0.076***
	(0.73)	(2.97)	(3.65)	(3.94)
Observations	145	143	142	140
R^2	0.02	0.10	0.11	0.12
Portugal High Risk	0.028***	0.044***	0.066***	0.087***
	(3.07)	(3.13)	(3.55)	(4.15)
Observations	144	143	141	140
R^2	0.08	0.09	0.11	0.13
Portugal Low-High Risk	-0.020	-0.004	-0.010	-0.011
	(-1.44)	(-0.18)	(-0.41)	(-0.38)
Spain Low Risk	0.012*	0.017	0.037***	0.050**
	(1.72)	(1.45)	(2.62)	(2.36)
Observations	155	153	152	150
R^2	0.08	0.07	0.08	0.09
Spain High Risk	0.016**	0.042***	0.061***	0.072***
	(2.16)	(3.77)	(4.85)	(5.50)
Observations	154	153	151	150
R^2	0.04	0.11	0.15	0.17
Spain Low-High Risk	-0.004	-0.024	-0.024	-0.022
	(-0.38)	(-1.48)	(-1.24)	(-0.89)
Sweden Low Risk	-0.003	-0.015	-0.010	0.003
	(-0.44)	(-1.10)	(-0.62)	(0.17)
Observations	96	95	93	92
R^2	0.01	0.06	0.09	0.12
Sweden High Risk	-0.005	-0.004	0.012	0.033***
	(-0.49)	(-0.25)	(0.83)	(2.73)
Observations	96	94	93	91
R^2	0.05	0.05	0.08	0.11
Sweden Low-High Risk	0.002	-0.010	-0.022	-0.031
	(0.13)	(-0.49)	(-1.01)	(-1.58)
Switzerland Low Risk	0.022***	0.035***	0.058***	0.083***
	(3.09)	(3.68)	(5.53)	(7.49)
Observations	155	153	152	150
R^2	0.09	0.10	0.18	0.28
Switzerland High Risk	0.019**	0.053***	0.075***	0.102***
	(2.27)	(4.99)	(6.13)	(7.67)
Observations	154	153	151	150
R^2	0.08	0.15	0.19	0.25
Switzerland Low-High Risk	0.003	-0.018	-0.017	-0.019
	(0.30)	(-1.25)	(-1.08)	(-1.12)
UK Low Risk	0.006	-0.005	0.005	0.020*
	(0.74)	(-0.41)	(0.50)	(1.78)
Observations	155	153	152	150
R^2	0.03	0.05	0.04	0.04
UK High Risk	0.015	0.035***	0.047***	0.053***
	(1.62)	(2.72)	(3.78)	(4.36)
Observations	154	153	151	150
R^2	0.05	0.11	0.17	0.18
UK Low-High Risk	-0.009	-0.040**	-0.041**	-0.033**
	(-0.74)	(-2.19)	(-2.51)	(-2.00)
US Low Risk	0.011	0.035*	0.036*	0.076***
	(0.67)	(1.75)	(1.84)	(2.63)
Observations	155	153	152	150
R^2	0.07	0.11	0.07	0.11
US High Risk	0.027***	0.054***	0.087***	0.103***
	(3.00)	(5.59)	(6.90)	(8.89)
Observations	154	153	151	150
R^2	0.14	0.20	0.28	0.31
US Low-High Risk	-0.017	-0.018	-0.051**	-0.028
	(-0.90)	(-0.83)	(-2.20)	(-0.89)

Table A.11

Sentiment and volatility premium during periods of low and high ambiguity: controlling for risk factors

This tables reports the results from regressing future volatility premium against sentiment and the Fama–French three factors (market, size, and book-to-market) during periods of low and high ambiguity. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and the High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Ambiguity	-0.014	-0.027**	-0.025*	-0.021
	(-1.62)	(-1.98)	(-1.67)	(-1.36)
Observations	129	128	126	125
R^2	0.16	0.09	0.07	0.06
Australia High Ambiguity	-0.014**	-0.014	-0.016	-0.006
	(-2.19)	(-1.34)	(-1.15)	(-0.35)
Observations	129	127	126	124
R^2	0.20	0.13	0.12	0.10
Australia Low-High Ambiguity	0.000	-0.013	-0.009	-0.015
	(0.02)	(-0.76)	(-0.43)	(-0.62)
Austria Low Ambiguity	0.003	-0.022	-0.013	0.005
	(0.18)	(-0.73)	(-0.47)	(0.22)
Observations	155	153	152	150
R^2	0.01	0.02	0.01	0.02
Austria High Ambiguity	0.008	0.043***	0.062***	0.067***
	(0.84)	(3.64)	(4.52)	(4.12)
Observations	154	153	151	150
R^2	0.09	0.13	0.19	0.16
Austria Low-High Ambiguity	-0.005	-0.065**	-0.075**	-0.063**
	(-0.26)	(-2.01)	(-2.47)	(-2.33)
Belgium Low Ambiguity	0.016	0.041**	0.081***	0.136***
	(1.30)	(2.09)	(4.13)	(7.48)
Observations	155	153	152	150
R^2	0.03	0.08	0.19	0.37
Belgium High Ambiguity	0.015***	0.023**	0.035***	0.038***
	(2.68)	(2.52)	(2.73)	(2.98)
Observations	154	153	151	150
R^2	0.11	0.06	0.07	0.08
Belgium Low-High Ambiguity	0.001	0.018	0.046*	0.098***
	(0.09)	(0.83)	(1.95)	(4.43)
Canada Low Ambiguity	0.009	0.022	0.043***	0.048***
	(0.93)	(1.58)	(2.72)	(2.74)
Observations	117	115	114	112
R^2	0.06	0.05	0.10	0.10
Canada High Ambiguity	-0.025**	-0.041**	-0.074***	-0.101***
	(-2.13)	(-2.24)	(-3.21)	(-4.04)
Observations	116	115	113	112
R^2	0.05	0.07	0.15	0.17
Canada Low-High Ambiguity	0.035**	0.063***	0.117***	0.149***
	(2.23)	(2.74)	(4.18)	(4.88)
Denmark Low Ambiguity	-0.015	-0.023	-0.001	0.022
	(-1.08)	(-1.32)	(-0.09)	(1.21)
Observations	96	95	93	92
R^2	0.03	0.03	0.05	0.06
Denmark High Ambiguity	0.004	0.006	0.017	0.026
	(0.49)	(0.44)	(0.85)	(1.09)
Observations	96	94	93	91
R^2	0.05	0.02	0.02	0.02
Denmark Low-High Ambiguity	-0.018	-0.030	-0.019	-0.004
	(-1.18)	(-1.30)	(-0.72)	(-0.14)
Finland Low Ambiguity	0.001	0.000	-0.004	0.016
	(0.08)	(0.02)	(-0.27)	(1.10)
Observations	96	95	93	92
R^2	0.01	0.05	0.10	0.07
Finland High Ambiguity	0.008	0.025***	0.054***	0.075***
	(1.10)	(3.13)	(5.92)	(6.81)
Observations	96	94	93	91
R^2	0.02	0.12	0.25	0.34
Finland Low-High Ambiguity	-0.008	-0.025	-0.058***	-0.058***
	(-0.57)	(-1.54)	(-3.34)	(-3.14)

Table A.11 (continued)

France Low Ambiguity	0.025**	0.052***	0.080***	0.108***
	(2.20)	(3.28)	(4.05)	(4.73)
Observations	155	153	152	150
R^2	0.09	0.12	0.17	0.23
France High Ambiguity	0.006	0.021***	0.039***	0.038***
	(1.33)	(3.04)	(5.28)	(4.28)
Observations	154	153	151	150
R^2	0.02	0.09	0.19	0.12
France Low-High Ambiguity	0.019	0.031*	0.041*	0.071***
	(1.51)	(1.77)	(1.95)	(2.88)
Germany Low Ambiguity	0.018	0.044***	0.083***	0.107***
	(1.60)	(2.90)	(4.32)	(4.37)
Observations	155	153	152	150
R^2	0.09	0.11	0.12	0.07
Germany High Ambiguity	-0.008*	-0.003	-0.002	-0.001
	(-1.85)	(-0.52)	(-0.21)	(-0.12)
Observations	154	153	151	150
R^2	0.05	0.02	0.01	0.01
Germany Low-High Ambiguity	0.027**	0.047***	0.085***	0.108***
	(2.17)	(2.87)	(4.07)	(4.13)
Greece Low Ambiguity	-0.041***	-0.094***	-0.150***	-0.195***
	(-2.85)	(-4.58)	(-5.02)	(-4.66)
Observations	152	151	149	148
R^2	0.07	0.14	0.18	0.16
Greece High Ambiguity	-0.042*	-0.056*	-0.073*	-0.128***
	(-1.78)	(-1.86)	(-1.71)	(-2.85)
Observations	136	134	133	131
R^2	0.10	0.09	0.08	0.17
Greece Low-High Ambiguity	0.001	-0.038	-0.078	-0.066
	(0.03)	(-1.04)	(-1.50)	(-1.08)
Ireland Low Ambiguity	0.026	0.052**	0.053*	0.069**
	(1.32)	(2.17)	(1.81)	(2.18)
Observations	143	142	140	139
R^2	0.05	0.06	0.03	0.03
Ireland High Ambiguity	-0.016	-0.032	0.047*	0.101***
	(-0.84)	(-0.93)	(1.74)	(4.63)
Observations	143	141	140	138
R^2	0.09	0.05	0.06	0.15
Ireland Low-High Ambiguity	0.041	0.084**	0.005	-0.032
	(1.54)	(2.01)	(0.14)	(-0.84)
Italy Low Ambiguity	0.010	0.021*	0.031***	0.036***
	(1.13)	(1.87)	(2.67)	(2.96)
Observations	74	73	71	70
R^2	0.10	0.07	0.10	0.09
Italy High Ambiguity	-0.007	-0.021*	-0.022	-0.024
	(-0.80)	(-1.95)	(-1.31)	(-1.18)
Observations	74	72	71	69
R^2	0.06	0.08	0.03	0.03
Italy Low-High Ambiguity	0.017	0.042***	0.053**	0.059**
	(1.37)	(2.70)	(2.61)	(2.53)
Japan Low Ambiguity	0.014*	0.035***	0.061***	0.089***
	(1.85)	(3.34)	(5.88)	(7.87)
Observations	155	153	152	150
R^2	0.05	0.08	0.14	0.23
Japan High Ambiguity	0.003	0.007	0.011*	0.020***
	(0.88)	(1.14)	(1.75)	(2.86)
Observations	154	153	151	150
R^2	0.01	0.03	0.07	0.10
Japan Low-High Ambiguity	0.011	0.028**	0.050***	0.069***
	(1.31)	(2.35)	(4.11)	(5.24)
Netherlands Low Ambiguity	0.024**	0.062***	0.096***	0.121***
	(2.18)	(3.75)	(4.38)	(4.89)
Observations	155	153	152	150
R^2	0.04	0.13	0.18	0.21
Netherlands High Ambiguity	0.010	0.018*	0.030**	0.040**
	(1.14)	(1.79)	(2.52)	(2.19)
Observations	154	153	151	150
R^2	0.04	0.05	0.13	0.13
Netherlands Low-High Ambiguity	0.014	0.044**	0.066***	0.081***
	(0.96)	(2.27)	(2.64)	(2.62)

Table A.11 (continued)

New Zealand Low Ambiguity	-0.005	-0.019**	-0.019*	-0.009
	(-0.83)	(-2.08)	(-1.79)	(-0.75)
Observations	87	86	84	83
R^2	0.06	0.12	0.11	0.06
New Zealand High Ambiguity	0.000	0.003	0.013	0.043**
	(0.00)	(0.26)	(0.80)	(2.21)
Observations	87	85	84	82
R^2	0.02	0.02	0.02	0.06
New Zealand Low-High Ambiguity	-0.005	-0.022	-0.032*	-0.051**
	(-0.51)	(-1.46)	(-1.67)	(-2.28)
Portugal Low Ambiguity	0.007	0.004	0.015	0.025
	(0.73)	(0.29)	(0.85)	(1.20)
Observations	154	152	151	149
R^2	0.05	0.03	0.03	0.04
Portugal High Ambiguity	-0.008	-0.010	-0.009	0.013
	(-0.59)	(-0.63)	(-0.45)	(0.53)
Observations	153	152	150	149
R^2	0.06	0.04	0.03	0.03
Portugal Low-High Ambiguity	0.014	0.014	0.024	0.011
	(0.90)	(0.68)	(0.91)	(0.35)
Spain Low Ambiguity	0.010	0.026***	0.041***	0.043***
	(1.35)	(2.87)	(3.88)	(3.99)
Observations	155	153	152	150
R^2	0.06	0.08	0.13	0.12
Spain High Ambiguity	0.002	-0.007	-0.011	0.008
	(0.18)	(-0.53)	(-0.76)	(0.49)
Observations	154	153	151	150
R^2	0.03	0.05	0.06	0.07
Spain Low-High Ambiguity	0.008	0.032**	0.052***	0.035*
	(0.73)	(2.13)	(2.83)	(1.79)
Sweden Low Ambiguity	0.006	0.006	0.015	0.028***
	(0.73)	(0.45)	(1.43)	(3.59)
Observations	96	95	93	92
R^2	0.07	0.06	0.11	0.17
Sweden High Ambiguity	-0.007	0.001	0.023	0.046***
	(-1.19)	(0.07)	(1.31)	(2.87)
Observations	96	94	93	91
R^2	0.01	0.00	0.06	0.16
Sweden Low-High Ambiguity	0.013	0.005	-0.008	-0.018
	(1.30)	(0.30)	(-0.38)	(-0.99)
Switzerland Low Ambiguity	0.017**	0.035***	0.050***	0.059***
	(2.11)	(3.50)	(4.63)	(5.16)
Observations	155	153	152	150
R^2	0.09	0.14	0.13	0.12
Switzerland High Ambiguity	0.002	0.015*	0.034***	0.056***
	(0.28)	(1.77)	(2.70)	(3.23)
Observations	154	153	151	150
R^2	0.01	0.03	0.08	0.14
Switzerland Low-High Ambiguity	0.015	0.019	0.015	0.003
	(1.37)	(1.45)	(0.92)	(0.14)
UK Low Ambiguity	0.012	0.016	0.025*	0.037**
	(1.24)	(1.17)	(1.79)	(2.57)
Observations	155	153	152	150
R^2	0.06	0.06	0.07	0.07
UK High Ambiguity	-0.010	-0.003	-0.004	-0.011
	(-1.60)	(-0.31)	(-0.38)	(-1.01)
Observations	154	153	151	150
R^2	0.04	0.13	0.25	0.22
UK Low-High Ambiguity	0.022*	0.019	0.029*	0.049***
	(1.91)	(1.12)	(1.67)	(2.66)
US Low Ambiguity	0.046***	0.079***	0.122***	0.153***
	(3.69)	(5.61)	(6.56)	(7.62)
Observations	155	153	152	150
R^2	0.19	0.27	0.29	0.31
US High Ambiguity	0.018**	0.064***	0.088***	0.079***
	(2.36)	(3.50)	(3.58)	(4.93)
Observations	154	153	151	150
R^2	0.06	0.21	0.22	0.13
US Low-High Ambiguity	0.028*	0.015	0.034	0.073***
	(1.94)	(0.66)	(1.10)	(2.86)

Table A.12

Sentiment and volatility premium during periods of low and high risk: controlling for risk factors
This tables reports the results from regressing future volatility premium against sentiment and the Fama–French three factors (market, size, and book-to-market) during periods of low and high risk. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Risk as the periods below the medium of risk and High Risk as the periods above the medium of risk. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Risk	-0.015**	-0.023*	-0.021*	-0.017
	(-2.09)	(-1.93)	(-1.75)	(-1.18)
Observations	129	128	126	125
R^2	0.15	0.11	0.10	0.07
Australia High Risk	-0.009	-0.015	-0.014	-0.010
	(-0.95)	(-1.00)	(-0.87)	(-0.55)
Observations	129	127	126	124
R^2	0.13	0.07	0.09	0.05
Australia Low-High Risk	-0.006	-0.008	-0.007	-0.007
	(-0.48)	(-0.42)	(-0.36)	(-0.32)
Austria Low Risk	0.015***	0.030***	0.035***	0.028**
	(3.28)	(4.63)	(3.43)	(2.33)
Observations	155	153	152	150
R^2	0.09	0.12	0.08	0.04
Austria High Risk	-0.005	-0.006	0.021	0.058***
	(-0.27)	(-0.18)	(0.74)	(2.69)
Observations	154	153	151	150
R^2	0.05	0.00	0.03	0.06
Austria Low-High Risk	0.019	0.036	0.014	-0.030
	(1.07)	(1.12)	(0.46)	(-1.22)
Belgium Low Risk	0.019***	0.023**	0.046***	0.060***
	(3.28)	(2.03)	(2.88)	(4.25)
Observations	155	153	152	150
R^2	0.13	0.09	0.13	0.18
Belgium High Risk	0.011	0.036**	0.066***	0.103***
	(0.91)	(2.01)	(4.00)	(5.94)
Observations	154	153	151	150
R^2	0.03	0.06	0.15	0.27
Belgium Low-High Risk	0.009	-0.013	-0.020	-0.043*
	(0.65)	(-0.59)	(-0.85)	(-1.92)
Canada Low Risk	-0.017	-0.046***	-0.058***	-0.086***
	(-1.37)	(-3.24)	(-3.76)	(-4.50)
Observations	117	115	114	112
R^2	0.05	0.16	0.12	0.20
Canada High Risk	0.009	0.024*	0.038**	0.039**
	(1.04)	(1.85)	(2.57)	(2.28)
Observations	116	115	113	112
R^2	0.09	0.07	0.09	0.07
Canada Low-High Risk	-0.026*	-0.070***	-0.096***	-0.125***
	(-1.72)	(-3.64)	(-4.48)	(-4.88)
Denmark Low Risk	0.008	-0.001	-0.001	0.009
	(1.11)	(-0.07)	(-0.03)	(0.55)
Observations	96	95	93	92
R^2	0.02	0.01	0.01	0.01
Denmark High Risk	-0.020	-0.022	0.001	0.014
	(-1.51)	(-1.06)	(0.05)	(0.76)
Observations	96	94	93	91
R^2	0.09	0.02	0.06	0.04
Denmark Low-High Risk	0.029*	0.021	-0.001	-0.005
	(1.86)	(0.86)	(-0.05)	(-0.19)
Finland Low Risk	0.010	0.020*	0.049***	0.074***
	(1.19)	(1.81)	(3.82)	(5.91)
Observations	96	95	93	92
R^2	0.04	0.12	0.24	0.37
Finland High Risk	-0.001	0.001	-0.006	0.007
	(-0.05)	(0.08)	(-0.50)	(0.52)
Observations	96	94	93	91
R^2	0.01	0.01	0.03	0.02
Finland Low-High Risk	0.011	0.019	0.055***	0.067***
	(0.79)	(1.08)	(3.11)	(3.56)

Table A.12 (continued)

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
France Low Risk	0.014*	0.027*	0.030**	0.054***
	(1.69)	(1.95)	(2.13)	(2.86)
Observations	155	153	152	150
R^2	0.11	0.09	0.10	0.13
France High Risk	0.021*	0.051***	0.088***	0.102***
	(1.88)	(3.36)	(4.44)	(4.39)
Observations	154	153	151	150
R^2	0.06	0.14	0.22	0.22
France Low-High Risk	-0.007	-0.024	-0.058**	-0.048
	(-0.49)	(-1.19)	(-2.38)	(-1.61)
Germany Low Risk	-0.000	-0.003	0.001	0.003
	(-0.03)	(-0.42)	(0.10)	(0.26)
Observations	155	153	152	150
R^2	0.07	0.07	0.04	0.05
Germany High Risk	0.009	0.043***	0.080***	0.102***
	(0.79)	(3.00)	(3.98)	(3.93)
Observations	154	153	151	150
R^2	0.09	0.10	0.14	0.09
Germany Low-High Risk	-0.009	-0.047***	-0.079***	-0.099***
	(-0.74)	(-2.84)	(-3.62)	(-3.53)
Greece Low Risk	-0.025	-0.056*	-0.073*	-0.122**
	(-1.59)	(-1.83)	(-1.92)	(-2.18)
Observations	139	138	136	135
R^2	0.05	0.06	0.06	0.10
Greece High Risk	-0.056***	-0.105***	-0.164***	-0.221***
	(-3.50)	(-5.50)	(-5.34)	(-5.68)
Observations	149	147	146	144
R^2	0.13	0.20	0.22	0.23
Greece Low-High Risk	0.031	0.049	0.091*	0.099
	(1.39)	(1.36)	(1.87)	(1.46)
Ireland Low Risk	0.016	0.029	0.041	0.100***
	(1.23)	(1.09)	(1.29)	(3.74)
Observations	143	142	140	139
R^2	0.10	0.04	0.05	0.12
Ireland High Risk	0.018	0.030	0.063**	0.080**
	(0.90)	(1.11)	(2.10)	(2.39)
Observations	143	141	140	138
R^2	0.07	0.02	0.03	0.04
Ireland Low-High Risk	-0.002	-0.001	-0.022	0.020
	(-0.06)	(-0.03)	(-0.50)	(0.48)
Italy Low Risk	0.003	0.014	0.024*	0.032**
	(0.35)	(1.31)	(1.88)	(2.31)
Observations	74	73	71	70
R^2	0.04	0.03	0.05	0.09
Italy High Risk	0.004	0.008	0.009	0.015
	(0.47)	(0.57)	(0.82)	(1.23)
Observations	74	72	71	69
R^2	0.03	0.01	0.02	0.02
Italy Low-High Risk	-0.001	0.006	0.015	0.017
	(-0.12)	(0.35)	(0.90)	(0.91)
Japan Low Risk	0.009**	0.019***	0.028***	0.036***
	(2.04)	(2.80)	(3.40)	(3.89)
Observations	155	153	152	150
R^2	0.07	0.09	0.14	0.17
Japan High Risk	0.005	0.019*	0.041***	0.063***
	(0.66)	(1.81)	(3.91)	(6.08)
Observations	154	153	151	150
R^2	0.03	0.07	0.09	0.16
Japan Low-High Risk	0.005	0.000	-0.013	-0.027*
	(0.55)	(0.01)	(-1.01)	(-1.92)
Netherlands Low Risk	0.017*	0.032***	0.039***	0.066***
	(1.77)	(2.62)	(2.80)	(3.02)
Observations	155	153	152	150
R^2	0.05	0.07	0.08	0.11
Netherlands High Risk	0.021*	0.054***	0.094***	0.101***
	(1.95)	(3.32)	(4.17)	(4.15)
Observations	154	153	151	150
R^2	0.03	0.11	0.19	0.19
Netherlands Low-High Risk	-0.004	-0.022	-0.055**	-0.035
	(-0.31)	(-1.07)	(-2.06)	(-1.08)

Table A.12 (continued)

New Zealand Low Risk	-0.002	-0.011	0.005	0.023
	(-0.29)	(-0.92)	(0.43)	(1.55)
Observations	87	86	84	83
R^2	0.05	0.05	0.06	0.04
New Zealand High Risk	-0.009	-0.020**	-0.030**	-0.020
	(-1.26)	(-2.05)	(-2.22)	(-1.39)
Observations	87	85	84	82
R^2	0.06	0.15	0.15	0.07
New Zealand Low-High Risk	0.007	0.009	0.035*	0.043**
	(0.73)	(0.60)	(1.96)	(2.08)
Portugal Low Risk	0.002	-0.003	0.011	0.032
	(0.17)	(-0.18)	(0.56)	(1.46)
Observations	154	152	151	149
R^2	0.00	0.01	0.00	0.02
Portugal High Risk	-0.007	-0.004	-0.002	0.003
	(-0.70)	(-0.32)	(-0.13)	(0.14)
Observations	153	152	150	149
R^2	0.04	0.03	0.02	0.02
Portugal Low-High Risk	0.009	0.002	0.013	0.029
	(0.59)	(0.07)	(0.50)	(0.97)
Spain Low Risk	-0.003	-0.012	-0.010	-0.000
	(-0.31)	(-0.87)	(-0.57)	(-0.02)
Observations	155	153	152	150
R^2	0.06	0.05	0.04	0.01
Spain High Risk	0.011	0.027***	0.041***	0.044***
	(1.57)	(3.26)	(4.16)	(4.20)
Observations	154	153	151	150
R^2	0.07	0.11	0.15	0.15
Spain Low-High Risk	-0.014	-0.039**	-0.051***	-0.044*
	(-1.13)	(-2.43)	(-2.60)	(-1.87)
Sweden Low Risk	-0.004	-0.009	-0.001	0.019
	(-0.69)	(-0.89)	(-0.06)	(1.33)
Observations	96	95	93	92
R^2	0.03	0.05	0.06	0.09
Sweden High Risk	0.006	0.010	0.024**	0.038***
	(0.75)	(0.71)	(2.16)	(4.42)
Observations	96	94	93	91
R^2	0.05	0.07	0.17	0.24
Sweden Low-High Risk	-0.010	-0.019	-0.025	-0.019
	(-1.01)	(-1.09)	(-1.41)	(-1.12)
Switzerland Low Risk	-0.001	0.018*	0.036***	0.044***
	(-0.08)	(1.92)	(3.02)	(3.01)
Observations	155	153	152	150
R^2	0.02	0.05	0.12	0.10
Switzerland High Risk	0.021***	0.034***	0.052***	0.071***
	(2.72)	(3.39)	(4.54)	(5.26)
Observations	154	153	151	150
R^2	0.09	0.12	0.12	0.14
Switzerland Low-High Risk	-0.022*	-0.016	-0.016	-0.026
	(-1.91)	(-1.13)	(-0.97)	(-1.33)
UK Low Risk	-0.011	-0.023**	-0.017*	-0.009
	(-1.33)	(-2.01)	(-1.72)	(-0.75)
Observations	155	153	152	150
R^2	0.08	0.07	0.06	0.01
UK High Risk	0.013	0.025**	0.032**	0.036**
	(1.45)	(2.01)	(2.33)	(2.50)
Observations	154	153	151	150
R^2	0.04	0.06	0.08	0.07
UK Low-High Risk	-0.023*	-0.048***	-0.048***	-0.045**
	(-1.96)	(-2.84)	(-2.89)	(-2.40)
US Low Risk	0.038	0.086***	0.091***	0.150***
	(1.64)	(2.65)	(2.97)	(3.15)
Observations	155	153	152	150
R^2	0.14	0.21	0.18	0.23
US High Risk	0.038***	0.070***	0.119***	0.139***
	(3.55)	(5.79)	(6.46)	(8.02)
Observations	154	153	151	150
R^2	0.20	0.28	0.31	0.32
US Low-High Risk	0.000	0.016	-0.028	0.011
	(0.01)	(0.47)	(-0.78)	(0.22)

Table A.13

Sentiment and idiosyncratic risk premium during periods of low and high ambiguity: controlling for risk factors

This tables reports the results from regressing future idiosyncratic risk premium against sentiment and the Fama–French three factors (market, size, and book-to-market) during periods of low and high ambiguity. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and the High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Ambiguity	-0.005	-0.014	-0.008	-0.004
	(-0.56)	(-1.14)	(-0.66)	(-0.32)
Observations	129	128	126	125
R^2	0.13	0.05	0.05	0.03
Australia High Ambiguity	-0.014**	-0.012	-0.014	-0.009
	(-2.36)	(-1.29)	(-1.10)	(-0.57)
Observations	129	127	126	124
R^2	0.21	0.14	0.11	0.10
Australia Low-High Ambiguity	0.009	-0.001	0.005	0.005
	(0.91)	(-0.10)	(0.31)	(0.22)
Austria Low Ambiguity	-0.012	-0.034**	-0.039*	-0.042**
	(-1.20)	(-2.25)	(-1.94)	(-2.30)
Observations	93	91	90	88
R^2	0.05	0.12	0.09	0.09
Austria High Ambiguity	0.001	0.008	0.015	0.029*
	(0.10)	(0.56)	(0.98)	(1.70)
Observations	92	91	89	88
R^2	0.08	0.02	0.04	0.10
Austria Low-High Ambiguity	-0.013	-0.042**	-0.054**	-0.071***
	(-0.94)	(-2.00)	(-2.14)	(-2.84)
Belgium Low Ambiguity	0.006	0.014	0.040**	0.069***
	(0.55)	(0.76)	(2.05)	(3.58)
Observations	151	150	148	147
R^2	0.05	0.02	0.06	0.12
Belgium High Ambiguity	0.008	0.014	0.014	0.011
	(1.26)	(1.65)	(1.63)	(1.19)
Observations	151	149	148	146
R^2	0.07	0.04	0.02	0.02
Belgium Low-High Ambiguity	-0.002	-0.001	0.026	0.058***
	(-0.13)	(-0.05)	(1.23)	(2.69)
Canada Low Ambiguity	0.016*	0.030***	0.051***	0.056***
	(1.83)	(3.11)	(3.94)	(3.67)
Observations	117	115	114	112
R^2	0.08	0.10	0.16	0.16
Canada High Ambiguity	-0.013	-0.020	-0.048***	-0.070***
	(-1.32)	(-1.34)	(-2.71)	(-3.51)
Observations	116	115	113	112
R^2	0.03	0.02	0.10	0.11
Canada Low-High Ambiguity	0.028**	0.050***	0.099***	0.126***
	(2.20)	(2.82)	(4.51)	(5.01)
Denmark Low Ambiguity	-0.010	-0.022***	-0.027**	-0.025*
	(-1.61)	(-2.83)	(-2.49)	(-1.79)
Observations	92	91	89	88
R^2	0.04	0.10	0.09	0.06
Denmark High Ambiguity	0.004	0.004	0.001	-0.008
	(0.56)	(0.33)	(0.05)	(-0.34)
Observations	92	90	89	87
R^2	0.05	0.00	0.00	0.01
Denmark Low-High Ambiguity	-0.014	-0.027*	-0.028	-0.017
	(-1.43)	(-1.77)	(-1.29)	(-0.61)
Finland Low Ambiguity	0.007	0.017	0.034***	0.060***
	(0.75)	(1.36)	(2.83)	(5.24)
Observations	90	89	87	86
R^2	0.04	0.03	0.12	0.24
Finland High Ambiguity	0.005	0.018**	0.024**	0.024**
	(0.71)	(2.08)	(2.61)	(2.01)
Observations	90	88	87	85
R^2	0.08	0.13	0.10	0.10
Finland Low-High Ambiguity	0.003	-0.001	0.010	0.036**
	(0.21)	(-0.06)	(0.65)	(2.15)

Table A.13 (continued)

France Low Ambiguity	0.017*	0.032**	0.047***	0.062***
	(1.73)	(2.45)	(2.91)	(3.31)
Observations	155	153	152	150
R^2	0.08	0.08	0.10	0.12
France High Ambiguity	0.005	0.015***	0.019***	0.018**
	(1.58)	(3.01)	(3.21)	(2.45)
Observations	154	153	151	150
R^2	0.06	0.12	0.13	0.06
France Low-High Ambiguity	0.011	0.016	0.028	0.044**
	(1.10)	(1.18)	(1.64)	(2.21)
Germany Low Ambiguity	0.016**	0.038***	0.072***	0.091***
	(2.06)	(3.48)	(4.83)	(4.52)
Observations	155	153	152	150
R^2	0.10	0.10	0.13	0.08
Germany High Ambiguity	-0.006	-0.003	-0.007	-0.010
	(-1.50)	(-0.51)	(-0.92)	(-1.16)
Observations	154	153	151	150
R^2	0.07	0.00	0.01	0.02
Germany Low-High Ambiguity	0.022**	0.041***	0.079***	0.101***
	(2.50)	(3.30)	(4.74)	(4.61)
Greece Low Ambiguity	0.017	-0.000	0.003	-0.011
	(1.11)	(-0.00)	(0.16)	(-0.91)
Observations	49	48	46	45
R^2	0.03	0.06	0.15	0.30
Greece High Ambiguity	-0.008	0.014	-0.013	-0.020
	(-0.75)	(1.20)	(-0.84)	(-1.10)
Observations	49	47	46	44
R^2	0.10	0.05	0.12	0.11
Greece Low-High Ambiguity	0.025	-0.014	0.016	0.009
	(1.34)	(-0.76)	(0.68)	(0.40)
Ireland Low Ambiguity	0.032	0.043	0.021	0.012
	(1.49)	(1.47)	(0.61)	(0.32)
Observations	36	35	33	32
R^2	0.20	0.15	0.07	0.06
Ireland High Ambiguity	-0.025	-0.051**	-0.018	-0.014
	(-1.20)	(-2.16)	(-0.70)	(-0.32)
Observations	36	34	33	31
R^2	0.11	0.21	0.32	0.17
Ireland Low-High Ambiguity	0.057*	0.094**	0.038	0.026
	(1.91)	(2.49)	(0.90)	(0.45)
Italy Low Ambiguity	0.006	0.013	0.023**	0.029**
	(0.80)	(1.33)	(2.08)	(2.44)
Observations	74	73	71	70
R^2	0.07	0.05	0.10	0.12
Italy High Ambiguity	0.003	-0.000	-0.002	-0.010
	(0.45)	(-0.02)	(-0.11)	(-0.55)
Observations	74	72	71	69
R^2	0.02	0.01	0.05	0.05
Italy Low-High Ambiguity	0.003	0.013	0.024	0.039*
	(0.27)	(0.87)	(1.24)	(1.77)
Japan Low Ambiguity	0.018***	0.040***	0.061***	0.084***
	(3.21)	(5.00)	(6.95)	(8.19)
Observations	155	153	152	150
R^2	0.08	0.13	0.19	0.26
Japan High Ambiguity	0.005*	0.010**	0.016***	0.028***
	(1.79)	(2.26)	(2.90)	(3.85)
Observations	154	153	151	150
R^2	0.02	0.04	0.09	0.13
Japan Low-High Ambiguity	0.012**	0.030***	0.045***	0.056***
	(1.98)	(3.29)	(4.28)	(4.46)
Netherlands Low Ambiguity	0.026***	0.060***	0.087***	0.104***
	(2.71)	(4.24)	(4.64)	(5.06)
Observations	155	153	152	150
R^2	0.07	0.15	0.20	0.23
Netherlands High Ambiguity	0.013	0.026**	0.041***	0.055***
	(1.44)	(2.60)	(3.78)	(3.47)
Observations	154	153	151	150
R^2	0.05	0.11	0.21	0.20
Netherlands Low-High Ambiguity	0.013	0.034**	0.045**	0.049*
	(0.99)	(1.98)	(2.10)	(1.90)

Table A.13 (continued)

Portugal Low Ambiguity	0.025*	0.040*	0.076**	0.138***
	(1.94)	(1.80)	(2.64)	(3.32)
Observations	39	38	36	35
R^2	0.17	0.12	0.28	0.42
Portugal High Ambiguity	-0.008	0.007	0.010	0.057
	(-0.39)	(0.23)	(0.25)	(1.19)
Observations	39	37	36	34
R^2	0.08	0.06	0.13	0.35
Portugal Low-High Ambiguity	0.032	0.034	0.066	0.082
	(1.41)	(0.93)	(1.32)	(1.30)
Spain Low Ambiguity	-0.001	0.003	0.006	0.004
	(-0.11)	(0.47)	(0.66)	(0.36)
Observations	155	153	152	150
R^2	0.05	0.04	0.03	0.02
Spain High Ambiguity	-0.009	-0.023**	-0.035**	-0.031*
	(-1.06)	(-2.56)	(-2.36)	(-1.75)
Observations	154	153	151	150
R^2	0.02	0.06	0.07	0.04
Spain Low-High Ambiguity	0.008	0.027**	0.041**	0.035*
	(0.81)	(2.28)	(2.35)	(1.69)
Sweden Low Ambiguity	-0.002	-0.005	0.004	0.005
	(-0.34)	(-0.61)	(0.48)	(0.68)
Observations	96	95	93	92
R^2	0.04	0.03	0.02	0.03
Sweden High Ambiguity	0.006	0.019**	0.026**	0.047***
	(1.07)	(2.00)	(2.33)	(3.51)
Observations	96	94	93	91
R^2	0.02	0.06	0.10	0.22
Sweden Low-High Ambiguity	-0.008	-0.023*	-0.022	-0.042***
	(-1.02)	(-1.93)	(-1.59)	(-2.71)
Switzerland Low Ambiguity	0.012*	0.023**	0.036***	0.037***
	(1.68)	(2.55)	(3.45)	(3.38)
Observations	155	153	152	150
R^2	0.05	0.08	0.08	0.06
Switzerland High Ambiguity	0.005	0.015	0.028*	0.050**
	(0.66)	(1.62)	(1.88)	(2.32)
Observations	154	153	151	150
R^2	0.01	0.03	0.07	0.11
Switzerland Low-High Ambiguity	0.007	0.009	0.008	-0.013
	(0.72)	(0.66)	(0.44)	(-0.52)
UK Low Ambiguity	0.010	0.010	0.017	0.027**
	(1.10)	(0.82)	(1.34)	(2.07)
Observations	155	153	152	150
R^2	0.06	0.05	0.05	0.05
UK High Ambiguity	-0.007	0.003	0.004	-0.003
	(-1.41)	(0.35)	(0.54)	(-0.35)
Observations	154	153	151	150
R^2	0.03	0.18	0.24	0.18
UK Low-High Ambiguity	0.017*	0.007	0.013	0.030*
	(1.66)	(0.51)	(0.84)	(1.90)
US Low Ambiguity	0.041***	0.072***	0.111***	0.136***
	(3.55)	(5.55)	(6.40)	(7.37)
Observations	155	153	152	150
R^2	0.18	0.27	0.28	0.30
US High Ambiguity	0.026***	0.069***	0.082***	0.067***
	(4.17)	(4.36)	(4.05)	(5.04)
Observations	154	153	151	150
R^2	0.11	0.23	0.22	0.11
US Low-High Ambiguity	0.015	0.002	0.029	0.068***
	(1.17)	(0.12)	(1.08)	(3.01)

Table A.14

Sentiment and idiosyncratic risk premium during periods of low and high risk: controlling for risk factors

This tables reports the results from regressing future idiosyncratic risk premium against sentiment and the Fama–French three factors (market, size, and book-to-market) during periods of low and high risk. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Risk as the periods below the medium of risk and High Risk as the periods above the medium of risk. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Risk	-0.014**	-0.020**	-0.019*	-0.017
	(-2.12)	(-2.02)	(-1.82)	(-1.43)
Observations	129	128	126	125
R^2	0.14	0.11	0.09	0.07
Australia High Risk	0.001	-0.001	0.002	0.005
	(0.07)	(-0.09)	(0.12)	(0.31)
Observations	129	127	126	124
R^2	0.13	0.06	0.09	0.05
Australia Low-High Risk	-0.014	-0.019	-0.020	-0.022
	(-1.29)	(-1.15)	(-1.19)	(-1.13)
Austria Low Risk	-0.015*	-0.024**	-0.036**	-0.020
	(-1.84)	(-2.19)	(-2.59)	(-1.53)
Observations	93	91	90	88
R^2	0.13	0.16	0.13	0.05
Austria High Risk	-0.003	0.001	0.019	0.025
	(-0.28)	(0.05)	(0.85)	(1.16)
Observations	92	91	89	88
R^2	0.08	0.00	0.02	0.04
Austria Low-High Risk	-0.012	-0.025	-0.055**	-0.045*
	(-0.79)	(-1.05)	(-2.11)	(-1.79)
Belgium Low Risk	0.013**	0.015	0.020	0.025**
	(1.98)	(1.48)	(1.56)	(2.34)
Observations	151	150	148	147
R^2	0.06	0.04	0.03	0.05
Belgium High Risk	-0.001	0.008	0.032**	0.053***
	(-0.11)	(0.47)	(2.03)	(2.81)
Observations	151	149	148	146
R^2	0.07	0.01	0.04	0.08
Belgium Low-High Risk	0.014	0.007	-0.012	-0.029
	(1.15)	(0.37)	(-0.59)	(-1.32)
Canada Low Risk	-0.006	-0.024*	-0.035***	-0.056***
	(-0.56)	(-1.90)	(-2.66)	(-3.19)
Observations	117	115	114	112
R^2	0.03	0.06	0.05	0.08
Canada High Risk	0.016**	0.032***	0.046***	0.048***
	(2.18)	(3.61)	(3.83)	(3.32)
Observations	116	115	113	112
R^2	0.11	0.12	0.14	0.11
Canada Low-High Risk	-0.022*	-0.056***	-0.081***	-0.104***
	(-1.70)	(-3.65)	(-4.55)	(-4.58)
Denmark Low Risk	-0.007	-0.017	-0.032**	-0.033
	(-1.00)	(-1.52)	(-2.08)	(-1.65)
Observations	92	91	89	88
R^2	0.06	0.03	0.10	0.07
Denmark High Risk	-0.009	-0.021**	-0.018	-0.025*
	(-1.46)	(-2.61)	(-1.60)	(-1.82)
Observations	92	90	89	87
R^2	0.07	0.07	0.05	0.03
Denmark Low-High Risk	0.002	0.004	-0.013	-0.008
	(0.18)	(0.27)	(-0.71)	(-0.32)
Finland Low Risk	-0.002	0.017*	0.030***	0.037***
	(-0.28)	(1.71)	(3.35)	(3.15)
Observations	90	89	87	86
R^2	0.11	0.11	0.16	0.19
Finland High Risk	0.013	0.016	0.029**	0.049***
	(1.55)	(1.41)	(2.26)	(3.57)
Observations	90	88	87	85
R^2	0.06	0.02	0.06	0.14
Finland Low-High Risk	-0.015	0.001	0.001	-0.012
	(-1.29)	(0.06)	(0.07)	(-0.69)

Table A.14 (continued)

France Low Risk	0.009	0.016	0.014	0.028*
	(1.35)	(1.41)	(1.15)	(1.92)
Observations	155	153	152	150
R^2	0.12	0.09	0.06	0.07
France High Risk	0.015	0.032**	0.052***	0.058***
	(1.49)	(2.58)	(3.16)	(3.00)
Observations	154	153	151	150
R^2	0.05	0.09	0.13	0.12
France Low-High Risk	-0.005	-0.016	-0.038*	-0.030
	(-0.44)	(-0.96)	(-1.82)	(-1.24)
Germany Low Risk	0.002	-0.000	0.003	0.000
	(0.36)	(-0.04)	(0.36)	(0.01)
Observations	155	153	152	150
R^2	0.10	0.08	0.05	0.06
Germany High Risk	0.009	0.036***	0.063***	0.081***
	(1.22)	(3.38)	(3.97)	(3.79)
Observations	154	153	151	150
R^2	0.07	0.09	0.14	0.08
Germany Low-High Risk	-0.008	-0.036***	-0.061***	-0.081***
	(-0.90)	(-2.91)	(-3.42)	(-3.42)
Greece Low Risk	0.008	-0.014	-0.013	-0.006
	(0.47)	(-0.55)	(-0.74)	(-0.32)
Observations	49	48	46	45
R^2	0.08	0.03	0.15	0.21
Greece High Risk	0.001	0.006	0.003	-0.015
	(0.06)	(0.44)	(0.16)	(-1.18)
Observations	49	47	46	44
R^2	0.02	0.05	0.08	0.17
Greece Low-High Risk	0.008	-0.020	-0.016	0.009
	(0.34)	(-0.69)	(-0.65)	(0.40)
Ireland Low Risk	0.003	-0.013	-0.025	-0.023
	(0.16)	(-0.52)	(-0.91)	(-0.65)
Observations	36	35	33	32
R^2	0.01	0.01	0.12	0.11
Ireland High Risk	0.005	0.004	0.008	-0.016
	(0.24)	(0.17)	(0.29)	(-0.43)
Observations	36	34	33	31
R^2	0.01	0.00	0.04	0.03
Ireland Low-High Risk	-0.003	-0.018	-0.033	-0.007
	(-0.09)	(-0.48)	(-0.83)	(-0.14)
Italy Low Risk	0.002	0.008	0.018	0.020
	(0.49)	(0.88)	(1.52)	(1.59)
Observations	74	73	71	70
R^2	0.01	0.02	0.05	0.04
Italy High Risk	0.005	0.008	0.006	0.017
	(0.55)	(0.78)	(0.55)	(1.40)
Observations	74	72	71	69
R^2	0.08	0.02	0.02	0.07
Italy Low-High Risk	-0.002	-0.001	0.012	0.004
	(-0.23)	(-0.04)	(0.75)	(0.21)
Japan Low Risk	0.011***	0.021***	0.032***	0.044***
	(2.95)	(3.71)	(4.22)	(4.77)
Observations	155	153	152	150
R^2	0.10	0.13	0.19	0.22
Japan High Risk	0.009*	0.024***	0.039***	0.058***
	(1.84)	(3.22)	(4.76)	(6.48)
Observations	154	153	151	150
R^2	0.04	0.08	0.11	0.17
Japan Low-High Risk	0.002	-0.002	-0.008	-0.014
	(0.31)	(-0.26)	(-0.69)	(-1.09)
Netherlands Low Risk	0.013	0.030***	0.035***	0.063***
	(1.63)	(2.76)	(2.80)	(3.33)
Observations	155	153	152	150
R^2	0.04	0.07	0.08	0.14
Netherlands High Risk	0.029***	0.061***	0.098***	0.101***
	(2.94)	(4.26)	(5.10)	(4.96)
Observations	154	153	151	150
R^2	0.07	0.16	0.25	0.22
Netherlands Low-High Risk	-0.015	-0.031*	-0.064***	-0.038
	(-1.19)	(-1.74)	(-2.78)	(-1.36)

Table A.14 (continued)

Portugal Low Risk	-0.030*	-0.043	0.015	0.014
	(-2.01)	(-1.50)	(0.32)	(0.20)
Observations	39	38	36	35
R^2	0.12	0.09	0.09	0.02
Portugal High Risk	0.025**	0.043**	0.053*	0.142***
	(2.06)	(2.19)	(1.91)	(4.00)
Observations	39	37	36	34
R^2	0.20	0.18	0.18	0.41
Portugal Low-High Risk	-0.054***	-0.086**	-0.038	-0.128
	(-2.86)	(-2.46)	(-0.71)	(-1.61)
Spain Low Risk	-0.013	-0.030**	-0.044**	-0.046*
	(-1.14)	(-1.99)	(-2.05)	(-1.86)
Observations	155	153	152	150
R^2	0.07	0.08	0.08	0.06
Spain High Risk	-0.001	0.004	0.009	0.007
	(-0.10)	(0.70)	(1.12)	(0.71)
Observations	154	153	151	150
R^2	0.02	0.02	0.02	0.02
Spain Low-High Risk	-0.012	-0.035**	-0.053**	-0.052**
	(-1.00)	(-2.11)	(-2.32)	(-1.99)
Sweden Low Risk	-0.004	0.002	0.009	0.019
	(-0.74)	(0.25)	(0.64)	(1.57)
Observations	96	95	93	92
R^2	0.03	0.02	0.03	0.08
Sweden High Risk	0.003	0.001	0.009	0.014
	(0.51)	(0.09)	(1.15)	(1.60)
Observations	96	94	93	91
R^2	0.02	0.02	0.04	0.04
Sweden Low-High Risk	-0.007	0.002	-0.000	0.005
	(-0.87)	(0.13)	(-0.02)	(0.37)
Switzerland Low Risk	-0.003	0.013	0.025*	0.037**
	(-0.41)	(1.44)	(1.95)	(2.16)
Observations	155	153	152	150
R^2	0.03	0.04	0.10	0.09
Switzerland High Risk	0.019***	0.026***	0.041***	0.050***
	(2.87)	(2.75)	(3.65)	(3.45)
Observations	154	153	151	150
R^2	0.08	0.07	0.09	0.08
Switzerland Low-High Risk	-0.022**	-0.012	-0.016	-0.013
	(-2.21)	(-0.93)	(-0.96)	(-0.59)
UK Low Risk	-0.010	-0.017	-0.009	-0.003
	(-1.55)	(-1.57)	(-0.99)	(-0.33)
Observations	155	153	152	150
R^2	0.09	0.07	0.05	0.01
UK High Risk	0.012	0.020*	0.024*	0.027**
	(1.47)	(1.71)	(1.93)	(2.05)
Observations	154	153	151	150
R^2	0.04	0.05	0.06	0.06
UK Low-High Risk	-0.022**	-0.037**	-0.033**	-0.030*
	(-2.12)	(-2.32)	(-2.13)	(-1.83)
US Low Risk	0.041*	0.087***	0.088***	0.138***
	(1.90)	(2.88)	(3.16)	(3.24)
Observations	155	153	152	150
R^2	0.16	0.23	0.18	0.22
US High Risk	0.034***	0.063***	0.107***	0.123***
	(3.52)	(5.84)	(6.28)	(7.64)
Observations	154	153	151	150
R^2	0.21	0.28	0.30	0.30
US Low-High Risk	0.007	0.024	-0.019	0.015
	(0.29)	(0.75)	(-0.59)	(0.33)

Table A.15

Sentiment and mispricing management premium during periods of low and high ambiguity: controlling for risk factors

This tables reports the results from regressing future mispricing management premium against sentiment and the Fama–French three factors (market, size, and book-to-market) during periods of low and high ambiguity. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and the High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Ambiguity	-0.017**	-0.038***	-0.044***	-0.041***
	(-2.40)	(-3.45)	(-3.81)	(-3.18)
Observations	129	128	126	125
R^2	0.16	0.17	0.16	0.12
Australia High Ambiguity	-0.002	-0.003	-0.001	0.003
	(-0.53)	(-0.34)	(-0.07)	(0.20)
Observations	129	127	126	124
R^2	0.11	0.12	0.11	0.11
Australia Low-High Ambiguity	-0.015*	-0.036***	-0.043***	-0.044**
	(-1.73)	(-2.62)	(-2.68)	(-2.30)
Austria Low Ambiguity	-0.019*	-0.037*	-0.040*	-0.030
	(-1.66)	(-1.80)	(-1.74)	(-1.33)
Observations	155	153	152	150
R^2	0.06	0.09	0.09	0.05
Austria High Ambiguity	0.002	0.015	0.035***	0.050***
	(0.28)	(1.46)	(2.89)	(4.14)
Observations	154	153	151	150
R^2	0.07	0.07	0.10	0.14
Austria Low-High Ambiguity	-0.021	-0.052**	-0.076***	-0.080***
	(-1.59)	(-2.26)	(-2.89)	(-3.11)
Belgium Low Ambiguity	0.015**	0.028***	0.041***	0.060***
	(2.41)	(2.93)	(3.74)	(4.78)
Observations	155	153	152	150
R^2	0.06	0.09	0.14	0.19
Belgium High Ambiguity	0.007*	0.016**	0.030***	0.038***
	(1.76)	(2.52)	(4.29)	(4.83)
Observations	154	153	151	150
R^2	0.17	0.13	0.14	0.15
Belgium Low-High Ambiguity	0.008	0.012	0.012	0.021
	(1.10)	(1.06)	(0.90)	(1.44)
Canada Low Ambiguity	-0.005	-0.006	-0.008	-0.010
	(-0.59)	(-0.59)	(-0.60)	(-0.69)
Observations	117	115	114	112
R^2	0.03	0.04	0.04	0.03
Canada High Ambiguity	-0.016**	-0.032***	-0.049***	-0.070***
	(-2.30)	(-3.13)	(-4.07)	(-5.21)
Observations	116	115	113	112
R^2	0.07	0.14	0.20	0.28
Canada Low-High Ambiguity	0.012	0.026*	0.042**	0.060***
	(1.11)	(1.78)	(2.37)	(3.14)
Denmark Low Ambiguity	-0.010	-0.023**	-0.025*	-0.018
	(-1.02)	(-2.02)	(-1.80)	(-0.93)
Observations	96	95	93	92
R^2	0.02	0.05	0.05	0.03
Denmark High Ambiguity	0.008	0.015	0.008	-0.001
	(1.46)	(1.66)	(0.67)	(-0.04)
Observations	96	94	93	91
R^2	0.04	0.16	0.11	0.12
Denmark Low-High Ambiguity	-0.018	-0.038***	-0.033*	-0.018
	(-1.62)	(-2.62)	(-1.81)	(-0.75)
Finland Low Ambiguity	0.004	0.018	0.031***	0.033***
	(0.42)	(1.59)	(2.89)	(2.88)
Observations	96	95	93	92
R^2	0.05	0.08	0.15	0.16
Finland High Ambiguity	0.007	0.014	0.026**	0.040***
	(1.20)	(1.64)	(2.38)	(2.85)
Observations	96	94	93	91
R^2	0.04	0.07	0.17	0.14
Finland Low-High Ambiguity	-0.003	0.004	0.006	-0.007
	(-0.28)	(0.28)	(0.37)	(-0.38)

Table A.15 (continued)

France Low Ambiguity	0.017***	0.033***	0.051***	0.071***
	(4.66)	(6.58)	(8.66)	(9.28)
Observations	155	153	152	150
R^2	0.17	0.29	0.41	0.47
France High Ambiguity	-0.004	-0.011**	-0.015**	-0.011
	(-1.51)	(-2.18)	(-2.26)	(-1.51)
Observations	154	153	151	150
R^2	0.09	0.14	0.09	0.10
France Low-High Ambiguity	0.021***	0.044***	0.067***	0.083***
	(4.58)	(6.14)	(7.44)	(7.68)
Germany Low Ambiguity	0.000	0.001	0.009	0.011
	(0.06)	(0.17)	(0.87)	(0.81)
Observations	155	153	152	150
R^2	0.05	0.05	0.03	0.02
Germany High Ambiguity	0.007*	0.018***	0.024***	0.027***
	(1.74)	(4.20)	(3.97)	(3.56)
Observations	154	153	151	150
R^2	0.03	0.13	0.10	0.11
Germany Low-High Ambiguity	-0.006	-0.017*	-0.014	-0.016
	(-0.96)	(-1.72)	(-1.14)	(-1.01)
Greece Low Ambiguity	-0.013	-0.033**	-0.054***	-0.071***
	(-1.04)	(-2.01)	(-3.02)	(-3.30)
Observations	138	136	135	133
R^2	0.03	0.05	0.11	0.11
Greece High Ambiguity	0.001	0.011	0.027	0.018
	(0.09)	(0.77)	(1.50)	(0.82)
Observations	137	136	134	133
R^2	0.01	0.01	0.03	0.02
Greece Low-High Ambiguity	-0.014	-0.044**	-0.081***	-0.088***
	(-0.82)	(-2.03)	(-3.20)	(-2.90)
Ireland Low Ambiguity	0.006	0.004	0.009	0.027
	(0.39)	(0.19)	(0.31)	(0.80)
Observations	155	153	152	150
R^2	0.04	0.02	0.02	0.03
Ireland High Ambiguity	-0.027***	-0.056***	-0.062**	-0.047*
	(-3.01)	(-3.36)	(-2.52)	(-1.67)
Observations	154	153	151	150
R^2	0.08	0.13	0.15	0.13
Ireland Low-High Ambiguity	0.034*	0.060**	0.071*	0.074*
	(1.82)	(2.14)	(1.88)	(1.68)
Italy Low Ambiguity	-0.002	-0.005	-0.012**	-0.020***
	(-0.52)	(-0.92)	(-2.04)	(-2.72)
Observations	74	73	71	70
R^2	0.13	0.07	0.09	0.12
Italy High Ambiguity	-0.003	-0.010	-0.023*	-0.043***
	(-0.50)	(-1.26)	(-1.89)	(-3.01)
Observations	74	72	71	69
R^2	0.01	0.05	0.06	0.16
Italy Low-High Ambiguity	0.001	0.005	0.010	0.023
	(0.14)	(0.53)	(0.79)	(1.42)
Japan Low Ambiguity	-0.001	0.004	0.008	0.008
	(-0.20)	(0.90)	(1.47)	(1.35)
Observations	155	153	152	150
R^2	0.05	0.03	0.02	0.01
Japan High Ambiguity	-0.001	-0.004	-0.004	0.001
	(-0.42)	(-0.86)	(-0.96)	(0.18)
Observations	154	153	151	150
R^2	0.01	0.02	0.02	0.02
Japan Low-High Ambiguity	0.001	0.008	0.012*	0.007
	(0.14)	(1.24)	(1.74)	(0.87)
Netherlands Low Ambiguity	0.005	0.012	0.027***	0.040***
	(0.96)	(1.45)	(2.74)	(3.68)
Observations	155	153	152	150
R^2	0.02	0.03	0.07	0.09
Netherlands High Ambiguity	0.010*	0.020***	0.025***	0.034***
	(1.74)	(2.66)	(2.79)	(2.78)
Observations	154	153	151	150
R^2	0.04	0.05	0.06	0.11
Netherlands Low-High Ambiguity	-0.005	-0.007	0.002	0.006
	(-0.60)	(-0.67)	(0.16)	(0.36)

Table A.15 (continued)

New Zealand Low Ambiguity	-0.012**	-0.029***	-0.036***	-0.033***
	(-2.03)	(-2.82)	(-3.72)	(-3.86)
Observations	87	86	84	83
R^2	0.07	0.08	0.11	0.12
New Zealand High Ambiguity	-0.011	-0.013	-0.004	0.013
	(-1.15)	(-1.16)	(-0.26)	(0.62)
Observations	87	85	84	82
R^2	0.04	0.05	0.01	0.06
New Zealand Low-High Ambiguity	-0.001	-0.016	-0.031	-0.045**
	(-0.12)	(-1.05)	(-1.59)	(-2.04)
Portugal Low Ambiguity	0.018**	0.033***	0.037***	0.041***
	(2.26)	(3.03)	(3.16)	(2.74)
Observations	141	139	138	136
R^2	0.04	0.07	0.09	0.09
Portugal High Ambiguity	-0.017*	-0.027**	-0.021	-0.026
	(-1.83)	(-2.24)	(-1.42)	(-1.62)
Observations	140	139	137	136
R^2	0.04	0.05	0.05	0.05
Portugal Low-High Ambiguity	0.035***	0.059***	0.058***	0.067***
	(2.87)	(3.69)	(3.08)	(3.05)
Spain Low Ambiguity	-0.002	0.004	0.005	0.011
	(-0.36)	(0.51)	(0.55)	(0.95)
Observations	155	153	152	150
R^2	0.02	0.04	0.02	0.03
Spain High Ambiguity	-0.008	-0.031***	-0.038***	-0.042**
	(-1.37)	(-3.55)	(-3.03)	(-2.59)
Observations	154	153	151	150
R^2	0.03	0.15	0.14	0.11
Spain Low-High Ambiguity	0.006	0.035***	0.044***	0.053***
	(0.77)	(3.05)	(2.71)	(2.66)
Sweden Low Ambiguity	0.012**	0.021***	0.030***	0.038***
	(2.38)	(4.12)	(5.11)	(5.56)
Observations	96	95	93	92
R^2	0.15	0.21	0.24	0.24
Sweden High Ambiguity	0.007	0.023**	0.047***	0.068***
	(1.23)	(2.43)	(4.15)	(4.95)
Observations	96	94	93	91
R^2	0.14	0.11	0.22	0.29
Sweden Low-High Ambiguity	0.005	-0.001	-0.017	-0.030*
	(0.61)	(-0.12)	(-1.30)	(-1.96)
Switzerland Low Ambiguity	-0.008**	-0.019***	-0.022***	-0.021***
	(-2.50)	(-4.62)	(-4.73)	(-3.25)
Observations	155	153	152	150
R^2	0.10	0.17	0.17	0.12
Switzerland High Ambiguity	0.007*	0.023***	0.036***	0.043***
	(1.91)	(4.48)	(6.41)	(6.46)
Observations	154	153	151	150
R^2	0.04	0.12	0.21	0.21
Switzerland Low-High Ambiguity	-0.016***	-0.041***	-0.058***	-0.064***
	(-3.08)	(-6.38)	(-7.95)	(-6.89)
UK Low Ambiguity	-0.002	-0.001	0.004	0.012
	(-0.36)	(-0.18)	(0.51)	(1.32)
Observations	155	153	152	150
R^2	0.03	0.04	0.04	0.04
UK High Ambiguity	-0.005	-0.013***	-0.022***	-0.029***
	(-1.56)	(-2.64)	(-3.95)	(-3.85)
Observations	154	153	151	150
R^2	0.05	0.11	0.16	0.16
UK Low-High Ambiguity	0.003	0.011	0.027***	0.041***
	(0.45)	(1.32)	(2.71)	(3.46)
US Low Ambiguity	0.023***	0.042***	0.063***	0.077***
	(3.61)	(5.05)	(5.45)	(5.51)
Observations	155	153	152	150
R^2	0.19	0.25	0.26	0.24
US High Ambiguity	0.005	0.010	0.008	0.007
	(1.22)	(1.20)	(0.70)	(0.49)
Observations	154	153	151	150
R^2	0.02	0.03	0.01	0.02
US Low-High Ambiguity	0.018**	0.032***	0.055***	0.070***
	(2.36)	(2.71)	(3.50)	(3.51)

Table A.16

Sentiment and mispricing management premium during periods of low and high risk: controlling for risk factors

This tables reports the results from regressing future mispricing management premium against sentiment and the Fama–French three factors (market, size, and book-to-market) during periods of low and high risk. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Risk as the periods below the medium of risk and High Risk as the periods above the medium of risk. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Risk	-0.013**	-0.023**	-0.022*	-0.019
	(-2.13)	(-2.14)	(-1.93)	(-1.49)
Observations	129	128	126	125
R^2	0.12	0.10	0.10	0.08
Australia High Risk	-0.008	-0.024**	-0.030**	-0.028*
	(-1.13)	(-2.16)	(-2.48)	(-1.96)
Observations	129	127	126	124
R^2	0.09	0.10	0.10	0.07
Australia Low-High Risk	-0.005	0.001	0.008	0.008
	(-0.48)	(0.04)	(0.45)	(0.44)
Austria Low Risk	-0.002	-0.002	0.000	0.008
	(-0.36)	(-0.23)	(0.02)	(0.66)
Observations	155	153	152	150
R^2	0.02	0.01	0.00	0.02
Austria High Risk	-0.015	-0.018	-0.004	0.019
	(-1.28)	(-0.87)	(-0.19)	(0.81)
Observations	154	153	151	150
R^2	0.07	0.04	0.02	0.02
Austria Low-High Risk	0.013	0.016	0.005	-0.012
	(1.03)	(0.75)	(0.18)	(-0.44)
Belgium Low Risk	0.005	0.009	0.022***	0.030***
	(1.27)	(1.59)	(3.52)	(4.14)
Observations	155	153	152	150
R^2	0.06	0.04	0.10	0.12
Belgium High Risk	0.019***	0.037***	0.053***	0.071***
	(2.98)	(3.86)	(4.81)	(5.67)
Observations	154	153	151	150
R^2	0.11	0.16	0.21	0.26
Belgium Low-High Risk	-0.014*	-0.028**	-0.031**	-0.041***
	(-1.92)	(-2.48)	(-2.42)	(-2.83)
Canada Low Risk	-0.018***	-0.039***	-0.058***	-0.071***
	(-3.14)	(-4.25)	(-5.81)	(-6.35)
Observations	117	115	114	112
R^2	0.11	0.22	0.30	0.33
Canada High Risk	-0.005	-0.006	-0.009	-0.017
	(-0.69)	(-0.64)	(-0.79)	(-1.21)
Observations	116	115	113	112
R^2	0.04	0.05	0.04	0.04
Canada Low-High Risk	-0.013	-0.033**	-0.049***	-0.055***
	(-1.46)	(-2.53)	(-3.12)	(-3.10)
Denmark Low Risk	0.002	-0.009	-0.021*	-0.020
	(0.38)	(-0.86)	(-1.84)	(-1.46)
Observations	96	95	93	92
R^2	0.03	0.06	0.10	0.12
Denmark High Risk	-0.009	-0.005	-0.004	-0.004
	(-0.92)	(-0.42)	(-0.30)	(-0.23)
Observations	96	94	93	91
R^2	0.02	0.04	0.04	0.02
Denmark Low-High Risk	0.011	-0.004	-0.018	-0.016
	(0.99)	(-0.22)	(-1.01)	(-0.74)
Finland Low Risk	-0.007	0.008	0.022*	0.032**
	(-0.98)	(0.81)	(1.95)	(2.24)
Observations	96	95	93	92
R^2	0.07	0.03	0.06	0.08
Finland High Risk	0.017*	0.029**	0.035***	0.034***
	(1.90)	(2.62)	(2.99)	(2.88)
Observations	96	94	93	91
R^2	0.06	0.09	0.14	0.15
Finland Low-High Risk	-0.025**	-0.021	-0.013	-0.002
	(-2.10)	(-1.44)	(-0.81)	(-0.08)

Table A.16 (continued)

France Low Risk	0.006	0.010	0.013	0.026**
	(1.27)	(1.34)	(1.51)	(2.00)
Observations	155	153	152	150
R^2	0.05	0.05	0.08	0.10
France High Risk	0.012***	0.025***	0.043***	0.059***
	(3.42)	(4.56)	(6.20)	(7.26)
Observations	154	153	151	150
R^2	0.09	0.18	0.27	0.34
France Low-High Risk	-0.006	-0.015*	-0.030***	-0.033**
	(-1.15)	(-1.69)	(-2.65)	(-2.18)
Germany Low Risk	0.007**	0.013**	0.020***	0.026***
	(2.27)	(2.18)	(2.64)	(2.66)
Observations	155	153	152	150
R^2	0.08	0.08	0.08	0.08
Germany High Risk	-0.002	0.007	0.017	0.017
	(-0.28)	(0.90)	(1.47)	(1.11)
Observations	154	153	151	150
R^2	0.07	0.07	0.06	0.03
Germany Low-High Risk	0.008	0.006	0.003	0.009
	(1.30)	(0.56)	(0.19)	(0.50)
Greece Low Risk	-0.005	-0.005	-0.012	-0.024
	(-0.45)	(-0.34)	(-0.67)	(-1.17)
Observations	138	136	135	133
R^2	0.02	0.01	0.05	0.05
Greece High Risk	-0.014	-0.029*	-0.043**	-0.059***
	(-1.09)	(-1.83)	(-2.44)	(-2.73)
Observations	137	136	134	133
R^2	0.03	0.04	0.07	0.07
Greece Low-High Risk	0.010	0.025	0.030	0.035
	(0.58)	(1.15)	(1.21)	(1.18)
Ireland Low Risk	-0.021	0.002	-0.028	0.017
	(-1.61)	(0.08)	(-0.90)	(0.48)
Observations	155	153	152	150
R^2	0.07	0.08	0.08	0.04
Ireland High Risk	-0.005	-0.033*	-0.020	-0.028
	(-0.33)	(-1.71)	(-0.76)	(-0.88)
Observations	154	153	151	150
R^2	0.01	0.02	0.01	0.02
Ireland Low-High Risk	-0.016	0.035	-0.008	0.045
	(-0.81)	(1.15)	(-0.19)	(0.95)
Italy Low Risk	-0.011**	-0.017**	-0.025***	-0.040***
	(-2.41)	(-2.63)	(-2.88)	(-4.13)
Observations	74	73	71	70
R^2	0.07	0.07	0.10	0.18
Italy High Risk	-0.003	-0.010	-0.021***	-0.029***
	(-0.59)	(-1.64)	(-2.82)	(-3.40)
Observations	74	72	71	69
R^2	0.04	0.09	0.13	0.17
Italy Low-High Risk	-0.008	-0.007	-0.004	-0.011
	(-1.13)	(-0.82)	(-0.35)	(-0.87)
Japan Low Risk	0.000	-0.001	0.000	0.004
	(0.02)	(-0.29)	(0.00)	(0.55)
Observations	155	153	152	150
R^2	0.01	0.01	0.03	0.02
Japan High Risk	0.001	0.006	0.012**	0.013**
	(0.34)	(1.46)	(2.26)	(2.29)
Observations	154	153	151	150
R^2	0.03	0.05	0.04	0.02
Japan Low-High Risk	-0.001	-0.008	-0.012	-0.009
	(-0.21)	(-1.20)	(-1.56)	(-1.04)
Netherlands Low Risk	0.005	0.015**	0.023**	0.044***
	(0.96)	(2.06)	(2.46)	(3.35)
Observations	155	153	152	150
R^2	0.05	0.05	0.07	0.13
Netherlands High Risk	0.010*	0.016*	0.030***	0.032***
	(1.79)	(1.91)	(3.00)	(2.87)
Observations	154	153	151	150
R^2	0.04	0.05	0.09	0.07
Netherlands Low-High Risk	-0.005	-0.001	-0.007	0.012
	(-0.66)	(-0.10)	(-0.52)	(0.69)

Table A.16 (continued)

New Zealand Low Risk	-0.013**	-0.022**	-0.022*	-0.016
	(-2.13)	(-2.26)	(-1.83)	(-1.11)
Observations	87	86	84	83
R^2	0.07	0.10	0.11	0.09
New Zealand High Risk	-0.011	-0.031**	-0.039***	-0.040***
	(-1.31)	(-2.45)	(-2.80)	(-3.19)
Observations	87	85	84	82
R^2	0.05	0.08	0.12	0.12
New Zealand Low-High Risk	-0.002	0.010	0.018	0.025
	(-0.22)	(0.59)	(0.95)	(1.29)
Portugal Low Risk	0.016*	0.019	0.022	0.004
	(1.89)	(1.50)	(1.30)	(0.25)
Observations	141	139	138	136
R^2	0.04	0.03	0.03	0.01
Portugal High Risk	0.005	0.014	0.019	0.031**
	(0.56)	(1.34)	(1.63)	(2.20)
Observations	140	139	137	136
R^2	0.04	0.02	0.07	0.08
Portugal Low-High Risk	0.012	0.004	0.003	-0.027
	(0.96)	(0.26)	(0.16)	(-1.19)
Spain Low Risk	-0.011*	-0.021*	-0.025*	-0.027*
	(-1.78)	(-1.81)	(-1.80)	(-1.72)
Observations	155	153	152	150
R^2	0.11	0.10	0.09	0.06
Spain High Risk	-0.000	0.001	0.002	0.004
	(-0.00)	(0.18)	(0.16)	(0.35)
Observations	154	153	151	150
R^2	0.01	0.01	0.00	0.00
Spain Low-High Risk	-0.011	-0.023	-0.026	-0.031
	(-1.37)	(-1.64)	(-1.54)	(-1.57)
Sweden Low Risk	0.007	0.017*	0.039***	0.062***
	(1.32)	(1.83)	(3.84)	(4.92)
Observations	96	95	93	92
R^2	0.08	0.06	0.18	0.28
Sweden High Risk	0.012**	0.023***	0.032***	0.037***
	(2.26)	(4.57)	(5.02)	(5.13)
Observations	96	94	93	91
R^2	0.16	0.23	0.24	0.22
Sweden Low-High Risk	-0.005	-0.005	0.008	0.026*
	(-0.65)	(-0.50)	(0.63)	(1.77)
Switzerland Low Risk	-0.000	0.014**	0.020***	0.025***
	(-0.09)	(2.60)	(2.97)	(3.27)
Observations	155	153	152	150
R^2	0.03	0.07	0.09	0.10
Switzerland High Risk	-0.004	-0.014***	-0.016***	-0.012
	(-1.05)	(-2.99)	(-2.95)	(-1.58)
Observations	154	153	151	150
R^2	0.06	0.09	0.10	0.05
Switzerland Low-High Risk	0.003	0.027***	0.036***	0.037***
	(0.63)	(3.94)	(4.16)	(3.43)
UK Low Risk	-0.010**	-0.020**	-0.025***	-0.021*
	(-2.02)	(-2.25)	(-3.19)	(-1.95)
Observations	155	153	152	150
R^2	0.09	0.11	0.11	0.04
UK High Risk	0.001	0.002	0.006	0.010
	(0.11)	(0.29)	(0.79)	(1.08)
Observations	154	153	151	150
R^2	0.01	0.03	0.02	0.04
UK Low-High Risk	-0.011	-0.022**	-0.031***	-0.031**
	(-1.52)	(-2.02)	(-2.82)	(-2.19)
US Low Risk	0.023*	0.044**	0.051**	0.083**
	(1.76)	(2.04)	(2.16)	(2.25)
Observations	155	153	152	150
R^2	0.11	0.13	0.12	0.16
US High Risk	0.017***	0.035***	0.058***	0.068***
	(3.38)	(5.22)	(5.38)	(5.60)
Observations	154	153	151	150
R^2	0.22	0.26	0.26	0.25
US Low-High Risk	0.006	0.008	-0.007	0.015
	(0.44)	(0.37)	(-0.28)	(0.38)

Table A.17

Sentiment and mispricing performance premium during periods of low and high ambiguity: controlling for risk factors

This tables reports the results from regressing future mispricing performance premium against sentiment and the Fama–French three factors (market, size, and book-to-market) during periods of low and high ambiguity. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and the High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Ambiguity	0.007	0.026***	0.048***	0.067***
	(1.30)	(3.15)	(4.68)	(6.00)
Observations	129	128	126	125
R^2	0.12	0.17	0.23	0.31
Australia High Ambiguity	-0.003	-0.009*	-0.007	0.001
	(-0.66)	(-1.74)	(-1.01)	(0.13)
Observations	129	127	126	124
R^2	0.02	0.02	0.04	0.04
Australia Low-High Ambiguity	0.010	0.035***	0.055***	0.066***
	(1.40)	(3.59)	(4.43)	(5.02)
Austria Low Ambiguity	0.002	-0.008	0.020	0.059***
	(0.14)	(-0.35)	(0.94)	(3.27)
Observations	155	153	152	150
R^2	0.01	0.03	0.02	0.09
Austria High Ambiguity	-0.009	-0.003	-0.002	-0.004
	(-1.14)	(-0.22)	(-0.14)	(-0.24)
Observations	154	153	151	150
R^2	0.05	0.04	0.14	0.17
Austria Low-High Ambiguity	0.011	-0.005	0.023	0.063**
	(0.67)	(-0.20)	(0.85)	(2.54)
Belgium Low Ambiguity	0.000	0.004	0.016	0.040**
	(0.03)	(0.20)	(0.69)	(2.18)
Observations	155	153	152	150
R^2	0.01	0.02	0.02	0.04
Belgium High Ambiguity	0.001	0.002	0.007	0.010
	(0.27)	(0.32)	(0.67)	(0.93)
Observations	154	153	151	150
R^2	0.00	0.02	0.06	0.06
Belgium Low-High Ambiguity	-0.001	0.002	0.009	0.030
	(-0.07)	(0.08)	(0.36)	(1.41)
Canada Low Ambiguity	0.025***	0.052***	0.083***	0.100***
	(3.47)	(5.28)	(8.34)	(9.53)
Observations	117	115	114	112
R^2	0.19	0.34	0.49	0.53
Canada High Ambiguity	0.023***	0.043***	0.055***	0.073***
	(3.39)	(3.41)	(3.81)	(4.51)
Observations	116	115	113	112
R^2	0.15	0.16	0.21	0.24
Canada Low-High Ambiguity	0.002	0.009	0.028	0.027
	(0.25)	(0.54)	(1.62)	(1.40)
Denmark Low Ambiguity	0.001	0.001	0.037***	0.060***
	(0.12)	(0.05)	(2.70)	(4.08)
Observations	96	95	93	92
R^2	0.06	0.02	0.05	0.11
Denmark High Ambiguity	-0.003	0.014	0.037**	0.065***
	(-0.30)	(0.94)	(2.03)	(3.47)
Observations	96	94	93	91
R^2	0.05	0.07	0.12	0.19
Denmark Low-High Ambiguity	0.004	-0.014	-0.000	-0.005
	(0.29)	(-0.62)	(-0.01)	(-0.22)
Finland Low Ambiguity	0.022**	0.036***	0.036**	0.064***
	(2.12)	(2.73)	(2.36)	(3.46)
Observations	96	95	93	92
R^2	0.08	0.07	0.07	0.12
Finland High Ambiguity	-0.005	0.008	0.026*	0.032**
	(-0.64)	(0.82)	(1.97)	(2.33)
Observations	96	94	93	91
R^2	0.09	0.01	0.04	0.05
Finland Low-High Ambiguity	0.027**	0.027	0.010	0.033
	(2.10)	(1.64)	(0.52)	(1.42)

Table A.17 (continued)

France Low Ambiguity	0.011*	0.022**	0.034***	0.045***
	(1.78)	(2.23)	(3.04)	(4.27)
Observations	155	153	152	150
R^2	0.04	0.05	0.10	0.17
France High Ambiguity	0.009**	0.027***	0.044***	0.054***
	(2.51)	(4.45)	(6.35)	(5.96)
Observations	154	153	151	150
R^2	0.05	0.13	0.22	0.23
France Low-High Ambiguity	0.002	-0.005	-0.010	-0.009
	(0.34)	(-0.39)	(-0.74)	(-0.65)
Germany Low Ambiguity	0.012	0.021*	0.034***	0.044***
	(1.33)	(1.73)	(2.69)	(3.11)
Observations	155	153	152	150
R^2	0.08	0.10	0.12	0.10
Germany High Ambiguity	-0.006*	-0.004	-0.006	-0.008
	(-1.95)	(-0.98)	(-0.94)	(-1.24)
Observations	154	153	151	150
R^2	0.04	0.05	0.05	0.05
Germany Low-High Ambiguity	0.018*	0.025*	0.040***	0.052***
	(1.94)	(1.96)	(2.83)	(3.34)
Greece Low Ambiguity	-0.061***	-0.107***	-0.160***	-0.210***
	(-4.75)	(-6.55)	(-8.06)	(-7.88)
Observations	152	151	149	148
R^2	0.15	0.22	0.31	0.32
Greece High Ambiguity	-0.018	-0.027	-0.034	-0.058*
	(-0.79)	(-0.96)	(-1.04)	(-1.97)
Observations	136	134	133	131
R^2	0.07	0.03	0.03	0.06
Greece Low-High Ambiguity	-0.043	-0.080**	-0.126***	-0.152***
	(-1.62)	(-2.46)	(-3.34)	(-3.83)
Ireland Low Ambiguity	0.027	0.052**	0.063**	0.070**
	(1.45)	(2.21)	(2.20)	(2.29)
Observations	155	153	152	150
R^2	0.03	0.05	0.05	0.04
Ireland High Ambiguity	-0.001	0.002	0.057**	0.102***
	(-0.08)	(0.07)	(2.52)	(5.39)
Observations	154	153	151	150
R^2	0.07	0.07	0.05	0.15
Ireland Low-High Ambiguity	0.029	0.050	0.007	-0.033
	(1.23)	(1.45)	(0.18)	(-0.91)
Italy Low Ambiguity	0.011	0.018	0.031*	0.049**
	(1.08)	(1.24)	(1.77)	(2.43)
Observations	74	73	71	70
R^2	0.06	0.03	0.05	0.09
Italy High Ambiguity	0.015	0.026*	0.041**	0.026
	(1.52)	(1.74)	(2.07)	(0.73)
Observations	74	72	71	69
R^2	0.09	0.11	0.11	0.04
Italy Low-High Ambiguity	-0.004	-0.008	-0.010	0.023
	(-0.30)	(-0.37)	(-0.39)	(0.57)
Japan Low Ambiguity	0.003	0.007	0.014*	0.027***
	(0.58)	(0.92)	(1.75)	(2.84)
Observations	155	153	152	150
R^2	0.07	0.05	0.03	0.04
Japan High Ambiguity	0.005	0.013*	0.018**	0.017**
	(1.17)	(1.77)	(2.45)	(2.20)
Observations	154	153	151	150
R^2	0.03	0.04	0.08	0.04
Japan Low-High Ambiguity	-0.002	-0.006	-0.004	0.010
	(-0.23)	(-0.54)	(-0.32)	(0.83)
Netherlands Low Ambiguity	0.020***	0.040***	0.049***	0.049***
	(2.83)	(3.92)	(3.55)	(2.80)
Observations	155	153	152	150
R^2	0.06	0.10	0.10	0.08
Netherlands High Ambiguity	-0.008	-0.008	0.003	0.021
	(-1.00)	(-0.67)	(0.24)	(1.36)
Observations	154	153	151	150
R^2	0.04	0.03	0.11	0.10
Netherlands Low-High Ambiguity	0.028**	0.048***	0.047**	0.028
	(2.58)	(3.11)	(2.54)	(1.19)

Table A.17 (continued)

New Zealand Low Ambiguity	0.011**	0.012	0.009	0.007
	(2.22)	(1.48)	(0.95)	(0.83)
Observations	87	86	84	83
R^2	0.06	0.05	0.07	0.06
New Zealand High Ambiguity	-0.003	0.004	-0.001	-0.011
	(-0.53)	(0.63)	(-0.05)	(-0.92)
Observations	87	85	84	82
R^2	0.02	0.06	0.03	0.05
New Zealand Low-High Ambiguity	0.014*	0.008	0.009	0.019
	(1.80)	(0.79)	(0.69)	(1.23)
Portugal Low Ambiguity	-0.016*	-0.018	-0.011	-0.011
	(-1.89)	(-1.43)	(-0.64)	(-0.57)
Observations	155	153	152	150
R^2	0.04	0.04	0.03	0.04
Portugal High Ambiguity	-0.015	-0.060***	-0.118***	-0.155***
	(-1.08)	(-2.70)	(-4.51)	(-4.07)
Observations	154	153	151	150
R^2	0.05	0.15	0.22	0.21
Portugal Low-High Ambiguity	-0.002	0.042	0.106***	0.143***
	(-0.10)	(1.64)	(3.39)	(3.33)
Spain Low Ambiguity	-0.004	0.003	0.006	0.002
	(-0.50)	(0.25)	(0.46)	(0.16)
Observations	155	153	152	150
R^2	0.01	0.00	0.01	0.00
Spain High Ambiguity	-0.012	-0.029*	-0.034*	-0.027
	(-1.29)	(-1.89)	(-1.95)	(-1.41)
Observations	154	153	151	150
R^2	0.07	0.08	0.09	0.06
Spain Low-High Ambiguity	0.008	0.031*	0.040*	0.030
	(0.67)	(1.68)	(1.81)	(1.21)
Sweden Low Ambiguity	0.005	0.010	0.020**	0.035***
	(0.78)	(0.87)	(2.15)	(4.78)
Observations	96	95	93	92
R^2	0.02	0.04	0.10	0.20
Sweden High Ambiguity	0.003	0.018*	0.014	0.009
	(0.39)	(1.76)	(1.18)	(0.72)
Observations	96	94	93	91
R^2	0.05	0.05	0.11	0.07
Sweden Low-High Ambiguity	0.002	-0.008	0.006	0.026*
	(0.25)	(-0.53)	(0.39)	(1.80)
Switzerland Low Ambiguity	0.012	0.027***	0.020**	0.020*
	(1.61)	(3.22)	(2.17)	(1.85)
Observations	155	153	152	150
R^2	0.04	0.12	0.05	0.04
Switzerland High Ambiguity	-0.002	-0.021**	-0.015	-0.015
	(-0.28)	(-2.40)	(-1.38)	(-1.46)
Observations	154	153	151	150
R^2	0.01	0.07	0.06	0.05
Switzerland Low-High Ambiguity	0.014	0.048***	0.035**	0.034**
	(1.36)	(3.96)	(2.44)	(2.35)
UK Low Ambiguity	0.017**	0.022**	0.028***	0.029***
	(2.32)	(2.27)	(2.95)	(3.00)
Observations	155	153	152	150
R^2	0.06	0.08	0.12	0.10
UK High Ambiguity	-0.016***	-0.005	-0.005	-0.012
	(-3.39)	(-0.62)	(-0.52)	(-1.16)
Observations	154	153	151	150
R^2	0.16	0.01	0.08	0.05
UK Low-High Ambiguity	0.033***	0.027**	0.033**	0.041***
	(3.79)	(2.19)	(2.46)	(2.90)
US Low Ambiguity	0.025***	0.042***	0.064***	0.082***
	(5.48)	(9.28)	(10.75)	(12.64)
Observations	155	153	152	150
R^2	0.20	0.28	0.34	0.37
US High Ambiguity	0.015***	0.042***	0.068***	0.070***
	(2.67)	(4.46)	(4.87)	(4.25)
Observations	154	153	151	150
R^2	0.12	0.16	0.22	0.16
US Low-High Ambiguity	0.010	-0.000	-0.004	0.012
	(1.46)	(-0.04)	(-0.29)	(0.69)

Table A.18

Sentiment and mispricing performance premium during periods of low and high risk: controlling for risk factors

This tables reports the results from regressing future mispricing performance premium against sentiment and the Fama–French three factors (market, size, and book-to-market) during periods of low and high risk. We use future returns over three-, six-, nine-, and twelve-month period: R^M_{t+3}, R^M_{t+6}, R^M_{t+9}, and R^M_{t+12}. We use the Baker and Wurgler (2006) investor sentiment index for the US and the consumer confidence index (CCI) for other countries to measure sentiment. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Risk as the periods below the medium of risk and High Risk as the periods above the medium of risk. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+3}	R^M_{t+6}	R^M_{t+9}	R^M_{t+12}
Australia Low Risk	0.002	-0.000	0.010	0.019**
	(0.40)	(-0.04)	(1.30)	(1.99)
Observations	129	128	126	125
R^2	0.07	0.07	0.10	0.07
Australia High Risk	0.006	0.025***	0.044***	0.066***
	(1.15)	(2.79)	(3.98)	(5.20)
Observations	129	127	126	124
R^2	0.10	0.13	0.18	0.28
Australia Low-High Risk	-0.004	-0.025**	-0.034**	-0.047***
	(-0.56)	(-2.32)	(-2.53)	(-2.99)
Austria Low Risk	-0.015***	-0.028***	-0.023**	-0.019
	(-3.30)	(-4.41)	(-2.40)	(-1.42)
Observations	155	153	152	150
R^2	0.07	0.15	0.15	0.10
Austria High Risk	0.001	0.011	0.043*	0.079***
	(0.04)	(0.47)	(1.76)	(3.91)
Observations	154	153	151	150
R^2	0.03	0.02	0.06	0.17
Austria Low-High Risk	-0.015	-0.039	-0.066**	-0.098***
	(-0.96)	(-1.58)	(-2.52)	(-4.04)
Belgium Low Risk	-0.001	-0.011	-0.008	0.002
	(-0.19)	(-1.04)	(-0.53)	(0.16)
Observations	155	153	152	150
R^2	0.01	0.02	0.02	0.00
Belgium High Risk	0.002	0.015	0.031	0.046**
	(0.14)	(0.77)	(1.58)	(2.59)
Observations	154	153	151	150
R^2	0.02	0.02	0.04	0.07
Belgium Low-High Risk	-0.003	-0.026	-0.039	-0.044**
	(-0.20)	(-1.16)	(-1.58)	(-2.11)
Canada Low Risk	0.031***	0.041***	0.055***	0.059***
	(3.82)	(3.17)	(3.98)	(3.77)
Observations	117	115	114	112
R^2	0.18	0.16	0.21	0.23
Canada High Risk	0.025***	0.057***	0.090***	0.114***
	(3.88)	(6.64)	(10.41)	(12.32)
Observations	116	115	113	112
R^2	0.21	0.40	0.56	0.61
Canada Low-High Risk	0.006	-0.017	-0.036**	-0.055***
	(0.56)	(-1.08)	(-2.21)	(-3.00)
Denmark Low Risk	-0.003	-0.006	0.017	0.031*
	(-0.33)	(-0.42)	(1.16)	(1.72)
Observations	96	95	93	92
R^2	0.00	0.03	0.04	0.06
Denmark High Risk	-0.001	0.016	0.044***	0.074***
	(-0.10)	(0.91)	(2.64)	(4.70)
Observations	96	94	93	91
R^2	0.09	0.02	0.09	0.16
Denmark Low-High Risk	-0.002	-0.022	-0.026	-0.043*
	(-0.14)	(-0.98)	(-1.17)	(-1.81)
Finland Low Risk	0.006	0.016	0.038***	0.050***
	(0.63)	(1.48)	(3.09)	(3.40)
Observations	96	95	93	92
R^2	0.13	0.05	0.13	0.12
Finland High Risk	0.015	0.028**	0.028*	0.049***
	(1.54)	(2.07)	(1.80)	(2.65)
Observations	96	94	93	91
R^2	0.04	0.05	0.04	0.07
Finland Low-High Risk	-0.009	-0.011	0.010	0.001
	(-0.66)	(-0.66)	(0.48)	(0.06)

Table A.18 (continued)

France Low Risk	0.015***	0.025***	0.034***	0.048***
	(2.91)	(2.91)	(4.15)	(5.56)
Observations	155	153	152	150
R^2	0.09	0.09	0.13	0.23
France High Risk	0.008	0.023**	0.040***	0.047***
	(1.27)	(2.40)	(3.41)	(4.06)
Observations	154	153	151	150
R^2	0.01	0.05	0.12	0.17
France Low-High Risk	0.007	0.002	-0.006	0.001
	(0.86)	(0.16)	(-0.45)	(0.07)
Germany Low Risk	-0.001	-0.003	-0.003	-0.001
	(-0.29)	(-0.64)	(-0.65)	(-0.17)
Observations	155	153	152	150
R^2	0.04	0.06	0.04	0.09
Germany High Risk	0.007	0.021*	0.033***	0.039***
	(0.80)	(1.93)	(2.63)	(2.76)
Observations	154	153	151	150
R^2	0.06	0.08	0.12	0.09
Germany Low-High Risk	-0.008	-0.025**	-0.036***	-0.040***
	(-0.85)	(-2.02)	(-2.68)	(-2.60)
Greece Low Risk	-0.017	-0.027	-0.036	-0.082**
	(-1.07)	(-1.16)	(-1.31)	(-2.03)
Observations	139	138	136	135
R^2	0.04	0.05	0.08	0.10
Greece High Risk	-0.068***	-0.124***	-0.171***	-0.219***
	(-4.76)	(-7.28)	(-7.90)	(-9.14)
Observations	149	147	146	144
R^2	0.17	0.29	0.32	0.36
Greece Low-High Risk	0.051**	0.097***	0.135***	0.138***
	(2.34)	(3.37)	(3.85)	(2.94)
Ireland Low Risk	0.015	0.063***	0.070**	0.118***
	(1.08)	(2.72)	(2.14)	(5.16)
Observations	155	153	152	150
R^2	0.06	0.10	0.07	0.19
Ireland High Risk	0.019	0.022	0.046	0.064**
	(1.09)	(0.93)	(1.65)	(2.10)
Observations	154	153	151	150
R^2	0.04	0.02	0.03	0.03
Ireland Low-High Risk	-0.005	0.041	0.024	0.054
	(-0.21)	(1.23)	(0.57)	(1.42)
Italy Low Risk	0.022**	0.041***	0.060***	0.071***
	(2.07)	(3.71)	(4.16)	(3.57)
Observations	74	73	71	70
R^2	0.09	0.18	0.26	0.21
Italy High Risk	-0.007	-0.004	-0.007	0.006
	(-0.71)	(-0.19)	(-0.29)	(0.25)
Observations	74	72	71	69
R^2	0.01	0.02	0.02	0.01
Italy Low-High Risk	0.030**	0.044**	0.067**	0.065**
	(1.98)	(2.03)	(2.41)	(2.03)
Japan Low Risk	0.000	0.005	0.008	0.010
	(0.08)	(0.53)	(0.75)	(0.91)
Observations	155	153	152	150
R^2	0.03	0.01	0.02	0.04
Japan High Risk	0.001	0.006	0.012	0.016*
	(0.29)	(0.84)	(1.65)	(1.97)
Observations	154	153	151	150
R^2	0.10	0.10	0.07	0.08
Japan Low-High Risk	-0.001	-0.002	-0.004	-0.006
	(-0.14)	(-0.14)	(-0.30)	(-0.42)
Netherlands Low Risk	0.000	0.001	0.001	0.021
	(0.00)	(0.08)	(0.05)	(1.18)
Observations	155	153	152	150
R^2	0.05	0.01	0.01	0.04
Netherlands High Risk	0.014*	0.036***	0.054***	0.047***
	(1.83)	(3.37)	(3.78)	(2.79)
Observations	154	153	151	150
R^2	0.03	0.08	0.14	0.09
Netherlands Low-High Risk	-0.014	-0.036**	-0.054***	-0.027
	(-1.36)	(-2.40)	(-2.90)	(-1.09)

Table A.18 (continued)

New Zealand Low Risk	-0.003	-0.011**	-0.013*	-0.012
	(-0.69)	(-2.11)	(-1.89)	(-1.33)
Observations	87	86	84	83
R^2	0.02	0.07	0.04	0.04
New Zealand High Risk	0.016**	0.022**	0.016	0.011
	(2.58)	(2.33)	(1.50)	(1.06)
Observations	87	85	84	82
R^2	0.08	0.08	0.10	0.05
New Zealand Low-High Risk	-0.019**	-0.033***	-0.029**	-0.024*
	(-2.44)	(-3.07)	(-2.29)	(-1.67)
Portugal Low Risk	-0.008	-0.035*	-0.041*	-0.044
	(-0.69)	(-1.69)	(-1.74)	(-1.51)
Observations	155	153	152	150
R^2	0.06	0.06	0.08	0.06
Portugal High Risk	-0.021**	-0.030**	-0.040**	-0.054**
	(-2.34)	(-2.41)	(-2.23)	(-2.58)
Observations	154	153	151	150
R^2	0.04	0.06	0.05	0.06
Portugal Low-High Risk	0.013	-0.005	-0.001	0.010
	(0.93)	(-0.21)	(-0.04)	(0.29)
Spain Low Risk	-0.014	-0.035**	-0.040**	-0.049*
	(-1.51)	(-2.40)	(-2.22)	(-1.92)
Observations	155	153	152	150
R^2	0.11	0.13	0.12	0.11
Spain High Risk	-0.002	0.006	0.008	0.007
	(-0.24)	(0.56)	(0.63)	(0.48)
Observations	154	153	151	150
R^2	0.01	0.00	0.01	0.01
Spain Low-High Risk	-0.013	-0.041**	-0.048**	-0.056*
	(-1.05)	(-2.27)	(-2.16)	(-1.91)
Sweden Low Risk	0.008*	0.009	0.002	0.007
	(1.72)	(1.10)	(0.21)	(0.84)
Observations	96	95	93	92
R^2	0.05	0.04	0.01	0.01
Sweden High Risk	0.004	0.013	0.024**	0.037***
	(0.50)	(1.03)	(2.53)	(4.78)
Observations	96	94	93	91
R^2	0.03	0.05	0.13	0.25
Sweden Low-High Risk	0.005	-0.004	-0.022	-0.031***
	(0.54)	(-0.26)	(-1.50)	(-2.68)
Switzerland Low Risk	0.005	-0.013	-0.013	-0.010
	(0.69)	(-1.43)	(-1.26)	(-1.01)
Observations	155	153	152	150
R^2	0.01	0.05	0.06	0.04
Switzerland High Risk	0.007	0.023***	0.020**	0.016
	(1.00)	(2.63)	(2.09)	(1.55)
Observations	154	153	151	150
R^2	0.03	0.11	0.04	0.03
Switzerland Low-High Risk	-0.002	-0.036***	-0.033**	-0.027*
	(-0.19)	(-2.83)	(-2.34)	(-1.82)
UK Low Risk	0.000	-0.009	-0.009	-0.013
	(0.04)	(-1.21)	(-1.05)	(-1.01)
Observations	155	153	152	150
R^2	0.05	0.05	0.04	0.07
UK High Risk	0.009	0.024***	0.031***	0.030***
	(1.28)	(2.61)	(3.20)	(3.03)
Observations	154	153	151	150
R^2	0.04	0.07	0.14	0.12
UK Low-High Risk	-0.009	-0.033***	-0.040***	-0.042***
	(-0.95)	(-2.79)	(-3.07)	(-2.66)
US Low Risk	0.016**	0.043***	0.054***	0.072***
	(2.41)	(4.84)	(5.10)	(4.69)
Observations	155	153	152	150
R^2	0.09	0.21	0.20	0.20
US High Risk	0.023***	0.040***	0.064***	0.080***
	(5.07)	(8.56)	(9.89)	(12.08)
Observations	154	153	151	150
R^2	0.17	0.26	0.34	0.39
US Low-High Risk	-0.008	0.003	-0.011	-0.008
	(-0.99)	(0.30)	(-0.85)	(-0.48)

Table A.19

Sentiment and returns during periods of low and high ambiguity: US daily evidence by controlling for risk factors

This tables reports the results from regressing future returns against sentiment and the Fama–French three factors (market, size, and book-to-market) during periods of low and high ambiguity. We use future returns over one-, two-, three-, and five-day period: R^M_{t+1}, R^M_{t+2}, R^M_{t+3}, and R^M_{t+5}. We use the Da et al. (2015) FEARS sentiment index. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Ambiguity as the periods below the medium of ambiguity and High Ambiguity as the periods above the medium of ambiguity. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+1}	R^M_{t+2}	R^M_{t+3}	R^M_{t+5}
Beta Low Ambiguity	-0.001**	-0.002**	-0.002*	-0.002**
	(-2.39)	(-2.36)	(-1.91)	(-2.06)
Observations	945	944	944	943
R^2	0.02	0.01	0.01	0.01
Beta High Ambiguity	0.000	-0.000	-0.000	-0.000
	(0.48)	(-0.52)	(-0.56)	(-0.62)
Observations	944	944	943	942
R^2	0.01	0.01	0.00	0.00
Beta Low-High Ambiguity	-0.001**	-0.002**	-0.001	-0.002*
	(-2.43)	(-2.08)	(-1.61)	(-1.69)
Volatility Low Ambiguity	-0.002**	-0.002***	-0.002**	-0.003**
	(-2.23)	(-2.92)	(-2.51)	(-2.57)
Observations	945	944	944	943
R^2	0.01	0.01	0.01	0.02
Volatility High Ambiguity	0.000	-0.000	-0.000	-0.000
	(0.31)	(-0.76)	(-0.64)	(-0.34)
Observations	944	944	943	942
R^2	0.01	0.00	0.01	0.01
Volatility Low-High Ambiguity	-0.002**	-0.002**	-0.002**	-0.003**
	(-2.23)	(-2.54)	(-2.12)	(-2.26)
Idiosyncratic risk Low Ambiguity	-0.001*	-0.001**	-0.001**	-0.002**
	(-1.89)	(-2.43)	(-2.18)	(-2.08)
Observations	945	944	944	943
R^2	0.02	0.01	0.01	0.01
Idiosyncratic risk High Ambiguity	0.000	-0.000	-0.000	-0.000
	(0.68)	(-0.61)	(-0.43)	(-0.35)
Observations	944	944	943	942
R^2	0.02	0.01	0.01	0.01
Idiosyncratic risk Low-High Ambiguity	-0.001**	-0.001**	-0.001*	-0.002*
	(-2.01)	(-2.10)	(-1.85)	(-1.77)
Mispricing management Low Ambiguity	-0.000	-0.000	-0.000	-0.001
	(-1.38)	(-1.12)	(-1.00)	(-1.16)
Observations	945	944	944	943
R^2	0.03	0.01	0.01	0.01
Mispricing management High Ambiguity	-0.000	-0.000	0.000	-0.000
	(-0.02)	(-0.37)	(0.02)	(-0.05)
Observations	944	944	943	942
R^2	0.02	0.01	0.01	0.00
Mispricing management Low-High Ambiguity	-0.000	-0.000	-0.000	-0.001
	(-1.29)	(-0.92)	(-0.94)	(-1.07)
Mispricing performance Low Ambiguity	-0.000	-0.001	-0.001	-0.002**
	(-1.23)	(-1.30)	(-1.54)	(-2.53)
Observations	945	944	944	943
R^2	0.01	0.01	0.01	0.02
Mispricing performance High Ambiguity	0.000	0.000	0.000	0.000
	(1.27)	(1.19)	(0.01)	(0.85)
Observations	944	944	943	942
R^2	0.00	0.00	0.00	0.02
Mispricing performance Low-High Ambiguity	-0.001	-0.001	-0.001	-0.002***
	(-1.49)	(-1.56)	(-1.49)	(-2.67)

Table A.20

Sentiment and returns during periods of low and high risk: US daily evidence by controlling for risk factors

This tables reports the results from regressing future returns against sentiment and the Fama–French three factors (market, size, and book-to-market) during periods of low and high ambiguity. We use future returns over one-, two-, three-, and five-day period: R^M_{t+1}, R^M_{t+2}, R^M_{t+3}, and R^M_{t+5}. We use the Da et al. (2015) FEARS sentiment index. Sentiment is standardized to have a mean of zero and a variance of one. We identify Low Risk as the periods below the medium of risk and High Risk as the periods above the medium of risk. Numbers in parentheses are t-statistics based on White (1980) heteroskedasticity-consistent standard errors.

	R^M_{t+1}	R^M_{t+2}	R^M_{t+3}	R^M_{t+5}
Beta Low Risk	0.000	-0.000	-0.000	-0.000
	(0.70)	(-0.25)	(-0.33)	(-0.32)
Observations	945	944	944	943
R^2	0.01	0.00	0.00	0.01
Beta High Risk	-0.001**	-0.002**	-0.002**	-0.003**
	(-2.50)	(-2.48)	(-2.02)	(-2.27)
Observations	944	944	943	942
R^2	0.02	0.01	0.01	0.01
Beta Low-High Risk	0.001***	0.002**	0.002*	0.003**
	(2.60)	(2.27)	(1.80)	(2.00)
Volatility Low Risk	0.000	-0.000	-0.000	-0.000
	(0.18)	(-0.65)	(-0.62)	(-0.15)
Observations	945	944	944	943
R^2	0.01	0.00	0.01	0.01
Volatility High Risk	-0.001**	-0.002***	-0.002**	-0.003***
	(-2.20)	(-3.00)	(-2.54)	(-2.73)
Observations	944	944	943	942
R^2	0.01	0.01	0.01	0.02
Volatility Low-High Risk	0.002**	0.002***	0.002**	0.003**
	(2.18)	(2.65)	(2.16)	(2.48)
Idiosyncratic risk Low Risk	0.000	-0.000	-0.000	-0.000
	(0.41)	(-0.72)	(-0.57)	(-0.23)
Observations	945	944	944	943
R^2	0.02	0.01	0.01	0.01
Idiosyncratic risk High Risk	-0.001*	-0.001**	-0.001**	-0.002**
	(-1.79)	(-2.38)	(-2.10)	(-2.18)
Observations	944	944	943	942
R^2	0.02	0.01	0.01	0.01
Idiosyncratic risk Low-High Risk	0.001*	0.001**	0.001*	0.002*
	(1.83)	(2.01)	(1.72)	(1.91)
Mispricing management Low Risk	0.000	-0.000	0.000	-0.000
	(0.12)	(-0.33)	(0.01)	(-0.04)
Observations	945	944	944	943
R^2	0.02	0.01	0.01	0.00
Mispricing management High Risk	-0.000	-0.000	-0.000	-0.001
	(-1.47)	(-1.15)	(-1.00)	(-1.17)
Observations	944	944	943	942
R^2	0.03	0.01	0.01	0.01
Mispricing management Low-High Risk	0.000	0.000	0.000	0.001
	(1.43)	(0.97)	(0.94)	(1.09)
Mispricing performance Low Risk	0.000	0.000	0.000	0.000
	(0.83)	(1.20)	(0.04)	(0.95)
Observations	945	944	944	943
R^2	0.00	0.00	0.00	0.01
Mispricing performance High Risk	-0.000	-0.001	-0.001	-0.002***
	(-1.06)	(-1.26)	(-1.53)	(-2.58)
Observations	944	944	943	942
R^2	0.01	0.01	0.01	0.02
Mispricing performance Low-High Risk	0.000	0.001	0.001	0.002***
	(1.21)	(1.52)	(1.49)	(2.75)