THE FINANCIAL CRISIS IMPACT: AN INDUSTRY LEVEL ANALYSIS OF THE US STOCK MARKET

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Abstract
In this paper, we analyze the impact of the recent financial crisis in the US stock market, specifically on the relation between stock returns, at an industry level, and unexpected changes in nominal interest rates. Thus, we decompose the nominal interest rate into its components: real interest and inflation rates in order to do a more detailed study. This analysis has been carried out in a very long sample period (November 1989 to February 2014), with alternating expansion and recession sub-periods, and in a shorter sample period (December 2001 to March 2011), that contains just one but consecutive and relevant expansion period and a recession period. Although most significant relations are predictably negative, some are consistently positive, suggesting that investments in industries with this positive relation can form a safe haven from unexpected changes in real and nominal interest rates, in line with González *et al.* (2016).
JEL Classification: E31, G12, G3, L2
Keywords: Unexpected inflation; interest rates; Stock return; Business Cycle

1. Introduction and literature review

The US stock market is the most active equity market with the longest series of detailed quality data. Therefore, our aim is to study the relationships between unanticipated inflation and its co-dependents, unanticipated changes in real and nominal interest rates, in detail by industry and taking into account the state of the economy. We examine these relations by industry because the key role for investors and managers would be identify individual industry returns positively related to unanticipated changes in inflation and real and nominal interest rates. Thus, these managers recognize investment opportunities as a safe haven for investors, because these stock prices rise to some extent with inflation. Moreover, it is also important to study the financial crisis impact on these relations, because, as claimed by González *et al.* (2016), inverse relations can turn positive as economic conditions change, and vice versa.

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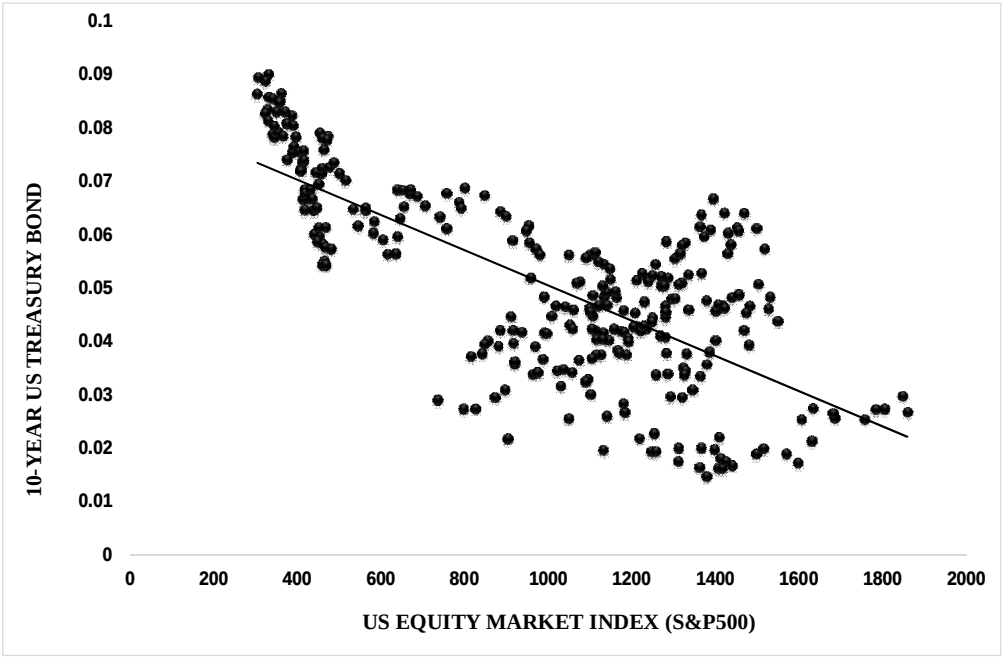
Figure 1 presents a scatter plot with the US stock market index (S&P500) and the 10-year Treasury bond yield from September 1989 to February 2014. As the US stock market shows an growing trend over the analyzed period, (Bartram and Bodnar, 2009; Campos *et al.*, 2016; Cano *et al.*, 2016; González *et al.*, 2016), and the 10-year Treasury bond yield exhibits a declining trend, then we observe a negative relation these both variables. Furthermore, according to González *et al.* (2016), it is important to know whether this negative relation between stock market returns and changes in nominal interest rates in the US keeps constant when we split up unexpected changes in the nominal interest rates into unexpected changes in the real interest and inflation rates. Finally, we also take into account the state of the economy.

Figure 1. Scatter plot of the US equity market index (S&P 500) and the 10-year US Treasury Bond yield from September 1989 to February 2014



Most literature such as Jareño (2006, 2008), Ferrer *et al.* (2010) and Korkeamäki (2011), Campos *et al.* (2016), Jareño *et al.* (2016), and Ferrando *et al.* (2017), among others, reveal a negative and significant relationship between stock returns and unanticipated changes in nominal interest rates. Some authors (Oertmann *et al.*, 2000, and Shamsuddin, 2014) have examined these relations for the overall stock market while others (Jareño, 2006 and 2008) have deepened the analysis by decomposing unexpected changes in nominal interest rates into unexpected changes in real interest and unexpected inflation rates.

In this paper we estimate the stock return response to unexpected shocks in the nominal interest rate and its components, unexpected changes in the inflation rate and unexpected changes in the real interest rate, by using an extension of the Stone (1974) two-factor model proposed in Jareño (2006) and, partly, in Jareño (2008) and Jareño

and Navarro (2010). So, our contributions to previous literature are not only to analyse the relation between stock returns and unexpected changes in nominal and real interest rate and inflation rates by individual industries but also to examine a long time period, from September 1989 to February 2014, which covers a lot of different states of the economy, including the last recession period and its previous expansion period (December 2001 to March 2011) whose results have been compared with the total sample period (November 1989 to February 2014) because of their relevancy in the US economy.

Our results normally agree with previous literature. Thus, the response of stock returns to changes in nominal and real interest rates is generally negative, apart from some notable exceptions. In particular, we find that one industry, Diversified Metals and Mining, has a significant consistently positive relation between stock returns and unexpected changes in nominal interest rates while two industries, Integrated Oil and Gas and Diversified Metals and Mining, have a consistent significant positive relation between stock returns and unexpected changes in real interest rates. These results are really relevant for portfolio managers and investors, because t long investments in stock portfolios located in these particular industries can form a safe haven from unanticipated changes in nominal and real interest rates (González *et al.*, 2016).[1] Interestingly, portfolios involving Gold industry have an insignificant effect in recession, so the Gold industry might be a safe haven in this state of the economy. Similarly, two industries, Household Durables and Gold, have a negative relation to unanticipated inflation in the overall sample and in the recession and expansion sub-periods not only in the long sample period but also in the shorter one. This results suggests that these industries are particularly exposed to inflation risk. Finally, stock returns are negatively related to unexpected inflation for the Gold industry, so damaging the image of Gold as a hedge against inflation.

The rest of the paper is structured as follows. Section 2 includes a short description of the methodology applied in this study. Section 3 presents a descriptive analysis of the data and variables used in our research. Section 4 shows the main results of our estimates and, finally, Section 5 comments on the most relevant conclusions.

2. Methodology

The model we use to measure the US stock returns sensitivity to interest rate changes is an extension of the Stone (1974) model, aimed to decomposes unexpected changes in the nominal interest rates into unexpected changes in real interest and

[1] While an investor can form a hedge by shorting stocks of an industry that has a consistently inverse relation with, say, unexpected changes in nominal interest rates, we can anticipate frictions such as a lack of full use of proceeds from short selling, unanticipated termination of the hedge by the party lending the stocks and regulatory prohibition of short selling during crisis periods that can make this sort of hedge less effective than a natural hedge based on a long position in a portfolio of stocks with a positive relation with unexpected changes in nominal interest rates.

inflation rates, in line with Cornell (2000), Jareño (2006 and 2008), and Jareño *et al*. (2016). However, all of these studies just examine the impact of changes in the nominal interest rates on stock returns at sector level. Thus, we propose an analysis at the industry level of all the sectors using an extension of the Stone (1974) model (focusing on part of the analysis made in González *et al*., 2016).

Most previous literature focuses on the Stone (1974) two-factor model to measure the interest rate sensitivity of stock returns to unexpected changes in nominal interest rates (Sweeney and Warga, 1986, Fraser *et al.*, 2002, Bartram, 2002, Soto *et al.*, 2005, Staikouras, 2005, Jareño, 2006 and 2008, Ferrer *et al.*, 2010; Ferrando *et al.*, 2017, among others). Adjusting Arango et al.'s (2002) model of stock returns by industry we have

$$r_{jt} = \alpha_j + \beta_j \cdot r_{mt} + \gamma_j \cdot \Delta i_t^u + \varepsilon_{jt} \tag{1}$$

where r_{jt} is the stock (industry) j return in month t, β_j shows the stock sensitivity to market movements, r_{mt} is the return on the market portfolio, Δi_t^u represents unexpected changes in nominal interest rates and, finally, ε_{jt} is the error term.

We also apply the Fisher approximation to the Stone (1974) model to extend it, breaking down nominal interest rates i_t into real interest r_t and expected inflation $E_t(\pi_{t,t+1})$ components. Therefore, the second model estimated in this paper is

$$r_{jt} = \alpha_j + \beta_j \cdot r_{mt} + \beta_{jr} \cdot \Delta r_t + \beta_{j\pi} \cdot \Delta E_t^{ORT}\left(\pi_{t,t+1}\right) + \varepsilon_{jt} \tag{2}$$

where r_{jt} is the stock (industry) j return in month t, β_j shows the stock sensitivity to market movements, r_{mt} is the return on the market portfolio, Δr_t represents unexpected changes in real interest rates, $\Delta E_t^{ORT}\left(\pi_{t,t+1}\right)$ shows shocks in the expected inflation rate (orthogonalized) and,[2] finally, ε_{jt} is the error term.

3. Data

This paper takes monthly indices for the US industries (82 industries in total) from November 1989 to February 2014. These individual industry indices are refinements of the Global Industry Classification Standard (GICS), as developed by Morgan Stanley Capital International and Standard &Poor's, compiled by and obtained from Bloomberg. We also use the monthly S&P500 market index from Bloomberg and the monthly 10-year US Treasury yields from the Federal Reserve. Finally, we use the monthly expected inflation rates estimated using ARIMA models thereby assuming

[2] The relation between unexpected changes in the real interest rate and unexpected changes in the inflation rate is ortogonalized by regressing changes in the unexpected inflation rate on a constant and changes in the unexpected real interest rate using ordinary least squares regression

that this component depends upon its own past series. Then the forecast errors from the ARIMA model form our estimate of unanticipated changes in inflation.[3]

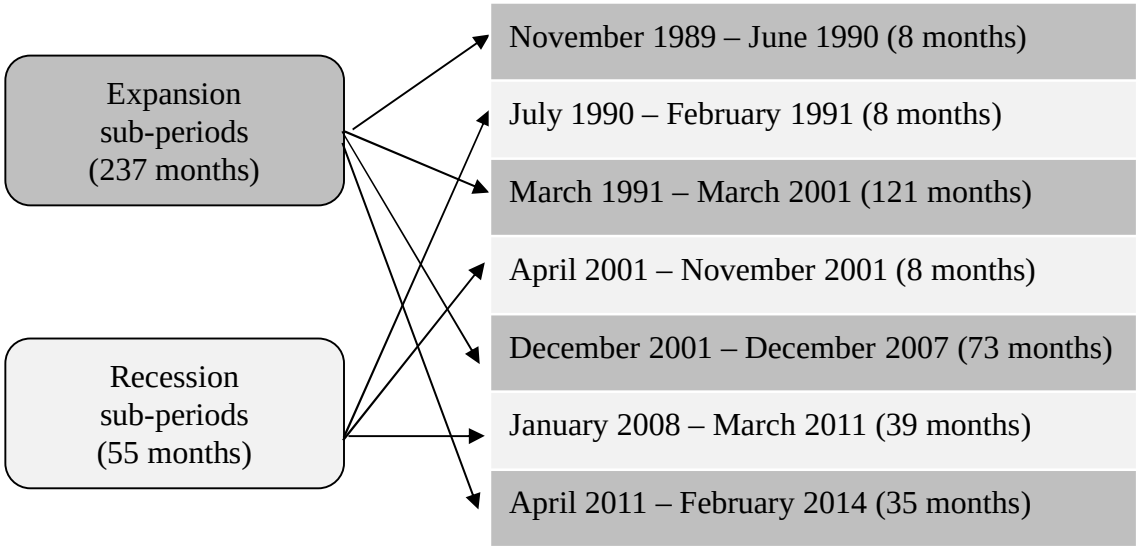
Table A, in the appendix reports the industry classifications according to the GICS combined with the Bloomberg refinements. In this paper we analyze 82 industries.

Because of our period (November 1889-February 2014) contains several expansion and recession sub-periods which could influence the results, we take into account the business cycle. Specifically, such as Veronesi (1999), Knif *et al*. (2008), Díaz and Jareño (2009 and 2013), and Jareño and Navarro (2016), we assume that the impact of changes in nominal and real interest and inflation rates on stock returns by industry depends on the state of the economy. Therefore, we classify this key information –the state of the economy- following the National Bureau of Economic Research (NBER's) classification. We also extend it (only available until June 2009) by examining the evolution of the annual growth of the US GDP after seasonal adjustment (as in Díaz and Jareño, 2013; and González *et al.*, 2016) in order to identify expansion and non-expansion (recession) months.

The business cycle timing is shown in Figure 2. Following NBER announcements, this classification divides the state of the economy in our sample period (November 1889-February 2014: 292 months in total) in 237 months of expansion and 55 months of recession, resulting three recession and four expansion sub-periods. Due to the fact that these expansion and recession sub-periods are alternate in time line, we also take into account a shorter period (December 2001 to March 2011) with just an expansion and a recession consecutive sub-periods, in order to a deeper analysis of the impact of the recent financial crisis in the US stock market, specifically on the relation between stock returns, at an industry level, and unexpected changes in nominal interest rates.

Figure 2. State of the Economy

[3] We use ARIMA models because authors, such as Joyce and Read (2002) and Browne and Doran (2005), observe similar results using ARIMA and other alternative and more sophisticated procedures



Source: NBER (The National Bureau of Economic Research). Notes: NBER'S classification is only available until June 2009, so we extend this classification analyzing the evolution of the annual growth of the US GDP after seasonal adjustment (Díaz and Jareño, 2013).

4. Empirical results

In this paper, we estimate two models: Model 1 analyses the relation between stock returns and unanticipated changes in nominal interest rates and Model 2 examines the relation between stock returns and unanticipated changes in real interest and inflation rates. These models, (1) and (2), are applied by industry and are estimated by using the "seemingly unrelated regression" SUR technique (Zellner, 1962).

We show the most remarkable results in Table 2. Table 2 panel A1 shows the results for model 1 for the total sample, several and alternate expansion sub-periods and several and alternate recession sub-periods in the long sample period (November 1989 to February 2014). On the other hand, panel A2 contains the results for model 2 for the total sample, the unique expansion sub-period from December 2001 to December 2007 and the unique and recent recession sub-period from January 2008 to March 2011 in the short sample period (December 2001 to March 2011). Specifically, panel A1 has 7 columns that presents the following information: columns 2 and 5 show the proportion of industries that have a significant response to each factor, columns 3 and 6 show the number of industries that have a positive response to these factors while columns 4 and 7 show the ones with a negative response. On the other hand, panel A2 has 10 columns that summarize the following results: columns 2, 5 and 8 show the proportion of industries that have a significant response to each factor, columns 3, 6 and 9 show the number of industries that have a positive response to each factor and finally, columns 4, 7 and 10 show the number of industries with a negative response to each factor.

Table 1. Beta coefficients of industry stock returns to variations in nominal interest rates (model 1) and real interest and expected inflation rates (model 2) in the long sample period (Nov. 1989 to Feb. 2014) with several and alternate expansion and recession sub-periods and in the short sample period (Dec. 2001 to Mar. 2011) with a consecutive expansion and recession sub-period

Panel A1: Model 1. Signficant (S), Positive (+), Negative(-) Coefficients

Model 1	r_{mt}			Δi_t^u		
	S	+	-	S	+	-
Long sample period (Nov. 1989-Feb. 2014)						
Total sample	82/82	82	0	28/82	15	13
Expansion sub-periods	82/82	82	0	24/82	16	8
Recession sub-periods	81/82	81	0	31/82	11	20
Short sample period (Dec. 2001-Mar.2011)						
Total sample	82/82	82	0	25/82	10	15
Expansion sub-period (Dec. 2001-Dec.2007)	74/82	74	0	10/82	7	3
Recession sub-period (Jan. 2008-Mar. 2011)	81/82	81	0	29/82	12	17

Panel A2: Model 2: Signficant (S), Positive (+), Negative(-) Coefficients

Model 2	r_{mt}			Δr_t			$\Delta E_t^{ORT}(\pi_{t,t+1})$		
	S	+	-	S	+	-	S	+	-
Long sample period (Nov. 1989-Feb. 2014)									
Total sample	82/82	82	0	16/82	9	7	23/82	11	12
Expansion sub-periods	82/82	82	0	11/82	10	1	21/82	12	9
Recession sub-periods	81/82	81	0	21/82	11	10	30/82	10	20
Short sample period (Dec. 2001-Mar.2011)									
Total sample	82/82	82	0	23/82	12	11	21/82	8	13
Expansion sub-period (Dec. 2001-Dec.2007)	75/82	75	0	11/82	10	1	11/82	6	5
Recession sub-period (Jan. 2008-Mar. 2011)	81/82	81	0	22/82	10	12	29/82	12	17

Notes: **Model 1**: $r_{jt} = \alpha_j + \beta_j \cdot r_{mt} + \gamma_j \cdot \Delta i_t^u + \varepsilon_{jt}$;

Model 2: $r_{jt} = \alpha_j + \beta_{jm} \cdot r_{mt} + \beta_{jr} \cdot \Delta r_t + \beta_{j\pi} \cdot \Delta E_t^{ORT}(\pi_{t,t+1}) + \varepsilon_{jt}$

Where: r_{jt} represents stock returns at time t for each industry j, r_{mt} is the return on the market portfolio, Δi_t^u represents changes in nominal interest rates, Δr_t represents changes in real interest rates, $\Delta E_t^{ORT}(\pi_{t,t+1})$ shows movements in expected inflation rates (orthogonalized) and ε_t is the error term. The sample extends from Nov. 1989 to Feb. 2014 and the following regression has been estimated using SUR methodology. t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In the long sample period (November 1989 to February 2014) all industries, for Models 1 and 2, exhibit positive and significant market betas for the total sample and for the expansion sub-period while in the recession sub-period there is one exceptional industry, Gold, without a significant coefficient. This exception is interesting because Gold should be rumoured to provide a safe haven during recessions.

On the other hand, in the short sample period (December 2001 to March 2011), all industries exhibit positive and significant market betas just for the total sample for models 1 and 2, while in the recession sub-period (January 2008 to March 2011), just one exceptional industry, Diversified Consumer Services, does not exhibit significant market for both models and, moreover, in the expansion sub-period (December 2001 to December 2007) just 74 and 75 industries out of 82 exhibit significant market betas for models 1 and 2, respectively. A possible explanation of these results could be that industries belonging to some particular sectors could anticipate the recession period during the previous and consecutive expansion period. So, in the expansion sub-period from December 2001 to December 2007 we observe some sectoral returns which move independently of the market.

Panel A1 reports that in the total sample period for the very long sample period (November 1989 to February 2014) there are more instances of contrary positive relations between stock returns and unanticipated changes in nominal interest rates in the total sample. Meanwhile in the short sample period (December 2001 to March 2011) there are more industries with negative relations between stock returns and unanticipated changes in nominal interest rates. In the expansion sub-period, we find that compared to the overall sample, there are four fewer industries (24 industries in total) that have a significant relation between stock returns and unexpected changes in nominal interest rate in the long sample period (November 1989 to February 2014). On the other hand, in the expansion sub-period from December 2001 to December 2007, there are just 10 industries (fifteen fewer industries than in the total sample period) with a significant relation between stock returns and unanticipated changes in nominal interest rate. Moreover, in the expansion sub-periods of both long and short periods, there are more industries with contrary positive relations between stock returns and unanticipated changes in nominal interest rates. In the recession sub-period we find that the stock returns of more industries are inversely related to unanticipated changes in nominal interest rates in both long and short sample periods. Specifically, in the recession sub-periods for the long sample period there are three more industries than in the overall sample with a significant relation between stock returns and unanticipated changes in nominal interest rates. Meanwhile, in the recession sub-period (the last recession period) for the short sample period four more industries now have a significant relation between stock returns and unanticipated changes in nominal interest rates.

A relevant result is that stock returns for the Diversified Metals and Mining industry have a positive and significant relation between stock returns and unexpected changes in nominal interest rates for the overall, recession and expansion sub-periods

in the long sample period (November 1989 to February 2014).[4] So, an investment in this industry can form a natural safe haven against unexpected changes in the nominal interest rate.

Focusing our attention on model 2 panel A2, we notice that stock returns of most industries have no significant relation with unexpected changes in the real rate of interest. Specifically, in the overall period just 16 out of 82 industries, for the long sample period (November 1989 to February 2014), and 23 of the 82 industries, for the short sample period (December 2001 to March 2011), have a significant coefficient. In the expansion sub-periods there are 5 fewer industries (11 out of 82) in the long sample period and 12 fewer industries (11 out of 82) in the short sample period with a significant relation between stock returns and unexpected changes in the real rate of interest. Looking at the recession sub-periods and comparing these results with the overall sample ones, there are 5 more industries (21 out of 82) in the long sample period and 1 fewer industry (22 out of 82) in the short sample period with a significant relation with those unexpected changes in the real rate of interest. So, we can affirm that the stock returns of most industries do not respond to unexpected changes in the real rate of interest.

We find two industries, Integrated Oil and Gas and Diversified Metals and Mining, that have a consistently significant and positive relation between stock returns and unexpected changes in the real rate of interest for the overall, recession and expansion sub-periods for both long and short sample periods. This suggests that investments in these industries can provide some insulation from unexpected changes in the real rate of interest.

Taking into account unexpected changes in the inflation rate (model 2 panel A2), we find that overall, 23 of 82 industries for the long sample period and 21 of 82 industries for the short sample period respond significantly to unexpected changes in inflation rates. During the expansion sub-periods, the number of significant relations to unexpected inflation falls to 21 (just 2 fewer industries) and to 11 (10 fewer industries) for the long and short sample periods, respectively. Meanwhile, these significant relations rise to 30 (7 more industries than in the overall sample period) and to 29 (8 more industries than in the overall) during recession sub-periods for the long and short sample periods, respectively.

According to these results, most industries have a negative significant relation between stock returns and unexpected inflation. Moreover, Household Durables and Gold have a consistent negative relation to unanticipated inflation in the overall sample and in the recession and expansion sub-periods for the long and the short sample period, suggesting that stocks in these industries are exposed to significant inflation risk. However, although we can find industries with a significant positive relation to unexpected changes in the inflation rate, there is not any industry with a consistently positive relation with unexpected inflation.

[4] This consistent relation in Diversified Metals and Mining between stock returns and unexpected changes in nominal interest rates does not continue for the short sample period from December 2001 to March 2011.

5. Conclusions

In this paper we not only examine the sensitivity of stock returns to changes in nominal interest rates, finding significant and negative relationship between stock returns and unexpected changes in nominal interest rates that agree with previous papers (Sweeney and Warga, 1986, Fraser *et al.*, 2002, Oertmann *et al.*, 2000, Hevert *et al.*, 1998 a and b, Jareño, 2006 and 2008, Ferrer *et al.*, 2010, Campos *et al.*, 2016, and Ferrando *et al.*, 2017, among others), but also we have decompose these unexpected changes in the nominal interest rate into unexpected changes in the real interest and inflation rate at the industry level for several recession and expansion sub-periods in an overall sample period (November 1989 to February 2014), as well as for the last recession period of the US economy (January 2008 to March 2011) and its previous expansion period (December 2001 to December 2007) and the total period (December 2001 to March 2011).

Apart from these negative relations, we also observe some insignificant and consistently positive relations between stock returns and unexpected changes in nominal interest rates, such as the Diversified Metals and Mining industry, just in the long sample period.

After decomposing unexpected changes in the nominal interest rate into unexpected changes in the real interest and inflation rates we find that, in general, the stock returns by industry are inversely related to unexpected changes in the real interest rate movements, and unexpected changes in the inflation rate overall and more so in the recession than in expansion sub-period. However, we could not find any industry with a consistent negative relation between stock returns and unanticipated changes in the real interest rate. On the other hand, taking into account inflation as a source of risk, we found that Household Durables and Gold have a consistent negative relation to unanticipated inflation in the overall sample and in the recession and expansion sub-periods for the long and the short sample period. So, investments in these two industries are exposed to significant inflation risk.

It is remarkable that two industries, Integrated Oil and Gas and Diversified Metals and Mining, provide a safe haven against unexpected changes in the real rate of interest. It is due to the fact that they have a consistently positive relation with unexpected changes in the real rate of interest for the overall, recession and expansion sub-periods for both long and short sample periods. This suggests that investments in these industries can provide some insulation from unexpected changes in the real rate of interest.

We suggest that future research can be inspired by Czaja *et al.* (2009) and Shamsuddin (2014), who estimate interest rate risk in terms of the sensitivity of stock returns to changes in level, slope and curvature of the interest rate term structure rather than changes in the level of the yield curve. Also, estimating interest rate sensitivity via the Quantile Regression technique (Jareño *et al.*, 2016; and Ferrando *et al.*, 2017) can prove to be fruitful because Quantile Regressions allows for measuring the impact of interest rate changes not only at the centre but also at the tails of the distribution of the stock returns, and thus provides a more comprehensive characterization of the relationship.

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Appendix

Table 1. The Global Industry Classification Standard (GICS) combined with Bloomberg classification as of April 29, 2010:

Panel A: Consumer Disc retionary, Consumer Staples and Energy

Panel B: Financials, Health Care, Industrials and Information Technology

Panel C: Materials, Telecommunications Services and Utilities

Panel A: Consumer Discretionary, Consumer Staples and Energy

Sector (weights)/ Industries
S1 Consumer Discretionary (10.59%)
I1 Auto components I2 Automobiles
I3 Household Durables I4 Leisure Equipment & Products I5 Textiles, Apparel & Luxury Goods
I6 Hotels Restaurants & Leisure I7 Diversified Consumer Services
I8 Advertising I9 Broadcasting I10 Cable & Satellite I11 Movies & Entertainment I12 Publishing
I13 Distributors I14 Internet & Catalog Retail I15 Multiline Retail I16 Specialty Retail
S2 Consumer Staples (10.80%)
I1 Drug Retail I2 Food Distributors I3 Food Retail I4 Hypermarkets & Super Centers
I5 Beverages I6 Food Products I7 Tobacco
I8 Household Products I9 Personal Products
S3 Energy (11.50%)
I1 Oil & Gas Drilling I2 Oil & Gas Equipment & Services
I3 Integrated Oil & Gas I4 Oil & Gas Exploration & Production I5 Oil & Gas Refining & Marketing I6 Oil & Gas Storage & Transportation I7 Coal & Consumable Fuels

Panel B: Financials, Health Care, Industrials and Information Technology

Sector (weights)/ Industries
S4 Financials (16.58%)
I1 Commercial Banks I2 Thrifts & Mortgage Finance
I3 Diversified Financial Services I4 Consumer Finance I5 Capital Markets
I6 Insurance Brokers I7 Life & Health Insurance I8 Multi-line Insurance I9 Property & Casualty Insurance
I10 Real Estate Investment Trusts (REITs)

I11 Real Estate Management & Development
S5 Health Care (11.50%)
I1 Health Care Equipment & Supplies I2 Health Care Providers & Services
I3 Biotechnology I4 Pharmaceuticals I5 Life Sciences Tools & Services
S6 Industrials (10.79%)
I1 Aerospace & Defense I2 Building Products I3 Construction & Engineering I4 Electrical Equipment I5 Industrial Conglomerates I6 Machinery I7 Trading Companies & Distributors
I8 Commercial Services & Supplies I9 Professional Services
I10 Air Freight & Logistics I11 Airlines I12 Road & Rail
S7 Information Technology (19.02%)
I1 Internet Software & Services I2 IT Services I3 Software
I4 Communications Equipment I5 Computers & Peripherals I6 Electronic Equip., Instruments & Components I7 Office Electronics
I8 Semiconductor Equipment I9 Semiconductors

Panel C: Materials, Telecommunications Services and Utilities

Sector (weights)/ Industries
S8 Materials (3.44%)
I1 Diversified Chemicals I2 Fertilizers & Agricultural Chemicals I3 Industrial Gases I4 Specialty Chemicals
I5 Metal & Glass Containers I6 Paper Packaging
I7 Aluminum I8 Diversified Metals & Mining I9 Gold I10 Steel
I11 Forest Products I12 Paper Products
S9 Telecommunications Services (2.71%)
I1 Integrated Telecommunication Services
S10 Utilities (3.42%)