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THE EFFECT OF G20 SUMMITS ON GLOBAL FINANCIAL MARKETS

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Abstract

In the wake of the global financial crisis, the G20 has become the most important forum of global governance and cooperation, largely replacing the once powerful G7. In this paper we run an event study to test whether G20 meetings at ministerial and Leaders level have had an impact on global financial markets. We focus on the period from 2007 to 2013, looking at equity returns, bond yields and measures of market risk such as implied volatility, skewness and kurtosis. Our main finding is that G20 summits have not had a strong, consistent and durable effect on any of the markets that we consider, suggesting that the information and decision content of G20 summits is of limited relevance for market participants.

Keywords: G20, global financial markets, event studies, volatility, global governance, financial crisis.

JEL: G14, G15, F53.

Non-Technical summary

The global financial crisis has brought about a fundamental shift in global economic governance with the Group of 20 (henceforth G20) largely taking the reins of the world economy from the G7. This shift has undoubtedly led to a number of important benefits. Most important, global governance has become more broadly based and legitimate, with key emerging markets being represented and contributing to decisions at the global level. Nevertheless, doubts linger on the legitimacy and effectiveness of the G20, which has received its fair share of criticism.

Against this background, the main purpose of this paper is to evaluate the G20 from a somewhat different, but in our view related, angle, namely whether G20 summits have been influential for global financial markets. While it is not the stated objective of the G20 to steer global financial markets, especially in the short term (and it is therefore not a yardstick against which the output legitimacy of the G20 should be measured) the financial market reaction is a useful indicator of the information and hence decision content of G20 summits. If the G20 summits contribute to reaching agreement on key decisions, as the G20 is the premier forum for international economic cooperation, surely such agreement represents important news for financial markets and should be reflected in market prices and volatilities. Otherwise, G20 summits could simply be an effective way for Leaders and ministers to get to know each other better, which facilitates cooperation later and on an on-going basis. This would make G20 summits possibly still valuable, but it would probably not justify the media attention that they sometimes receive.

In this paper we carry out an event study and analyse the impact of the G20 meetings at both ministerial and Leaders level on a set of financial market prices - equity (total market and banking sector), bond markets, as well as equity implied volatility and higher moments such as skewness and kurtosis, to also capture the effect on asymmetry and tail risks. Studying the impact on volatility is particularly useful in order to understand whether the G20 has been a stabilising force on markets. We look not only at the timing of the G20 meetings, but also at other characteristics such as the press reaction to G20 meetings by constructing a quantitative measure of the press reception of each G20 meeting.

The big picture arising from our analysis is that effects of G20 summits are small,

short-lived, non-systematic and non-robust across specifications and assets. On the other hand there is some evidence, though not very strong, that G20 summits have had a mild calming impact on market developments, as indicated by the decrease of some risk measures after G20 meetings. Therefore, our paper suggests that the information and decision content of G20 summits has been of limited immediate relevance for market participants or already incorporated in prices.

An important caveat in our analysis is that it is limited to the short term reaction of financial markets. It may very well be that decisions at G20 level (for example in terms of economic policy coordination and regulation) have helped stabilising global financial markets from a longer term perspective and have averted a more negative scenario which would have materialised in the absence of those policy measures. This longer-term perspective is a much harder question to tackle and on which our analysis sheds little light.

1 Introduction

The 2007-09 global financial crisis has brought about a fundamental shift in global economic governance with the Group of 20 (henceforth G20) largely taking the reins of the world economy from the G7. While the G20 existed since the late 1990s¹, it has acquired prominence only in recent years, especially after the Pittsburgh summit in September 2009 (though the political consensus was already forged at the London summit in April). This shift has undoubtedly brought a number of important benefits. Most important, global governance has become more broadly based and legitimate, with key emerging markets being represented and contributing to decisions at the global level. Nevertheless, doubts linger on the legitimacy and effectiveness of the G20, which has received its fair share of criticism ("divided, ineffective and illegitimate"; Rachman 2010).

In general, any global governance system faces an unavoidable trade-off between *efficiency* and *legitimacy*. A larger table is slower in taking decisions, but the presence of more players makes it more legitimate. This begs the question whether the composition of the G20 is the best way to manage this trade-off, being aware that an "ideal" composition is probably unattainable (Carin et al. 2010). The question of legitimacy is also not

¹The G20 has been established as a group of finance ministers and central bank governors in 1999 in the wake of the Asian crisis.

straightforward, since one can distinguish at least between "input" legitimacy (the country composition) and "output" legitimacy (the outcomes stemming from G20 processes, irrespective of who takes the decision). In terms of the former definition, several observers have noted that the G20 composition is not clear and transparent (Vestergaard 2011b), based on criteria decided largely by the G7, influenced by US strategic interests, and inconsistent. For example, it is not clear why countries such as Argentina and Saudi Arabia are included and Spain is excluded from the G20, although Spain has an unclear status as a permanent "guest". Vestergaard (2011b) proposes to create a Global Economic Council in place of the G20, embedded in the institutional framework of the Bretton Woods institutions.

The lack of a clear input legitimacy implies that decisions in the G20 can be taken only by consensus, leading to too timid and hence suboptimal decisions. Turning to output legitimacy, the common opinion is that the record is mixed (Truman 2011), being positive in some areas (catalyst for global financial regulation, management of capital flows) and poor in others (e.g., surveillance of the global economy). Larionova (2012) notes that the G20 is still significantly less effective than the G8 in terms of accountability and delivery. Angeloni and Pisani-Ferry (2011) note that G20 actions were effective at the peak of the crisis, when all countries had consistent policy objectives and priorities (global shock), but not when priorities started to diverge thereafter. Other observers have also emphasised the need for the G20 to become more accountable (Subacchi and Pickford 2011).² Finally, another set of issues concerns the role of the IMF as the operational arm of the G20.

Against this background, the main purpose of this paper is to evaluate the G20 from a somewhat different, but in our view related, angle, namely whether G20 summits have been influential for global financial markets. Clearly, it is not the stated objective of the G20 to steer global financial markets, especially in the short term, and it is therefore not a yardstick against which the output legitimacy of the G20 should be measured. Still, the financial market reaction is a useful indicator of the information and hence decision content of G20 summits. If the G20 summits contribute to reaching agreement on key decisions, because the G20 is the premier forum for international economic cooperation, surely such agreement represents important news for financial markets and should be reflected in

²The lack of a permanent secretariat is widely seen as a problem in the assessment of, and follow up to, G20 commitments.

changes in market prices and volatilities. Otherwise, G20 summits could simply be an effective way for Leaders and ministers to get to know each other better, which facilitates cooperation later and on an ongoing basis. This would make G20 summits possibly still valuable, but it would not justify the media attention that they sometimes receive. In short, our analysis is aimed at achieving a better understanding of the nature of G20 summits. We do not really have much to say about the usefulness and role of the G20 (or for that matter of international economic policy cooperation) more broadly.³

More in detail, in this paper we run an event study and analyse the impact of the G20 meetings at both ministerial and Leaders level on a set of financial market prices - equity (total market and banking sector), government bond markets, as well as equity implied volatility and higher moments such as skewness and kurtosis, to also capture the effect on asymmetry and tail risks. Studying the impact on volatility is particularly useful in order to understand whether the G20 has been a stabilising force on markets, in particular in times of financial distress such as in 2008-2009. We look not only at the timing of the G20 meetings, but also at other characteristics such as the press reaction to G20 meetings. We obtain a quantitative measure of the press reception of each G20 meeting (at both Leader and ministerial level), largely following the approach used by Lucca and Trebbi (2009) for FOMC meetings.

Coming to the main results of our paper, overall they suggest that the information and decision content of G20 summits has been of limited immediate relevance for market participants or already incorporated in prices. Indeed, effects of G20 summits are found to be small, short-lived, non-systematic and non-robust across specifications and assets. We also find that characteristics of the statements released after the meetings and of the press reception likewise do not have a consistent effect on markets. On the other hand there is some evidence, though not very strong, that G20 summits have had a mild calming impact on market developments. This latter conclusion stems from the positive effects of G20 meetings on equity prices and slight decreases in advanced countries' bond prices,

³See also the debate on the Economist blog, e.g. the positions of Ricardo Caballero ("*[G20 summits are] probably worth having but not much surplus is left after the travel expenses are paid for. The unreasonable part is the hype around these meetings. The G20 gathering is just a nice photo and venting opportunity; the speeches and debates are totally predictable (and boring).*") and Viral Acharya ("*G20 summits are worth having. While the process of international dialogue and cooperation does not always yield tangible effective results, the counterfactual could be far worse. And the debates at the G20 do shape national agendas on various policies relating to trade, exchange rates, and financial sector regulation.*").

which points to some "risk on" effect. This conclusion is also supported by the decline in at least some of the risk measures and absolute returns. It should be noted, however, that also these effects are not consistent and robust throughout.

An important caveat in our analysis, as most is that it is limited to the *short term* reaction of financial markets. It may well be that decisions at G20 level (for example in terms of economic policy coordination and regulation) have helped stabilising global financial markets from a longer term perspective and have averted a more negative scenario which would have materialised in the absence of those policy measures. Whether this has been the case is a much harder question to tackle and on which our analysis sheds only limited light. From this standpoint, our results should certainly not belittle G20 achievements. Our work has had the more limited objective to shed some light on the nature of the G20 summits and their information content in terms of economic policy decisions as seen through the lenses of the financial market reaction.

Our paper follows a long tradition of event studies in economics and finance; see MacKinlay (1997) for a survey. Yet, to the authors' knowledge this is the first paper to address the role of the G20 in global financial markets, probably owing to the fact that the rise of the G20 is still a relatively recent phenomenon. In a similar spirit, Fratzscher (2009) analyses the impact of G7 communication on *exchange rates* of major currencies since the 1970s. He finds that the G7 has generally been effective in moving exchange rates at a relatively short horizon, but not thereafter. The G20, however, has not gained a prominent role on exchange rates so far, and for this reason we look at other financial variables in our paper. As the G20 has been heavily involved in the process of global financial sector regulation and reform, we look in particular at equity returns in the banking sector, both in advanced and emerging markets.

There is also an older literature dealing with the impact of the G7 on economic outcomes; a seminal contribution is Balamoune (2000) who looks at the effect of the G7 objectives on macroeconomic variables in a VAR study. Kirton (2006) tries to explain what drives compliance with G8 commitments, in particular in the institutional setting. He finds that institutionalization through the finance ministers as well as having clear deadlines increases compliance with the commitments. Closer in its main objective to our paper, Smeets and Zimmermann (2013) look at the financial market impact of European Council summits (including in Euro Area composition). Similar to our study of G20 meet-

ings, they find that EU summits have a small impact on European stock markets and bond yields. Finally, there is a large literature on central bank communication and in particular the impact of communication on financial markets (see the survey paper by Blinder et al. 2008). This empirical literature generally finds that central bank communication has a substantial short run impact on financial markets, for example following statements and reports. Our results tend to contrast with this literature because we find that unlike, for example, meetings of the US Federal Open Market Committee, the summits of the G20 are generally not market-movers. This is not surprising given the fundamental difference between G20 meetings (meetings among leaders or ministers of sovereign States) and central banks entrusted with a specific executive power, i.e. monetary policy, which has a clear and direct impact on financial market prices.

As the G20 is the vehicle of international policy coordination, our paper is also loosely related to a larger and older literature dealing with costs and benefits of international macroeconomic policy coordination. This strand of work typically emphasises that gains from coordination are positive but small and uncertain.⁴ However, international macroeconomic policy coordination is not the only possible benefit of G20 summits; according (among others) to Daniels (2004), the main benefit of economic summits is rather in contributing to improve domestic policies.

The paper is organised as follows. Section 2 presents the data; Section 3 describes the empirical model. Section 4 presents the results (baseline and robustness), and Section 5 concludes.

2 Data

2.1 G20 meeting dates

We collect data on the date of the G20 meetings and Leader and ministerial level between November 2007 and September 2013 (*Table 1*), yielding a total of 29 meetings of which 8 at Leader and 21 at minister level (*Table 1a*).

(Tables 1-1a here)

⁴See for example the recent contribution to this literature by Ostry and Ghosh (2013).

Furthermore, we also build measures based on the content of the statement released after each meeting. These measures are unavoidably subjective and are based on our reading of the statements. In particular, we build two measures, *Decision* and *Financial_decision* which takes value 1 if a new decision was announced in the statement and 0 otherwise (rather than, say, reiterating and confirming previous decisions). We include the launching of Action Plans as decisions, implying that for most meetings at Leaders level the *Decision* variable takes value 1. *Financial_decision* is the same variable taking value 1 if the decision is in the field of financial regulation. Finally, we characterise the description of the economic outlook in the first part of the statement as positive, negative or neutral and we define a variable *Outlook* as having values +1 (positive), 0 (neutral) and -1 (negative). Admittedly these measures can be criticised because they are largely subjective, however they do not play a large role in the analysis anyway and they are kept only as a robustness check.

2.2 Measuring the press reaction to G20 statements

We broadly follow Lucca and Trebbi (2009) who look at discussions of FOMC statements from newspapers, journals and newswires that are included in the Dow Jones Factiva news database on days of announcements. We follow the same approach by first selecting articles containing the words “G20 meeting” on the day of the meetings and the following 3 days, also from the Dow Jones Factiva database. Table 1a contains an indication of the press articles found for each G20 meeting (these vary between 0 and 10 for each meeting). We then compute a semantic orientation score (henceforth *Press*) by simply subtracting the number of words with positive connotation from the number of words with negative connotation in each article, dividing them by the total number of "positive" and "negative" words (if there is no article found, the score is set equal to zero). We also consider an alternative based on the difference scaled by the total number of words rather than the number of positive and negative words.

Table 1b contains the list of positive and negative words we use in our analysis. We are careful to correctly identify negative sentences; for example, the word “*deliver*” in “*this G20 meeting did not deliver*” is classified as a "negative" word. We also cross-check the score by reading a few of the articles and assigning a subjective score to the content of the article in terms of judgement on the outcome of a given G20 meeting. Finally, we

also consider the total number of words in all press articles as a measure of resonance of a given G20 meeting (*Coverage*).⁵ We compute the *Press* score separately for Leaders and Ministers meetings. Table 1a reports the summary statistics for our Press variable and the number of words in the Dow Jones Factiva database.

(Table 1b here)

2.3 Financial market data

We use daily data for equity returns and changes in bond yields between January 2007 and October 2013 for 65 advanced and emerging countries (see the list of countries in *Table 2*). We also use data on key risk measures in global financial markets, such as the VIX for the US stock market. *Table 3* contains the summary statistics and codes for the financial market data that we use; data are derived from Datastream and the ECB's own database. We also use daily data on the Citigroup G10 surprise index, compiled by Citigroup; this is an index that measures the degree of surprise in the release of economic news globally at a daily frequency.

(Tables 2-3 here)

When using daily data for an event study, one important issue which needs to be dealt with is the timing of the day of each meeting, which determines whether the effect to be tested is at day t or $t + 1$. For most meetings the decision is straightforward since they take place on weekends, so the market reaction is measured on the following Monday. For non-weekend meetings, we go back to the real time commentaries for that particular trading day to find out whether the G20 statement was factored in market prices, in particular in American markets, on the same day. We also experiment with different time windows in the robustness analysis.

In *Table 4*, we report for illustration purposes correlations between asset return variables, and in *Table 4a* between risk measures. Starting from the asset returns, correlations are all positive and strongly statistically significant, with the exception of the *Dembi* variable (the first difference of the redemption yield on the Emerging Markets Bond Index - EMBI). Notably, the correlation between stock returns and key bond yields (US and

⁵Note that for ease of interpretation the measure is standardised.

German ones in particular) is positive. Correlations between implied volatility and skewness measures are positive, while the correlations with kurtosis measures are negative (skewness and kurtosis are also negatively correlated), suggesting that our measures of risk capture different dimensions of risk and are not overlapping. While most of the correlations are statistically significant, those for skewness and kurtosis for EU bank equity returns⁶ (*KTbanks* and *SKbanks*) are sometimes not statistically significant. More generally, correlations between risk measures are lower than for returns.

(Tables 4-4a here)

3 The empirical model

We carry out the empirical analysis in two steps, (i) first by regressing individual key financial market data of global relevance, such as the U.S. equity return, on the event dummies (*time series analysis*) and then (ii) doing the same in a panel setting (*panel analysis*), distinguishing between advanced and emerging markets.

The basic set-up of the empirical analysis is the one typical of event studies. For the first part of the analysis, the benchmark specification of the estimated model is

$$\Delta y_t = \rho \Delta y_{t-1} + \beta G20_t + \gamma press_t + \lambda X_t + \varepsilon_t \quad (1)$$

where Δy is the daily change in financial price of interest or risk measure (as shown in Table 3), $G20$ is the dummy variable for the timing of the meetings as described in Section 2 (further divided into Leaders and Ministers meetings), $press$ is our measure of the press reaction to the meetings (again divided into Leaders and ministerial), and X is a vector of controls (notably day of the week and Citigroup economic surprise index). The coefficients of interest for our analysis are β and γ .

It could be the case that G20 summits affect asset returns but not always in the same direction. Notably, certain decisions could be seen negatively by market participants and lead to negative asset returns, while other decisions might have the opposite effect. Finding no effect on asset returns could therefore mask an effect which however does not always go in the same direction. For this reason, we also estimate the model in absolute

⁶Skewness and kurtosis computed on options on the Dow Jones EU Bank Equity Index.

values,

$$|\Delta y_t| = \rho |\Delta y_{t-1}| + \beta G20_t + \gamma press_t + \lambda X_t + \varepsilon_t \quad (2)$$

Of course, this part of the analysis is not relevant for risk measures, where the sign has a clear interpretation (e.g., a positive change in *Dvix* is an increase in risk). For this specification in absolute values, evidence of an effect would be there for *positive* β and γ ; a negative value for these parameters would signal that G20 meetings have a calming impact on markets, reducing their realised volatility, at least on the day following them.

After estimating model (1) for some key measures of asset returns and risk in global financial markets we also run a panel analysis on equity returns and bond yields (not for risk measures because our country coverage is too limited). In this second part of the analysis the estimated model is a fixed-effect panel,

$$\Delta y_{it} = c_i + \rho \Delta y_{i,t-1} + \beta G20_t + \gamma press_{it} + \lambda X_{it} + \varepsilon_{it} \quad (3)$$

As our key right hand side variable, the G20 dummy, varies only across time and not by country, the problem of high cross sectional dependence may arise. For this reason we use Driscoll-Kraay standard errors (see Driscoll and Kraay 1998). Driscoll-Kraay standard errors are robust to very general forms of spatial and temporal dependence when the time dimension becomes large. For the panel estimation we also include a robustness analysis by adding the *Coverage*, *Decision*, *Financial_decision* and *Outlook* variables to the baseline specification. Also for the panel estimation we estimate the model in returns and in absolute returns, both for the baseline and for the robustness analysis.

4 Results

We first describe the time series results for returns and risk measures (Section 4.1) before turning to the panel results (Section 4.2). The big picture arising from the empirical analysis is that, with a couple of exceptions, effects of G20 summits are small, short-lived, non-systematic and non-robust across specifications and assets. There is also some evidence, though not very strong, that G20 summits have had a mild calming impact on market developments. This latter conclusion stems from the positive effects of G20 meetings on equity prices and slight decreases in advanced countries' bond prices, which points to some "risk on" effect. This conclusion is also supported by the decline in at least

some of the risk measures and absolute returns. As a caveat, note that also these effects are not consistent and robust throughout the various specifications that we include.

4.1 Time series results

4.1.1 Asset returns

Table 5 reports the baseline results for equation (1) for different asset returns. The returns included are those in the upper panel of *Table 3*: the S&P500 returns ($DlnSP500$), Eurostoxx returns ($Dlneustox$), the Emerging Market Equity Return ($DlneqEME$), three bank equity returns (for the US, euro area and emerging markets; respectively $DlnbankUS$, $DlnbankEMU$, $DlnbankEME$), and 10-year government bond yields in the US ($D10yUS$), Germany ($D10yDE$) and a bond yield representative of emerging markets ($Dembi$). Results indicate that dummies for G20 meetings and our measure of press reaction do not have a systematic effect on asset returns, with the exception of a small decline in bond yields in the US and Germany following G20 summits at Leaders level (by 2-3 basis points) and a rise in case of a positive press reaction. As we shall see later also these results are not very robust.

(Table 5 here)

As mentioned in the Introduction, the G20 became the premier forum of international economic cooperation only after 2009. Therefore, it could be that G20 meetings have had a larger impact on global financial markets after 2009 by virtue of the increased importance of the G20. In *Table 5a* we therefore repeat the same analysis as in *Table 5* starting from the London summit in April 2009. Results are very similar to *Table 5*, although now also the coefficient for *press* is positive and significant for bank equity returns in the US and the euro area. However, the effect remains insignificant for most variables for both Leaders and ministerial meetings.

(Table 5a here)

One important question is whether the effects of meetings are durable, and for this reason we use a 5-day window in *Table 5b*. In particular, we regress 5-day cumulated returns on the G20 dummies and *press*, plus the controls. In this case we find that

practically all coefficients are insignificant. We experiment with other time windows (longer and shorter, between 1 and 5 days) and results likewise point to inconsistent or no effects on bond and stock prices, even though some effects are significant for a particular time window and a particular asset.

(Table 5b here)

Turning to the specification in absolute values (equation (2)), *Table 5c* reports the results. We do find some significant effects in this table, but in general they go in the opposite direction of finding that G20 meetings had new information content for market participants since most of the significant coefficients are *negative*. On the other hand, a more positive interpretation of this finding is that the G20 meetings had some calming impact in particular on equity returns. One exception to this pattern is the effect of the *press* variable for ministerial meetings on the absolute value of US bank equity returns.

(Table 5c here)

4.1.2 Risk measures

We now turn the results for risk measures, following the same order of presentation as for the asset returns, namely (i) baseline (*Table 6*), (ii) results after the London summit (*Table 6a*) and (iii) longer time window (*Table 6b*).⁷ All tables include the risk indicators described in Table 3, namely the VIX (*Dvix*), the implied volatility of the Eurostoxx (*Dvstoxx*), the implied volatility of the German stock market (*DvixDE*), the option implied kurtosis for the S&P 500 (*KTSP500*), the Eurostoxx 500 (*KTEU500*) and the EU bank equity index (*KTbanks*), as well as the option implied skewness of the same markets (respectively *SKSP500*, *SKEU500*, *SKbanks*). As noted this comprehensive list of indicators, including notably skewness and kurtosis, allows us to look at effects not only on second moments but also on the asymmetry of the distribution and on tail risks.

The general message from the analysis of risk measures is the same as for asset returns, namely that while some effects are sporadically significant there is no consistent pattern of significant effects throughout. In the baseline results in Table 6, the effect of G20 summits

⁷As already noted in Section 3, unlike for asset returns we do not need to look at absolute measures for risk indicators.

is insignificant on all the chosen risk measures apart from the kurtosis of the S&P 500 for which the effect is negative (indicating lower risk, albeit only marginally).

(Table 6 here)

Are results different after the London summit (*Table 6a*)? The *press* variable is now significant and negative for the VIX and stock implied volatility in Germany, but not for the other risk indicators. Again, the press reaction variable is significant at the 10 per cent level and for the kurtosis of the S&P 500 only.

(Table 6a here)

Results for a 5-day window (*Table 6b*) after the meetings suggest that any effect is not lasting beyond a couple of days, since no variable is significant at that horizon anymore. This is similar to results obtained for asset returns and suggests that effects are, if anything, very short-lived.⁸

(Table 6b here)

4.2 Panel results

4.2.1 Baseline panel results

Finally, we present the baseline panel results in *Table 7*; given the small country variation available for the risk measures, we limit this part of the analysis to equity returns and bond yields for 65 countries (list in *Table 2*). In *Table 7* we include equity returns for advanced and emerging markets, equity returns for banks in advanced and emerging markets, and changes in government bond yields. We find that the only noticeable effect of meetings is on government bond yields in advanced countries. Even in that case the effects, however, are small. We find that bond yields rise by 1 basis point following Leaders meeting and fall by 3 basis points following ministerial-level meetings. A more positive press reaction by one standard deviation leads to an increase by up to a couple of basis points in advanced countries' bond yields. Although only significant at the 10 per cent level, we find that bank equity returns in advanced countries rise after G20 meetings at ministerial level.

⁸Results obtained by varying the time window and using the alternative measure of the press reaction are almost the same as the baseline ones.

Results for absolute returns (*Table 7a*) are again consistent with the idea that effects are if anything negative, indicating a mild calming effect on markets.⁹

(Tables 7-7a here)

Table 7b repeats the same analysis for G20 countries, to test the proposition that the effect of G20 meetings might be larger for them as compared with other countries. We find the opposite to be the case, with the effects mostly insignificant even for bond yields apart from a small positive effect on bond yields in advanced countries (+2 basis points) and a fall in emerging countries (-3 basis points) for Leaders' meetings only. Although the absolute value of these effects is small, this may be another indication of a calming impact of G20 summits on bond markets, with riskier assets (emerging market bonds) benefiting to some extent.

(Table 7b here)

4.2.2 Robustness

Tables 7c-7e report the robustness analysis for returns, respectively equity returns (*Table 7c* for equity returns, *Table 7d* for bank equity returns, and *Table 7e-7g* for government bond yields). We also include additional potential explanatory variables and pooling all G20 meetings, without distinguishing between meetings at Leaders or ministerial level. We consider all countries together in the robustness analysis, but split the group in advanced (*Table 7f*) and emerging markets (*Table 7g*) for government bond yields, due to the substantial difference in the structure and determinants of bond yields in the two country types (see also the correlations between *Dembi* and bond yields in the US and Germany, which are negative).

Consistent with the previous results, most of the coefficients are small or statistically insignificant. One notable exception is the variable *Financial_decision*, which has a strong positive effect (at ministerial level only) on equity returns, especially in the banking sector (*Table 7d*). One caveat surrounding this result is that this variable takes value 1 in only very few occasions, suggesting that it may be capturing the idiosyncratic effect of

⁹There is however one exception (equity returns in emerging markets following a more positive value of *press* for Leaders meetings).

specific meetings rather than a more general feature of G20 meetings. Especially for bank equity returns we also find some evidence of a positive effect of G20 Leaders meetings, when controlling for the *Decision* variables. Again, it is difficult to judge whether this is simply picking up the effect of few meetings specifically. For government bond yields, the effects are normally insignificant and, where statistically significant, small in absolute value.

(Tables 7c-7e here)

We repeat the robustness analysis when looking at equity returns and changes in government bond yields in absolute value (*Tables 8-8d*). Again, for changes in government bond yields we consider advanced countries and emerging markets separately. Results for absolute values confirm that the effects of G20 summits, wherever significant, tend to be negative, suggesting a calming impact on markets, though the estimated effect is more often than not insignificant. The variable *Financial_decision* again comes out as strongly significant (both economically and statistically speaking) for equity returns. Results for bond yields tend to confirm those discussed earlier, with some significant impact (but small) on advanced countries, less so for emerging markets.

(Tables 8-8d here)

5 Conclusions

In this paper we have dealt with the question of whether G20 summits have been influential for global financial markets. While the output legitimacy of the G20 should not be judged based on its capacity to steer global financial markets, especially in the short term, the financial market reaction may be considered as a useful indicator of the information and hence decision content of G20 summits. If the G20 summits contribute to reaching consensus on key decisions in global cooperation and financial regulation, it should follow that summits represent important news for financial markets and should be reflected in market prices and volatilities.

In particular, our paper follows the tradition of events studies and analyses the impact of the G20 meetings at both ministerial and Leaders level on a set of financial market prices. We cover equity returns (total market and banking sector), bond markets, as well

as equity implied volatility and higher moments of market prices such as skewness and kurtosis, to also capture the effect on asymmetry and tail risks. Studying the impact on volatility is also useful in order to understand whether the G20 has been a stabilising force on markets in times of crisis. We look not only at the timing of the G20 meetings, but also at other characteristics such as, in particular, the press reaction to G20 meetings, building on a quantitative measure of the press reception of each G20 meeting similar to the one used by Lucca and Trebbi (2009) for the press reaction of FOMC meetings.

The big picture arising from the empirical analysis is that, with a couple of exceptions, effects of G20 summits are small, short-lived, non-systematic and non-robust across specifications and assets. We also find that characteristics of the statements released after the meetings and of the press reception likewise do not have a consistent effect on markets. Nevertheless there is some evidence, though not very strong, that G20 summits have had a mild calming impact on market developments. This latter conclusion stems from the positive effects of G20 meetings on equity prices and slight decreases in advanced countries' bond prices, which points to some "risk on" effect. This conclusion is also supported by the decline in at least some of the risk measures and absolute returns. It should be noted, however, that also these effects are not consistent and robust throughout the analysis. Therefore, our paper suggests that the information and decision content of G20 summits has been of limited immediate relevance for market participants or has been already incorporated in prices before the meetings.

Our event study, by its own nature, has only looked at the short term impact on markets. A more difficult but also more interesting question is whether G20 actions have been effective from a lower frequency perspective, despite the absence of a strong market reaction to summits in the short term. The question is difficult to tackle because it is hard to think of a meaningful counterfactual in terms of economic policy cooperation.

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Table 1. List of G20 meetings

Start	End	Host Country	City	Type	Economic Outlook	Decision	Decision (Fin.)	Articles	Number of Words	Positive Words	Negative Words	Press	Press (Alternative 1)	Press (Alternative 2)
17/11/07	18/11/07	South Africa	Kleinmond	Ministers	0	0	0	2	655	4	0	1.000	0.006	4
11/10/08	11/10/08	USA	Washington DC	Ministers	0	1	1	5	1378	6	1	0.714	0.004	5
08/11/08	09/11/08	Brazil	Saopaulo	Ministers	-1	0	0	4	2180	16	1	0.882	0.007	15
14/11/08	15/11/08	USA	Washington DC	Leaders	-1	1	1	5	2571	34	3	0.838	0.013	31
14/03/09	14/03/09	UK	Horsham	Ministers	0	1	1	6	2483	39	8	0.660	0.016	31
02/04/09	02/04/09	UK	London	Leaders	-1	1	1	7	3531	13	0	1.000	0.004	13
24/04/09	24/04/09	USA	Washington DC	Ministers				2	702	3	0	1.000	0.004	3
04/09/09	05/09/09	UK	London	Ministers	0	0	0	6	2355	28	1	0.931	0.012	27
24/09/09	25/09/09	USA	Pittsburgh	Leaders	0	1	0	5	3563	20	2	0.818	0.006	18
06/11/09	07/11/09	UK	St Andrews	Ministers	1	1	0	6	2438	30	11	0.463	0.012	19
22/04/10	23/04/10	USA	Washington DC	Ministers	1	0	0	2	540	0	0		0.000	0
04/06/10	05/06/10	Korea	Busan	Ministers	1	0	0	3	2164	4	0	1.000	0.002	4
26/06/10	27/06/10	Canada	Toronto	Leaders	0	0	0	4	2945	9	4	0.385	0.003	5
09/10/10	10/10/10	USA	Washington DC	Ministers				1	403	0	0		0.000	0
22/10/10	23/10/10	Korea	Gyeongju	Ministers	0	1	0	2	1348	14	1	0.867	0.010	13
11/11/10	12/11/10	South Korea	Seoul	Leaders	0	1	0	4	3906	26	6	0.625	0.007	20
18/02/11	19/02/11	France	Paris	Ministers	0	0	0	10	5601	59	16	0.573	0.011	43
14/04/11	15/04/11	USA	Washington DC	Ministers	1	1	0	1	381	3	1	0.500	0.008	2
23/09/11	23/09/11	USA	Washington DC	Ministers	-1	0	0	2	578	2	0	1.000	0.003	2
14/10/11	15/10/11	France	Paris	Ministers	-1	0	0	3	2438	27	1	0.929	0.011	26
03/11/11	04/11/11	France	Cannes	Leaders	-1	1	0	6	5235	11	28	-0.436	0.002	-17
25/02/12	26/02/12	Mexico	Mexico City	Ministers	-1	1	0	9	3514	32	7	0.641	0.009	25
19/04/12	20/04/12	USA	Washington DC	Ministers	0	0	0	4	4366	58	2	0.933	0.013	56
18/06/12	19/06/12	Mexico	Los Cabos	Leaders	-1	1	0	5	2999	21	1	0.909	0.007	20
04/11/12	05/11/12	Mexico	Mexico City	Ministers	-1	0	0	6	3340	27	2	0.862	0.008	25
15/02/13	16/02/13	Russia	Moscow	Ministers	0	0	0	1	307	3	0	1.000	0.010	3
18/04/13	19/04/13	USA	Washington DC	Ministers	0	0	0	2	1914	2	5	-0.429	0.001	-3
19/07/13	20/07/13	Russia	Moscow	Ministers	0	1	0	0	0	0	0			0
05/09/13	06/09/13	Russia	St. Petersburg	Leaders	0	1	0	0	0	0	0			0

Note: See notes to Table 1a for an explanation of the 'Decision' and 'Press' variables.

Table 1a. G20 meetings-related variables: Description and summary statistics

Variable	Description	Number of ones				
G20	Impulse dummy equal to 1 on the day following a G20 Meeting (Leaders or Ministers)	29				
Leaders	Impulse dummy equal to 1 on the day following a G20 Leader Meeting	8				
Ministers	Impulse dummy equal to 1 on the day following a G20 Minister Meeting	21				
Decision	Impulse dummy equal to 1 if a concrete decision was taken during the G20 meeting	14				
Decision (financial)	Impulse dummy equal to 1 if a concrete decision on financial reform was taken during the G20 meeting	4				
		Obs.	Mean	Std. Dev	Min	Max
Articles	Number of press articles covering the meeting. Source: Factiva	29	3.90	2.53	0.00	10.00
Coverage	Number of words in press articles covering the meeting. Source: Factiva	29	2201	1557	0	5601
Positive Words	Number of "positive" words in press articles covering the meeting. Source: Factiva	29	16.93	16.71	0.00	59.00
Negative Words	Number of "negative" words in press articles covering the meeting. Source: Factiva	29	3.48	6.06	0.00	28.00
Press	Number of "positive" minus number of "negative" words scaled by the sum of "positive" and "negative" words	25	0.71	0.39	-0.44	1.00
Decision	Dummy whether the post-summit statement contained a major new decision (based on a subjective analysis of the statement)	29	0.01	0.09	0.00	1.00
Financial decision	Dummy whether the post-summit statement contained a major new decision in financial regulation	29	0.00	0.00	0.00	1.00
Economic Outlook	Assessment of macro environment in the G20 communiquee. -1 negative, 0 neutral, 1 positive.	27	-0.19	0.68	-1.00	1.00

Table 1b: List of positive and negative words in the semantic analysis

Positive words	Negative words
Agreement, agree, agreed, accord	No/lack of agreement/accord, did not/didn't agree, not agreed, disagreement, disagree, disagreed
Decision, decide, decided	No/lack of decision, did not/didn't decide, not decided
Progress	No/lack of progress
Consensus	No/lack of consensus
Deal	No/lack of deal
Surprise, surprised, surprising surprisingly	No/lack of surprise, not surprisingly, unsurprisingly
Deliver, delivered	Did not/didn't deliver, not delivered
Achievement, achieve, achieved	No/lack of achievement, did not/didn't achieve
Above expectation, unexpected, unexpectedly	Under expectation, expected, as expected
Cooperation, cooperate, cooperatively, cooperative	No/lack of cooperation, did not/didn't cooperate
Success, successful, succeed, successfully	Failure, unsuccessful, failed, did not/didn't succeed
Satisfaction, satisfy, satisfied, satisfactory, satisfying	Disappointment, unsatisfactory, disappointed, disappointing
Action	No/lack of action
Effort	No/lack of effort

Table 2. Country list and regional group

Country Name	Regional Group		Country Name	Regional Group
Argentina	Latin America	35	Mexico	Latin America
Australia	Asia Pacific	36	Morocco	Middle East and Africa
Austria	Euro Area	37	Netherlands	Euro Area
Belgium	Euro Area	38	New Zealand	Asia Pacific
Brazil	Latin America	39	Nigeria	Middle East and Africa
Bulgaria	European Union (non EA)	40	Norway	Asia Europe
Canada	North America	41	Pakistan	Asia Pacific
Chile	Latin America	42	Peru	Latin America
China	Asia Pacific	43	Philippines	Asia Pacific
Colombia	Latin America	44	Poland	European Union (non EA)
Croatia	Asia Europe	45	Portugal	Euro Area
Czech Republic	European Union (non EA)	46	Qatar	Middle East and Africa
Denmark	European Union (non EA)	47	Romania	European Union (non EA)
Ecuador	Latin America	48	Russia	Asia Europe
Egypt	Middle East and Africa	49	Saudi Arabia	Middle East and Africa
Finland	Euro Area	50	Serbia	Asia Europe
France	Euro Area	51	Singapore	Asia Pacific
Germany	Euro Area	52	South Africa	Middle East and Africa
Greece	Euro Area	53	Spain	Euro Area
Hong Kong	Asia Pacific	54	Sweden	European Union (non EA)
Hungary	European Union (non EA)	55	Switzerland	Asia Europe
India	Asia Pacific	56	Taiwan	Asia Pacific
Indonesia	Asia Pacific	57	Thailand	Asia Pacific
Ireland	Euro Area	58	Tunisia	Middle East and Africa
Israel	Middle East and Africa	59	Turkey	Asia Europe
Italy	Euro Area	60	UK	European Union (non EA)
Japan	Asia Pacific	61	US	North America
Kazakhstan	Asia Europe	62	Ukraine	Asia Europe
Korea	Asia Pacific	63	United Arab Emirates	Middle East and Africa
Kuwait	Middle East and Africa	64	Venezuela, Rep. Bol.	Latin America
Latvia	European Union (non EA)	65	Vietnam	Asia Pacific
Lithuania	European Union (non EA)			
Luxembourg	Euro Area			
Malaysia	Asia Pacific			

Table 3. Summary statistics and codes for financial variables

Time series variables	Code	Unit	Source	Obs.	Mean	Std. Dev	Min	Max	Notes
S&P500 Returns	DlnSP500	%	Datastream	1347	-0.01	1.64	-9.47	10.96	
Eurostoxx Index Returns	Dlneustoxx	%	Datastream	1347	-0.05	1.67	-8.25	9.96	<i>Datastream Total Market Index</i>
Emerging Market Equity Index Returns	DlneqEME	%	Datastream	1347	0.00	1.51	-9.84	8.96	<i>Datastream Bank Equity Index</i>
US Bank Equity Index Returns	DlnbankUS	%	Datastream	1347	-0.08	3.38	-21.68	19.34	<i>Datastream Bank Equity Index</i>
EA Bank Equity Index Returns	DlnbankEMU	%	Datastream	1347	-0.14	2.79	-10.78	17.58	<i>Datastream Bank Equity Index</i>
Emerging Market Bank Equity Index Returns	DlnbankEME	%	Datastream	1347	0.00	1.73	-9.28	11.30	<i>Datastream Bank Equity Index</i>
US 10 year Treasury Bond, First Difference	D10yUS	%	Datastream	1347	0.00	0.07	-0.47	0.35	
German 10 year Government Bond, First Difference	D10yDE	%	Datastream	1347	0.00	0.05	-0.26	0.19	
EMBI Index Yield, First Difference	Dembi	%	Datastream	1347	0.00	0.08	-0.91	1.09	
Implied Volatility in the US, First Difference	Dvix	%	Datastream	1347	0.00	2.38	-17.36	16.54	<i>CBOE VIX Index</i>
Implied Volatility in the EU, First Difference	Dvstoxx	%	Datastream	1347	0.01	2.33	-13.98	22.64	<i>VSTOXX Index</i>
Implied Volatility in Germany, First Difference	DvixDE	%	Datastream	1347	0.01	1.98	-15.05	21.92	<i>VDAX Index</i>
Option Implied Kurtosis for the S&P 500 Index, First Difference	KTSP500		ECB	1119	0.00	0.20	-1.33	1.15	
Option Implied Kurtosis for the EUSTOXX 500 Index, First Difference	KTEU500		ECB	1150	0.00	0.06	-0.33	0.45	
Option Implied Kurtosis for the DJ EU Bank Index, First Difference	KTbanks		ECB	1129	0.00	0.32	-5.64	3.25	
Option Implied Skewness for the S&P 500 Index, First Difference	SKSP500		ECB	1119	0.00	0.16	-0.87	1.15	
Option Implied Skewness for the EUSTOXX 500 Index, First Difference	SKEU500		ECB	1150	0.00	0.03	-0.23	0.14	
Option Implied Skewness for the DJ EU Bank Index, First Difference	SKbanks		ECB	1129	0.00	0.09	-1.31	0.72	

G10 Surprise Index, First Difference			Citigroup	1347	-0.06	3.49	-18.00	16.50	
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Panel variables

Equity Index, Return, Advanced Economies	Dlneq	%	Datastream	41650	-0.02	1.49	-14.42	16.05	<i>Datastream Total Market Index</i>
Equity Index, Return, Emerging Markets	Dlneq	%	Datastream	66380	0.00	1.53	-19.85	31.89	<i>Datastream Total Market Index</i>
Equity Index, Return, G20 Advanced Economies	Dlneq	%	Datastream	13328	-0.01	1.45	-9.85	16.05	<i>Datastream Total Market Index</i>
Equity Index, Return, G20 Emerging Markets	Dlneq	%	Datastream	18326	0.01	1.61	-19.85	23.17	<i>Datastream Total Market Index</i>
Bank Equity Index, Return, Advanced Economies	Dlnbanks	%	Datastream	37554	-0.07	2.80	-129.91	29.76	<i>Datastream Bank Equity Index</i>
Bank Equity Index, Return, Emerging Markets	Dlnbanks	%	Datastream	44982	0.01	1.90	-29.36	38.28	<i>Datastream Bank Equity Index</i>
Bank Equity Index, Return, G20 Advanced Economies	Dlnbanks	%	Datastream	13328	-0.04	2.41	-21.68	19.34	<i>Datastream Bank Equity Index</i>
Bank Equity Index, Return, G20 Emerging Markets	Dlnbanks	%	Datastream	16660	0.02	2.04	-25.68	31.59	<i>Datastream Bank Equity Index</i>
10 Year Gov Bond Yield, First Difference, Advanced Economies	Dgov10y	%	Datastream	38341	0.00	0.20	-19.69	9.16	
10 Year Gov Bond Yield, First Difference, Emerging Markets	Dgov10y	%	Datastream	39912	0.00	0.33	-22.85	22.85	
10 Year Gov Bond Yield, First Difference, G20 Advanced Economies	Dgov10y	%	Datastream	13325	0.00	0.06	-0.81	0.58	
10 Year Gov Bond Yield, First Difference, G20 Emerging Markets	Dgov10y	%	Datastream	15423	0.00	0.46	-22.85	22.85	

Note: Sample period is January 2007 to October 2013, daily data.

Table 4. Correlations: Asset returns

	DlnSP500	Dlneustoxx	DlneqEME	DlnbankUS	DlnbankEMU	DlnbankEME	D10yUS	D10yDE	Dembi
DlnSP500	1								
Dlneustoxx	0.636*** (0.00)	1							
DlneqEME	0.507*** (0.00)	0.735*** (0.00)	1						
DlnbankUS	0.813*** (0.00)	0.486*** (0.00)	0.362*** (0.00)	1					
DlnbankEMU	0.534*** (0.00)	0.879*** (0.00)	0.673*** (0.00)	0.449*** (0.00)	1				
DlnbankEME	0.486*** (0.00)	0.717*** (0.00)	0.966*** (0.00)	0.358*** (0.00)	0.658*** (0.00)	1			
D10yUS	0.420*** (0.00)	0.404*** (0.00)	0.305*** (0.00)	0.350*** (0.00)	0.354*** (0.00)	0.289*** (0.00)	1		
D10yDE	0.346*** (0.00)	0.548*** (0.00)	0.400*** (0.00)	0.281*** (0.00)	0.525*** (0.00)	0.383*** (0.00)	0.555*** (0.00)	1	
Dembi	-0.352*** (0.00)	-0.482*** (0.00)	-0.605*** (0.00)	-0.256*** (0.00)	-0.437*** (0.00)	-0.599*** (0.00)	-0.0911*** (0.00)	-0.117*** (0.00)	1

p-values in parentheses
 * p<0.05, ** p<0.01, *** p<0.001

Note: The correlations are computed on daily observations from January 2007 to October 2013. See Table 3 for the definition of the variables.

Table 4a. Correlations: Risk variables

	Dvix	Dvstox	DvixDE	KTSP500	SKSP500	KTEU500	SKEU500	KTbanks	SKbanks
Dvix	1								
Dvstox	0.573*** (0.00)	1							
DvixDE	0.503*** (0.00)	0.913*** (0.00)	1						
KTSP500	-0.256*** (0.00)	-0.170*** (0.00)	-0.139*** (0.00)	1					
SKSP500	0.198*** (0.00)	0.0999*** (0.00)	0.0671* (0.01)	-0.586*** (0.00)	1				
KTEU500	-0.464*** (0.00)	-0.712*** (0.00)	-0.655*** (0.00)	0.184*** (0.00)	-0.149*** (0.00)	1			
SKEU500	0.451*** (0.00)	0.684*** (0.00)	0.621*** (0.00)	-0.134*** (0.00)	0.102*** (0.00)	-0.857*** (0.00)	1		
KTbanks	-0.0872** (0.00)	-0.101*** (0.00)	-0.0475 (0.08)	0.0354 (0.19)	-0.0594* (0.03)	0.131*** (0.00)	-0.0545* (0.04)	1	
SKbanks	0.0192 (0.48)	0.0772** (0.00)	0.142*** (0.00)	0.0174 (0.52)	0.00288 (0.91)	-0.0673* (0.01)	0.104*** (0.00)	0.629*** (0.00)	1

p-values in parentheses
 * p<0.05, ** p<0.01, *** p<0.001

Note: The correlations are computed on daily observations from January 2007 to October 2013. See Table 3 for the definition of the variables.

Table 5. Time series results for asset returns

VARIABLES	□ article								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	DlnSP500	Dlnstoxx	DlnqEME	DlnbankUS	DlnbankEMU	DlnbankEME	D10yUS	D10yDE	Demb
G20 Leaders	0.251 (0.231)	0.234 (0.546)	0.115 (0.287)	0.425 (0.467)	0.280 (0.594)	-0.162 (0.355)	-0.022 (0.031)	-0.026*** (0.007)	0.000 (0.014)
Press Leaders	-0.327 (0.720)	-0.069 (0.869)	-0.534 (0.418)	0.509 (1.444)	-0.005 (1.146)	-0.241 (0.483)	0.079*** (0.038)	0.079*** (0.013)	-0.010 (0.029)
G20 Ministers	1.442 (1.028)	1.113 (0.984)	0.810 (0.921)	1.623 (1.123)	1.394 (1.318)	1.065 (1.188)	0.004 (0.011)	-0.014 (0.021)	-0.047 (0.042)
Press Ministers	-1.185 (0.947)	-0.649 (0.870)	-0.671 (0.967)	-1.752 (1.459)	-1.153 (1.201)	-0.861 (1.194)	-0.007 (0.020)	0.015 (0.022)	0.039 (0.043)
Citigroup economic surprise index	0.019 (0.014)	0.032** (0.013)	0.001 (0.011)	0.037 (0.034)	0.033 (0.021)	-0.002 (0.013)	0.002*** (0.001)	0.002*** (0.000)	0.001* (0.001)
Observations	1,682	1,682	1,682	1,682	1,682	1,682	1,682	1,682	1,682
R-squared	0.020	0.008	0.053	0.020	0.011	0.036	0.021	0.041	0.130
F-test	1.634	0.864	4.099	1.226	1.369	2.773	3.593	17.36	2.459

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 5a. Time series results for asset returns - after the London summit

VARIABLES	□article								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	DlnSP500	Dlneststox	DlnqEME	DlnbankUS	DlnbankEMU	DlnbankEME	D10yUS	D10yDE	Demi
G20 Leaders	0.399 (0.281)	0.388 (0.400)	0.188 (0.213)	0.740 (0.552)	0.544 (0.378)	-0.089 (0.272)	-0.017 (0.033)	-0.024*** (0.007)	-0.002 (0.015)
Press Leaders	0.314 (0.426)	0.660 (0.675)	-0.148 (0.223)	1.691* (0.908)	1.135** (0.459)	0.190 (0.282)	0.099** (0.038)	0.087*** (0.013)	-0.026 (0.026)
G20 Ministers	0.659 (0.449)	0.055 (0.586)	0.105 (0.603)	1.089 (0.798)	0.104 (1.083)	0.065 (0.701)	-0.005 (0.011)	-0.034 (0.024)	-0.015 (0.025)
Press Ministers	-0.763 (0.586)	-0.221 (0.682)	-0.616 (0.654)	-1.096 (1.239)	-0.512 (1.180)	-0.746 (0.731)	0.003 (0.022)	0.026 (0.030)	0.037 (0.027)
Citigroup economic surprise index	0.019 (0.014)	0.032** (0.013)	0.000 (0.011)	0.037 (0.034)	0.032 (0.021)	-0.003 (0.013)	0.002*** (0.001)	0.002*** (0.000)	0.001** (0.001)
Observations	1,682	1,682	1,682	1,682	1,682	1,682	1,682	1,682	1,682
R-squared	0.019	0.007	0.052	0.020	0.011	0.035	0.022	0.043	0.130
F-test	1.717	1.133	4.541	1.966	3.663	3.282	4.081	18.81	2.630

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: The estimation period is April 2009 (London G20 summit) to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 5b. Time series results for asset returns - 5-day window after the event

VARIABLES	□ article								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	DlnSP500	Dlnestoxx	DlnqEME	DlnbankUS	DlnbankEMU	DlnbankEME	D10yUS	D10yDE	Demb
G20 Leaders	-0.364 (0.519)	-0.232 (0.488)	-0.321 (0.350)	-1.019 (0.846)	-0.056 (0.921)	-0.500 (0.397)	-0.008 (0.019)	-0.003 (0.016)	0.007 (0.011)
Press Leaders	-0.336 (0.786)	-0.513 (0.625)	-0.099 (0.490)	-0.111 (1.659)	-0.977 (1.192)	0.103 (0.545)	-0.010 (0.027)	-0.001 (0.021)	-0.003 (0.017)
G20 Ministers	0.377 (0.277)	0.556 (0.367)	0.144 (0.269)	0.643 (0.445)	0.630 (0.533)	0.122 (0.307)	-0.009 (0.012)	-0.006 (0.007)	-0.011 (0.018)
Press Ministers	-0.350 (0.272)	-0.385 (0.418)	-0.218 (0.302)	-0.825* (0.462)	-0.474 (0.671)	-0.177 (0.336)	0.008 (0.012)	0.004 (0.009)	0.008 (0.012)
Citigroup economic surprise index	0.020 (0.014)	0.033** (0.014)	0.001 (0.011)	0.039 (0.034)	0.032 (0.021)	-0.002 (0.013)	0.002*** (0.001)	0.002*** (0.000)	0.001* (0.001)
Observations	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664
R-squared	0.022	0.011	0.054	0.022	0.012	0.036	0.021	0.038	0.130
F-test	1.802	1.437	4.119	1.629	1.667	2.705	3.295	6.060	2.507

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 5c. Time series results for asset returns - Absolute values

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	DlnSP500 _a	Dlnscocx _a	DlnccqEME _a	DlnbankUS _a	DlnbankEMU _a	DlnbankEME _a	DlnyUS _a	DlnyDE _a	Dcmbl _a
G20 Leaders	-0.296 (0.190)	-0.204 (0.250)	-0.684*** (0.155)	-1.291** (0.536)	-0.750** (0.301)	-0.654*** (0.171)	0.035** (0.016)	0.021** (0.009)	-0.002 (0.006)
Press Leaders	0.261 (0.319)	0.353 (0.343)	0.242 (0.308)	1.966** (0.823)	0.775 (0.724)	0.395 (0.327)	0.016 (0.016)	-0.018 (0.016)	0.024 (0.032)
G20 Ministers	0.478 (0.842)	0.726 (0.303)	-0.010 (0.943)	-0.771* (0.449)	0.839 (1.039)	0.777 (0.768)	-0.021** (0.006)	0.014 (0.013)	-0.033 (0.036)
Press Ministers	0.085 (0.634)	-0.081 (0.346)	0.321 (0.588)	1.334** (0.633)	-0.225 (1.308)	0.469 (0.836)	0.027** (0.011)	-0.000 (0.022)	0.014 (0.026)
Citigroup economic surprise index	-0.003 (0.010)	0.001 (0.010)	0.006 (0.008)	0.014 (0.028)	0.020 (0.014)	0.007 (0.010)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.001)
Observations	1,682	1,682	1,682	1,682	1,682	1,682	1,682	1,682	1,682
R-squared	0.062	0.054	0.083	0.134	0.025	0.076	0.028	0.021	0.186
F-test	3.064	2.201	7.468	12.30	4.045	6.163	7.753	3.354	8.238

Robust standard errors in parentheses
*** p < 0.01, ** p < 0.05, * p < 0.1

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column (the suffix "a" stays for absolute value) and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 6. Time series results for risk measures

VARIABLES	□article								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Dvix	Dvstox	DvixDE	KTSP500	SKSP500	KTEU500	SKEU500	KTbanks	SKbanks
G20 Leaders	-0.232 (0.308)	-0.416 (0.702)	0.185 (0.405)	0.012 (0.027)	-0.051* (0.029)	0.010 (0.028)	0.003 (0.012)	0.024 (0.035)	-0.013 (0.025)
Press Leaders	-0.013 (0.937)	0.058 (1.025)	-0.787 (0.721)	-0.101* (0.052)	0.170** (0.080)	0.008 (0.035)	-0.005 (0.016)	-0.030 (0.043)	0.025 (0.031)
G20 Ministers	-1.541 (1.163)	-0.846 (1.270)	-0.057 (0.683)	0.063 (0.060)	0.032 (0.051)	-0.000 (0.025)	-0.012 (0.015)	-0.475 (0.526)	-0.027 (0.066)
Press Ministers	1.593* (0.912)	1.016 (0.981)	0.437 (0.663)	-0.111* (0.062)	0.013 (0.048)	-0.003 (0.023)	0.008 (0.014)	0.307 (0.428)	0.026 (0.049)
Citigroup economic surprise index	-0.016 (0.019)	-0.029 (0.019)	-0.039** (0.017)	0.003* (0.001)	0.001 (0.001)	0.001 (0.001)	-0.000 (0.000)	0.000 (0.002)	0.000 (0.001)
Observations	1,682	1,682	1,682	1,403	1,403	1,468	1,468	1,432	1,432
R-squared	0.030	0.012	0.033	0.120	0.094	0.024	0.011	0.047	0.004
F-test	2.180	1.936	4.079	8.233	5.515	0.922	0.351	1.012	0.494

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 6a. Time series results for risk measures - after the London summit

VARIABLES	□article								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Dvix	Dvstox	DvixDE	KTSP500	SKSP500	KTEU500	SKEU500	KTbanks	SKbanks
G20 Leaders	-0.418 (0.370)	-0.619 (0.519)	0.029 (0.276)	0.010 (0.027)	-0.058** (0.027)	0.014 (0.025)	-0.000 (0.010)	0.044 (0.040)	-0.017 (0.021)
Press Leaders	-0.825 (0.517)	-0.862 (0.532)	-1.436*** (0.366)	-0.108* (0.058)	0.152 (0.093)	0.029 (0.031)	-0.018 (0.012)	-0.031 (0.049)	0.002 (0.021)
G20 Ministers	-0.649* (0.371)	0.409 (0.666)	0.418 (0.607)	0.074 (0.066)	-0.014 (0.036)	-0.018 (0.023)	0.003 (0.008)	-0.020 (0.057)	0.023** (0.010)
Press Ministers	1.346* (0.692)	0.778 (0.732)	0.563 (0.607)	-0.130** (0.063)	0.029 (0.036)	-0.006 (0.025)	0.007 (0.010)	0.112 (0.091)	0.001 (0.014)
Citigroup economic surprise index	-0.016 (0.019)	-0.028 (0.019)	-0.038** (0.017)	0.003* (0.001)	0.001 (0.001)	0.001 (0.001)	-0.000 (0.000)	0.001 (0.002)	0.000 (0.001)
Observations	1,682	1,682	1,682	1,403	1,403	1,468	1,468	1,432	1,432
R-squared	0.031	0.014	0.035	0.120	0.093	0.027	0.012	0.038	0.004
F-test	3.228	4.554	7.197	8.391	5.251	1.643	1.039	1.079	1.345

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: The estimation period is April 2009 (London G20 summit) to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 6b. Time series results for risk measures - 5-day window after the event

VARIABLES	□article								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Dvix	Dvstox	DvixDE	KTSP500	SKSP500	KTEU500	SKEU500	KTbanks	SKbanks
G20 Leaders	0.232 (1.095)	-0.022 (0.692)	0.017 (0.554)	0.003 (0.055)	-0.018 (0.042)	-0.012 (0.018)	0.008 (0.008)	-0.014 (0.014)	0.006 (0.008)
Press Leaders	0.060 (1.412)	0.454 (0.859)	0.406 (0.775)	-0.026 (0.072)	0.074 (0.050)	-0.006 (0.018)	0.003 (0.008)	-0.022 (0.021)	0.002 (0.014)
G20 Ministers	-0.053 (0.377)	-0.107 (0.466)	0.050 (0.382)	-0.017 (0.040)	0.038* (0.023)	0.007 (0.009)	-0.004 (0.005)	-0.101 (0.112)	0.003 (0.018)
Press Ministers	0.239 (0.360)	0.144 (0.398)	0.115 (0.340)	0.046 (0.053)	-0.051 (0.032)	-0.006 (0.012)	0.004 (0.006)	0.095 (0.068)	0.008 (0.017)
Citigroup economic surprise index	-0.016 (0.019)	-0.029 (0.019)	-0.039** (0.017)	0.003* (0.001)	0.001 (0.001)	0.001 (0.001)	-0.000 (0.000)	0.000 (0.002)	0.000 (0.001)
Observations	1,664	1,664	1,664	1,388	1,388	1,452	1,452	1,416	1,416
R-squared	0.030	0.012	0.034	0.122	0.095	0.026	0.014	0.038	0.004
F-test	2.115	1.921	3.617	7.871	5.368	1.189	0.759	1.359	0.558

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 7. Panel results

VARIABLES	(1) Dlneq	(2) Dlneq	(3) Dlnbanks	(4) Dlnbanks	(5) Dgov10y	(6) Dgov10y
G20 Leaders	0.160 (0.248)	0.000 (0.097)	0.278 (0.341)	-0.138 (0.207)	0.013*** (0.005)	-0.015 (0.023)
Press Leaders	-0.319 (0.421)	-0.101 (0.361)	-0.248 (0.811)	0.190 (0.486)	0.026** (0.011)	0.098* (0.059)
G20 Ministers	0.904 (0.652)	0.492 (0.401)	1.357* (0.782)	0.718 (0.548)	-0.027** (0.012)	-0.005 (0.008)
Press Ministers	-0.705 (0.588)	-0.389 (0.384)	-1.168 (0.746)	-0.669 (0.552)	0.043*** (0.014)	-0.016 (0.020)
Citigroup economic surprise index	0.019** (0.009)	0.003 (0.006)	0.034** (0.014)	0.004 (0.009)	0.001*** (0.000)	0.001** (0.001)
Observations	41,525	66,180	37,440	44,847	38,169	39,652
Number of groups	25	40	23	27	24	27
F-test	1.099	4.879	2.987	2.527	5.455	2.864

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 7a. Panel results - Absolute returns

VARIABLES	[]article					
	(1)	(2)	(3)	(4)	(5)	(6)
	Adv. countries	Eme. countries	Adv. countries	Eme. countries	Adv. countries	Eme. countries
G20 Leaders	-0.242*** (0.088)	-0.428*** (0.105)	-0.093 (0.269)	-0.269*** (0.089)	-0.016*** (0.005)	-0.019 (0.019)
Press Leaders	0.294 (0.278)	0.525*** (0.170)	0.449 (0.423)	0.394 (0.276)	0.037*** (0.012)	0.076 (0.050)
G20 Ministers	0.277 (0.437)	0.027 (0.235)	0.456 (0.441)	0.107 (0.257)	-0.001 (0.009)	-0.016 (0.015)
Press Ministers	0.095 (0.433)	0.190 (0.260)	-0.180 (0.489)	0.162 (0.257)	-0.000 (0.010)	0.028 (0.020)
Citigroup economic surprise index	0.002 (0.005)	0.003 (0.004)	0.012 (0.008)	0.006 (0.005)	0.000 (0.000)	-0.001 (0.001)
Observations	41,525	66,180	37,440	44,847	38,169	39,652
Number of groups	25	40	23	27	24	27
F-test	12.26	22.90	15.57	20.45	4.725	5.681

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column (the suffix "a" stays for absolute value) and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 7b. Panel results - G20 countries only

VARIABLES	[article]					
	(1)	(2)	(3)	(4)	(5)	(6)
	Advanced countries	Emerging countries	Advanced countries	Emerging countries	Advanced countries	Emerging countries
G20 Leaders	0.109 (0.164)	0.108 (0.135)	0.093 (0.229)	0.261 (0.215)	0.016* (0.009)	-0.025 (0.017)
Press Leaders	-0.042 (0.429)	-0.249 (0.359)	0.444 (0.768)	-0.278 (0.357)	0.005 (0.013)	0.067 (0.049)
G20 Ministers	1.040 (0.673)	0.612 (0.455)	1.208 (0.764)	0.707 (0.689)	-0.009 (0.011)	-0.014 (0.016)
Press Ministers	-0.786 (0.611)	-0.572 (0.446)	-0.907 (0.794)	-0.754 (0.680)	0.013 (0.010)	-0.006 (0.021)
Citigroup economic surprise index	0.017* (0.009)	0.004 (0.008)	0.026* (0.016)	0.007 (0.010)	0.002*** (0.000)	0.003** (0.001)
Observations	13,288	18,271	13,288	16,610	13,284	15,335
Number of groups	8	11	8	10	8	11
F-test	1.221	1.879	1.487	1.554	4.320	2.523

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 7c. Panel results for equity returns - Robustness

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G20 meeting	0.203 (0.214)	0.242 (0.284)	0.424 (0.580)	-0.039 (0.188)	0.054 (0.132)					
Press score		-0.191 (0.241)	-0.165 (0.230)							
Press coverage			-0.027 (0.051)							
Citigroup economic surprise index	0.009 (0.007)	0.009 (0.007)	0.009 (0.007)	0.009 (0.007)	0.009 (0.007)	0.009 (0.007)	0.009 (0.007)	0.009 (0.007)	0.009 (0.007)	0.009 (0.007)
Decision				-0.496 (0.438)						
Financial decision					1.111 (1.232)					
G20 Leaders						-0.008 (0.235)	0.069 (0.131)	0.069 (0.131)	0.248*** (0.055)	0.220*** (0.060)
G20 Ministers						0.286 (0.279)	0.267 (0.323)	0.497 (0.597)	-0.058 (0.201)	0.000 (0.173)
Press score Leaders							-0.199 (0.318)	-0.200 (0.318)		
Press score ministers							0.000 (0.000)	0.000 (0.000)		
Press coverage ministers							-0.039 (0.058)	-0.039 (0.058)		
Press coverage ministers							0.000 (0.000)	0.000 (0.000)		
Decision Leaders									-0.292 (0.261)	
Decision ministers									1.023 (0.698)	
Financial decision Leaders										-0.914 (0.723)
Financial decision ministers										3.028** (1.416)
Observations	107,965	107,705	107,705	107,835	107,835	107,965	107,705	107,705	107,835	107,835
Number of groups	65	65	65	65	65	65	65	65	65	65
F-test	3.762	3.227	2.912	3.788	3.432	3.369	2.882	2.633	5.687	4.207
	Standard errors in parentheses									
	*** p<0.01, ** p<0.05, * p<0.1									

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 7d. Panel results for bank equity returns - Robustness

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G20 meeting	0.283 (0.269)	0.299 (0.333)	0.501 (0.648)	0.020 (0.255)	0.134 (0.195)					
Press score		-0.136 (0.392)	-0.108 (0.391)							
Press coverage			-0.029 (0.061)							
Citigroup economic surprise index	0.017 (0.011)	0.018* (0.011)	0.017 (0.011)	0.017 (0.011)	0.017 (0.011)	0.018* (0.011)	0.018* (0.011)	0.017 (0.011)	0.017 (0.011)	0.017 (0.011)
Decision				0.572 (0.531)						
Financial decision					1.241 (1.436)					
G20 Leaders						0.070 (0.429)	0.052 (0.264)	0.052 (0.264)	0.739*** (0.078)	0.405*** (0.141)
G20 Ministers						0.366 (0.325)	0.336 (0.376)	0.622 (0.667)	-0.034 (0.267)	0.045 (0.251)
Press score Leaders							-0.010 (0.615)	-0.011 (0.615)		
Press score ministers							0.000 (0.000)	0.000 (0.000)		
Press coverage ministers							0.000 (0.071)	0.000 (0.071)		
Press coverage ministers							-0.048 (0.000)	-0.048 (0.000)		
Decision Leaders									-0.765 (0.471)	
Decision ministers									1.250 (0.777)	
Financial decision Leaders										-1.359 (1.443)
Financial decision ministers										3.663*** (0.813)
Observations	82,486	82,287	82,287	82,387	82,387	82,486	82,287	82,287	82,387	82,387
Number of groups	50	50	50	50	50	50	50	50	50	50
F-test	4.080	3.505	3.185	3.916	3.800	3.601	3.160	2.937	31.09	6.213
	Standard errors in parentheses									
	*** p<0.01, ** p<0.05, * p<0.1									

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 7e. Panel results for government bond yields - Robustness: Advanced countries

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G20 meeting	0.010 (0.009)	0.007 (0.010)	0.020 (0.018)	0.011 (0.012)	0.005 (0.009)					
Press score		0.017* (0.009)	0.018** (0.009)							
Press coverage			-0.002 (0.002)							
Citigroup economic surprise index	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Decision				0.003 (0.017)						
Financial decision				0.044** (0.022)						
G20 Leaders						0.022* (0.012)	0.013*** (0.005)	0.014*** (0.005)	0.021*** (0.004)	0.023 (0.015)
G20 Ministers						0.005 (0.010)	0.006 (0.011)	0.026 (0.019)	0.010 (0.013)	-0.001 (0.010)
Press score Leaders							0.026** (0.011)	0.026** (0.011)		
Press score ministers							0.000 (0.000)	0.000 (0.000)		
Press coverage ministers								-0.004* (0.002)		
Press coverage ministers								0.000 (0.000)		
Decision Leaders									0.001 (0.014)	
Decision ministers									-0.006 (0.024)	
Financial decision Leaders										-0.002 (0.021)
Financial decision ministers										0.079*** (0.027)
Observations	38,260	38,169	38,169	38,215	38,215	38,260	38,169	38,169	38,215	38,215
Number of groups	24	24	24	24	24	24	24	24	24	24
F-test	5.009	4.795	4.279	4.387	4.750	4.484	4.637	4.461	4.522	4.453

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 7f. Panel results for government bond yields - Robustness: Emerging markets

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G20 meeting	-0.001 (0.013)	-0.017 (0.011)	-0.026 (0.017)	-0.021 (0.016)	-0.013 (0.010)					
Press score		0.050* (0.027)	0.048* (0.026)							
Press coverage			0.001 (0.001)							
Citigroup economic surprise index	0.001** (0.001)	0.001** (0.001)	0.001** (0.001)	0.001** (0.001)	0.001** (0.001)	0.001** (0.001)	0.001** (0.001)	0.001** (0.001)	0.001** (0.001)	0.001** (0.001)
Decision				0.042* (0.025)						
Financial decision					0.088 (0.056)					
G20 Leaders						0.036 (0.032)	-0.015 (0.023)	-0.015 (0.023)	-0.025*** (0.004)	-0.005 (0.011)
G20 Ministers						-0.016 (0.011)	-0.017 (0.012)	-0.018 (0.015)	-0.021 (0.017)	-0.016 (0.013)
Press score Leaders							0.098* (0.059)	0.098* (0.059)		
Press score ministers							0.000 (0.000)	0.000 (0.000)		
Press coverage ministers							0.000 (0.000)	0.000 (0.000)		
Press coverage ministers							0.000 (0.000)	0.000 (0.000)		
Decision Leaders									0.070** (0.036)	
Decision ministers									0.018 (0.019)	
Financial decision Leaders										0.158** (0.072)
Financial decision ministers										0.012 (0.025)
Observations	39,749	39,652	39,652	39,699	39,699	39,749	39,652	39,652	39,699	39,699
Number of groups	27	27	27	27	27	27	27	27	27	27
F-test	3.483	3.486	3.117	3.341	3.411	3.362	3.104	2.793	78.84	3.031

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 8. Panel results for equity returns in absolute terms - Robustness

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G20 meeting	0.079 (0.119)	0.163 (0.157)	0.441 (0.311)	0.014 (0.100)	-0.064 (0.082)					
Press score		-0.056 (0.152)	-0.016 (0.127)							
Press coverage			-0.041 (0.028)							
Citigroup economic surprise index	0.003 (0.004)	0.003 (0.004)	0.003 (0.004)	0.003 (0.004)	0.002 (0.004)	0.003 (0.004)	0.003 (0.004)	0.003 (0.004)	0.003 (0.004)	0.002 (0.004)
Decision				0.162 (0.242)						
Financial decision				1.085* (0.574)						
G20 Leaders						-0.127 (0.155)	-0.356*** (0.080)	-0.356*** (0.080)	-0.298*** (0.044)	-0.266** (0.121)
G20 Ministers						0.160 (0.150)	0.239 (0.168)	0.354 (0.304)	0.042 (0.103)	0.012 (0.092)
Press score Leaders							0.435** (0.191)	0.436** (0.191)		
Press score ministers							0.000 (0.000)	0.000 (0.000)		
Press coverage ministers							-0.019 (0.027)	-0.019 (0.027)		
Press coverage ministers							0.000 (0.000)	0.000 (0.000)		
Decision Leaders									0.195 (0.177)	
Decision ministers									0.415 (0.414)	
Financial decision Leaders										0.560 (0.393)
Financial decision ministers										1.744** (0.837)
Observations	107,965	107,705	107,705	107,835	107,835	107,965	107,705	107,705	107,835	107,835
Number of groups	65	65	65	65	65	65	65	65	65	65
F-test	26.27	23.15	20.83	24.57	22.86	23.52	21.85	19.98	22.28	18.81
	Standard errors in parentheses									
	*** p<0.01, ** p<0.05, * p<0.1									

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 8a. Panel results for bank equity returns in absolute terms - Robustness

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G20 meeting	0.124 (0.136)	0.211 (0.157)	0.505 (0.313)	0.021 (0.114)	-0.059 (0.098)					
Press score		-0.002 (0.206)	0.039 (0.191)							
Press coverage			-0.043 (0.028)							
Citigroup economic surprise index	0.008 (0.006)	0.009 (0.006)	0.008 (0.006)	0.008 (0.006)	0.008 (0.006)	0.008 (0.006)	0.009 (0.006)	0.008 (0.006)	0.008 (0.006)	0.008 (0.006)
Decision				0.251 (0.271)						
Financial decision				1.430*** (0.525)						
G20 Leaders						-0.006 (0.248)	-0.189 (0.161)	-0.188 (0.161)	-0.317*** (0.059)	-0.288*** (0.109)
G20 Ministers						0.176 (0.159)	0.269 (0.173)	0.415 (0.311)	0.052 (0.118)	0.026 (0.114)
Press score Leaders							0.417 (0.323)	0.417 (0.323)		
Press score ministers							0.000 (0.000)	0.000 (0.000)		
Press coverage ministers							0.000 (0.031)	0.000 (0.031)		
Press coverage ministers							-0.025 (0.000)	-0.025 (0.000)		
Decision Leaders									0.356 (0.285)	
Decision ministers									0.457 (0.418)	
Financial decision Leaders										1.147* (0.662)
Financial decision ministers										1.863*** (0.615)
Observations	82,486	82,287	82,287	82,387	82,387	82,486	82,287	82,287	82,387	82,387
Number of groups	50	50	50	50	50	50	50	50	50	50
F-test	43.17	38.54	34.48	37.87	44.73	38.49	34.77	31.41	36.19	38.17
	Standard errors in parentheses									
	*** p<0.01, ** p<0.05, * p<0.1									

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 8b. Panel results for government bond yields in absolute terms - Robustness: Advanced countries

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G20 meeting	0.000 (0.005)	-0.003 (0.006)	0.005 (0.010)	-0.001 (0.007)	0.001 (0.006)					
Press score		0.012 (0.008)	0.013* (0.007)							
Press coverage			-0.001 (0.001)							
Citigroup economic surprise index	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)
Decision				0.003 (0.009)						
Financial decision					-0.003 (0.010)					
G20 Leaders						0.005 (0.010)	-0.016*** (0.005)	-0.016*** (0.005)	-0.009* (0.005)	0.009 (0.013)
G20 Ministers						-0.002 (0.006)	-0.001 (0.006)	0.006 (0.010)	-0.000 (0.007)	-0.001 (0.006)
Press score Leaders							0.037*** (0.012)	0.037*** (0.012)		
Press score ministers							0.000 (0.000)	0.000 (0.000)		
Press coverage ministers							-0.001 (0.001)	-0.001 (0.001)		
Press coverage ministers							0.000 (0.000)	0.000 (0.000)		
Decision Leaders									0.016 (0.012)	
Decision ministers									-0.002 (0.010)	
Financial decision Leaders										-0.016 (0.013)
Financial decision ministers										0.005 (0.016)
Observations	38,260	38,169	38,169	38,215	38,215	38,260	38,169	38,169	38,215	38,215
Number of groups	24	24	24	24	24	24	24	24	24	24
F-test	3.367	3.148	2.894	3.031	2.995	2.964	5.224	4.710	16.84	4.272

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).

Table 8c. Panel results for government bond yields in absolute terms - Robustness: Emerging markets

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G20 meeting	0.009 (0.012)	0.002 (0.012)	-0.005 (0.017)	0.003 (0.015)	0.001 (0.009)					
Press score		0.027 (0.023)	0.026 (0.023)							
Press coverage			0.001 (0.001)							
Citigroup economic surprise index	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Decision				0.012 (0.024)						
Financial decision					0.052 (0.057)					
G20 Leaders						0.025 (0.027)	-0.019 (0.019)	-0.019 (0.019)	-0.010** (0.005)	0.007 (0.011)
G20 Ministers						0.002 (0.012)	0.005 (0.014)	-0.000 (0.016)	0.004 (0.016)	-0.001 (0.012)
Press score Leaders							0.076 (0.050)	0.076 (0.050)		
Press score ministers							0.000 (0.000)	0.000 (0.000)		
Press coverage ministers							0.001 (0.002)	0.001 (0.002)		
Press coverage ministers							0.000 (0.000)	0.000 (0.000)		
Decision Leaders									0.040 (0.030)	
Decision ministers									-0.004 (0.026)	
Financial decision Leaders										0.072 (0.088)
Financial decision ministers										0.028 (0.063)
Observations	39,749	39,652	39,652	39,699	39,699	39,749	39,652	39,652	39,699	39,699
Number of groups	27	27	27	27	27	27	27	27	27	27
F-test	7.122	6.504	5.865	6.414	6.514	6.401	6.058	5.497	9.075	5.199
	Standard errors in parentheses									
	*** p<0.01, ** p<0.05, * p<0.1									

Notes: The estimation period is January 2007 to October 2013, daily data. Standard errors are corrected for heteroscedasticity and serial correlation. The dependent variables are shown in each column and are expressed in percentage points. See Table 3 for the coding and the descriptive statistics of the variables. Each equation also contains one lag of the dependent variable and day of the week (not shown for brevity).