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Unforeseen Events Wait Lurking:

Estimating Policy Spillovers From U.S. To Foreign Asset Prices

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Abstract

Event studies are used to analyze the impact of U.S. financial, fiscal, and monetary policies from US to foreign asset prices across a range of G20 countries and Switzerland. The initial announcement that the Administration supported tighter regulation of banks led to a generalized fall in advanced economy bank shares compared to local equity markets. For later Dodd-Frank announcements, however, falls in U.S. bank equity prices were accompanied by increases in U.K. and Swiss valuations, implying a potential for regulatory arbitrage. Turning to macro policies, the 2008/9 fiscal and monetary stimulus packages generally supported foreign activity, while the impact of similar stimulus in 2010 is less clear.

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I. INTRODUCTION

In this paper, event studies are used to analyze the impact of U.S. financial, fiscal, and monetary policies on foreign asset prices across a range of G20 countries and Switzerland. The analysis looks first at "typical" responses of key foreign financial market prices to changes in U.S. asset prices. Given this baseline, the analysis then examines whether the responses to various types of U.S. policy announcements vary from this norm. These deviations from the usual response can be used to gauge the impact of these policies on foreign financial conditions, a key step in assessing the spillovers from U.S. policies to the rest of the world. A major complicating factor in this analysis is that financial market linkages appear to have shifted dramatically at the onset of the crisis. Hence, there are two "typical" relationships (pre- and post-crisis) to which policy responses since the crisis can be compared, making the analysis more complex than for a "usual" event study.[1]

For U.S. financial policies, the analysis involves comparing the response of foreign bank excess returns to its U.S. equivalent. Bank excess returns are defined as the difference between changes in major bank equity prices to the overall equity market. Bank excess returns are a key signal of the impact of financial policies, as they measure the market assessment of the change in the relative valuation of major banks compared to the market as a whole. The analysis first examines the bilateral relationship between U.S. banks excess returns and foreign ones on days of significant U.S. financial policy announcements to see whether such announcements create abnormal link to foreign bank equity prices. Next, a range of other asset prices (e.g., measures of global risk aversion, commodity prices, and domestic and foreign financial conditions) are added to see if the responses are explained by changes in global financial conditions.

For fiscal and monetary policies the main analysis examines the response of foreign bond yields and exchange rates to changes in yields on the U.S. 10-year note.[2] The response of the 10-year note is known to be a useful measure of the impact of fiscal policies—which change the level of U.S. government borrowing and debt[3]—and for U.S. monetary policies (pre-crisis, changes in the yield on the 10-year note were found to be a good measure of the unexpected element in U.S. monetary policy).[4] Given that U.S. yields are a good proxy for U.S. macroeconomic policies, it follows that the knock-on from these yields to foreign yields and dollar/nominal effective exchange rates are a major potential spillover to the rest of the world. As with bank excess returns, the knock-ons are measured both on a bilateral basis

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[1] See, for example, Glick and Leduc (2011) and Neely (2010).

[2] See Neely (2010) for a similar analysis using a smaller set of countries.

[3] Laubach (2009).

[4] Cook and Hahn (1989), Poole and Rasche (2004), Faust, Swanson, and Wright (2004), and Rigobon and Sack (2004), and Swiston (2007).

(i.e., simply measuring the link between U.S. yields and yields and the exchange rate in Brazil, for example) and the link once measures of global financial conditions are included.

The analysis is completed by examining a range of other global financial links. First, the impact of changes in U.S. equity prices on equity prices in other countries is examined, to see whether and how U.S. policies may have affected financial sentiment through this channel. Next, the link between U.S 10-year yields and global asset prices (such as risk aversion and commodity prices) is examined, to investigate the extent that U.S. policy announcements affected global market sentiment. Finally, the changing nature of correlations of global financial market prices before, during, and after the crisis is examined.

II. DATA

Daily data were collected from early 2003 across 18 of the G-20 members and Switzerland for the following variables:[5]

- *Macro and financial indicators. U.S. and foreign bond yields*, with the latter measured using local currency yields for advanced economies and EMBI spreads for emerging markets (except India) given the liquidity and accessibility of these markets and the short window being used for the analysis;[6] *bilateral exchange rates against the dollar*; *nominal effective exchange rates* calculated from the wide number of currencies for which daily data is readily available; *excess returns for major U.S. and foreign major banks*, measured as the average change in equity prices of major banks less the return on the national equity market;[7] and *equity prices*, measured using common equity price indicators (e.g., the S&P 500 for the United States, DAX index for Germany).

- *Proxies for growth and fiscal risks. U.S. and foreign sovereign CDS spreads* as a measure of fiscal risks; *U.S. and foreign equity market returns* as a proxy for growth prospects; *expected U.S. inflation* derived from the 10-year index-linked bond yield;

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[5] In addition to the United States, economies included in the analysis were: advanced economies; Australia, Canada, the Euro area (including France, Germany, and Italy), Japan, Korea, Switzerland, and the United Kingdom. Emerging markets were; Brazil, China, India, Indonesia, Mexico (only for the macro analysis), Russia, South Africa, and Turkey. Sources are discussed in the Data Annex.

[6] Analysis of readily available onshore dollar and local currency bond yields suggest that over the longer term these are closely correlated with the yields implied by EMBI spreads in dollars, implying that the EMBI market is a reasonable proxy for emerging market borrowing costs.

[7] Euro area banks were adjusted for the change in the national market—so German bank returns (for example) were adjusted by the change in the DAX, the French the CAC, etc.

- *Current and expected monetary stance. The effective fed funds rate*; *the expected change in the fed funds rate over the next month and one year,* calculated using fed funds futures and one-year LIBOR rates, respectively;

- *Global market conditions. The VIX* was used as a proxy for global risk aversion; *oil and nonoil commodity prices* measured in dollars.

Dates for the timing of U.S. policy announcements—including precursors to actions such as FOMC statements and speeches—were also collected for the following policies:[8]

- *Financial policies*: *The Dodd-Frank Act* divided between the Obama January 2010 speech announcing plans to tighten bank regulation (including by limiting bank self-dealing) and subsequent announcements; *announcements of Fed swaps with other central banks* divided between announcements that included the country in question and dates on which swaps were provided to other economies, to look at the direct and indirect impact of these policy announcements.

- *Monetary policies*: *Quantitative easing*, divided between the 2008/09 policy which involved purchases of MBS and GSE debt as well as Treasuries ("QE1") and the 2010 policy of buying government bonds ("QE2"); *pre- and post-crisis regular and extraordinary FOMC meetings*, measured both using change in the Fed funds rate and the change in the yield on the 10-year note on those days, as the latter is generally regarded as a proxy for the surprise element of the FOMC announcement.

- *Fiscal policies*: *Stimulus packages*, divided into the early 2008, mid-2009, and late 2010 packages; *pre-crisis fiscal announcements* of the budget by the administration and key dates when the bills passed the house and senate.

The following banking cross-sectional variables were also collected to help explain variations in responses of bank excess returns: *Equity capital as a ratio of assets*, as a measure of capital buffers; *ratio of retail deposits to assets*, as a measure of reliance on wholesale funding; *ratio of noninterest income to total income*, as a proxy for investment banking business models; *the number of U.S. based subsidiaries as a ratio for all subsidiaries* as a measure of U.S. market presence; dummy variables for major non-U.S. investment banks, comprising Deutsche Bank, Barclays Capital, UBS, Credit Suisse, BNP, Société Générale, and HSBC.

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[8] The list of dates is reported in the Data Annex.

III. SPECIFICATION

The specification for the event study regressions is based on a CAPM model with the United States assumed to be the "market". Hence, all correlations between markets are assumed driven by U.S. asset price changes. This is clearly a sensible assumption on days of major U.S. policy announcements as the identifying principle of the analysis is that these events were the main international "news" of the day. That being said, this analysis has the usual issues associated with most event studies, namely that it can only identify the short-term market response which, even in the case of asset prices that are approximate random walks (as bank excess returns, equity prices, bond yields, and exchange rate movements generally are), may not accurately reflect the long-term impact of a policy.

For the identification of "typical" market associations the assumption that causation runs only from U.S. to foreign markets is more questionable, as some reverse feedback may well also occur. That said, there is considerable support for the notion that U.S. markets do generally act as the bellwether for international price discovery. Three lines of enquiry suggest the importance of U.S. financial markets in global asset pricing. First, studies looking at the impact of U.S. news on foreign variables compared to the impact of foreign news on U.S. asset prices.[9] Second, time series evidence that estimates the direction of causation of contemporaneous correlations across global bond and equity markets.[10] Finally, in the emerging market sphere, analysis of the role of "push" versus "pull" factors in capital flows.[11]

In the specification, foreign bond yields (for example) are regressed on Treasury yields (plus other variables), with the coefficient on Treasury yields being interpreted as the dependence of foreign yields on U.S. ones (the market "beta").[12] A post-crisis dummy is included in the regression as many of these underlying relationships appear to have shifted after early 2007 (see section IV.G below). Dummy variables are also included on dates of policy announcements, with policies being regarded as have a significant impact on foreign asset prices if the market response on days of announcements is significantly different from the typical response indicated by the beta. Finally, various measures of global market conditions and cross-sectional characteristics are also included in some specifications.

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[9] Diebold and Yilmaz (2009).

[10] See, for instance, Ishii (2008), Ehrmann, Fratzscher, and Rigobon (2010), Bayoumi and Bui (2011).

[11] Scott (2011).

[12] Alternatively, for those more skeptical that U.S. assets can be assumed to be the market, these results can be regarded as defining the typical linkage between the two asset prices without any inference of causality.

More specifically, the specification was:

$$\Delta y_{it} = \alpha_i + (\beta_i + \nu_i \, postcrisis_{it} + \gamma'EVENTS_{it}) \, \Delta US \, asset \, price_{it} + \delta'\Delta CONDITIONS_{it} + \zeta'Z_{it} + \varepsilon_{it},$$

where y_{it} is the foreign or global variables of interest (for example, as discussed earlier, foreign excess bank returns, foreign bond yields, exchange rates, or equity returns), $postcrisis_{it}$ is a dummy variable for the period from the start of 2007 until the end of the sample,[13] $EVENTS_{it}$ is a matrix of dummy variables singling out policy announcements, US $asset \, price_{it}$ is the U.S. variable of interest (U.S. bank excess returns, 10-year Treasury yields, or U.S. equity returns), and (where included) $CONDITIONS_{it}$ is a matrix of market conditions (such as CDS spreads, monetary policy expectations, commodity prices, and global risk aversion) and Z_{it} are variables explaining differences in characteristics across banks.

Responses to events were measured using the (time-zone adjusted) market response on the day of the announcement.[14] Specifically, U.S. data on the day of the announcement is regressed on same day responses in the Americas, next day responses in Asia (where time zones do not overlap), and same and next day responses in Europe (reflecting the partial overlap of the European and U.S. time zones). The short one-day window used in the baseline results (which has also become typical in event studies of U.S. monetary policy over the crisis[15]) was used for two reasons. First, given the sheer number of shocks that were occurring over the crisis and post-crisis period a longer window increases the risk of conflating identified events with other developments. Second, while most event studies examine the direct impact of a policy—an assessment that may require a longer window— the objective here is to look at the spillovers from a domestic policy announcement on the rest of the world, and there is no reason to think that using a longer window would improve this relative assessment and, by adding noise from foreign events, it could actually make it worse. Finally, graphs of responses for several days before and after events were examined and, in cases of particular uncertainty, news reports were also checked. In addition, as a robustness check, results using 2-, 5-, and 10-day windows were also calculated, and the results are discussed section IV.G and reported in Annex Tables.

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[13] Experimentation indicated that the exact timing of the pre/post crisis break made little difference to the results because volatility is so much higher after the crisis than before it. Results placing the break at the Lehman event are reported in the Appendix Tables.

[14] Exchange rate data were all measured at the end of the U.S. day, so no timing adjustments were used.

[15] See Gagnon, Raskin, Remache, and Sack (2011) and Vissing-Jorgensen and Krishnamurthy (2011).

IV. FINANCIAL SECTOR REFORM RESULTS

A. Baseline Regressions

Results for announcements of central bank swaps (mainly aimed at supporting foreign dollar liquidity) and the Dodd-Frank Act are summarized in Table 1. Table 1a reports results for a simple version of the model where foreign bank excess returns are regressed only on domestic excess returns, the post-crisis dummy, and event dates.[16] This specification is useful for providing a baseline on the response on foreign bank excess returns to U.S. bank excess returns and to relevant policy announcements. Table 1b reports results for the same specification, but including the cross sectional information on bank characteristics (the Z_i matrix) to provide information as to how far the identified market responses reflect differences in types of banks. Finally, Table 1c extends these results further by including time series of market conditions (the $CONDITIONS_{it}$ matrix), and hence the degree to which market responses to events are linked to developments in other markets.

Links between U.S. and foreign bank excess returns were transformed by the crisis, rising for key European markets but not for the rest of the world. The pre-crisis beta coefficient was largest and most significant for Switzerland (both of whose major banks have large U.S. operations), followed Germany (where the same is true for one of the two major banks). Other significant links (in order of size) involved France, Spain, Japan, Korea, Canada, and the United Kingdom (with the smallest significant beta of 13 percent), while Italy, Australia, and all emerging markets are estimated to have no significant links. Only the Swiss beta exceeded 25 percent, implying that in all other cases a one percent U.S. bank excess return led to an increase of less than ¼ percent in excess returns abroad.

Post-crisis U.S. banking links are consistently stronger for European banks than those of other countries. The post-crisis beta coefficient reported in the third column suggests that on a typical post-crisis day some 60 percent of excess returns across major U.S. banks spillover to Swiss banks, 50 percent to U.K. and German banks, and 40 30, and 20 percent to French, Italian, and Spanish banks, respectively. This involves a major increase from the pre-crisis betas, which is statistically significant except for Switzerland and Spain. By contrast, post-crisis changes in betas are insignificant for non-European banking systems, and vary from 15 percent (for Korean banks) to zero (for Russian ones).

Adding bank characteristics and market variables lower the betas modestly, but these factors explain only a small part of the observed linkages. The results in Table 1b suggest that banks that house global investment banks and have relatively more U.S. subsidiaries are more closely linked to U.S. bank excess returns than other banks. The former result is

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[16] Specifically on swaps, divided between those countries receiving swaps and those not receiving them, the January 21, 2010 speech by Obama on the Volcker rule, and other Dodd-Frank announcements.

consistent with the view that investment banks are major conduits by which dollar liquidity is distributed to the global financial system. In addition, while some global asset prices are significant in Table 1c, adding these does not seem to materially affect the underlying analysis.

B. Policy Impact: Swaps

Bilateral analysis finds that swaps provided support to countries that received them. Excess returns rose on announcements of Fed swap arrangements in all countries except Korea. These coefficients are large—over unity in most cases—and hence economically significant, Slightly surprisingly, the impact in individual countries is statistically insignificant, but other papers have found that swap announcements were linked to a range of other beneficial market movements, such as lower global risk aversion and higher U.S. and foreign equity prices. This confirms other work finding that Fed swaps provided significant support for foreign banking systems, and lowered tensions in interbank markets (e.g., Ait-Sahlia and others, 2009).

Spillovers onto banking systems not included directly in the swaps again appear to be positive. The sign of any spillover is ambiguous. Swaps could support non-targeted banking systems by reducing global competition for dollar funding, but could hurt them to the extent that market participants were expecting some direct relief. As can be seen in the fifth column of Table 1a, the estimated impact is positive but insignificant for both advanced countries and emerging markets. This suggests that, if anything, banking systems not included in the swaps benefitted, possibly by improving general global liquidity conditions.

C. Financial regulation

Results on spillovers from U.S. financial regulation appear to depend on the issue being addressed:

- *The January 21, 2010 Obama speech backing a tough banking regulation is estimated to have lowered U.S. and most European bank equity prices*. While the speech is often remembered for the announcement of the "Volcker" rule to limit banks' trading on their own account, the main spillover appears to have come from the fact that U.S. leadership signaled a tough global approach to financial regulation. Summing the typical correlation and the shift from the Volcker rule speech, the impact on excess returns of the Swiss, U.K., and German and French bank stocks were actually larger than those for U.S. banks. While this partly reflects the characteristics of these banks—low capitalization coupled in many cases with large U.S. investment banking operations—the outsized impact remains even after accounting for bank characteristics (Table 1b). This suggests that the abnormal response largely reflects anticipation of tougher future domestic bank regulation after the lead set by the United States. This interpretation is supported by the fact that

excess returns were *negatively* related to U.S. ones in other countries—all emerging markets as well as Japan, Korea, Australia, and Canada—whose banks are generally conservatively managed and highly capitalized and hence would gain competitiveness if global banking regulations were tightened.

- *Other Dodd-Frank announcements of tighter (softer) U.S. bank regulation were found to support (hurt) bank excess returns in core European markets.* The estimated betas are negative for the U.K. and Swiss banks and lower than typical elsewhere in Europe, suggesting that such announcements of regulations were seen as putting U.S. banks at a competitive disadvantage compared to their counterparts in major European financial markets. This suggests that markets may have perceived the potential for regulatory arbitrage in these cases.

Adding proxies for bank characteristics or market conditions does not significantly alter the estimated impact of policies. As reported in Tables 1b and 1c, adding proxies for bank characteristics alone or also adding macroeconomic conditions have little impact on the results. In particular, the assessment of the impact of policies varies little across these specifications.

D. Monetary and Fiscal Policies

Results for the impact of monetary and fiscal policies are summarized in Tables 2, 3, and 4. Tables 2a and 2b report the results of regressions linking changes in foreign bond yields to changes in U.S. 10-year note yields, with Table 2a being a "stripped down" specification including only full period and post-crisis changes in coefficients and shifts in the betas coming from policy events while Table 2b includes broader global financial conditions. Tables 3a and 3b report the same results but for changes in bilateral dollar exchange rates as a result of changes in U.S. 10-year Treasury note yields, while Tables 4a and 4b do the same for foreign nominal effective exchange rates, which are a better measure of induced changes in competitiveness than bilateral dollar rates.

In all cases, results are reported for 6 country groupings: Japan (singled out for its different post-crisis responses, particularly with regard to exchange rates); advanced country commodity exporters (Australia and Canada); Korea and European advanced countries (euro area, Switzerland, and the U.K.); China (whose dollar peg and capital controls set it apart); financially open emerging markets (Brazil, Mexico, South Africa, and Turkey); and emerging markets which have less open financial systems (Indonesia and Russia). India is included with China for bond analysis (given its capital controls on these instruments) but with Russia and Indonesia for exchange rate and equity analysis.

Foreign bond yields

Links between U.S. yields and those in emerging markets fell after the crisis. Before 2007, a rise in U.S. bond yields had a pass-through of some 70 percent for financially open

emerging market economies, slightly less for Indonesia and Russia, with no link for China or India, the latter likely reflecting capital controls. The results in Table 2a, which exclude broader measures of financial conditions, suggest that these emerging market links basically disappeared after the crisis. However, as can be seen in Table 2b, when financial conditions—such as domestic equity prices—are included in the regression the pre-crisis coefficient halves (to levels similar to the Europe and Korea advanced economy coefficient) rather than disappears completely. This suggests that improved market conditions played a role in the loss of correlation between changes on U.S. and emerging market yields, with the main significant variables being local equity prices and sovereign CDS spreads. In both the simple and more complex regressions, however, the significant fall in the correlation of changes in U.S. and foreign yields suggests higher capital inflows post-crisis, as such inflows reduce the impact on yields in shallow emerging market financial markets.

By contrast, links between U.S. yields and those of advanced economies with deeper financial markets remained relatively constant over the crisis. The pre-crisis relationship whereby a one-percentage point rise in U.S. yields led to a 40 basis point rise in European/Korean yields and a 15 basis point rise in Japanese yields appears unaffected by the crisis. The link between advanced commodity exporters yields and U.S. yields did fall modestly, from two-thirds to one-half.

Results for "normal" policy announcements suggest that pre-crisis spillovers from U.S. yields were largely driven by expectations about U.S. monetary policy. Budget announcements appear to have no significant differential impact on foreign bond yields, likely reflecting the fact that they were largely anticipated. Of considerably more interest is the fact that FOMC announcements, measured using either changes in the 10-year yield or the change in the Fed funds rate, also create little significant differential impact (although the coefficient on the advanced commodity exporters falls modestly in the basic regressions). Since it is already known from earlier work that unexpected changes in Fed policy announced on FOMC days have a significant impact on U.S. yields, this suggests that pre-crisis spillovers from U.S. bond yields largely reflected shifting expectations about U.S. monetary policy. When the Fed Funds rate hit the lower bound and the Fed vowed to keep it there for a considerable time, however, rises in bond yields seem to have become proxies for U.S. and global risk aversion/growth prospects, explaining the lowering of the link with emerging market (these issues are discussed further in section F).

Exchange rates

Shifts in the relationship with foreign exchange rates also suggest changes in the information contained in U.S. yields (Table 3a). Before the crisis rising U.S. 10-year yields were associated with significant depreciations in dollar exchange rates in advanced economies and financially open emerging markets, consistent with a generalized dollar strengthening given expected tightening of U.S. monetary policies. However, there was no significant change for China, with its dollar peg, or India, Indonesia and Russia, with their

more managed exchange rates. Post crisis higher U.S. yields led to large appreciations in emerging markets, especially financially open ones, as well as advanced economy commodity exporters.

Post-crisis shifts in non-commodity advanced country exchange rate responses plausibly reflect their relative attractiveness of currencies for funding carry trades. The yen appears to be the most favorable currency in this respect (and hence has the largest depreciation). U.S. yields had little impact on dollar exchange rates in advanced Europe and Korea. These shifts are consistent with the view that post-crisis higher U.S. yields led to capital flows into emerging markets and commodity producers and out of advanced economies with low interest rates—especially Japan. The shifting relationship of emerging market and exchange rate with U.S. yields seems to mainly reflect the impact of global financial conditions. As can be seen in Table 3b, once global financial prices are added to the regression there are no significant post-crisis shifts in emerging market dollar correlations. The shift in advanced economy coefficients are smaller than in Table 3a, but remain significant.

Based on the significance of estimated coefficients in Table 3b, currency appreciations in most emerging markets as well as Australia and Canada seem to largely reflect underlying relationships with oil and nonoil commodity prices, local equity prices, and local sovereign spreads—whose link with U.S. yields changed after the crisis. By contrast, global risk aversion (measured using the VIX) and U.S. monetary conditions do not appear to play a significant role.

Nominal effective exchange rate results—a better measure of the overall impact on competitiveness—show some subtle differences with those for dollar exchange rates. In the pre-crisis period rises in U.S. yields are again associated with depreciations of advanced economy currencies. Reflecting the importance of these countries in global trade and hence emerging market nominal effective exchange rates, however, there is no significant impact on the competitiveness of financially open emerging markets, while China, India, Indonesia, and Russia appreciate given their close links with the U.S. dollar (Table 4a). After the crisis starts, the appreciation in China's nominal effective exchange rate is very small, reflecting more mixed responses of dollar rates elsewhere. In Table 4b, the importance of the oil price is diminished, suggesting its role may be more connected to dollar fluctuations than to changes in overall competitiveness.

Fiscal stimulus and quantitative easing announcements

Results for announcements of the fiscal stimulus packages (in Tables 2-4) suggest that effects varied significantly over time (fiscal stimulus increases Treasury yields, so that positive relationships imply higher foreign yields that tends to lower foreign activity):

- The *2008 stimulus package* is characterized by a delinking of yields in Europe and Korea with rising U.S. ones, while yields in financially open emerging markets and Japan became more tightly bound and the yen appreciated, suggesting a withdrawal from risky investments to safe havens.

- The *2009 package* seems to have led to a delinking of European and Korean bond yields, suggesting negative financial market spillovers were tempered.

- The *2010 package* seems have been accompanied by larger-than-normal increases in foreign yields and appreciation across a range of foreign currencies, suggesting larger-than-typical negative asset market spillovers.

These shifting relationships can be plausibly related to changing perceptions of financial conditions. In 2009, when the world was engulfed in financial turmoil, fiscal stimulus led to a fall in yields in other major advanced economies as the reduction in global risk premiums offset the rise in yields from anticipated higher U.S. debt. In 2010, when financial markets were in a more orderly state, concerns about rising U.S. debt seem to have led to tighter links across global yields. The 2008 stimulus had elements of both, providing lower bond market links (and hence more stimulus) for Europe and Korea—seen to be coping with the same difficulties rapidly engulfing the United States—but tighter bond market links in emerging markets and Japan, who were thought at the time to have decoupled.

Turning to monetary stimulus through quantitative easing, QE1 is estimated to have had much more positive impacts on foreign financial conditions than QE2. In contrast to fiscal stimulus, QE works through *lowering* Treasury yields, and hence tight positive links to Treasury yields benefit the rest of the world:

- *Post-crisis FOMC meetings without QE announcements have a negative coefficient on emerging market bond yields and larger-than-usual currency appreciations.* This is consistent with the view that greater optimism on U.S. growth, which drives up U.S. bond yields, led to capital flows into emerging markets

- *QE1 announcements are also estimated to have been associated with large reductions in emerging market yields and currency appreciations (Tables 2a, 3a, and 4a).* In this case, *falling* U.S. bond yields led to these emerging market responses, which seem to have boosted foreign demand and capital outflows. These effects seem to have largely reflected beneficial impacts on commodity prices, foreign equities, and sovereign CDS spreads (Tables 2b, 3b, and 4b).

- *QE2 announcements appear to have had much more muted effects on foreign markets than QE1 announcements.* As discussed further in section IV.F, QE2 announcements

led to much smaller improvement in global financial market sentiment than QE1 announcements, and hence more muted benefits.

E. Equity Market Correlations

Global equity markets are also tightly linked, with the important exception of China. Tables 5a and 5b report results for the correlation of local currency returns on U.S. and foreign equity prices in a similar format to that given in Tables 2a and 2b for bond yields. The underlying correlations are, if anything, even stronger for equity prices than for bond yields. Excluding China (which is the only insignificant beta in the Table 5a), the "raw" pre-crisis beta coefficients vary from 0.48 (for Australia and Canada) to 0.87 (for Brazil, Mexico, South Africa, and Turkey) (Table 5a). Unlike other financial market relationships, the crisis seems to have produced limited changes in these relationships, although the estimated betas are more similar, varying from 0.55 to 0.76.

Post-crisis links are somewhat lower once other global financial prices are added, suggesting that part of the strong equity correlations reflect other market links (Table 5b). However, the underlying beta coefficients are still sizeable at around 0.5. Interestingly, the betas between U.S. and emerging market equity prices fall in half post-crisis, a pattern also seen in the equivalent regressions for bond yields.

Policy announcements appear to have had a relatively little systematic impact on these correlations, again in contrast to the results for bond yields and exchange rates. The exception to this rule are the 2010 fiscal stimulus announcements, which seem to have boosted equity correlations with non-commodity advanced countries (whose economies were weak cyclically) but reduced such correlations with many emerging markets as well as advanced country commodity exporters (whose economies were stronger). Otherwise, the limited number of significant coefficients on policy announcements seem to have little overall pattern.

F. Results using indicators of macro, monetary, and fiscal conditions

Tables 6a and 6b report results for indicators of global growth conditions on changes Treasury yields both excluding and including macroeconomic conditions. The relevant variables are the VIX, oil and nonoil commodity prices, foreign and U.S. equity prices, and U.S. inflation expectations. The results in Table 6a indicate that post-crisis increases in Treasury yields are universally associated with better global financial conditions when other financial prices are excluded, while there is very little link pre-crisis. However, once broader financial conditions are included, as is done in Table 6b, this positive relationship largely disappears. Rather, the positive bilateral links between U.S. yields and improving external financial market conditions seems to reflect a wider web of financial market linkages. The exception to this rule is U.S. inflationary expectations, which rise with higher U.S. nominal bond yields over the entire period, suggesting that between one quarter and one third of changes in nominal yields do not flow into real rates.

The only policy announcements that significantly disrupt this overall pattern seem to have been the quantitative easing announcements (discussed earlier). The shift in coefficients generally imply an improvement in global financial asset prices as a result of falling U.S. bond yields, in sharp contrast to the typical post-crisis result. The falls in U.S. bond yields associated with QE1 and QE2 announcements were associated with significantly higher than expected U.S. inflation expectations, suggesting some reduction in U.S. real interest rates.

Tables 6c and 6d report results for monetary and fiscal indicators (i.e., the expected path of U.S. policy rates and foreign and U.S. sovereign CDS spreads). Unsurprisingly, U.S. bond yields matter for the expected path of monetary policy, but for sovereign CDS spreads the post-crisis relationship disappears once other market conditions are included. Turning to policy announcements, QE1 and (to a lesser extent) QE2 announcements seem to have lowered foreign sovereign CDS spreads, a reversal of the usual post-crisis correlation.

Correlations across asset prices seem to have shifted after the crisis, but stayed relatively constant subsequently. Table 7 investigates the changing relationships between measures of financial conditions by reporting correlation matrixes of day-to-day changes in a wide range of asset prices. Results before the crisis, reported in the upper right portion of the matrix, indicate two distinct sets of relationships. A monetary group comprising short- and long-term U.S. monetary policy expectations, U.S. inflation expectations, and the U.S. nominal effective exchange rate. And a group associated with real activity, comprising U.S. equities, global risk aversion (measured by the VIX), and commodity prices. U.S. Treasury yields matter for both, presumably reflecting their role as an indicator of future monetary policy.

Correlations for the post-crisis period, reported in the lower half of the matrix, suggest a new pattern in which a broad range of global asset prices are correlated. U.S. inflation expectations, Treasury yields, the U.S. nominal effective exchange rate, global risk aversion, U.S. and foreign equity returns/sovereign CDS spreads, and global commodity prices are all closely linked. These high correlations have been attributed to "risk-on/risk-off" behavior by investors, in which (say) a reduction in risk aversion leads to an uptick in U.S. and foreign equities, higher U.S. inflationary expectations, higher bond yields, outflow of capital to emerging markets, and rising commodity prices.

Analysis suggest the increase in correlations across global financial prices occurred relatively early in 2007. Examination of the patterns of correlations between the initial problems in U.S. subprime mortgages in early 2007 and the Lehman failure in September 2008 suggest the correlations rose early in the crisis. Hence the decision to time our post-crisis dummy in early 2007.

Although these financial relationships will likely become more similar to pre-crisis segmentation as the recovery matures, this does not appear to have happened yet. Correlations since the late-summer 2010 announcement of quantitative easing are similar to

those seen over the full post-crisis period, as are those from the first quarter of 2011 although oil prices became less linked other global financial assets, presumably reflecting Middle East turmoil (Table 8).

G. Robustness Checks

The main conclusions of the analysis appear robust to alternative formulations of the model. The appendix Tables report the main results (the bilateral regressions for bonds markets, dollar exchange rates, and market conditions—Tables 2a, 3a, and 6a) when: (i) the break between the pre- and post-crisis period is moved from the start of 2007 to the September 2008 Lehman crisis (Tables A1-A3); and (ii) the length of the event window is extended to 2, 5, and 10 days (Tables A4-A12). Other results (not reported for the sake of brevity) can be obtained from the authors.

The switch in the timing of the start of the crisis dummy has relatively little impact on the results. There is almost no change for the post-crisis coefficients, presumably reflecting the fact that the main volatility came later. On the other hand, the pre-crisis coefficients tend to fall, consistent with the notion that underlying market responses had already changed by 2007, and that choosing a later start period contaminates and lowers the estimated coefficients.

Lengthening the event study window does not change the qualitative nature of the results. It does, however, tend to raise the estimated "typical" bond and exchange rate links while lowering the differential impact of policies. One interpretation of the former result is that dollar markets are a key source of finding, and hence it takes several days to see the full impact on foreign markets. However, it is difficult to understand why such a predictable relationship would not be internalized in short-term asset price responses. An alternative explanation is that these increases in coefficients represent contamination from policy announcements, as least in the busy post-crisis period. This is supported by the generalized fall in significance of policy announcements. Finally, the results for the impact of U.S. ten year notes on global financial conditions are more mixed, and show little general pattern. However, QE2 announcements are never found to have had a significant impact on such conditions.

V. Conclusions

This paper has investigated how event analysis using daily financial market data can provide insight into the impact of recent and likely future U.S. policies. An important result is that underlying relations across banking systems, bond yields, and exchange rates has changes significantly pre- and post-crisis, and that the impact of recent policy decisions needs to be seen against the background of the "extraordinary" financial relationships.

Financial policy spillovers appear to have depended on the objective of the intervention. Consistent with earlier results, central bank swap arrangements between the

Federal Reserve and other central banks are found to have provided significant support to foreign banking systems and financial conditions more broadly. The impact of changes in financial regulations is more differentiated. The announcement that the Administration supported tighter regulation of banks, including the "Volcker rule" limiting banks from trading on their own account, led to a generalized fall in advanced economy bank shares compared to local equity markets, which may have partly reflected anticipation to tougher future global regulation. By contrast, in emerging markets and Japan where banks and more conservative and generally better capitalized, bank valuations tended to improve. For other aspects of the Dodd-Frank legislation, however, falls in U.S. bank equity prices were accompanied by increases in U.K. and Swiss bank valuations, presumably reflecting an assessment that their competitive position would improve, implying a potential for regulatory arbitrage.

Turning to macro policies, the 2008/9 fiscal and monetary stimulus packages generally supported foreign activity, while the impact of 2010 stimulus is less clear. The 2010 fiscal stimulus was accompanied by significantly-larger-than-usual increases in foreign bond yields. The case of QE2 announcements is particularly complex. It does seem to have lowered emerging market yields. However, unlike QE1 announcements, its initial impact financial conditions more generally—such as global risk aversion, inflation expectations, commodity prices—appears to have been neutral or negative. That said, soon after the 2010 quantitative easing was announced global financial conditions went through a generalized upswing. This upswing, however, appears to be a continuation of the high correlated financial relationships seen in the post-crisis period, and its relationship to quantitative easing is difficult to establish from event studies.

Table 1a: Bank Excess Returns: Basic Regressions

Country	Baseline			Impact of Swaps		Impact of Regulation	
	Full Period	Change Post-Crisis	Sum	Included	Not Included	Volcker Rule Speech	Other Dodd-Frank
Switzerland	.42 (.09)**	.16 (.11)	0.58	2.23 (2.06)		.94 (.07)**	-.76 (.16)**
UK	.13 (.05)*	.37 (.08)**	0.50	1.66 (2.32)		.78 (.08)**	-.97 (.27)**
Germany	.23 (.09)*	.27 (.11)**	0.50			.71 (.05)**	-.30 (.22)
France	.20 (.06)**	.20 (.07)**	0.40	.06 (1.02)			
Italy	.02 (.08)	.30 (.10)**	0.32			-.07 (.03)*	.01 (.10)
Spain	.18 (.07)**	.02 (.08)	0.21		.18 (.63)		
Japan	.18 (.09)*	-.05 (.09)	0.13	.47 (.88)			
Korea	.18 (.08)*	-.03 (.09)	0.15	-.71 (.29)*			
Canada	.15 (.04)**	-.02 (.04)	0.13	1.06 (.63)			
Australia	.05 (.03)	.05 (.04)	0.10	1.03 (.53)			
Brazil	.04 (.08)	.08 (.08)	0.12	1.06 (1.63)		-.25 (.01)**	-.09 (.03)**
Turkey	.09 (.05)		0.09				
Indonesia	.02 (.08)	.09 (.08)	0.10		.21 (.19)		
India	.08 (.08)	-.03 (.09)	0.05				
China	.52 (.27)	-.49 (.27)	0.04				
Russia	-.16 (.17)	.16 (.18)	-0.01				

R^2	.06
DW	1.46

Note: Standard errors are in parenthesis. ** and * represent significant at the 1 and 5 percent significance level. Coefficients on some other macroeconomic events and bilateral dollar exchange rates are not reported

Table 1b: Bank Excess Returns: Bank Characteristics

Country	Baseline			Impact of Swaps		Impact of Regulation	
	Full Period	Change Post-Crisis	Sum	Included	Not Included	Volcker Rule Speech	Other Dodd-Frank
Switzerland	.26 (.12)*	.16 (.11)	0.42	2.23 (2.06)		.94 (.07)**	-.76 (.16)**
UK	.07 (.06)	.37 (.08)**	0.44	1.66 (2.32)		.78 (.08)**	-.97 (.27)**
Germany	.15 (.10)	.27 (.11)**	0.43			.71 (.05)**	-.30 (.22)
France	.20 (.06)**	.20 (.07)**	0.41	.06 (1.02)			
Italy	.03 (.08)*	.30 (.10)**	0.32		.18 (.63)	-.07 (.03)*	.01 (.10)
Spain	.14 (.07)*	.02 (.08)	0.17				
Japan	.21 (.09)*	-.05 (.09)	0.16	.48 (.88)			
Korea	.19 (.08)*	-.04 (.09)	0.16	-.71 (.28)*			
Canada	.18 (.04)**	-.01 (.05)	0.17	1.07 (.63)			
Australia	.05 (.03)	.05 (.04)	0.09	1.05 (.53)*			
Brazil	.02 (.09)	.05 (.10)	0.06	-.12 (.83)		-.24 (.01)**	-.12 (.04)**
Turkey	.05 (.05)		0.05				
Indonesia	.02 (.08)	.01 (.08)	0.03		.18 (.19)		
India	.08 (.09)	-.03 (.09)	0.05				
China	.49 (.27)	-.48 (.27)	0.01				
Russia	-.20 (.17)	.15 (.18)	-0.05				
Bank Characteristics							
Capital Ratio	.00 (.00)						
Liquid Ratio	.00 (.00)						
Non-int inc.	.00 (.00)						
US Presence	.00 (.00)**						
Global IB	.21 (.08)*						

R^2	.06
DW	1.42

Note: See Table 1a

Table 1c: Bank Excess Returns: Bank Characteristics and Other Financial Conditions

Country	Baseline			Impact of Swaps		Impact of Regulation	
	Full Period	Change Post-Crisis	Sum	Included	Not Included	Volcker Rule Speech	Other Dodd-Frank
Switzerland	.16 (.11)	.23 (.10)*	0.39	2.17 (1.89)		.90 (.07)**	-.72 (.14)**
UK	.03 (.07)	.38 (.09)**	0.41	1.27 (2.31)		.68 (.09)**	-.90 (.29)**
Germany	.12 (.09)	.28 (.10)**	0.40			.57 (.05)**	-.32 (.23)
France	.14 (.06)*	.23 (.08)**	0.37	-.13 (.92)			
Italy	.15 (.09)	.13 (.10)	0.28		.15 (.55)	-.19 (.04)**	.02 (.11)
Spain	.00 (.06)	.13 (.06)*	0.13				
Japan	.22 (.09)*	-.08 (.09)	0.14	.47 (.82)			
Korea	.10 (.08)	.06 (.08)	0.16	-1.19 (.98)			
Canada	.23 (.07)**	-.08 (.07)	0.15	1.25 (.73)		-.29 (.02)**	-.06 (.03)*
Australia	.09 (.05)*	-.01 (.05)	0.08	1.46 (.76)			
Brazil	.21 (.12)	-.13 (.13)	0.09	.43 (.76)			
Turkey	.06 (.12)		0.06				
Indonesia	-.12 (.14)	.16 (.15)	0.04		.33 (.23)		
India	.00 (.11)	.06 (.11)	0.06				
China	.59 (.31)	-.57 (.31)	0.01				
Russia	-.22 (.23)	.21 (.24)	-0.02				

Bank Characteristics

	Full Period
Capital Ratio	.00 (.00)
Liquid Ratio	.00 (.00)
Non-int inc.	.00 (.00)
US Presence	.00 (.00)**
Global IB	.21 (.09)*

Financial Conditions

		Full Period
VIX	AM	.04 (.03)
	EM	.03 (.03)
US Equities	AM	-.11 (.06)
	EM	.05 (.04)
Foreign Equities	AM	.27 (.03)**
	EM	-.12 (.02)**
1 Year Fed Funds Exp	AM	.00 (.00)
	EM	.00 (.01)
1 month Fed Funds Exp	AM	.01 (.01)
	EM	.04 (.02)**
US CDS	AM	-.08 (.03)**
	EM	-.03 (.02)
Oil Prices	AM	-.02 (.02)
	EM	-.05 (.02)*
Non-Oil Comm. Prices	AM	-.09 (.03)**
	EM	-.02 (.03)
US Inflation Expectation	AM	.01 (.01)
	EM	.01 (.01)

R^2	.09
DW	1.41

Note: See Table 1a

Table 2a: Foreign Bond Yields: Basic Regression

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China and India	Brazil, Mexico, South Africa, and Turkey	Indonesia and Russia
US 10 Year Yield	*.16 (.02)***	*.66 (.02)***	*.39 (.02)***	.01 (.02)	*.69 (.07)***	*.53 (.05)***
Change Post-Crisis	-.01 (.02)	*-.14 (.02)***	.03 (.03)	-.04 (.04)	*-.68 (.10)***	*-.80 (.12)***
Fiscal Event						
Budget	-.01 (.07)	.00 (.20)	.08 (.15)	.10 (.16)	-.18 (.34)	.33 (.69)
2008 Stimulus	*.22 (.08)***	-.15 (.12)	*-.24 (.05)***	.02 (.07)	*.88 (.08)***	.06 (.13)
2009 Stimulus	.29 (.25)	.61 (.55)	*-.46 (.20)**	.31 (.24)	-.02 (.73)	-2.39 (3.47)
2010 Stimulus	*.17 (.05)***	*.17 (.06)***	*.17 (.02)***	*.52 (.06)***	*.59 (.08)***	*.89 (.12)***
Monetary Events						
FOMC - Pre	-.18 (.09)	*.17 (.08)**	.02 (.08)	.19 (.11)	.39 (.21)	.35 (.28)
FOMC - Post	.01 (.06)	.11 (.06)	-.02 (.09)	*-.38 (.11)***	*-.45 (.21)**	-.51 (.41)
Chg Fed Funds	.01 (.02)	-.05 (.03)	-.01 (.02)	-.02 (.05)	.05 (.10)	.08 (.19)
QE 2008/09	-.03 (.06)	*-.11 (.06)**	-.07 (.11)	*.48 (.16)***	*1.48 (.31)***	*1.54 (.40)***
QE 2010	.02 (.04)	*-.23 (.05)***	.02 (.25)	*.59 (.27)**	*.43 (.15)***	*.70 (.23)***

R^2	.08
DW	1.27

Note: Standard error are reported in parenthesis. ** and * represents significance at the 1 and 5 percent levels, respectively. Some other financial policy event coefficients are not reported

Table 2b: Foreign Bond Yields: Including Other Financial Conditions

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China and India	Brazil, Mexico, South Africa, and Turkey	Indonesia and Russia
US 10 Year Yield	*.16 (.03)* **	*.63 (.03)* **	*.33 (.03)* **	*.18 (.06)* **	*.85 (.06)* **	*.74 (.12)* **
Change Post-Crisis	-.04 (.03)	*-.18 (.03)* **	.01 (.03)	*-.17 (.06)* **	*-.42 (.06)* **	*-.46 (.12)* **
Fiscal Event						
Budget	.08 (.10)	-.06 (.21)	.16 (.14)	.07 (.23)	.34 (.19)	.55 (.56)
2008 Stimulus	*.15 (.07)* *	-.16 (.09)	*-.23 (.05)* **	.03 (.07)	*.61 (.05)* **	-.04 (.15)
2009 Stimulus	-.04 (.12)	.20 (.30)	*-.70 (.17)* **	.29 (.30)	.27 (.54)	-1.81 (2.48)
2010 Stimulus	*.15 (.05)* **	*.23 (.06)* **	*.18 (.03)* **	*.49 (.06)* **	*.23 (.05)* **	*.49 (.10)* **
Monetary Events						
FOMC - Pre	-.19 (.14)	.03 (.11)	-.05 (.12)	.30 (.18)	-.06 (.15)	-.20 (.32)
FOMC - Post	.03 (.05)	*.14 (.06)* *	.01 (.09)	*-.27 (.10)* **	-.05 (.13)	-.06 (.27)
Chg Fed Funds	.02 (.02)	-.03 (.02)	.00 (.02)	-.02 (.06)	-.01 (.03)	.04 (.15)
QE 2008/09	-.08 (.05)	-.11 (.08)	-.07 (.12)	*.34 (.16)* *	*.50 (.24)* *	.34 (.33)
QE 2010	-.01 (.03)	*-.30 (.05)* **	.01 (.20)	*.55 (.24)* *	-.10 (.07)	.19 (.15)
Monetary Conditions						
1 Yr Fed Fund Exp	.02 (.02)	*.07 (.02)* **	*.05 (.02)* *	-.02 (.03)	-.02 (.04)	-.04 (.10)
1 mth Fed Fund Exp	*.09 (.03)* **	.10 (.05)	.09 (.05)	-.18 (.12)	*-.19 (.10)* *	.06 (.21)
Fiscal Conditions						
Foreign Sov. CDS	.04 (.03)	.07 (.07)	-.01 (.03)	.03 (.03)	*.65 (.04)* **	*.32 (.07)* **
US Sov. CDS	.00 (.04)	*-.17 (.08)* *	-.18 (.10)	-.11 (.17)	-.08 (.12)	.28 (.22)
Macro Conditions						
VIX	-.03 (.05)	*.22 (.11)* *	*.26 (.12)* *	.44 (.26)	-.13 (.27)	.03 (.59)
Oil Price	.00 (.04)	.02 (.07)	*.15 (.07)* *	.15 (.13)	-.06 (.10)	.15 (.22)
Non-Oil Comm Price	*-.19 (.07)* **	-.16 (.11)	-.11 (.10)	.10 (.19)	-.11 (.15)	-.46 (.38)
Foreign Equities	*.70 (.05)* **	*.98 (.13)* **	*.82 (.09)* **	-.02 (.11)	*-.69 (.16)* **	*-1.21 (.17)* **
US Equities	*-.31 (.09)* **	-.01 (.16)	.00 (.19)	.03 (.32)	.20 (.38)	*-2.54 (.97)* **
US Inflation Exp.	-.01 (.02)	-.03 (.03)	.00 (.04)	.06 (.08)	-.07 (.06)	-.13 (.13)
R^2	.38					
DW	1.73					

Note: See Table 2a

Table 3a: Bilateral Exchange Rates: Basic Regression

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China	Brazil, Mexico, South Africa, and Turkey	India, Indonesia, and Russia
US 10 Year Yield	*-1.45 (.37)***	*-1.88 (.33)***	*-1.66 (.29)***	.08 (.08)	*-1.03 (.34)***	-.05 (.13)
Change Post-Crisis	*-2.21 (.55)***	*5.55 (.63)***	*1.96 (.44)***	-.08 (.10)	*3.82 (.63)***	*.88 (.26)***
Fiscal Event						
Budget	-.43 (2.41)	4.33 (3.41)	2.28 (2.71)	.35 (.32)	4.58 (2.41)	1.01 (1.48)
2008 Stimulus	*10.22 (.61)***	*-2.54 (.96)***	-.33 (.59)	*.78 (.25)***	*-4.31 (.59)***	-.14 (.23)
2009 Stimulus	.06 (3.11)	6.22 (11.64)	-2.44 (11.44)	-.45 (.29)	2.94 (11.68)	*-6.19 (2.66)**
2010 Stimulus	*1.07 (.42)***	*-4.22 (1.67)***	*2.10 (.66)***	.19 (.12)	-.92 (.63)	*1.48 (.25)***
Monetary Events						
FOMC - Pre	.91 (1.52)	-.38 (2.21)	1.58 (1.22)	-.13 (.09)	*3.56 (1.60)**	.04 (.33)
FOMC - Post	-1.37 (1.27)	1.51 (1.66)	*3.32 (1.12)***	-.13 (.17)	*5.22 (1.80)***	.82 (.69)
Chg Fed Funds	.29 (.56)	-.78 (.78)	-.28 (.39)	-.01 (.02)	-.04 (.97)	*-.18 (.09)**
QE 2008/09	2.46 (1.45)	*-6.55 (1.96)***	*-4.15 (1.07)***	.00 (.15)	*-7.26 (1.84)***	*-2.12 (.69)***
QE 2010	*1.84 (.74)***	-2.74 (1.86)	-1.47 (2.12)	-.09 (.29)	*-3.89 (1.44)***	-1.03 (.93)

R^2 .04
DW   2.02

Note: See Table 2a. A positive value indicate an appreciation against dollar.

Table 3b: Bilateral Exchange Rates: Including Other Financial Conditions

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China	Brazil, Mexico, South Africa, and Turkey	India, Indonesia, and Russia
US 10 Year Yield	-.28 (.70)	*-2.79 (.64)* **	*-1.99 (.50)* **	-.18 (.19)	*-2.08 (.69)* **	-.04 (.30)
Change Post-Crisis	*-1.57 (.69)* *	*2.17 (.64)* **	*1.21 (.49)* **	.07 (.19)	.81 (.77)	-.03 (.29)
Fiscal Event						
Budget	-2.64 (2.76)	1.10 (3.62)	-1.43 (3.35)	.52 (.55)	.12 (2.08)	-1.73 (1.63)
2008 Stimulus	*10.50 (.77)* **	-.42 (.69)	-.23 (.46)	*1.00 (.25)* **	.69 (1.21)	*1.06 (.28)* **
2009 Stimulus	5.76 (3.05)	-1.40 (4.34)	-3.08 (5.83)	-.67 (.49)	-.80 (2.31)	*-5.23 (1.79)* **
2010 Stimulus	.22 (.43)	-.55 (1.58)	*2.64 (.83)* **	*.26 (.12)* *	*2.21 (.65)* **	*2.17 (.20)* **
Monetary Events						
FOMC - Pre	-.16 (2.42)	-.84 (1.53)	2.41 (1.37)	-.32 (.43)	3.20 (2.92)	*1.19 (.46)* **
FOMC - Post	-.32 (1.22)	-1.82 (1.37)	*2.64 (.83)* **	-.23 (.17)	*2.80 (1.25)* *	.48 (.57)
Chg Fed Funds	.25 (.46)	-.80 (.66)	-.15 (.27)	-.01 (.03)	.66 (.72)	-.12 (.11)
QE 2008/09	.31 (1.51)	1.30 (1.93)	*-2.05 (.89)* *	.13 (.17)	-.93 (1.36)	-.58 (.82)
QE 2010	1.13 (.98)	*2.66 (1.36)* *	-.95 (2.01)	-.04 (.26)	-1.15 (1.17)	-.40 (.78)
Monetary Conditions						
1 Yr Fed Fund Exp	*-.98 (.48)* *	-.64 (.40)	-.44 (.32)	*.09 (.05)* *	*.88 (.44)* *	-.23 (.17)
1 mth Fed Fund Exp	*-3.59 (1.09)* **	-1.46 (.92)	-1.23 (.84)	.01 (.13)	.45 (1.13)	-.16 (.44)
Fiscal Conditions						
Foreign Sov. CDS	1.81 (1.85)	.15 (1.55)	*-3.94 (1.00)* **	-.10 (.06)	*-3.08 (.34)* **	*-.71 (.12)* **
US Sov. CDS	.19 (1.95)	-.23 (1.36)	1.80 (1.37)	.11 (.15)	.16 (1.72)	-.99 (.69)
Macro Conditions						
VIX	*5.58 (2.73)* *	-4.07 (2.26)	1.81 (1.67)	-.49 (.25)	.70 (2.21)	1.90 (1.07)
Oil Price	*-2.93 (1.16)* **	*7.02 (1.08)* **	*3.48 (.98)* **	*.46 (.23)* *	*4.57 (1.12)* **	*3.01 (.75)* **
Non-Oil Comm Price	3.74 (2.16)	*20.24 (2.01)* **	*12.10 (1.72)* **	.44 (.31)	*17.24 (1.98)* **	*3.85 (1.13)* **
Foreign Equities	*-5.62 (1.56)* **	*-6.89 (2.59)* **	1.36 (1.28)	-.15 (.13)	*4.63 (1.40)* **	*2.17 (.43)* **
US Equities	3.67 (3.25)	*20.00 (3.08)* **	.99 (2.54)	-.62 (.39)	.47 (4.36)	1.18 (1.74)
US Inflation Exp.	-.64 (.87)	*3.89 (.68)* **	*1.97 (.59)* **	.02 (.10)	*2.26 (.83)* **	*.96 (.32)* **
R^2	.27					
DW	2.11					

Note: See Table 2a. A positive value indicate an appreciation against dollar.

Table 4a: Nominal Effective Exchange Rates: Basic Regression

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China	Brazil, Mexico, South Africa, and Turkey	India, Indonesia, and Russia
US 10 Year Yield	*-.90 (.31)**	*-1.04 (.25)**	*-.45 (.11)**	*.97 (.17)**	-.02 (.30)	*.94 (.18)**
Change Post-Crisis	*-3.23 (.54)**	*4.45 (.50)**	*.52 (.21)**	*-.89 (.24)**	*2.49 (.52)**	-.40 (.24)
Fiscal Event						
Budget	-1.70 (2.38)	2.92 (2.63)	.38 (.90)	-.99 (1.48)	**2.87 (1.34)***	-.70 (.96)
2008 Stimulus	*10.55 (.50)**	*-2.24 (.63)**	.00 (.19)	-.13 (.18)	*-3.72 (.80)**	.06 (.48)
2009 Stimulus	.22 (6.48)	4.48 (6.01)	**-5.86 (2.81)***	-.72 (5.31)	.42 (4.35)	-8.19 (5.34)
2010 Stimulus	.60 (.55)	*-4.80 (1.47)**	*1.13 (.41)**	-.49 (.36)	*-1.68 (.45)**	*.72 (.20)**
Monetary Events						
FOMC - Pre	.52 (1.34)	-.98 (1.88)	.65 (.57)	-.78 (.64)	2.86 (1.70)	-.68 (.63)
FOMC - Post	-2.64 (1.60)	.17 (1.39)	*1.55 (.57)**	*-1.36 (.49)**	*3.64 (1.39)**	-.71 (.52)
Chg Fed Funds	.42 (.70)	-.65 (.63)	-.11 (.21)	.08 (.15)	.12 (.83)	-.04 (.12)
QE 2008/09	*4.46 (1.71)**	*-4.44 (1.80)**	*-1.43 (.54)**	*1.86 (.49)**	*-4.76 (1.44)**	.30 (.69)
QE 2010	*2.70 (.87)**	-2.07 (1.21)	-.66 (1.04)	.53 (.82)	*-3.10 (.57)**	-.26 (.49)

R^2	.04
DW	2.09

Note: See Table 2a. A positive value indicates an appreciation against dollar.

Table 4b: Nominal Effective Exchange Rates: Including Other Financial Conditions

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China	Brazil, Mexico, South Africa, and Turkey	India, Indonesia, and Russia
US 10 Year Yield	.46 (.64)	*-1.86 (.52)***	*-.80 (.25)***	*2.16 (.54)***	-1.12 (.64)	*.98 (.34)***
Change Post-Crisis	*-1.95 (.63)***	*1.69 (.52)***	*.54 (.26)**	*-1.46 (.53)***	.31 (.71)	-.44 (.32)
Fiscal Event						
Budget	-2.32 (2.55)	1.61 (2.43)	-.08 (1.24)	1.70 (1.96)	1.39 (2.04)	-.82 (1.52)
2008 Stimulus	*9.94 (.77)***	-1.07 (.69)	*-1.28 (.33)***	*-1.12 (.28)***	-.06 (1.28)	-.04 (.37)
2009 Stimulus	6.04 (4.24)	-2.64 (2.68)	*-5.54 (1.29)***	-3.09 (4.49)	-3.05 (3.47)	-7.77 (5.74)
2010 Stimulus	*-1.00 (.50)**	-1.89 (1.37)	.99 (.62)	*-1.00 (.43)**	.69 (.49)	*.64 (.23)***
Monetary Events						
FOMC - Pre	-.98 (2.25)	-1.76 (1.52)	.92 (.66)	-1.85 (1.38)	1.90 (2.91)	-.16 (.74)
FOMC - Post	-1.13 (1.33)	*-2.76 (1.35)**	*1.41 (.70)**	*-1.15 (.39)***	1.93 (1.09)	-.62 (.58)
Chg Fed Funds	.34 (.52)	-.68 (.57)	-.11 (.22)	.11 (.12)	.71 (.70)	-.04 (.15)
QE 2008/09	.82 (1.51)	2.19 (2.04)	-.84 (.71)	.81 (.46)	-.35 (1.20)	.23 (.87)
QE 2010	*1.70 (.81)**	*2.91 (1.23)**	-.14 (1.15)	.16 (.84)	-.78 (.80)	-.04 (.45)
Monetary Conditions						
1 Yr Fed Fund Exp	-.82 (.49)	-.36 (.35)	.07 (.21)	.27 (.18)	*1.19 (.39)***	.05 (.20)
1 mth Fed Fund Exp	*-3.18 (1.07)***	-.53 (.75)	.17 (.62)	.59 (.46)	1.28 (1.10)	.94 (.50)
Fiscal Conditions						
Foreign Sov. CDS	3.77 (1.99)	1.40 (1.56)	*-3.82 (.93)***	*1.16 (.37)***	*-2.67 (.31)***	*-.39 (.13)***
US Sov. CDS	.82 (1.96)	.36 (1.21)	*2.52 (.92)***	.49 (.64)	.59 (1.52)	-.42 (.64)
Macro Conditions						
VIX	*5.76 (2.90)**	*-4.20 (2.13)**	1.13 (1.09)	-1.60 (.96)	-.03 (2.01)	1.29 (.98)
Oil Price	*-4.74 (1.14)***	*5.02 (.91)***	*1.14 (.58)**	-1.41 (.74)	*2.73 (1.04)***	1.08 (.74)
Non-Oil Comm Price	-2.27 (2.14)	*12.75 (1.67)***	*2.54 (1.11)**	*-5.84 (1.10)***	*10.69 (1.84)***	*-3.88 (1.03)***
Foreign Equities	*-5.85 (1.58)***	*-6.62 (2.34)***	-1.28 (1.02)	-.07 (.36)	2.17 (1.30)	.69 (.44)
US Equities	2.62 (3.49)	*18.29 (2.80)***	.49 (1.91)	-1.54 (1.43)	.77 (4.03)	.24 (1.56)
US Inflation Exp.	*-1.73 (.83)**	*2.77 (.61)***	*.72 (.36)**	*-1.04 (.38)***	1.25 (.80)	-.24 (.32)
R^2	.21					
DW	2.13					

Note: See Table 2a. A positive value indicates an appreciation against dollar.

Table 5a: Foreign Equity Returns: Basic Regression

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China	Brazil, Mexico, South Africa, and Turkey	India, Indonesia, and Russia
US Equity Return	*.58 (.05)***	*.48 (.02)***	*.76 (.05)***	.24 (.21)	*.87 (.04)***	*.51 (.06)***
Change Post-Crisis	.08 (.07)	*.13 (.03)***	-.06 (.06)	-.06 (.22)	*-.11 (.05)**	.04 (.08)
Fiscal Event						
Budget	-.29 (.64)	.00 (.35)	.07 (.41)	.30 (.79)	.29 (.19)	.19 (.48)
2008 Stimulus	*.60 (.25)**	-.36 (.43)	.00 (.21)	*.61 (.21)***	*-.20 (.04)***	*-.61 (.05)***
2009 Stimulus	1.86 (1.41)	*1.01 (.44)**	.41 (.55)	-.73 (.70)	.01 (.63)	.40 (1.52)
2010 Stimulus	*.72 (.15)***	*-.27 (.07)***	*1.29 (.13)***	*-2.60 (.06)***	*-.74 (.04)***	*1.05 (.09)***
Monetary Events						
FOMC - Pre	.27 (.22)	.18 (.11)	-.06 (.21)	-.23 (.27)	.26 (.30)	.11 (.37)
FOMC - Post	-.09 (.23)	-.05 (.08)	-.18 (.13)	-.11 (.13)	-.10 (.09)	-.21 (.25)
Chg Fed Funds	-.02 (.01)	*-.02 (.01)**	-.01 (.01)	-.01 (.02)	-.01 (.01)	-.01 (.02)
QE 2008/09	-.39 (.36)	*-.34 (.15)**	-.30 (.18)	.05 (.23)	.12 (.17)	-.24 (.35)
QE 2010	1.00 (.62)	*.58 (.08)***	.48 (.58)	*1.21 (.43)***	.49 (.31)	.10 (.44)

R^2 .22
DW 1.59

Note: See Table 2a

Table 5b: Foreign Equity Returns: Including Other Financial Conditions

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China	Brazil, Mexico, South Africa, and Turkey	India, Indonesia, and Russia
US Equity Return	.46 (.64)	*-1.86 (.52)***	*-.80 (.25)***	*2.16 (.54)***	-1.12 (.64)	*.98 (.34)***
Change Post-Crisis	*-1.95 (.63)***	*1.69 (.52)***	*.54 (.26)**	*-1.46 (.53)***	.31 (.71)	-.44 (.32)
Fiscal Event						
Budget	-2.32 (2.55)	1.61 (2.43)	-.08 (1.24)	1.70 (1.96)	1.39 (2.04)	-.82 (1.52)
2008 Stimulus	*9.94 (.77)***	-1.07 (.69)	*-1.28 (.33)***	*-1.12 (.28)***	-.06 (1.28)	-.04 (.37)
2009 Stimulus	6.04 (4.24)	-2.64 (2.68)	*-5.54 (1.29)***	-3.09 (4.49)	-3.05 (3.47)	-7.77 (5.74)
2010 Stimulus	*-1.00 (.50)**	-1.89 (1.37)	.99 (.62)	*-1.00 (.43)**	.69 (.49)	*.64 (.23)***
Monetary Events						
FOMC - Pre	-.98 (2.25)	-1.76 (1.52)	.92 (.66)	-1.85 (1.38)	1.90 (2.91)	-.16 (.74)
FOMC - Post	-1.13 (1.33)	*-2.76 (1.35)**	*1.41 (.70)**	*-1.15 (.39)***	1.93 (1.09)	-.62 (.58)
Chg Fed Funds	.34 (.52)	-.68 (.57)	-.11 (.22)	.11 (.12)	.71 (.70)	-.04 (.15)
QE 2008/09	.82 (1.51)	2.19 (2.04)	-.84 (.71)	.81 (.46)	-.35 (1.20)	.23 (.87)
QE 2010	*1.70 (.81)**	*2.91 (1.23)**	-.14 (1.15)	.16 (.84)	-.78 (.80)	-.04 (.45)
Monetary Conditions						
1 Yr Fed Fund Exp	-.82 (.49)	-.36 (.35)	.07 (.21)	.27 (.18)	*1.19 (.39)***	.05 (.20)
1 mth Fed Fund Exp	*-3.18 (1.07)***	-.53 (.75)	.17 (.62)	.59 (.46)	1.28 (1.10)	.94 (.50)
Fiscal Conditions						
Foreign Sov. CDS	3.77 (1.99)	1.40 (1.56)	*-3.82 (.93)***	*1.16 (.37)***	*-2.67 (.31)***	*-.39 (.13)***
US Sov. CDS	.82 (1.96)	.36 (1.21)	*2.52 (.92)***	.49 (.64)	.59 (1.52)	-.42 (.64)
Macro Conditions						
VIX	*5.76 (2.90)**	*-4.20 (2.13)**	1.13 (1.09)	-1.60 (.96)	-.03 (2.01)	1.29 (.98)
Oil Price	*-4.74 (1.14)***	*5.02 (.91)***	*1.14 (.58)**	-1.41 (.74)	*2.73 (1.04)***	1.08 (.74)
Non-Oil Comm Price	-2.27 (2.14)	*12.75 (1.67)***	*2.54 (1.11)**	*-5.84 (1.10)***	*10.69 (1.84)***	*-3.88 (1.03)***
Foreign Bond Yields	*-5.85 (1.58)***	*-6.62 (2.34)***	-1.28 (1.02)	-.07 (.36)	2.17 (1.30)	.69 (.44)
US 10 Yr Yield	2.62 (3.49)	*18.29 (2.80)***	.49 (1.91)	-1.54 (1.43)	.77 (4.03)	.24 (1.56)
US Inflation Exp.	*-1.73 (.83)**	*2.77 (.61)***	*.72 (.36)**	*-1.04 (.38)***	1.25 (.80)	-.24 (.32)
R^2	.21					
DW	2.13					

Note: See Table 2a

Table 6a: Real Economy: Basic Regressions

	VIX	Oil Prices	Non-Oil Comm Prices	Foreign Equities	US Equities	US Inflation Expectation
US 10 Year Yield	-.02 (.01)	-.02 (.01)	.00 (.01)	*.02 (.01)***	*.03 (.01)***	*.28 (.02)***
Change Post-Crisis	*-.11 (.01)***	*.09 (.01)***	*.04 (.01)***	*.06 (.01)***	*.08 (.01)***	.05 (.02)*
Fiscal Events						
Budget	.03 (.07)	.14 (.08)	.06 (.04)	.00 (.07)	-.02 (.05)	-.05 (.14)
2008 Stimulus	-.01 (.10)	-.14 (-.07)	*-.17 (.06)***	*.02 (.01)***	.03 (.07)	.34 (.20)
2009 Stimulus	-.23 (.24)	.10 (-.96)	-.04 (.15)	.18 (.15)	.13 (.17)	.82 (.48)
2010 Stimulus	.12 (.08)	-.07 (1.52)	-.06 (.05)	*-.06 (.01)***	-.10 (.06)	-.06 (.15)
Monetary Events						
FOMC - Pre	.06 (.05)	-.02 (.05)	.00 (.03)	*-.07 (.02)***	*-.09 (.03)***	-.04 (.09)
FOMC - Post	*-.18 (.03)***	.00 (.03)	*.04 (.02)**	.01 (.03)	*.07 (.02)***	.10 (.06)
Change in Fed Funds	.00 (.01)	.00 (.01)	-.01 (22.00)	-.02 (.01)	-.01 (.01)	-.01 (.02)
QE 2008/2009	*.33 (.04)***	-.06 (.04)	*-.05 (.02)**	*-.11 (.03)***	*-.21 (.03)***	*-.55 (.08)***
QE 2010	.07 (.07)	.03 (.08)	.01 (.05)	-.01 (.03)	-.07 (.05)	*-.34 (.15)**
R^2	.18	.05	.05	.06	.21	.29
DW	2.20	1.68	2.05	1.39	2.20	1.65

Note: See Table 2a

Table 6b: Real Economy: Conditions Included

	VIX	Oil Prices	Non-Oil Comm Prices	Foreign Equities	US Equities	US Inflation Expectation
US 10 Year Yield	.00 (.01)	**-.03 (.01)***	.00 (.01)	.00 (.01)	-.01 (.01)	**.33 (.03)***
Change Post-Crisis	.00 (.01)	**.03 (.01)***	.00 (.01)	.00 (.01)	**.04 (.01)***	-.05 (.03)
Fiscal Events						
Budget	.04 (.05)	.18 (.08)*	.01 (.05)	-.01 (.05)	-.01 (.04)	-.03 (.16)
2008 Stimulus	.03 (.06)	-.08 (.48)	**-.14 (.06)***	**.04 (.01)***	.04 (.04)	**.43 (.19)***
2009 Stimulus	-.11 (.15)	-.06 (-.70)	-.08 (.14)	.12 (.10)	-.01 (.11)	.68 (.47)
2010 Stimulus	.00 (.05)	-.01 (-.02)	-.03 (.05)	.01 (.01)	-.03 (.03)	.02 (.15)
Monetary Events						
FOMC - Pre	.00 (.04)	-.05 (.06)	.02 (.04)	-.03 (.02)	-.03 (.03)	-.03 (.12)
FOMC - Post	**-.10 (.02)***	-.04 (.03)	.03 (.02)	**-.04 (.02)***	**-.03 (.01)***	.06 (.06)
Change in Fed Funds	-.01 (.01)	.01 (.01)	-.01 (22.00)	-.01 (.01)	**-.01 (.00)***	-.01 (.02)
QE 2008/2009	**.07 (.02)***	.06 (.04)	.00 (.02)	.04 (.02)	-.03 (.02)	**-.44 (.07)***
QE 2010	-.01 (.05)	.06 (.07)	.02 (.04)	**.05 (.02)***	-.03 (.03)	**-.36 (.14)***
Monetary Conditions						
1 Year Fed Funds Exp.	.01 (.01)	-.01 (.01)	.00 (.00)	.01 (.00)	.01 (.00)	**-.07 (.02)***
1 Mnth Fed Funds Exp.	**-.05 (.01)***	-.01 (.02)	-.01 (.01)	.01 (.02)	-.02 (.01)	.00 (.04)
Fiscal Condtions						
Foreign Sov. CDS	n.a.	n.a.	n.a.	**-.03 (.01)***	n.a.	n.a.
US Sov. CDS	-.01 (.02)	**-.10 (.03)***	-.03 (.02)	**-.03 (.02)**	**-.03 (.01)***	-.08 (.06)
Macro Conditions						
VIX	--	-.01 (.04)	-.04 (.02)	.01 (.03)	**-.55 (.01)***	**-.16 (.07)***
Oil Price	-.01 (.02)	--	.24 (.01)**	.02 (.01)	**.02 (.01)***	**.44 (.05)***
Non-Oil Comm Price	-.05 (.03)	.63 (.04)**	--	**.16 (.03)***	**.04 (.02)***	**.25 (.08)***
Foreign Equities	n.a.	n.a.	n.a.	--	n.a.	n.a.
US Equities	-1.12 (.02)**	.11 (.05)*	.07 (.03)*	**.54 (.04)***	--	.10 (.11)
US Inflation Exp.	-.02 (.01)*	.11 (.01)**	.02 (.01)**	.02 (.01)	.01 (.01)	--
R^2	.72	.31	.27	.27	.73	.37
DW	2.17	1.63	2.09	1.65	2.17	1.69

Note: See Table 2a

Table 6c: Monetary and Fiscal Conditions: Basic Regressions

	Monetary Condtions		Fiscal Conditions	
	1 Yr Fed F Expectation	1 Mnth Fed F Expectation	CDS	US CDS
US 10 Year Yield	*.75 (.03)***	*.09 (.01)***	.00 (.02)	.00 (.01)
Change Post-Crisis	*-.20 (.04)***	*-.05 (.01)***	*-.23 (.05)***	*-.03 (.01)***
Fiscal Events				
Budget	-.38 (.21)	.00 (.07)	-.14 (.21)	*-.19 (.06)***
2008 Stimulus	-.27 (.29)	-.02 (-.93)	*.32 (.06)***	.02 (.07)
2009 Stimulus	.59 (.71)	-.11 (.83)	-.02 (.95)	.06 (.18)
2010 Stimulus	-.09 (.23)	-.04 (-.38)	*.16 (.06)***	.04 (.06)
Monetary Events				
FOMC - Pre	.09 (.14)	.01 (.05)	.03 (.07)	.00 (.05)
FOMC - Post	.01 (.09)	*.10 (.03)***	*-.34 (.15)**	.03 (.02)
Change in Fed Funds	*-.09 (.02)***	.01 (.01)	.02 (.06)	.00 (.01)
QE 2008/2009	.00 (.11)	*-.11 (.04)***	*.62 (.20)***	-.04 (.03)
QE 2010	-.27 (.22)	-.04 (.08)	*.40 (.10)***	-.03 (.06)
R^2	.42	.07	.03	.02
DW	2.02	1.86	1.52	1.79

Note: See Table 2a

Table 6d: Monetary and Fiscal Conditions: Conditions Included

	Monetary Condtions		Fiscal Conditions	
	1 Yr Fed F Expectation	1 Mnth Fed F Expectation	CDS	US CDS
US 10 Year Yield	*.85 (.04)***	*.14 (.02)***	.09 (.05)	.00 (.01)
Change Pre-Crisis	*-.24 (.05)***	*-.10 (.02)***	-.08 (.04)	-.01 (.01)
Fiscal Events				
Budget	**-.57 (.25)***	.00 (.10)	.11 (.18)	*-.17 (.06)***
2008 Stimulus	-.25 (.29)	-.02 (-.86)	*.27 (.07)***	.01 (.07)
2009 Stimulus	.91 (.73)	-.13 (1.25)	.46 (.57)	.07 (.18)
2010 Stimulus	-.11 (.23)	-.04 (-.47)	-.04 (.06)	.02 (.06)
Monetary Events				
FOMC - Pre	.18 (.18)	.01 (.07)	-.09 (.06)	-.02 (.05)
FOMC - Post	.04 (.09)	*.08 (.03)**	-.12 (.12)	.04 (.02)
Change in Fed Funds	*-.10 (.03)***	.01 (.01)	.02 (.04)	.00 (.01)
QE 2008/2009	-.09 (.12)	-.07 (.04)	.10 (.19)	*-.06 (.03)**
QE 2010	-.31 (.22)	-.04 (.08)	*.30 (.10)***	-.04 (.06)
Monetary Conditions				
1 Year Fed Funds Exp.	--	-.01 (.01)	.07 (.04)	.00 (.01)
1 Mnth Fed Funds Exp.	-.06 (.06)	--	-.17 (.15)	.00 (.02)
Fiscal Condtions				
Foreign Sov. CDS	n.a.	n.a.	--	n.a.
US Sov. CDS	.07 (.10)	.01 (.04)	*.76 (.16)***	--
Macro Conditions				
VIX	.16 (.11)	*-.16 (.04)***	*.92 (.31)***	-.01 (.03)
Oil Price	-.11 (.07)	-.01 (.03)	*-.22 (.09)***	*-.06 (.02)***
Non-Oil Comm Price	-.07 (.12)	-.03 (.05)	*-.45 (.21)**	-.04 (.03)
Foreign Equities	n.a.	n.a.	*-.80 (.15)***	n.a.
US Equities	.24 (.16)	-.11 (.06)	.50 (.35)	*-.08 (.04)**
US Inflation Exp.	*-.16 (.04)***	.00 (.01)	*-.25 (.06)***	-.01 (.01)
R^2	.42	.09	.17	.05
DW	2.06	1.87	1.64	1.83

Note: See Table 2a

Table 7. Correlations Daily Changes in Financial Conditions

Pre Crisis

	ΔST FFR Exp.	ΔLT FFR Exp.	ΔUS Infl. Exp.	US NEER	Foreign Equities	ΔUST10	US Equities	ΔVIX	ΔOIL	ΔNon-Oil	ΔCDS	ΔUSCDS
ΔST FFR Exp.	-	*0.42*	0.18	0.23	0.02	*0.42*	0.02	-0.04	-0.06	0.02	0.01	0.03
ΔLT FFR Exp.	0.04	-	*0.39*	0.22	0.04	*0.78*	0.14	-0.06	-0.10	-0.02	0.01	0.04
ΔUS Infl. Exp.	0.10	0.17	-	-0.01	0.06	*0.55*	0.07	-0.03	0.17	0.12	-0.01	0.01
US NEER	-0.03	0.02	*-0.35*	-	-0.06	0.18	0.01	0.00	-0.19	-0.28	0.06	-0.01
Foreign Equities	0.04	0.04	0.11	-0.15	-	0.06	0.32	-0.27	0.02	0.11	-0.11	0.01
ΔUST10	0.15	0.55	0.49	-0.10	0.09	-	0.16	-0.08	-0.05	0.01	0.00	0.04
US Equities	0.12	0.23	0.40	-0.29	0.17	*0.45*	-	-0.73	-0.12	0.07	-0.05	0.03
ΔVIX	-0.16	-0.17	*-0.38*	0.27	-0.15	*-0.39*	*-0.84*	-	0.06	-0.06	0.06	-0.02
ΔOIL	0.06	0.08	*0.40*	-0.46	0.12	0.26	*0.36*	-0.32	-	0.23	-0.01	0.00
ΔNon-Oil	0.03	0.08	*0.31*	-0.53	0.15	0.22	*0.33*	-0.31	*0.57*	-	-0.04	-0.01
ΔCDS	-0.07	-0.01	-0.21	0.24	-0.04	-0.12	-0.22	0.25	-0.20	-0.19	-	0.01
ΔUSCDS	-0.02	-0.04	-0.14	0.14	-0.06	-0.12	-0.14	0.11	-0.19	-0.14	0.15	-

Post Crisis

Table 8. Correlations Daily Changes in Financial Conditions

Sept-Dec 2010

	ΔST FFR Exp.	ΔLT FFR Exp.	ΔUS Infl. Exp.	US NEER	Foreign Equities	ΔUST10	US Equities	ΔVIX	ΔOIL	ΔNon-Oil	ΔCDS	ΔUSCDS
ΔST FFR Exp.	-	-0.01	0.20	0.05	-0.01	0.16	0.05	0.00	0.16	-0.01	-0.00	-0.08
ΔLT FFR Exp.	-0.01	-	0.17	0.17	-0.00	0.55	0.05	-0.01	0.06	-0.04	0.08	-0.00
ΔUS Infl. Exp.	0.21	0.10	-	-0.24	0.10	0.46	0.42	-0.43	0.33	0.21	-0.28	-0.34
US NEER	-0.15	0.11	-0.08	-	-0.15	-0.01	-0.47	0.35	-0.44	-0.37	-0.40	0.21
Foreign Equities	0.05	0.01	0.06	-0.14	-	0.10	0.21	-0.17	0.13	0.13	-0.37	-0.11
ΔUST10	0.02	0.30	0.58	-0.04	0.10	-	0.33	-0.34	0.17	0.15	-0.18	-0.34
US Equities	0.12	0.12	0.35	-0.31	0.19	0.61	-	-0.83	0.63	0.49	-0.37	-0.34
ΔVIX	-0.13	-0.13	-0.32	0.32	-0.17	-0.57	-0.89	-	-0.51	-0.44	0.34	0.29
ΔOIL	0.15	-0.05	0.35	-0.24	0.01	0.02	-0.15	0.07	-	0.40	-0.29	-0.22
ΔNon-Oil	0.22	0.08	0.37	-0.44	0.16	0.45	0.57	-0.60	0.35	-	-0.26	-0.22
ΔCDS	-0.03	-0.04	-0.11	0.28	-0.22	-0.16	-0.26	0.21	-0.04	-0.23	-	0.33
ΔUSCDS	-0.35	-0.16	-0.19	0.08	-0.03	-0.25	-0.18	0.19	-0.08	-0.15	0.25	-

Jan-Mar 2011

Table A1: Foreign Bond Yields: Basic Regression – Post-Lehman

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China and India	Brazil, Mexico, South Africa, and Turkey	Indonesia and Russia
US 10 Year Yield	.17 (.02)**	.61 (.02)**	.38 (.02)**	-.04 (.02)*	.51 (.05)**	.30 (.04)**
Change Post-Crisis	-.05 (.02)**	-.09 (.03)**	.06 (.03)	.07 (.05)	-.62 (.12)**	-.72 (.17)**
Fiscal Event						
Budget	-.02 (.07)	.01 (.20)	.08 (.15)	.11 (.16)	-.16 (.35)	.37 (.70)
2008 Stimulus	.19 (.08)**	-.24 (.11)*	-.20 (.05)**	.04 (.06)	.37 (.06)**	-.52 (.08)**
2009 Stimulus	.32 (.25)	.60 (.55)	-.49 (.20)**	.24 (.24)	.07 (.74)	-2.28 (3.47)
2010 Stimulus	.20 (.05)**	.17 (.07)**	.14 (.03)**	.47 (.06)**	.69 (.11)**	1.04 (.17)**
Monetary Events						
FOMC - Pre	-.08 (.09)	.10 (.08)	-.07 (.09)	-.01 (.12)	.04 (.21)	.02 (.22)
FOMC - Post	.00 (.03)	.13 (.05)*	.08 (.08)	-.47 (.15)**	-.68 (.25)**	-.87 (.52)
Chg Fed Funds	.01 (.02)	-.06 (.03)	-.02 (.02)	-.01 (.06)	.04 (.11)	.07 (.20)
QE 2008/09	.00 (.04)	-.13 (.05)**	-.18 (.11)	.50 (.17)**	1.79 (.30)**	2.01 (.48)**
QE 2010	.05 (.03)	-.24 (.05)**	-.03 (.22)	.57 (.29)*	.62 (.21)**	.97 (.35)**
R^2	.08					
DW	1.27					

Note: Standard error are reported in parenthesis. ** and * represents significance at the 1 and 5 percent levels, respectively. Some other financial policy event coefficients are not reported

Table A2: Bilateral Dollar Exchange Rates: Basic Regression – Post-Lehman

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China	Brazil, Mexico, South Africa, and Turkey	India, Indonesia, and Russia
US 10 Year Yield	-2.18 (.34)**	-.68 (.29)*	-1.42 (.22)**	.01 (.07)	-.08 (.30)	-.06 (.11)
Change Post-Crisis	-1.59 (.60)**	5.49 (.80)**	2.40 (.52)**	.07 (.09)	3.51 (.78)**	1.33 (.34)**
Fiscal Event						
Budget	-.32 (2.48)	4.25 (3.42)	2.27 (2.74)	.36 (.32)	4.45 (2.29)*	1.05 (1.49)
2008 Stimulus	8.74 (.57)**	1.81 (.85)*	1.39 (.53)**	.78 (.26)**	-1.43 (.39)**	.74 (.11)**
2009 Stimulus	.07 (3.16)	5.15 (11.64)	-3.11 (11.45)	-.53 (.30)	2.41 (11.66)	-6.68 (2.68)**
2010 Stimulus	1.18 (.52)*	-5.36 (1.75)**	1.43 (.74)*	.12 (.12)	-1.55 (.81)*	1.02 (.34)**
Monetary Events						
FOMC - Pre	-.08 (1.40)	.84 (1.61)	1.98 (.76)**	-.19 (.19)	3.63 (1.55)*	.79 (.38)*
FOMC - Post	-1.96 (1.36)	2.45 (1.98)	4.45 (1.30)**	-.04 (.15)	7.08 (1.59)**	.62 (.98)
Chg Fed Funds	.27 (.54)	-.65 (.75)	-.26 (.39)	-.01 (.02)	.01 (.95)	-.14 (.10)
QE 2008/09	3.09 (1.56)*	-8.58 (2.28)**	-5.82 (1.13)**	-.14 (.13)	-9.53 (1.44)**	-2.41 (.90)**
QE 2010	2.14 (.83)**	-4.19 (2.14)*	-2.53 (2.22)	-.19 (.31)	-5.15 (1.79)**	-1.41 (.98)
R^2	.04					
DW	2.01					

Note: See Table 2a. A positive value indicate an appreciation against dollar.

Table A3: Real Economy: Basic Regressions – Post-Lehman

	VIX	Oil Prices	Non-Oil Comm Prices	Foreign Equities	US Equities	US Inflation Expectation
US 10 Year Yield	*-.05 (.01)***	-.01 (.01)	.01 (.00)	*.04 (.01)***	*.05 (.01)***	*.24 (.01)***
Change Post-Crisis	*-.09 (.01)***	*.12 (.01)***	*.04 (.01)***	*.05 (.01)***	*.07 (.01)***	*.17 (.02)***
Fiscal Events						
Budget	.04 (.07)	.14 (.08)	.06 (.04)	.00 (.07)	-.03 (.05)	-.04 (.14)
2008 Stimulus	-.08 (.10)	-.06 (-.85)	*-.14 (.06)**	*.05 (.01)***	.09 (.07)	*.43 (.19)**
2009 Stimulus	-.22 (.24)	.06 (-.93)	-.05 (.15)	.16 (.15)	.12 (.18)	.73 (.48)
2010 Stimulus	.13 (.08)	-.11 (1.63)	-.07 (.05)	*-.07 (.01)***	*-.11 (.06)**	-.14 (.15)
Monetary Events						
FOMC - Pre	-.03 (.03)	-.01 (.04)	.01 (.02)	-.03 (.02)	.00 (.02)	.04 (.07)
FOMC - Post	*-.24 (.04)***	.02 (.04)	*.07 (.02)***	.02 (.04)	*.08 (.03)***	.12 (.08)
Change in Fed Fur	.00 (.01)	.00 (.01)	-.01 (22.00)	-.01 (.01)	-.01 (.01)	.00 (.02)
QE 2008/2009	*.39 (.04)***	*-.12 (.05)***	*-.08 (.03)***	*-.12 (.03)***	*-.23 (.03)***	*-.65 (.08)***
QE 2010	.10 (.07)	-.02 (.08)	.00 (.05)	-.02 (.03)	-.08 (.05)	*-.43 (.15)***
R^2	.17	.07	.05	.05	.19	.31
DW	2.21	1.68	2.06	1.43	2.21	1.65

Note: See Table 2a

Table A4: Foreign Bond Yields: Basic Regression – 2-day Window

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China and India	Brazil, Mexico, South Africa, and Turkey	Indonesia and Russia
US 10 Year Yield	*.19 (.02)***	*.71 (.01)***	*.59 (.02)***	*.26 (.02)***	*.92 (.08)***	*.86 (.06)***
Change Post-Crisis	-.01 (.03)	*-.12 (.02)***	.02 (.04)	*-.08 (.04)**	*-.93 (.13)***	*-1.19 (.18)***
Fiscal Event						
Budget	-.04 (.10)	.19 (.11)	*.23 (.11)**	-.11 (.26)	-.46 (.61)	-.10 (.73)
2008 Stimulus	*.28 (.08)***	-.11 (.20)	-.12 (.08)	*-.40 (.20)**	-.01 (.18)	-.30 (.23)
2009 Stimulus	-.06 (.20)	.06 (.38)	.45 (.32)	*-.57 (.20)***	.59 (.54)	2.10 (3.74)
2010 Stimulus	*.06 (.02)***	-.07 (.06)	-.12 (.08)	*.17 (.04)***	*.82 (.14)***	*.81 (.18)***
Monetary Events						
FOMC - Pre	.09 (.09)	.02 (.05)	.07 (.07)	.09 (.07)	*.78 (.31)***	*.53 (.17)***
FOMC - Post	-.03 (.05)	-.04 (.08)	.12 (.12)	.12 (.18)	-.34 (.49)	-.11 (.88)
Chg Fed Funds	.01 (.02)	-.03 (.02)	-.03 (.02)	.03 (.05)	.14 (.16)	.09 (.28)
QE 2008/09	-.02 (.05)	-.11 (.11)	-.19 (.12)	-.02 (.25)	*1.77 (.45)***	*1.44 (.68)**
QE 2010	-.03 (.06)	-.15 (.09)	.35 (.24)	.19 (.13)	.76 (.50)	.76 (.60)
R^2	.10					
DW	.73					

Note: Standard error are reported in parenthesis. ** and * represents significance at the 1 and 5 percent levels, respectively. Some other financial policy event coefficients are not reported

Table A5: Bilateral Dollar Exchange Rates: Basic Regression – 2-day Window

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China	Brazil, Mexico, South Africa, and Turkey	India, Indonesia and Russia
US 10 Year Yield	*-1.93 (.36)**	*-1.74 (.33)**	*-2.30 (.28)**	.04 (.05)	*-1.11 (.36)**	-.17 (.14)
Change Post-Crisis	*-2.78 (.51)**	*5.67 (.67)**	*2.87 (.45)**	-.09 (.07)	*5.07 (.62)**	*1.32 (.28)**
Fiscal Event						
Budget	1.35 (2.37)	3.52 (4.27)	5.18 (3.46)	.47 (.26)	2.03 (3.10)	1.42 (2.65)
2008 Stimulus	*5.65 (.58)**	*1.23 (.60)*	*1.83 (.36)**	*.80 (.26)**	-1.15 (.62)	.69 (.43)
2009 Stimulus	-6.43 (4.13)	-5.26 (6.74)	-7.23 (8.38)	-.16 (.10)	-1.72 (7.55)	*-6.11 (1.64)**
2010 Stimulus	.14 (1.15)	*-4.50 (2.24)*	-1.04 (.94)	-.28 (.28)	*-4.55 (1.26)**	-.76 (.45)
Monetary Events						
FOMC - Pre	*-4.55 (1.36)**	-1.26 (1.75)	-.98 (1.00)	*-.18 (.09)*	-.55 (1.55)	*-1.01 (.51)*
FOMC - Post	-.30 (1.76)	-3.80 (2.71)	-.37 (2.40)	-.14 (.22)	-2.87 (3.88)	-.90 (.84)
Chg Fed Funds	.07 (.49)	-.91 (.77)	-.74 (.51)	*-.13 (.04)**	-.29 (.73)	-.27 (.15)
QE 2008/09	-3.16 (2.34)	*-5.12 (2.54)*	*-5.88 (2.38)**	-.01 (.17)	-4.07 (3.29)	*-3.81 (1.04)**
QE 2010	-1.06 (2.11)	.64 (4.74)	-1.18 (6.69)	-.28 (.57)	-2.61 (4.53)	1.20 (2.47)
R^2	.05					
DW	1.02					

Note: See Table 2a. A positive value indicate an appreciation against dollar.

Table A6: Real Economy: Basic Regressions – 2-day Window

	VIX	Oil Prices	Non-Oil Comm Prices	Foreign Equities	US Equities	US Inflation Expectation
US 10 Year Yield	-.02 (.01)	*-.02 (.01)*	.00 (.01)	*.03 (.01)**	*.02 (.01)**	*.27 (.02)**
Change Post-Crisis	*-.09 (.01)**	*.11 (.01)**	*.04 (.01)**	*.07 (.01)**	*.07 (.01)**	*.08 (.03)**
Fiscal Events						
Budget	-.04 (.07)	.10 (.09)	.01 (.05)	.02 (.08)	-.01 (.05)	-.11 (.17)
2008 Stimulus	-.02 (.08)	-.05 (-.21)	-.03 (.05)	*.08 (.03)**	.03 (.05)	.07 (.17)
2009 Stimulus	.08 (.14)	.01 (.56)	.13 (.09)	-.18 (.15)	-.05 (.10)	-.18 (.32)
2010 Stimulus	.09 (.06)	-.09 (1.57)	-.03 (.04)	*-.09 (.02)**	-.08 (.04)	-.19 (.13)
Monetary Events						
FOMC - Pre	.02 (.04)	-.09 (.05)	-.02 (.03)	-.02 (.03)	-.03 (.03)	-.01 (.09)
FOMC - Post	*-.09 (.04)*	-.06 (.04)	-.01 (.02)	-.03 (.06)	-.01 (.03)	*-.23 (.08)**
Chg Fed Funds	.01 (.01)	.01 (.01)	.00 (22.00)	-.01 (.02)	-.01 (.01)	-.01 (.02)
QE 2008/2009	*.26 (.04)**	-.07 (.05)	*-.07 (.03)**	*-.13 (.05)**	*-.14 (.03)**	*-.34 (.09)**
QE 2010	.09 (.10)	.05 (.12)	-.04 (.06)	-.01 (.08)	-.02 (.07)	-.22 (.22)
R^2	.12	.06	.04	.06	.16	.25
DW	1.27	.87	1.04	.80	1.21	.85

Note: See Table 2a

Table A7: Foreign Bond Yields: Basic Regression – 5-day Window

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China and India	Brazil, Mexico, South Africa, and Turkey	Indonesia and Russia
US 10 Year Yield	*.27 (.02)**	*.72 (.01)**	*.79 (.03)**	*.43 (.02)**	*1.17 (.09)**	*1.09 (.07)**
Change Post-Crisis	-.04 (.03)	*-.09 (.02)**	.04 (.03)	-.03 (.04)	*-1.04 (.17)**	*-1.41 (.20)**
Fiscal Event						
Budget	.23 (.17)	*.19 (.09)*	.33 (.21)	-.11 (.20)	-1.05 (.97)	-1.25 (1.79)
2008 Stimulus	*.18 (.04)**	*-.28 (.05)**	*-.26 (.04)**	*-.57 (.04)**	-.15 (.37)	-.52 (.31)
2009 Stimulus	-.08 (.07)	.04 (.08)	-.15 (.13)	-.15 (.11)	.36 (.40)	-.67 (.54)
2010 Stimulus	-.07 (.09)	-.14 (.10)	-.04 (.10)	.07 (.04)	*1.12 (.15)**	*1.33 (.19)**
Monetary Events						
FOMC - Pre	.11 (.16)	.02 (.05)	.07 (.10)	.01 (.08)	1.18 (.65)	.35 (.39)
FOMC - Post	-.01 (.05)	-.03 (.05)	.07 (.09)	-.02 (.12)	1.18 (.70)	*1.83 (.78)*
Chg Fed Funds	-.01 (.01)	*-.05 (.02)**	-.03 (.02)	*.09 (.04)*	.26 (.19)	.25 (.27)
QE 2008/09	-.05 (.07)	-.11 (.09)	-.21 (.16)	-.16 (.23)	.64 (.48)	.92 (.59)
QE 2010	*.28 (.11)**	-.04 (.06)	*.40 (.09)**	-.01 (.13)	.03 (.25)	.12 (.46)
R^2	.11					
DW	.27					

Note: Standard error are reported in parenthesis. ** and * represents significance at the 1 and 5 percent levels, respectively. Some other financial policy event coefficients are not reported

Table A8: Bilateral Dollar Exchange Rates: Basic Regression – 5-day Window

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China	Brazil, Mexico, South Africa, and Turkey	India, Indonesia and Russia
US 10 Year Yield	*-1.94 (.33)**	*-1.28 (.34)**	*-2.07 (.28)**	.00 (.03)	-.56 (.35)	-.04 (.14)
Change Post-Crisis	*-3.99 (.51)**	*5.15 (.68)**	*2.68 (.54)**	-.05 (.06)	*4.35 (.67)**	*1.31 (.31)**
Fiscal Event						
Budget	-2.08 (4.02)	8.50 (5.06)	6.59 (4.26)	*.98 (.43)*	5.96 (4.73)	*6.70 (3.37)*
2008 Stimulus	*5.94 (.79)**	*6.37 (1.12)**	*3.08 (.53)**	*2.62 (.07)**	-.95 (.75)	*2.43 (.44)**
2009 Stimulus	*7.90 (1.89)**	*-6.84 (.77)**	-4.44 (5.21)	-.03 (.07)	*-3.75 (1.06)**	*-7.80 (1.99)**
2010 Stimulus	*3.08 (1.03)**	-1.29 (2.17)	1.94 (1.25)	-.27 (.63)	*-3.80 (1.67)*	.30 (.56)
Monetary Events						
FOMC - Pre	*-5.98 (1.70)**	-3.67 (2.08)	*-2.95 (1.23)*	*-.33 (.17)*	-.50 (2.80)	*-1.64 (.78)*
FOMC - Post	2.52 (1.49)	-3.87 (2.56)	-1.38 (1.45)	-.14 (.20)	-3.43 (2.02)	-1.77 (1.09)
Chg Fed Funds	-.66 (.46)	-.70 (.82)	*-1.11 (.55)*	*-.30 (.04)**	-.43 (.76)	-.10 (.26)
QE 2008/09	1.61 (.95)	-2.82 (2.36)	-1.89 (1.59)	*.84 (.39)*	*-2.85 (1.37)*	-2.45 (2.15)
QE 2010	2.15 (2.67)	2.04 (2.00)	1.13 (3.73)	1.01 (1.05)	-2.01 (1.61)	.41 (2.38)
R^2	.04					
DW	.43					

Note: See Table 2a. A positive value indicate an appreciation against dollar.

Table A9: Real Economy: Basic Regressions – 5-day Window

	VIX	Oil Prices	Non-Oil Comm Prices	Foreign Equities	US Equities	US Inflation Expectation
US 10 Year Yield	*-.02 (.01)**￼*	*-.04 (.01)**￼*	.01 (.01)	*.05 (.01)**￼*	*.03 (.01)**￼*	*.28 (.02)**￼*
Change Post-Crisis	*-.06 (.01)**￼*	*.15 (.02)**￼*	*.03 (.01)**￼*	*.05 (.01)**￼*	*.05 (.01)**￼*	*.07 (.03)**￼*
Fiscal Events						
Budget	-.09 (.09)	.19 (.14)	.07 (.07)	.15 (.12)	.07 (.07)	-.01 (.25)
2008 Stimulus	-.09 (.12)	.06 (-.76)	.09 (.09)	*.11 (.05)**	.11 (.10)	.21 (.34)
2009 Stimulus	-.01 (.08)	-.16 (-.13)	-.03 (.06)	*-.15 (.06)**￼*	-.10 (.06)	.39 (.21)
2010 Stimulus	.05 (.08)	-.09 (.65)	.03 (.06)	*-.06 (.03)**	-.03 (.07)	-.22 (.23)
Monetary Events						
FOMC - Pre	.03 (.04)	-.03 (.07)	-.04 (.03)	-.06 (.04)	-.05 (.03)	-.07 (.12)
FOMC - Post	*.06 (.03)**	-.02 (.04)	-.03 (.02)	-.08 (.05)	*-.06 (.02)**￼*	-.08 (.07)
Chg Fed Funds	*.02 (.01)**￼*	*.04 (.01)**￼*	*.01 (22.00)**	.01 (.02)	.00 (.01)	*.05 (.02)**￼*
QE 2008/2009	.06 (.04)	-.01 (.06)	-.01 (.03)	*-.09 (.04)**	-.02 (.03)	*-.40 (.11)**￼*
QE 2010	-.09 (.09)	.10 (.13)	.02 (.06)	.02 (.05)	.08 (.07)	.07 (.23)
R^2	.08	.06	.03	.06	.12	.22
DW	.59	.33	.44	.30	.53	.33

Note: See Table 2a

Table A10: Foreign Bond Yields: Basic Regression – 10-day Window

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China and India	Brazil, Mexico, South Africa, and Turkey	Indonesia and Russia
US 10 Year Yield	*.29 (.02)**￼*	*.71 (.01)**￼*	*.84 (.02)**￼*	*.47 (.02)**￼*	*1.46 (.09)**￼*	*1.38 (.06)**￼*
Change Post-Crisis	-.03 (.03)	*-.07 (.02)**￼*	.04 (.03)	-.01 (.03)	*-.90 (.14)**￼*	*-1.31 (.18)**￼*
Fiscal Event						
Budget	.18 (.10)	*.22 (.12)**	*.35 (.16)**	-.01 (.11)	.27 (.46)	.37 (.83)
2008 Stimulus	-.02 (.14)	*-.60 (.11)**￼*	*-1.50 (.17)**￼*	*-.84 (.18)**￼*	1.67 (1.16)	-.14 (1.26)
2009 Stimulus	*-.10 (.04)**￼*	.01 (.02)	.00 (.10)	.00 (.10)	*-.27 (.12)**	*-2.36 (.47)**￼*
2010 Stimulus	*-.23 (.02)**￼*	*-.45 (.03)**￼*	*-.50 (.03)**￼*	*-.33 (.03)**￼*	*1.17 (.11)**￼*	*1.05 (.16)**￼*
Monetary Events						
FOMC - Pre	.23 (.18)	*.10 (.04)**￼*	.14 (.10)	.11 (.10)	-.18 (.37)	-.11 (.29)
FOMC - Post	.06 (.06)	-.06 (.05)	.06 (.10)	-.25 (.13)	.88 (.65)	1.29 (1.15)
Chg Fed Funds	*-.03 (.01)**￼*	*-.04 (.01)**￼*	-.03 (.02)	*.15 (.03)**￼*	.06 (.15)	.14 (.20)
QE 2008/09	-.15 (.10)	.04 (.10)	-.09 (.15)	-.05 (.35)	.79 (.49)	.66 (.80)
QE 2010	*.24 (.04)**￼*	.13 (.08)	.40 (.25)	.08 (.22)	.53 (.36)	.54 (.61)
R^2	.15					
DW	.17					

Note: Standard error are reported in parenthesis. ** and * represents significance at the 1 and 5 percent levels, respectively. Some other financial policy event coefficients are not reported

Table A11: Bilateral Dollar Exchange Rates: Basic Regression – 10-day Window

	Advanced Countries			Emerging Markets		
	Japan	Australia and Canada	Europe and Korea	China	Brazil, Mexico, South Africa, and Turkey	India, Indonesia and Russia
US 10 Year Yield	*-2.42 (.32)***	*-1.99 (.35)***	*-2.11 (.28)***	.02 (.04)	*-.86 (.32)***	-.23 (.15)
Change Post-Crisis	*-3.54 (.46)***	*5.08 (.61)***	*2.21 (.49)***	-.09 (.07)	*3.02 (.60)***	*1.21 (.35)***
Fiscal Event						
Budget	.76 (1.76)	1.56 (3.35)	1.20 (2.38)	.43 (.27)	-2.99 (2.55)	.56 (1.74)
2008 Stimulus	.08 (1.67)	*11.16 (3.18)***	-4.99 (4.51)	*3.18 (.79)***	-9.18 (7.21)	2.59 (2.99)
2009 Stimulus	2.44 (1.43)	*1.27 (.55)**	-.24 (2.86)	.03 (.10)	2.85 (1.62)	*-8.30 (1.29)***
2010 Stimulus	*3.18 (.48)***	*-4.75 (.73)***	*-1.62 (.50)***	*-1.03 (.23)***	*-6.16 (.56)***	*-1.17 (.35)***
Monetary Events						
FOMC - Pre	-2.06 (1.83)	.33 (2.03)	*-2.41 (1.13)**	-.15 (.15)	2.93 (1.64)	-.65 (.84)
FOMC - Post	1.60 (1.51)	-2.48 (1.77)	-1.42 (1.23)	-.19 (.18)	-3.01 (2.33)	-2.13 (1.31)
Chg Fed Funds	*-1.18 (.32)***	-.46 (.63)	*-.86 (.44)**	*-.46 (.04)***	.32 (.63)	-.07 (.29)
QE 2008/09	1.52 (1.59)	-2.21 (1.80)	-2.00 (1.85)	*.99 (.26)***	-.41 (2.01)	-.69 (2.31)
QE 2010	.12 (4.14)	.89 (3.90)	-1.23 (3.65)	1.19 (.65)	-1.56 (2.76)	-1.38 (1.89)
R^2	.04					
DW	.25					

Note: See Table 2a. A positive value indicate an appreciation against dollar.

Table A12: Real Economy: Basic Regressions – 10-day Window

	VIX	Oil Prices	Non-Oil Comm Prices	Foreign Equities	US Equities	US Inflation Expectation
US 10 Year Yield	*-.02 (.01)**	*-.02 (.01)**	.01 (.01)	*.04 (.01)***	*.02 (.01)***	*.28 (.02)***
Change Post-Crisis	*-.03 (.01)***	*.15 (.02)***	*.02 (.01)***	*.05 (.01)***	*.05 (.01)***	*.09 (.03)***
Fiscal Events						
Budget	-.01 (.06)	.10 (.10)	.03 (.05)	-.03 (.06)	-.03 (.05)	-.06 (.17)
2008 Stimulus	-.05 (.23)	.12 (-.20)	*.49 (.20)***	.25 (.15)	.07 (.20)	.53 (.70)
2009 Stimulus	-.11 (.06)	-.13 (-1.81)	.00 (.05)	-.01 (.06)	.03 (.06)	*.63 (.19)***
2010 Stimulus	.01 (.09)	-.10 (.14)	.05 (.08)	*-.07 (.01)***	-.02 (.08)	-.13 (.28)
Monetary Events						
FOMC - Pre	.01 (.04)	.03 (.07)	-.01 (.03)	.02 (.04)	.01 (.04)	.01 (.12)
FOMC - Post	.02 (.03)	-.08 (.05)	*-.06 (.03)**	-.04 (.05)	-.05 (.03)	.01 (.09)
Change in Fed Fur	*.02 (.01)***	*.05 (.01)***	*.02 (22.00)***	*.03 (.01)**	.01 (.01)	*.07 (.02)***
QE 2008/2009	*.14 (.05)***	.13 (.08)	.06 (.04)	-.11 (.06)	*-.10 (.04)**	*-.36 (.14)***
QE 2010	-.05 (.08)	-.02 (.13)	.02 (.07)	.01 (.06)	.06 (.07)	-.08 (.23)
R^2	.07	.10	.05	.04	.09	.26
DW	.41	.19	.27	.16	.30	.22

Note: See Table 2a

References

Ait-Sahlia, Y., J.R. Andritzky, A. Jobst, S.B. Nowak, and N.T. Tamiris, 2009, "How to Stop a Heard of Running Bears? Market Response to Policy Initiatives during the Global Financial Crisis," IMF Working Paper 09/204 (Washington: International Monetary Fund).

Bayoumi, T. and T. Bui, 2011, "U.S. Financial Spillovers – Typical Advanced Country Responses," United States 2011 Spillover Report – Selected Issues, pp. 3-4 (Washington: International Monetary Fund).

Cook, T. and T. Hahn, 1989, "The effect of changes in the federal funds rate target on market interest rates in the 1970s," Journal of Monetary Economics, Vol. 24, pp. 331-51.

Diebold, F., and K. Yilmaz, 2009, ''Measuring Financial Asset Return and Volatility Spillovers, with Application to Global Equity Markets,'' Economic Journal, Vol. 119, (January), pp. 158–71.

Ehrmann, M., M. Frazscher, and R. Rigobon, 2010, "Stocks, bonds, money markets and exchange rates: measuring international financial transmission," Journal of Applied Econometrics, 26: n/a. doi: 10.1002/jae.1173

Faust, J., J. Rogers, S. Wang, and J. Wright, 2007, "The High-Frequency Response of Interest Rates to Macroeconomic Announcements," Journal of Monetary Economics, Vol. 54, pp. 1051-68.

Gagnon, J., M. Raskin, J. Remache, and B. Sack, 2011, "The Financial Market Effects of the Federal Reserve's Large-Scale Asset Purchases," International Journal of Central Banking, Vol. 7, No. 1, pp. 1-43.

Glick, R., and S. Leduc, 2011, "Are Large-Scale Asset Purchases Fueling the Rise in Commodity Prices?" Federal Reserve Bank of San Francisco Economic Letter, 2011-10. Available at http://www.frbsf.org/publications/economics/letter/2011/el2011-10.html.

Ishii, Y., 2008, "International transmissions in US-Japanese stock markets," Applied Financial Economics, Vol. 18, pp. 1193-1200.

Laubasch, T., 2009, "New Evidence on the Interest Rate Effects of Budget Deficits and Debt," Journal of the European Economic Association, Vol. 7, pp. 858-85.

Neely, C.J., 2010, "The Large-Scale Asset Purchases Had Large International Effects," Federal Reserve Bank of St. Louis Working Paper 2010-018C. Available at http://research.stlouisfed.org/wp/more/2010-018/.

Poole, W., and R. Rasche, 2003, "The Impact of changes in FOMC disclosure practices on the transparency of monetary policy: are markets and the FOMC better 'synched'?" Federal Reserve Bank of St. Louis Review, Issue Jan, pp. 1-10. Available at http://research.stlouisfed.org/publications/review/03/01/PooleRasche.pdf.

Rigobon, R., and B. Sack, 2003, "Measuring the Reaction of Monetary Policy to the Stock Market," Quarterly Journal of Economics, Vol. 118, No. 2, pp. 639–69.

_____, 2004, "The Impact of Monetary Policy on Asset Prices," Journal of Monetary Economics, Vol. 51, pp. 1553–75.

Scott, A., 2011, "U.S. Growth Spillovers: Fiscal Policy," United States 2011 Spillover Report – Selected Issues, pp. 37-42 (Washington: International Monetary Fund).

Swiston, A., 2007, "Where Have All of the Monetary Surprises Gone? The Effects of FOMC Statements," IMF Working Paper 07/185 (Washington: International Monetary Fund).

Vissing-Jorgensen, A. and A. Krishnamurthy, February 10, 2011, "The Effects of Quantitative Easing on Interest Rates". Available at SSRN: http://ssrn.com/abstract=1784270

Data Sources and Event Descriptions

I.   Data

We collect daily data of (advanced economies) the United States, Australia, Canada, the Euro area (including France, Germany, Italy, and Spain), Japan, Korea, Switzerland, and the United Kingdom; and (emerging markets) Brazil, China, India, Indonesia, Mexico (only for the macro analysis), Russia, South Africa, and Turkey between 1/1/2003 and 4/8/2011 from difference sources. Data availability is different across series and countries. Below is the brief description of the data. Full database is available upon request.

- Stock market and banks' equity indexes are downloaded from DataStream. Bank excess returns are calculated as the unweighted average of difference between banks' return and their respective national stock market overall return. There are fifty foreign banks included in the dataset. The detailed list of banks is available upon request.

- Bond yields are downloaded from Bloomberg. For advanced countries, Korea, and India, bond yields are generic 10-year government yields. For emerging markets, bond yields are calculated using the respective EMBIG spread and US 10-year yield.

- Bilateral dollar exchange rates are from DataStream. These dollar exchange rates are also used in calculating the Nominal Effective Exchange Rate using the current INS Trade Weight matrix.

- The effective Federal Fund rate, foreign central banks' policy rates, the VIX and oil/commodity prices are downloaded from Bloomberg. Sovereign CDS series are obtained from Markit. The U.S. inflation expectation is calculated as the difference between the U.S. nominal 10-year yield and the corresponding inflation-indexed yield.

- The Fed Fund expectations are calculated using the formulas provided by Andrew Swiston (WHD) and Bloomberg data.

II.   Event Dates

The specific event dates are provided by Andreas Jobst (MCM), Martin Sommer and Geoffrey Keim (WHD), and collected and classified by authors depending on type and timing of those events.

1. The Dodd-Frank Act dates, starting from the Obama's "Volcker Rule" speech on January 21st, 2011, are collected by authors.

2. The Quantitative Easing event dates are collected and provided by Andreas Jobst (MCM) in conjunction with authors' own assessment of other dates used by Federal Reserve Board economists.

3. The key U.S. Budget (Congress) and Fiscal (Administration) event dates – including the annual announcements and legislature meetings and special fiscal stimulus packages - are provided by Martin Sommer and Geoffrey Keim (WHD).

4. FOMC meetings (scheduled and emergency) are available from Federal Reserve Board website http://www.federalreserve.gov/monetarypolicy/fomccalendars.htm.

5. The Central Banks Liquidity Swap dates are provided by Andreas Jobst (MCM).

The following table lists some important events that are essential to our analysis. Full list of event dates used is available upon request.

Event	Dates
Fiscal Stimulus 2008	01/23/2008, 1/28/2008
Fiscal Stimulus 2009	01/15/2009, 01/26/2009, 02/01/2010[1]
Fiscal Stimulus 2010	09/08/2010, 12/07/2010
Dodd-Frank Act	01/21/2010[2], 05/20/2010, 06/25/2010, 07/15/2010, 07/21/2010
Quantitative Easing [1]	11/25/2008, 12/16/2008, 01/28/2009, 03/18/2009, 04/29/2010
Quantitative Easing [2]	08/10/2010, 08/27/2010, 09/21/2010, 11/03/2010

1/ President's FY2011 budget proposal with new stimulus measures including extensions of certain provisions in the Recovery Act (2009)
2/ The so-called "Volcker Rule" speech by President Obama