

**Federal Reserve Bank of Dallas
Globalization and Monetary Policy Institute**

Working Paper No. 287

[http://www.dallasfed.org/assets/documents/institute/
wpapers/2016/0287.pdf](http://www.dallasfed.org/assets/documents/institute/wpapers/2016/0287.pdf)

**Macroeconomic News and Asset Prices Before and
After the Zero Lower Bound***

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October 2016

Abstract

With short-term policy interest rates constrained by their effective zero lower bound (ZLB), monetary policy relied on communicating the future path of policy conditional on incoming macroeconomic data. Motivated by this, we exploit intra-day prices to investigate how updates on the state of the U.S. economy affect interest rates and exchange rates before and after the ZLB. We find that releases reflecting the dual mandate of the Fed rose in importance and – as an ex-post acknowledgement of the sources of the Great Recession – additional housing market indicators and GDP revisions, that hitherto left markets unaffected, became market movers.

JEL codes: E44, F42, G14

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I INTRODUCTION

The U.S. federal funds rate hit an effective zero lower bound (ZLB) in the aftermath of the Global Financial Crisis of 2008/09. Since then, the Federal Reserve has engaged in both time- as well as state-contingent forward guidance. The Fed changed its more time-contingent statement from October 24, 2012:

“In particular, the Committee also decided today to keep the target range for the federal funds rate at 0 to 1/4 percent and currently anticipates that exceptionally low levels for the federal funds rate are likely to be warranted at least through mid-2015[,]”

to a more state-contingent statement highlighting policy dependence on inflation and labor market outcomes on December 12, 2012:

“The Committee also reaffirmed its expectation that the current exceptionally low target range for the federal funds rate of 0 to 1/4 percent will be appropriate at least as long as the unemployment rate remains above 6-1/2 percent, inflation between one and two years ahead is projected to be no more than a half percentage point above the Committee’s 2 percent longer-run goal.”

This more explicit forward-looking data dependence of monetary policy potentially reshuffled the relative importance of U.S. macroeconomic releases for investors and policy makers.

Motivated by the increased importance of macroeconomic news for the more forward-looking central bank communication at the ZLB, [Swanson and Williams \(2014\)](#) estimated the time-varying sensitivity of domestic yields along the yield curve to establish the extent to which policy was effectively constrained by the ZLB. We build on their findings to investigate what set of macroeconomic announcements played a more prominent role at the ZLB, both domestically and internationally, by comparing the impact of U.S. macroeconomic news on interest rates and exchange rates before and after the ZLB in small time intervals around the release announcement time.

Our investigation highlights the different macroeconomic updates that have played a notable role in informing both policy makers and investors about the state of the economy and the likely path of monetary policy. The importance of macroeconomic news on asset prices

meaningfully changed before and after the ZLB.¹ At the ZLB, domestic financial markets put a greater focus on housing indicators – the sector that led to the recession and inhibited the recovery – as well as news directly related to the Fed’s dual mandate, such as Initial Jobless Claims and CPI inflation surprises.

II AN ILLUSTRATIVE EXAMPLE

Figure 1 displays intra-day data for selected currencies and interest rates futures on April 3, 2015, around the time the March 2015 employment report was released. The employment report contains the household survey with the headline unemployment rate and the establishment survey with the headline Nonfarm Payrolls. For this particular scheduled release, the Bloomberg survey forecast was 245,000 new payroll jobs. Yet, the actual figure turned out to be a mere 126,000 additions, a negative surprise of about 119,000 jobs. Payroll figures usually include substantial revisions, in particular to the previous two reporting months. Including revisions, the actual overall negative surprise was even larger at minus 188,000 jobs.

On April 3, 2015, the negative surprise led to an increase in the Treasury notes futures prices and thus a decline in interest rates as well as a depreciation of the U.S. dollar in a very tight time interval around the announcement (Figure 1). While this motivational illustration is only a single data point, this article systematically examines the response of interest and exchange rates to macroeconomic news and how those responses differ when policy rates are constrained by the effective zero lower bound and policy relies heavily on the communication of data-dependent future actions.

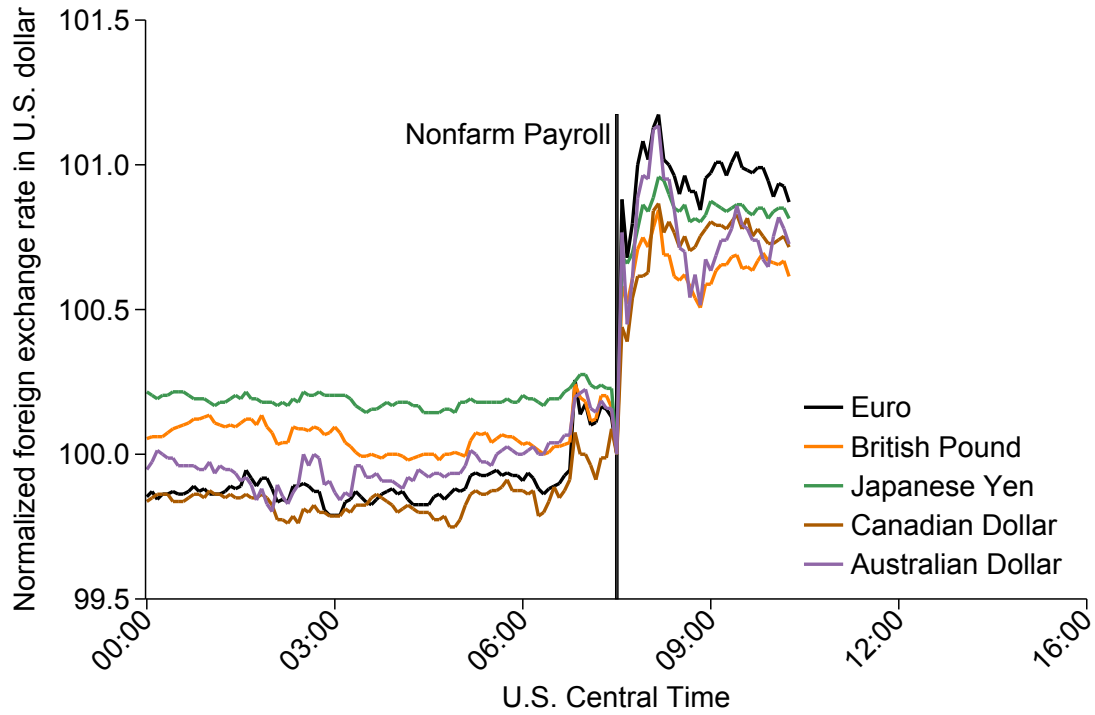
III DATA AND METHOD

We operationalize the concept of macroeconomic “news” as the difference between an announcement and its expected value prior to the actual release of information. The market expectation of the macroeconomic announcement is captured by the median response from a survey of market participants from Bloomberg, L.P., which has to be submitted by midnight

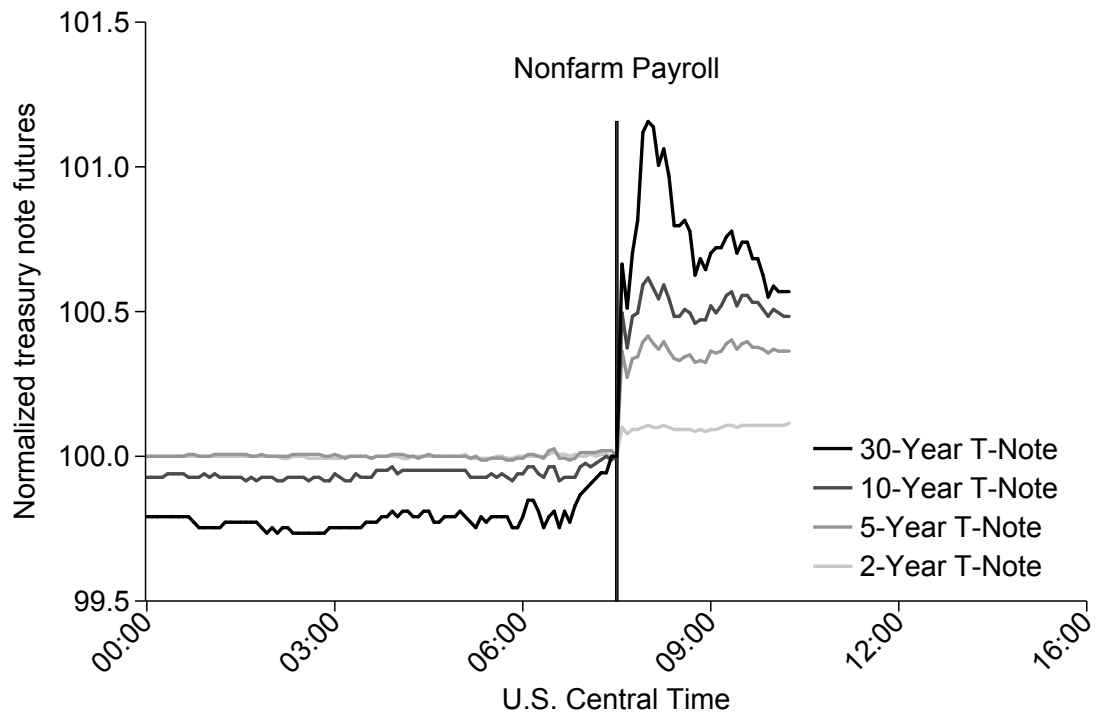
¹A taxonomy accounting for heterogeneity in macroeconomic news effects on asset prices can be found in [Gilbert, Scotti, Strasser, and Vega \(2016\)](#).

Fig. 1: Asset Prices React to U.S. Employment Report

(a) Foreign Exchange Futures (in USD)



(b) U.S. Treasury Note Futures



NOTES: Time of release of U.S. Employment Report is April 3, 2015, 7:30AM CT.
SOURCE: TickData.

of the day leading up to the release.² [Gürkaynak and Wolfers \(2005\)](#) have shown that these survey-based market expectations are similar to forecasts derived from financial instruments built on the underlying macroeconomic news releases. These “news” can be interpreted as updates on the state of the U.S. economy, for which deviations from prior expectations reflect the unanticipated component that alters the information set of market participants.

The available data on the 21 U.S. macroeconomic announcements that we analyze span 1996 to 2016 and thus include eight years of the ZLB. They comprise real-indicators such as quarterly GDP releases, monthly Nonfarm Payrolls and Industrial Production, as well as “flash” indicators based on household or businesses surveys such as Consumer Confidence or the ISM Manufacturing surveys.

We examine the response of 10-year futures prices and currency futures using intra-day data from TickData within a 15-minute symmetric window around the exact daytime of the macroeconomic release. We regress the log change in the price of the 10-year U.S. Treasury note futures and five currency futures on the normalized macroeconomic news for two different subsamples – before and after the ZLB. Foreign exchange futures are expressed in U.S. dollars, so that an increase in the exchange rate indicates a depreciation of the U.S. dollar relative to the foreign currency. The surprises are normalized to have a unit standard deviation and responses are in basis points to ease the interpretation of the results.

IV RESULTS AND DISCUSSION

As the U.S. entered the ZLB, how did the asset price impact of macroeconomic news change? Most notably, some indicators reflecting the dual mandate of the Fed – to stabilize prices and achieve maximum employment – gained importance. The more high-frequency weekly Initial Jobless Claims became more informative domestically and the asset price impact of year-over-year Consumer Price Index (CPI) inflation news rose threefold and took on a novel international role with positive news appreciating the U.S. dollar against three major currencies. U.S. domestic inflation has been substantially and persistently below target throughout recovery raising question about the success of inflation targeting. Thus inflation has also become a greater focal point of domestic monetary policy makers’ attention; this stronger international

²[Bartolini, Goldberg, and Sacarny \(2008\)](#) and [Hussain \(2011\)](#), for example, have used the same dataset to construct macroeconomic news.

response might be an indicator of shocks to the relative stances of monetary policy in different sample countries vis-à-vis the U.S.

Table 1 presents the effects of the 21 macroeconomic release surprises. The columns display different asset prices, the domestic 10-year Treasury note and five major currency futures, for the two subsample periods before and after the ZLB. In general, positive news tend to decrease futures prices and thus raise yields.³ Moreover, domestic interest rates tend to be more sensitive to U.S. macroeconomic news than exchange rates.⁴

First, our analysis reveals meaningful changes at the ZLB related to the Fed's dual mandate. On the inflation side, news on CPI inflation had no significant impact on asset prices prior to 2009. In contrast, during the ZLB period, a hypothetical CPI release that comes in one standard deviation higher than anticipated, lowers 10-year futures prices by 4.7 basis points and appreciates the dollar by 4 to 7 basis points against the Japanese yen, Canadian and Australian dollars. On the employment side, Initial Jobless Claims appear to become more important while standard signals on labor market healing weakened. Observers have questioned whether headline figures such as the unemployment rate and Nonfarm Payroll growth are sufficient statistics for imbalances in the labor market given secular trends and the severity of the downturn. Indeed, the Fed dropped its reference to the unemployment rate in later policy statements. The weaker impact from Nonfarm Payroll surprises and the simultaneously released unemployment rate may be a result of uncertainties about the impact of secular demographics shifts, e.g. on labor force participation. On the other hand, a high-frequency indicator such as Initial Jobless Claims is less likely to be affected by those secular changes and might thus be more informative about the state of the economy.

Furthermore, the informational content of the second and final readings of previous quarter U.S. GDP appear larger in the ZLB era. Positive revision surprises of quarterly GDP contain enough new information to move Treasury futures prices down and ten year rates up, but only during the post-2008 period. Conversely, the effect of surprises related to manufacturing activity such as Durable Goods Orders, Factory Orders or Industrial Production weakened.

³We use the word "positive news" to describe higher than expected values. This is not true for weekly initial claims or inflation. The interpretation of inflation surprises is more ambiguous, since higher-than-expected inflation could be considered "good" or "bad" depending on the inflation's level relative to the target.

⁴These results are in line with the literature that has previously found that the link between macroeconomic news and bond markets is simpler and stronger than foreign exchange markets (see, for example, [Gilbert et al., 2016](#)).

This could in part be the result of ongoing structural change, but is more likely related to the ex-post realization that macroeconomic vulnerabilities were associated with households' balance sheets and the financial system.

Second, housing releases became more important during the recovery. The strength of the signal from surprises for New and Existing Home Sales flipped in magnitude between the two periods. During the ZLB, all four housing indicators, including Housing Starts and the more leading Permits, raise domestic yields significantly and thus lower Treasury futures prices. New Home Sales, Starts, and Permits are good indicators of the health of the housing market. The housing bust triggered the near collapse of the financial system in the recession and constrained aggregate spending during the recovery (Mian and Sufi, 2011; Mian and Sufi, 2015), re-focusing investors' attention to these housing-related indicators.

Finally, the effects of two "flash" survey indicators, the Conference Board Consumer Confidence and the ISM Manufacturing Index, are softer domestically and internationally after 2008 and, interestingly, depreciates the dollar against the currencies of the commodity exporters Canada and Australia—a phenomenon also observed for Retail Sales. We further see more sensitivity to U.S. news in Japan's and Canada's currency responses. In contrast, the number of significant currency pricing responses for the euro and the pound sterling drops from 10 and 9, respectively, to 4. This might reflect the substantial phase shifting between the business cycles in the aftermath of the Great Recession. While the recovery in the U.S. is well underway, the euro area is still on its path to recovery; news from across the Atlantic might be of second order importance during this period.

V CONCLUSION

Intra-day asset price responses to macroeconomic surprises tell us about how markets interpret the macroeconomic releases' marginal informational content to discern where the economy is currently and where it is heading relative to other economies. Changes in those responses hint at where markets and policy makers perceive risks to the current economic outlook. Our findings suggest a greater focus on the housing market in line with the vulnerabilities that led to the recession and inhibited the recovery as well as policy mandate-consistent stronger responses to weekly Initial Jobless Claims and to CPI inflation readings, reflecting the continued

commitment of policy makers to attain their inflation objectives.

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Table 1: Intra-Day Responses to Macroeconomic News

News	10Yr T-Note		EUR		GBP		JPY		AUD		CAD	
	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008
Housing: Existing Home Sales	-7.32*** (1.98)	-4.04*** (0.95)	-7.59*** (2.57)	-1.64 (1.44)	-1.61 (2.44)	-0.49 (1.25)	-8.69*** (2.75)	-8.56*** (1.36)	2.80 (3.65)	1.32 (1.67)	-1.63 (2.73)	2.94* (1.61)
Housing: Housing Permits	-2.01 (2.04)	-2.92* (1.60)	-3.74 (2.42)	0.72 (2.07)	-4.97** (2.05)	-0.48 (1.53)	-4.79* (2.47)	-3.21 (2.11)	-5.51** (2.73)	-0.29 (2.00)	-1.41 (2.18)	0.98 (2.10)
Housing: Housing Starts	-0.33 (2.40)	-6.48*** (2.01)	-2.04 (2.93)	-3.50 (2.59)	-1.20 (2.14)	-2.42 (1.92)	-3.63 (3.77)	-8.98*** (2.64)	0.68 (3.49)	-2.11 (2.51)	0.62 (1.81)	2.13 (2.64)
Housing: New Home Sales	-4.18*** (0.85)	-7.00*** (1.57)	-2.57** (1.13)	-3.94* (2.37)	-2.41*** (0.87)	-1.30 (2.06)	-2.52** (1.10)	-8.78*** (2.26)	-1.99 (1.25)	0.23 (2.76)	-2.05** (0.89)	2.03 (2.65)
Initial Jobless Claims	4.11* (2.33)	6.19*** (1.57)	10.07*** (3.09)	1.36 (2.03)	3.51 (2.28)	1.15 (1.50)	8.10** (3.95)	8.35*** (2.06)	6.88* (3.56)	-1.00 (1.96)	1.13 (1.80)	-3.17 (2.06)
Nonfarm Payrolls	-22.81*** (2.85)	-8.48*** (1.22)	-18.67*** (3.85)	-7.44*** (1.58)	-13.72*** (2.81)	-5.49*** (1.17)	-13.28*** (4.89)	-13.11*** (1.59)	-13.30*** (4.40)	-3.23** (1.53)	-7.33*** (2.22)	0.22 (1.61)
Real GDP Growth Advanced	-10.51** (4.33)	-6.34** (2.87)	-21.11*** (5.67)	-4.44 (3.71)	-11.26*** (4.03)	-5.61** (2.74)	-10.32 (7.06)	-13.54*** (3.77)	-9.72 (6.38)	-1.81 (3.59)	1.32 (3.22)	7.71** (3.77)
Real GDP Growth Second	-8.24 (5.32)	-4.65** (2.07)	-9.60 (7.20)	-1.47 (2.68)	-8.69* (5.27)	0.97 (1.98)	-11.63 (9.05)	-10.21*** (2.72)	2.03 (8.18)	0.43 (2.59)	-0.45 (4.11)	3.98 (2.72)
Real GDP Growth Final	2.62 (5.56)	-4.94** (2.07)	0.42 (7.87)	-5.34** (2.67)	-7.76 (5.32)	-5.22*** (1.98)	-7.46 (9.32)	-7.93*** (2.73)	5.22 (8.41)	-5.91** (2.58)	5.54 (4.24)	-3.16 (2.72)
Inflation: Consumer Price Index	-1.46 (1.98)	-4.73*** (1.79)	-0.49 (2.36)	-1.37 (2.31)	-1.84 (2.03)	-0.85 (1.71)	2.28 (2.34)	-4.03* (2.36)	-1.67 (2.65)	-6.93*** (2.23)	0.51 (2.18)	-5.53** (2.34)
Inflation: Producer Price Index	-5.69*** (2.04)	-4.17** (1.75)	-2.76 (2.43)	-0.08 (2.26)	-2.56 (2.09)	-1.11 (1.67)	-2.90 (2.30)	-7.14*** (2.30)	-1.98 (2.24)	-0.04 (2.18)	-2.21 (2.26)	-1.95 (2.30)
Personal Income	-0.53 (3.00)	-0.34 (1.53)	-1.03 (3.78)	0.73 (1.97)	1.46 (2.97)	0.95 (1.46)	-0.02 (5.11)	0.76 (2.01)	1.86 (4.62)	0.52 (1.91)	1.63 (2.32)	1.72 (2.01)
Personal Spending	-2.23 (2.98)	-0.90 (1.84)	-10.98*** (8.84)	1.83 (2.37)	-3.91 (2.90)	2.05 (1.75)	2.93 (5.04)	-1.04 (2.42)	-9.35** (4.54)	2.93 (2.29)	0.79 (2.29)	2.61 (2.41)
Retail Sales	-8.04*** (1.94)	-12.26*** (1.80)	-7.04*** (2.63)	-0.44 (2.35)	-8.12*** (2.05)	-0.83 (1.74)	-4.87* (2.74)	-15.13*** (2.37)	3.02 (3.07)	4.46** (2.27)	1.82 (1.96)	4.66* (2.39)
Consumer Confidence	-9.26*** (1.00)	-5.63*** (0.97)	-11.12*** (1.41)	0.41 (1.47)	-6.07*** (1.03)	1.32 (1.28)	-7.29*** (1.31)	-7.62*** (1.39)	-4.57*** (1.49)	4.68*** (1.71)	-1.52 (1.08)	4.96*** (1.64)
Consumer Sentiment Final	-2.61** (1.17)	-0.21 (1.18)	-3.39** (1.49)	-2.47 (1.77)	-3.03** (1.20)	-2.18 (1.54)	2.66* (1.37)	0.11 (1.69)	-1.96 (1.70)	-2.57 (2.06)	-1.94 (1.25)	1.03 (1.98)
Consumer Sentiment Preliminary	-2.99*** (1.08)	-4.28*** (0.77)	-2.05 (1.38)	-1.53 (1.62)	-1.80 (1.10)	-0.42 (1.40)	-0.68 (1.26)	-6.37*** (1.54)	-0.16 (1.57)	0.17 (1.88)	-1.39 (1.15)	2.75 (1.81)
Industrial Production	-4.25*** (0.74)	-0.94 (0.77)	-0.20 (1.11)	-0.75 (1.37)	0.62 (0.89)	-0.54 (1.15)	-4.58*** (1.13)	-0.14 (1.22)	2.64* (1.37)	-0.33 (1.45)	0.40 (1.12)	-0.71 (1.46)
Durable Goods Orders	-7.55*** (2.59)	-2.19 (1.51)	-5.16 (3.22)	-0.14 (1.95)	-2.33 (2.37)	-0.19 (1.44)	-1.93 (4.20)	-2.91 (1.99)	-3.70 (3.88)	0.89 (1.88)	-1.32 (1.98)	1.33 (1.98)
Factory Orders	-2.73*** (1.01)	0.30 (1.04)	-1.79 (1.38)	-4.08*** (1.56)	-0.10 (1.03)	-3.30** (1.36)	-0.66 (1.30)	-1.31 (1.49)	-2.23 (1.48)	-3.77** (1.82)	-0.57 (1.06)	-2.03 (1.75)
ISM Manufacturing Index	-14.14*** (0.90)	-12.87*** (1.06)	-11.33*** (1.27)	-2.47 (1.66)	-6.04*** (0.95)	-1.67 (1.44)	-7.65*** (1.20)	-17.86*** (1.53)	-4.43*** (1.37)	4.98*** (1.92)	-1.67* (0.98)	6.38*** (1.85)

NOTES: Pre2008 indicates 10/30/1996-12/31/2008 and Post2008, 1/1/2009-1/14/2016.

SOURCE: Bloomberg, L.P. 2016; TickData; authors' calculation.

— APPENDIX —

Macroeconomic News and Asset Prices
Before and After the Zero Lower Bound

Highlights

- U.S. short term policy rates have been constrained by the zero lower bound (ZLB).
- Policy communication and expectations became more data-dependent.
- We estimate asset price impacts of macroeconomic news before and after the ZLB.
- Intra-day data reveals greater importance of news related to the Fed's dual mandate.
- During the ZLB further housing market indicators and GDP revisions moved markets.

A DATA

A.1 Macroeconomic News

The dataset from Bloomberg L.P. includes timing of the data announcement at the hour and minute level, the title of the announcement, the actual released value, the consensus value for the release, the prior released value, the revision to the prior data release, the country and region of the announcement, the reported period, the report type (preliminary, advanced, final) from 1996 to 2016. For announcements measured using monetary values, the values are reported in U.S. dollars.

The number of survey participants varies by announcement and release date. For example, for the ISM Manufacturing Index announcement on April 1, 2015, 80 survey participants submitted their projections. Although the selection process of survey participants is confidential, the forecasters are ranked by Bloomberg according to their accuracy and consistency over time.

The announcements considered are the following:

1. **Nonfarm Payrolls.** News on Nonfarm Payrolls is calculated from the difference between the actual value of the Total Nonfarm Payrolls, and the sum of the vintage Total Nonfarm Payrolls from the previous release and the expected value of Nonfarm Payroll Growth from Bloomberg L.P. 2015. This accounts for the effects of the revisions to the nonfarm payroll growth of the two prior months in the Employment Situation report. Net change in nonfarm payroll employment, published by the Bureau of Labor Statistics (BLS), is the month-over-month seasonally adjusted change in the total number of persons employed in the non-agricultural sector. BLS conducts the Current Employment Statistics (CES) survey, collecting data each month on employment, hours, and earnings from a sample of non-agricultural establishments. The sample includes around 140,000 businesses and government agencies, which cover approximately 440,000 individual worksites. The active CES sample includes approximately one-third of all nonfarm payroll employees. We look at the monthly seasonally adjusted total nonfarm payrolls, reported in thousands. Nonfarm payrolls is released with the Employment Situation report on the first Friday of every month. For more information go

to <http://www.bls.gov/news.release/empsit.toc.htm>.

2. **Consumer Sentiment.** Index of Consumer Sentiment published by the University of Michigan, measures the consumers' opinion on the overall health of the economy. Consumer Sentiment is indexed at 100 in 1966-Q1. It is comprised of two components: Current Economic Conditions and Index of Consumer Expectations. We look at the monthly non seasonally adjusted consumer sentiment diffusion index. Typically, preliminary Consumer Sentiment is reported on the Friday in the middle of every month, and final results are reported on the Friday at the end of every month. For more information go to <http://www.sca.isr.umich.edu/>.
3. **Consumer Confidence.** Consumer Confidence Index, published by the Conference Board, measures the consumers' opinion on the overall health of the economy. Consumer Confidence is seasonally adjusted and indexed at 100 in 1985. It is comprised of two components: Present Situation Index and Expectations Index. We look at the monthly seasonally adjusted consumer confidence diffusion index. Typically, Consumer Confidence is released on the last Tuesday of every month. For more information go to <https://www.conference-board.org/>.
4. **Consumer Price Index.** Consumer Price Index (CPI), published by the BLS, measures the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. The CPI is based on the expenditures of almost all residents of urban or metropolitan areas, including professionals, the self-employed, the unemployed, and retired people, as well as urban wage earners and clerical workers. Not included in the CPI are the spending patterns of people living in rural non-metropolitan areas, farm families, people in the armed forces, and those in institutions, such as prisons and mental hospitals. We look at the year-over-year non seasonally adjusted percent change in headline CPI. Typically, CPI is released in the middle of every month. For more information go to <http://www.bls.gov/news.release/cpi.toc.htm>.
5. **Producer Price Index.** Producer Price Index (PPI), published by the BLS, measures the average change over time in the selling prices received by domestic producers of goods and services. PPI is available for the output of nearly all industries in the goods-producing sectors of the U.S. economy—mining, manufacturing, agriculture, fishing, and

forestry—as well as natural gas, electricity, construction, and goods that are competitive with those made in the producing sectors, such as waste and scrap materials. Prior to February 2014, we look at the year-over-year seasonally adjusted percent change in PPI finished goods, which does not incorporate indexes for services, construction, exports, and government purchases; afterwards, we look at PPI final demand. Effective with the February 19, 2014 release, BLS transitioned from the Stage of Processing to the Final Demand-Intermediate Demand (FD-ID) aggregation system. The FD-ID system incorporates PPIs for services, construction, government purchases, and exports, and expands the PPI coverage of the United States economy to over 75 percent of in-scope domestic production. Typically, PPI is released in the middle of every month before the CPI report. For more information go to <http://www.bls.gov/news.release/ppi.toc.htm> and for information on the methodology change go to <http://www.bls.gov/ppi/fdidtransition.htm>.

6. **Initial Jobless Claims.** Initial Jobless Claims, published by the U.S. Department of Labor, is the weekly unemployment insurance claims filed by unemployed individuals after separation from their employers. The claimant requests a determination of basic eligibility for the unemployment insurance program. States initially report claims directly taken by the state liable for the benefit payments, regardless of where the claimant who filed the claim resided. Initial claims is an indication of emerging labor market conditions in the country. We look at the weekly seasonally adjusted initial claims, reported in thousands. Initial Jobless Claims is released every Tuesday. For more information go to <http://www.dol.gov/ui/data.pdf>.
7. **ISM Manufacturing Index.** ISM Manufacturing Index, published by the Institute for Supply Management (ISM), is a diffusion index on the manufacturing economy based on the responses of purchasing and supply executive nationwide. The survey responses reflect the change, if any, in the current month compared to the previous month. The diffusion index is measured as the percent of positive responses plus one-half of those responding the same. The index presents summary measures showing the prevailing direction of change and the scope of change in the manufacturing economy. A reading above 50 indicates that the manufacturing economy is generally expanding; below 50 indicates that it is generally declining. We look at the monthly seasonally adjusted man-

ufacturing diffusion index. ISM Manufacturing Index is released around the 1st of every month. For more information go to <https://www.instituteforsupplymanagement.org/ISMReport/index.cfm>.

8. **Durable Goods Orders.** Durable Goods Orders, published by the Census Bureau, reflects new orders placed with domestic manufacturers for delivery of factory hard goods (durable goods) in the near term or future. Durable goods orders is released twice a month in the advance report on durable goods and the manufacturer's shipments, inventories, and orders. Durable goods orders may provide information on the future growth of the economy as orders placed in the current months may provide work in factories in the future. We look at the month-over-month seasonally adjusted percent change in durable goods orders. Durable Goods Orders is released around the end of every month. For more information go to <http://www.census.gov/manufacturing/m3/index.html>.
9. **Real GDP Growth.** Real Gross Domestic Product, published by the Bureau of Economic Analysis (BEA), is the value of the production of goods and services in the United States. Quarter-over-quarter real GDP growth is reported as a seasonally adjusted annual rate. Quarterly estimates of GDP are published monthly, immediately after the reported quarter, in three consecutive releases: advanced estimate, second estimate, and third estimate. The components of GDP are personal consumption expenditures, nonresidential fixed investment, residential fixed investment, private inventories, net exports, and government expenditures and gross investment. We look at the quarter-over-quarter seasonally adjusted annualized percent change in real GDP. GDP is released around the end of every month. For more information go to <http://www.bea.gov/>.
10. **Retail Sales.** Retail Sales, published by the Census Bureau, provides estimates of monthly sales for companies in the retail trade and food service sectors. It covers retail companies with one or more establishments that sell merchandise and related services to final consumers. Consumer spending on services is excluded with two exceptions: restaurant sales and services that are incidental to the sale of merchandise. We look at the month-over-month seasonally adjusted percent change in retail sales. Retail Sales is released around the middle of every month. For more information go to <http://www.census.gov/retail/index.html>.

11. **New Home Sales.** New Home Sales, published by the Census Bureau, measures the monthly sales of new single-family houses at a seasonally adjusted annual rate. New home sales are one of the earliest indicators of housing demands. To be included in the sales estimates, the sales transaction must intend to include both the house and the land. The sale of a house may take place at any stage of construction, even before the building permit is issued. Excluded from these estimates are houses built for rent, houses built by the owner, and houses built by a general contractor on the owner's land. A house is considered sold when either a sales contract has been signed or a deposit accepted. We look at the monthly seasonally adjusted annualized rate of single family new home sales, reported in thousands. New Home Sales is released around the 25th of every month. For more information go to <http://www.census.gov/construction/nrs/index.html>.
12. **Existing Home Sales.** Existing Home Sales, published by the National Association of Realtors, measures the monthly sales of new single-family houses at a seasonally adjusted annual rate. Existing-home sales, which include single-family, town homes, condominiums and co-ops, are based on transaction closings from Multiple Listing Services. Existing-home sales, based on closings, differ from the U.S. Census Bureau's series on new single-family home sales, which are based on contracts or the acceptance of a deposit. Because of these differences, it is not uncommon for each series to move in different directions in the same month. In addition, existing-home sales, which account for more than 90 percent of total home sales, are based on a larger data sample and typically are not subject to large prior-month revisions. We look at the monthly seasonally adjusted annualized rate of existing home sales, reported in thousands. Existing Home Sales is released around the 20th of every month. For more information go to <http://www.realtor.org/research-and-statistics>.
13. **Housing Starts.** Housing Starts, published by the Census Bureau, measures monthly starts of new single-family and multifamily housing units at a seasonally adjusted annual rate. Start of construction occurs when excavation begins for the footings or foundation of a building. All housing units in a multifamily building are defined as being started when this excavation begins. Beginning with data for September 1992, estimates of housing starts include units in structures being totally rebuilt on an existing foundation. Housing starts are good indication of current residential construc-

tion activity. We look at the monthly seasonally adjusted annualized rate of housing starts, reported in thousands. Housing Starts is released in the New Residential Construction report around the 18th of every month. For more information go to <http://www.census.gov/construction/nrc/index.html>.

14. **Housing Permits.** Housing Permits, published by the Census Bureau, measures monthly issuance of building permits of new single-family and multifamily housing units at a seasonally adjusted annual rate. Building or zoning permit is the approval given by a local jurisdiction to proceed on a construction project. Note that not all areas of the country require a permit for construction. Permits are a good indication of residential construction activity in the next few months. We look at the monthly seasonally adjusted annualized rate of housing permits, reported in thousands. Housing Permits is released in the New Residential Construction report around the 18th of every month. For more information go to <http://www.census.gov/construction/nrc/index.html>.
15. **Industrial Production.** Industrial Production, published by the Federal Reserve, is a seasonally adjusted index that measures the real output of the manufacturing, mining, and electric and gas utilities industries; the reference period for the index is 2012. The industrial sector, together with construction, accounts for the bulk of the variation in national output over the course of the business cycle. The industrial detail provided by these measures helps illuminate structural developments in the economy. We look at the month-over-month seasonally adjusted percent change in total industrial production. Industrial Production is released around the middle of every month. For more information go to <http://www.federalreserve.gov/releases/G17/Current/default.htm>.
16. **Factory Orders.** New Factory Orders, published by the Census Bureau, reflects new orders placed with domestic manufacturers for delivery of factory goods in the near term or future. A new order is a communication of an intention to buy for immediate or future delivery. Only orders supported by binding legal documents (such as signed contracts, letters of intent, or letters of award) should be included. Reported data should include all new orders received during the month less cancellations. We look at the month-over-month seasonally adjusted percent change in total manufacturers new orders. Factory Orders is released around the beginning of every month. For more information go to

<http://www.census.gov/manufacturing/m3/index.html>.

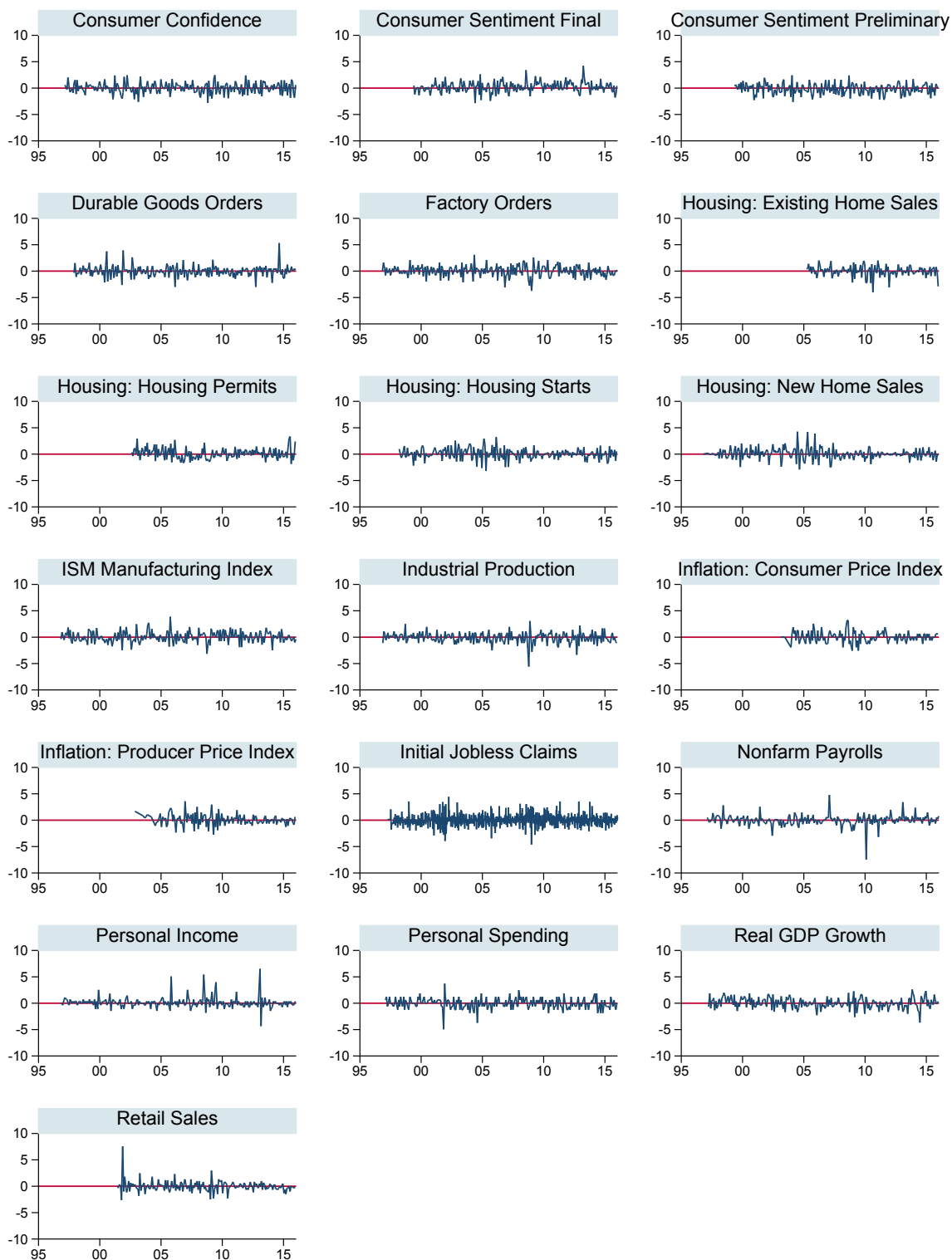
17. **Personal Income.** Personal Income, published by the BEA, measures the income received by households from employment (including self-employment), investments, and transfer payments. The largest component of personal income is wages and salaries from employment. We look at the month-over-month seasonally adjusted percent change in personal income. Personal Income is released with the Personal Income and Outlays report one business day after the GDP release around the end of every month. For more information go to <http://www.bea.gov/national/index.htm>.
18. **Personal Spending.** Personal Spending, published by the BEA, measures the expenditure by consumers on purchases of durable and non-durable goods and services. We look at the month-over-month seasonally adjusted percent change in personal consumption expenditure. Personal Spending is released with the Personal Income and Outlays report one business day after the GDP release around the end of every month. For more information go to <http://www.bea.gov/national/index.htm>.

Table A.1 displays summary statistics all U.S. macroeconomic news during our sample period: October 30, 1996 to January 14, 2016, which is dictated by data availability on announcement expectations. Figure A.1 displays the standardized news over time.

A.2 Asset Prices

The British pound (GBP), euro (EUR), Japanese yen (JPY), Australian dollar (AUD), and Canadian dollar (CAD) are foreign exchange futures expressed in U.S. dollars, so that an increase in the exchange rate indicates a depreciation of the U.S. dollar relative to the foreign currency. All prices are from Tickdata for the sample period beginning with “First Survey” and ending by January 14, 2016.

Fig. A.1: U.S. Macroeconomic News



NOTES: The sample period is October 30, 1996 to January 14, 2016.

SOURCES: Bloomberg, L.P. 2016; TickData; authors' calculation.

Table A.1: Summary Statistics of U.S. Macroeconomic News

News	Obs	Mean	Med	S.D.	Min	Max	First Survey
Consumer Confidence	226	0.1	0.3	5.0	-14.0	12.3	02/25/1997
Consumer Sentiment Final	200	0.3	0.3	1.4	-4.0	6.0	05/28/1999
Consumer Sentiment Preliminary	199	-0.7	-0.7	3.8	-9.9	9.2	05/14/1999
Durable Goods Orders	218	0.0	0.1	2.8	-8.2	14.6	11/26/1997
Factory Orders	230	0.0	0.0	0.6	-2.3	1.9	11/01/1996
Housing: Existing Home Sales	130	-1.5	10.0	203.8	-820.0	410.0	02/25/2005
Housing: Housing Permits	160	5.7	-1.5	58.1	-106.0	193.0	08/16/2002
Housing: Housing Starts	212	5.5	3.0	79.6	-253.0	256.0	03/17/1998
Housing: New Home Sales	229	4.0	2.0	57.5	-166.0	244.0	10/30/1996
ISM Manufacturing Index	230	0.1	0.0	1.9	-6.0	7.4	11/01/1996
Industrial Production	229	-0.0	0.0	0.4	-2.0	1.1	11/15/1996
Inflation: Consumer Price Index	147	0.0	0.0	0.2	-0.4	0.5	10/18/2002
Inflation: Producer Price Index	142	0.0	0.0	0.5	-1.3	1.7	11/15/2002
Initial Jobless Claims	961	0.3	0.0	18.1	-83.0	80.0	01/04/1997
Nonfarm Payrolls	226	-2.7	9.0	188.0	-1,398.0	894.0	01/10/1997
Personal Income	230	0.0	0.0	0.3	-1.2	1.8	10/31/1996
Personal Spending	226	-0.0	0.0	0.2	-0.8	0.6	02/03/1997
Real GDP Growth Advanced	74	0.0	-0.1	0.8	-1.7	1.7	04/30/1997
Real GDP Growth Final	76	-0.0	0.0	0.3	-1.1	0.7	03/26/1997
Real GDP Growth Second	75	0.0	0.0	0.3	-0.8	0.8	11/27/1996
Retail Sales	175	-0.0	0.0	0.6	-1.6	4.6	06/13/2001

Table A.2: Summary Statistics of Asset Prices

News	Obs	Mean	Med	S.D.	Min	Max
10Yr T-Note	1,041,812	117.409	116.047	8.978	93.703	135.469
5Yr T-Note	1,041,813	113.794	113.633	6.654	96.516	124.992
EUR	1,143,377	1.221	1.266	0.178	0.826	1.598
GBP	1,287,349	1.651	1.617	0.156	1.352	2.114
YEN	1,287,349	0.947	0.911	0.144	0.682	1.323
AUD	1,287,349	0.771	0.760	0.155	0.479	1.100
CAD	1,287,349	0.823	0.817	0.131	0.619	1.103

The summary statistics are calculated using price data at 5 minute intervals using a trading period from 18:00 to 16:00.

B ROBUSTNESS

The main estimation strategy can be broadly specified as

$$\Delta Y_{t-\tau,t+\tau} = \alpha_i + \beta_i news_{i,t} + \epsilon_{i,t},$$

where Y is either the log change in the price of 10-year U.S. Treasury Note futures multiplied by 10,000 or the log change in the price of currency futures multiplied by 10,000, for the EUR, GBP, JPY, AUD, CAD, expressed in USD. τ indicates the time-window in which the asset price reaction is considered relative to the release of a particular announcement i , where a 30-minute window refers the change in the asset price 15 minutes prior to the news and 15 minutes after.

In all tables, “Pre 2008” indicates 10/30/1996 - 12/31/2008 and “Post 2008” indicates 1/1/2009 - 1/14/2016.

1. Main results with different time windows for asset prices reaction:
10 minutes (Table B.1), 20 minutes (Table B.3), and 60 minutes (Table B.5).
2. Main results with day-of-the-week dummies (Table B.7).
3. Test whether coefficients are statistically different in the pre and post periods with different time windows for asset prices reaction:
10 minutes (Table B.2), 20 minutes (Table B.4), 30 minutes (Table B.8), and 60 minutes (Table B.6).
4. Full-sample results with different time windows for asset prices reaction:
10 minutes (Table B.9), 20 minutes (Table B.10), 30 minutes (Table B.11), and 60 minutes (Table B.12).
5. Different maturities for Treasuries:
 - 2 years (Table B.13).
 - 5 years (Table B.14).
 - 30 years (Table B.15).

Table B.1: Asset Prices Response to U.S. Macroeconomic News [10-minute window]

News	10Yr T-Note		EUR		GBP		JPY		AUD		CAD	
	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008
Consumer Confidence	-8.69*** (0.70)	-4.22*** (0.62)	-8.30*** (0.92)	0.99 (0.98)	-4.21*** (0.66)	0.85 (0.80)	-6.36*** (0.83)	-7.63*** (0.99)	-3.33*** (0.94)	4.63*** (1.13)	-1.01 (0.68)	4.20*** (1.13)
Consumer Sentiment Final	-0.42 (0.83)	0.69 (0.76)	-1.01 (0.98)	-1.24 (1.19)	-1.21 (0.76)	-1.30 (0.97)	-2.54*** (0.92)	-0.11 (1.21)	0.55 (1.08)	-1.21 (1.37)	-1.38* (0.79)	0.72 (1.37)
Consumer Sentiment Preliminary	-0.50 (0.76)	-0.98 (0.69)	-1.00 (0.90)	-1.02 (1.08)	0.45 (0.71)	-0.13 (0.88)	0.59 (0.85)	-4.53*** (1.10)	-0.20 (1.00)	-0.28 (1.25)	0.49 (0.73)	2.82** (1.25)
Durable Goods Orders	-6.07*** (1.11)	-2.72** (1.25)	-5.44*** (1.05)	-0.05 (1.38)	-2.96*** (0.77)	0.61 (1.01)	-4.33*** (0.94)	-3.61** (1.58)	-2.16* (1.12)	0.66 (1.47)	-1.09 (0.84)	2.27 (1.52)
Factory Orders	-2.13*** (0.71)	-1.80*** (0.67)	-2.11** (0.90)	-2.66** (1.04)	-1.05 (0.66)	-2.33*** (0.85)	-1.86** (0.83)	-3.74*** (1.07)	-1.57* (0.93)	-0.68 (1.21)	-1.97*** (0.67)	0.05 (1.21)
Housing: Existing Home Sales	-5.66*** (1.37)	-3.14*** (0.61)	-5.95*** (1.71)	-0.44 (0.96)	-2.11 (1.55)	0.29 (0.79)	-8.53*** (1.87)	-5.62*** (0.98)	1.33 (2.18)	1.90* (1.11)	-2.27 (1.71)	2.20** (1.11)
Housing: Housing Permits	-1.44 (1.51)	-3.28** (1.32)	-1.20 (1.37)	-0.98 (1.46)	-1.28 (1.09)	-0.62 (1.07)	-0.49 (1.27)	-2.45 (1.68)	-0.85 (1.40)	-0.09 (1.56)	-0.92 (1.23)	0.90 (1.62)
Housing: Housing Starts	-1.02 (1.02)	-6.47*** (1.66)	-0.33 (0.96)	-3.82** (1.83)	-0.53 (0.71)	-2.53* (1.34)	-0.47 (0.87)	-8.10*** (2.10)	-0.54 (1.02)	-1.18 (1.96)	-0.64 (0.78)	1.23 (2.03)
Housing: New Home Sales	-3.37*** (0.60)	-6.53*** (1.01)	-2.78*** (0.73)	-0.67 (1.59)	-2.34*** (0.55)	1.61 (1.29)	-2.63*** (0.70)	-8.91*** (1.61)	-1.12 (0.79)	2.42 (1.83)	-0.66 (0.56)	2.60 (1.83)
ISM Manufacturing Index	-11.45*** (0.62)	-10.58*** (0.67)	-6.49*** (0.83)	-1.98* (1.11)	-3.43*** (0.61)	-1.41 (0.90)	-5.27*** (0.76)	-14.56*** (1.08)	-0.49 (0.86)	3.93*** (1.27)	-0.59 (0.62)	5.25*** (1.27)
Industrial Production	-3.95*** (0.45)	-1.95*** (0.46)	-1.30* (0.67)	-0.36 (0.80)	-0.75 (0.55)	-0.37 (0.70)	-3.27*** (0.64)	-3.60*** (0.71)	0.84 (0.86)	0.95 (0.88)	1.22** (0.60)	1.47* (0.82)
Inflation: Consumer Price Index	-2.89* (1.51)	-4.37*** (1.48)	-1.04 (1.38)	-1.42 (1.63)	-1.50 (1.10)	-0.56 (1.20)	0.10 (1.28)	-5.09*** (1.87)	-1.74 (1.41)	-3.14* (1.74)	0.57 (1.24)	-1.94 (1.80)
Inflation: Producer Price Index	-5.29*** (1.57)	-3.72** (1.45)	-2.75* (1.43)	-1.97 (1.60)	-2.43** (1.14)	-0.91 (1.17)	-2.85** (1.33)	-6.15*** (1.83)	-2.11 (1.47)	0.35 (1.71)	-1.78 (1.29)	-0.33 (1.77)
Initial Jobless Claims	3.90*** (1.02)	4.58*** (1.30)	2.87*** (1.01)	1.90 (1.44)	2.25*** (0.70)	1.48 (1.05)	3.82*** (0.85)	7.41*** (1.64)	1.86* (1.00)	-0.34 (1.54)	-0.28 (0.75)	-1.38 (1.59)
Nonfarm Payrolls	-20.72*** (1.21)	-9.07*** (1.00)	-17.42*** (1.22)	-7.50*** (1.11)	-10.71*** (0.84)	-4.16*** (0.82)	-13.01*** (1.03)	-9.51*** (1.27)	-10.72*** (1.22)	-3.76*** (1.20)	-5.97*** (0.92)	2.27* (1.24)
Personal Income	0.64 (1.32)	-0.21 (1.27)	0.42 (1.24)	0.42 (1.40)	0.14 (0.90)	0.09 (1.02)	0.01 (1.10)	-0.27 (1.60)	-0.41 (1.29)	0.65 (1.49)	0.20 (0.97)	1.58 (1.54)
Personal Spending	-0.96 (1.31)	-1.87 (1.52)	-0.68 (1.26)	0.43 (1.68)	-0.45 (0.89)	1.35 (1.23)	-0.08 (1.09)	-2.32 (1.93)	-0.12 (1.28)	0.74 (1.79)	0.42 (0.96)	0.73 (1.85)
Real GDP Growth Advanced	-10.39*** (1.82)	-6.19*** (2.37)	-18.56*** (1.83)	-4.90* (2.62)	-10.22*** (1.25)	-4.76** (1.92)	-9.21*** (1.53)	-12.37*** (3.00)	-9.51*** (3.00)	0.11 (2.80)	-2.68** (1.36)	-1.14 (2.90)
Real GDP Growth Final	-1.40 (2.42)	-4.82*** (1.71)	-2.49 (2.58)	-3.73** (1.89)	-1.19 (1.66)	-2.35* (1.39)	-1.90 (2.03)	-6.81*** (2.17)	-2.35 (2.37)	-3.72* (2.02)	0.02 (1.78)	-3.03 (2.09)
Real GDP Growth Second	-3.22 (2.35)	-3.17* (1.71)	-4.59* (2.36)	-5.87*** (1.89)	-2.63 (1.60)	-2.77** (1.39)	-3.46* (1.96)	-9.77*** (2.16)	-1.34 (2.28)	-3.38* (2.02)	-3.29* (1.72)	-1.40 (2.09)
Retail Sales	-6.86*** (1.26)	-11.36*** (1.48)	-7.35*** (1.14)	-2.94* (1.66)	-5.44*** (0.90)	-1.75 (1.22)	-5.72*** (1.06)	-15.43*** (1.87)	-3.01** (1.18)	4.18* (1.77)	-0.78 (1.01)	3.81** (1.83)

Table B.2: Asset Prices Response to U.S. Macro News: t-test [10-minute window]

News	10Yr T-Note	EUR	GBP	JPY	AUD	CAD
Consumer Confidence	-230.38***	-315.87***	-226.70***	45.76***	-252.36***	-178.11***
Consumer Sentiment Final	-45.22***	6.72***	3.08***	-71.41***	45.29***	-58.53***
Consumer Sentiment Preliminary	21.55***	0.57	22.95***	165.19***	2.17**	-71.24***
Durable Goods Orders	-92.74***	-140.10***	-128.32***	-17.59***	-69.91***	-85.90***
Factory Orders	-16.49***	18.33***	54.74***	64.38***	-26.91***	-65.66***
Housing: Existing Home Sales	-54.66***	-93.55***	-45.65***	-45.95***	-7.79***	-74.42***
Housing: Housing Permits	37.64***	-4.66***	-17.95***	38.84***	-15.04***	-37.51***
Housing: Housing Starts	125.54***	74.19***	58.26***	146.88***	12.73***	-37.52***
Housing: New Home Sales	121.61***	-52.78***	-123.48***	158.01***	-78.50***	-73.84***
ISM Manufacturing Index	-45.12***	-146.57***	-84.57***	322.27***	-131.28***	-183.32***
Industrial Production	-147.37***	-40.59***	-19.41***	15.98***	-4.10***	-11.19***
Inflation: Consumer Price Index	28.64***	7.34***	-23.71***	95.14***	25.81***	47.86***
Inflation: Producer Price Index	-29.91***	-15.00***	-38.17***	60.48***	-45.15***	-27.41***
Initial Jobless Claims	-18.92***	24.79***	27.63***	-86.45***	54.45***	27.69***
Nonfarm Payrolls	-361.61***	-278.62***	-266.37***	-99.46***	-194.75***	-245.39***
Personal Income	22.31***	0.02	1.79*	6.64***	-25.19***	-34.31***
Personal Spending	21.40***	-23.67***	-54.44***	45.21***	-17.95***	-6.61***
Real GDP Growth Advanced	-64.63***	-191.17***	-108.14***	41.72***	-130.73***	-21.23***
Real GDP Growth Final	57.01***	18.24***	26.21***	77.79***	21.26***	51.75***
Real GDP Growth Second	-0.85	19.89***	3.24***	101.99***	32.56***	-32.62***
Retail Sales	99.31***	-94.37***	-104.90***	193.79***	-145.10***	-94.20***

Table B.3: Asset Prices Response to U.S. Macroeconomic News [20-minute window]

News	10Yr T-Note		EUR		GBP		JPY		AUD		CAD	
	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008
Consumer Confidence	-9.40*** (0.86)	-4.72*** (0.81)	-10.00*** (1.20)	-0.07 (1.25)	-5.23*** (0.85)	1.34 (1.07)	-7.09*** (1.09)	-6.90*** (1.19)	-4.22*** (1.24)	3.41** (1.49)	-0.77 (0.89)	3.01** (1.44)
Consumer Sentiment Final	-0.45 (1.01)	-0.72 (0.98)	-1.56 (1.27)	0.03 (1.50)	-1.93* (0.99)	-0.16 (1.29)	-2.27* (1.17)	-0.69 (1.44)	-1.11 (1.41)	1.19 (1.80)	-2.05** (1.04)	2.64 (1.73)
Consumer Sentiment Preliminary	-0.57 (0.93)	-3.90*** (0.89)	1.46 (1.17)	-1.78 (1.37)	1.56* (0.91)	-0.02 (1.18)	0.58 (1.08)	-7.54*** (1.30)	1.07 (1.30)	1.97 (1.64)	-0.06 (0.96)	4.45*** (1.58)
Durable Goods Orders	-8.00*** (2.54)	-2.81** (1.40)	-4.70 (3.13)	-0.75 (1.71)	-1.73 (2.30)	-0.37 (1.25)	-1.46 (4.18)	-3.63** (1.79)	-2.92 (3.80)	0.55 (1.71)	-0.91 (1.87)	1.10 (1.77)
Factory Orders	-3.07*** (0.88)	-0.37 (0.87)	-2.71** (1.17)	-3.49*** (1.32)	-0.72 (0.85)	-2.68** (1.14)	-2.02* (1.08)	-2.04 (1.27)	-2.70** (1.23)	-1.84 (1.59)	-1.52* (0.88)	-2.88* (1.53)
Housing: Existing Home Sales	-6.16*** (1.73)	-3.63*** (0.79)	-7.96*** (2.21)	-0.66 (1.22)	-5.36*** (2.05)	0.39 (1.05)	-9.24*** (2.43)	-7.45*** (1.16)	-0.83 (2.88)	2.58* (1.46)	-2.42 (2.27)	4.15*** (1.40)
Housing: Housing Permits	-1.82 (1.94)	-2.58* (1.49)	-3.15 (2.23)	0.04 (1.81)	-4.78** (1.89)	-0.34 (1.33)	-3.42 (2.32)	-2.37 (1.90)	-4.94** (2.43)	-0.00 (1.82)	-1.43 (1.93)	1.26 (1.88)
Housing: Housing Starts	-0.35 (2.35)	-6.86*** (1.86)	-1.74 (2.85)	-2.76 (2.27)	-1.03 (2.07)	-1.77 (1.67)	-2.93 (3.75)	-8.82*** (2.38)	0.47 (3.41)	-1.07 (2.28)	-0.03 (1.70)	1.76 (2.36)
Housing: New Home Sales	-4.42*** (0.74)	-6.61*** (1.30)	-3.45*** (0.96)	-1.49 (2.01)	-2.58*** (0.72)	1.67 (1.73)	-3.00*** (0.91)	-9.32*** (1.92)	-1.58 (1.04)	3.17 (2.40)	-1.91*** (0.74)	3.50 (2.32)
ISM Manufacturing Index	-12.60*** (0.78)	-12.11*** (0.87)	-8.88*** (1.08)	-2.40* (1.40)	-5.02*** (0.78)	-1.52 (1.21)	-6.36*** (0.99)	-14.69*** (1.30)	-3.01*** (1.14)	3.43** (1.68)	0.06 (0.81)	6.49*** (1.61)
Industrial Production	-3.54*** (0.61)	-1.56** (0.64)	-0.37 (0.89)	-0.66 (1.10)	0.68 (0.75)	-0.26 (0.96)	-4.40*** (0.89)	-3.12*** (1.01)	5.03*** (1.11)	-0.01 (1.20)	1.45* (0.84)	0.22 (1.09)
Inflation: Consumer Price Index	-1.63 (1.87)	-5.24*** (1.66)	-0.84 (2.16)	0.46 (2.02)	-1.74 (1.86)	0.24 (1.48)	1.30 (2.16)	-4.31** (2.12)	-1.93 (2.33)	-3.30 (2.03)	-0.21 (1.93)	-2.38 (2.10)
Inflation: Producer Price Index	-5.93*** (1.92)	-4.06** (1.63)	-4.15* (2.22)	-0.03 (1.98)	-3.99** (1.91)	0.57 (1.45)	-3.70* (2.20)	-7.74*** (2.07)	-2.94 (2.40)	0.91 (1.99)	-2.98 (1.99)	0.17 (2.06)
Initial Jobless Claims	3.29 (2.28)	5.78*** (1.46)	8.88*** (3.01)	1.21 (1.78)	3.31 (2.22)	0.55 (1.31)	8.17** (3.94)	8.10*** (1.86)	5.14 (3.49)	-1.63 (1.79)	1.11 (1.70)	-3.01 (1.85)
Nonfarm Payrolls	-21.49*** (2.79)	-7.58*** (1.13)	-18.05*** (3.75)	-6.55*** (1.38)	-13.03*** (2.73)	-4.79*** (1.01)	-13.54*** (4.87)	-10.11*** (1.44)	-14.31*** (4.31)	-3.09** (1.40)	-6.49*** (2.10)	0.87 (1.44)
Personal Income	-0.75 (2.94)	0.03 (1.42)	-1.79 (3.68)	0.42 (1.73)	1.10 (2.89)	0.99 (1.27)	-0.35 (5.10)	0.57 (1.81)	2.01 (4.52)	0.76 (1.74)	1.74 (2.20)	1.81 (1.79)
Personal Spending	-2.42 (2.92)	-2.27 (1.71)	-11.27*** (3.73)	1.11 (2.08)	-3.83 (2.82)	0.67 (1.52)	2.51 (5.03)	-2.97 (2.18)	-11.91*** (4.45)	1.57 (2.09)	0.31 (2.17)	2.03 (2.16)
Real GDP Growth Advanced	-10.03** (4.25)	-5.56** (2.67)	-20.87*** (5.52)	-7.87** (3.25)	-10.17*** (3.91)	-7.00*** (2.38)	-9.25 (7.04)	-13.70*** (3.40)	-10.64* (6.24)	-4.94 (3.26)	-0.02 (3.05)	3.52 (3.37)
Real GDP Growth Final	0.72 (5.45)	-6.14*** (1.92)	-1.75 (7.66)	-6.22*** (2.34)	-8.92* (5.17)	-4.49*** (1.72)	-9.91 (9.29)	-7.82*** (2.45)	4.95 (8.23)	-6.68*** (2.35)	4.85 (4.01)	-4.07* (2.43)
Real GDP Growth Second	-9.89* (5.22)	-4.11** (1.93)	-9.25 (7.01)	-3.41 (2.34)	-8.99* (5.13)	-1.21 (1.72)	-12.29 (9.02)	-12.67*** (2.44)	-0.26 (8.02)	-1.90 (2.35)	0.32 (3.90)	2.63 (2.43)
Retail Sales	-9.33*** (1.87)	-12.10*** (1.67)	-6.82*** (2.50)	-0.48 (2.06)	-7.97*** (1.94)	-1.57 (1.51)	-4.65* (2.64)	-15.42*** (2.13)	4.10 (2.90)	3.42* (2.07)	1.00 (1.77)	4.27** (2.14)

Table B.4: Asset Prices Response to U.S. Macro News: t-test [20-minute window]

News	10Yr T-Note	EUR	GBP	JPY	AUD	CAD
Consumer Confidence	-189.37***	-263.43***	-222.37***	-5.58***	-183.18***	-101.21***
Consumer Sentiment Final	8.71***	-36.40***	-48.71***	-38.19***	-45.21***	-102.43***
Consumer Sentiment Preliminary	118.09***	81.20***	47.70***	216.10***	-19.27***	-107.86***
Durable Goods Orders	-88.83***	-53.33***	-26.10***	24.40***	-42.32***	-36.92***
Factory Orders	-104.78***	20.28***	63.39***	0.66	-20.03***	34.93***
Housing: Existing Home Sales	-43.21***	-96.37***	-82.67***	-21.82***	-35.00***	-83.03***
Housing: Housing Permits	12.68***	-45.73***	-79.01***	-14.35***	-66.88***	-41.34***
Housing: Housing Starts	103.64***	13.11***	13.27***	64.98***	18.34***	-27.83***
Housing: New Home Sales	65.40***	-38.57***	-99.94***	131.96***	-80.08***	-96.80***
ISM Manufacturing Index	-19.55***	-165.01***	-110.89***	235.02***	-145.13***	-158.75***
Industrial Production	-106.62***	9.35***	36.03***	-44.76***	146.08***	41.33***
Inflation: Consumer Price Index	59.00***	-18.05***	-33.99***	76.34***	18.19***	31.58***
Inflation: Producer Price Index	-30.03***	-56.48***	-77.25***	54.88***	-50.32***	-45.17***
Initial Jobless Claims	-46.10***	105.29***	54.62***	0.75	89.05***	77.45***
Nonfarm Payrolls	-242.00***	-141.56***	-149.81***	-36.24***	-132.24***	-144.38***
Personal Income	-12.30***	-26.51***	1.94*	-9.05***	13.76***	-1.11
Personal Spending	-2.28**	-139.54***	-71.97***	52.28***	-142.47***	-26.89***
Real GDP Growth Advanced	-44.50***	-97.42***	-34.76***	29.29***	-41.28***	-36.48***
Real GDP Growth Final	62.35***	27.64***	-43.04***	-11.64***	72.46***	95.86***
Real GDP Growth Second	-55.01***	-39.03***	-77.00***	2.17**	10.57***	-25.38***
Retail Sales	47.55***	-84.93***	-113.05***	137.82***	8.30***	-50.73***

Table B.5: Asset Prices Response to U.S. Macroeconomic News [60-minute window]

News	10Yr T-Note		EUR		GBP		JPY		AUD		CAD	
	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008
Consumer Confidence	-9.87*** (1.27)	-7.12*** (1.25)	-10.62*** (1.97)	3.01 (2.02)	-5.42*** (1.43)	2.76 (1.79)	-5.14*** (1.79)	-6.60*** (1.92)	-7.17*** (2.05)	4.32* (2.32)	-1.35 (1.53)	4.03* (2.24)
Consumer Sentiment Final	-2.20 (1.48)	-0.62 (1.52)	-3.41* (2.07)	3.07 (2.44)	-4.48*** (1.66)	0.28 (2.15)	-2.66 (1.90)	1.42 (2.32)	-1.87 (2.35)	2.36 (2.80)	-2.54 (1.78)	6.10** (2.70)
Consumer Sentiment Preliminary	-4.00*** (1.36)	-3.91*** (1.38)	-1.36 (1.91)	-2.12 (2.23)	0.22 (1.53)	-1.81 (1.96)	-1.19 (1.75)	-6.62*** (2.11)	-0.76 (2.17)	0.55 (2.56)	-0.69 (1.65)	4.96** (2.46)
Durable Goods Orders	-7.49*** (2.70)	-2.07 (1.73)	-4.80 (3.31)	-1.17 (2.46)	-2.60 (2.47)	-0.86 (1.92)	-3.40 (4.30)	-3.38 (2.30)	-1.81 (3.98)	0.61 (2.45)	-2.19 (2.20)	1.02 (2.44)
Factory Orders	-1.30 (1.28)	0.88 (1.34)	-3.91** (1.90)	-3.85* (2.15)	-2.85** (1.43)	-5.97*** (1.90)	-0.81 (1.78)	0.46 (2.04)	-4.58** (2.03)	-5.18** (2.47)	-2.56* (1.51)	-0.89 (2.39)
Housing: Existing Home Sales	-11.68*** (2.64)	-2.90** (1.23)	-10.51*** (3.72)	-0.85 (1.98)	-4.83 (3.49)	-2.61 (1.75)	-17.35*** (4.01)	-7.06*** (1.87)	0.20 (5.06)	-0.53 (2.28)	-7.56* (3.91)	1.21 (2.19)
Housing: Housing Permits	-1.65 (2.19)	-2.99 (1.84)	-4.96* (2.63)	-0.37 (2.61)	-6.39*** (2.27)	-2.52 (2.03)	-6.49** (2.72)	-1.66 (2.45)	-6.18** (3.05)	-0.52 (2.60)	-3.34 (2.58)	-0.08 (2.59)
Housing: Housing Starts	-0.57 (2.49)	-6.74*** (2.30)	-2.13 (3.01)	-4.09 (3.27)	-0.79 (2.23)	-5.33** (2.55)	-4.13 (3.86)	-6.22** (3.07)	0.58 (3.58)	-1.31 (3.26)	0.41 (2.01)	1.99 (3.24)
Housing: New Home Sales	-4.91*** (1.08)	-7.37*** (2.02)	-3.96** (1.56)	-5.07 (3.26)	-3.38*** (1.20)	-3.52 (2.88)	-3.41** (1.50)	-10.12*** (3.09)	-2.71 (1.71)	-0.96 (3.75)	-1.81 (1.27)	1.04 (3.62)
ISM Manufacturing Index	-15.29*** (1.15)	-13.57*** (1.38)	-14.42*** (1.76)	-0.26 (2.28)	-6.98*** (1.32)	-0.42 (2.01)	-9.33*** (1.63)	-18.50*** (2.12)	-4.66** (1.88)	6.33** (2.62)	-2.02 (1.39)	7.95*** (2.52)
Industrial Production	-3.35*** (1.01)	-1.66 (1.13)	1.91 (1.65)	-1.11 (2.01)	1.68 (1.30)	0.16 (1.62)	-2.90* (1.56)	-1.12 (1.65)	7.44*** (1.80)	3.20 (2.05)	1.29 (1.54)	1.18 (2.06)
Inflation: Consumer Price Index	-0.91 (2.13)	-2.16 (2.06)	-3.81 (2.59)	-2.50 (2.92)	-3.27 (2.26)	-1.75 (2.27)	-1.32 (2.60)	-2.53 (2.73)	-4.67 (2.99)	-9.86*** (2.89)	-0.40 (2.59)	-5.54* (2.89)
Inflation: Producer Price Index	-6.46*** (2.20)	-8.39*** (2.00)	-2.83 (2.68)	1.62 (2.85)	-2.82 (2.33)	2.39 (2.22)	-3.75 (2.68)	-10.19*** (2.66)	-3.23 (3.09)	3.83 (2.84)	-4.38 (2.69)	0.07 (2.83)
Initial Jobless Claims	5.11** (2.43)	5.84*** (1.80)	10.42*** (3.17)	-2.68 (2.56)	2.56 (2.37)	1.30 (2.00)	8.01** (4.03)	7.80*** (2.40)	6.51* (3.64)	-2.13 (2.55)	-0.01 (1.99)	-5.07** (2.54)
Nonfarm Payrolls	-20.72*** (2.98)	-7.70*** (1.40)	-17.86*** (3.96)	-10.85*** (1.99)	-13.66*** (2.92)	-7.35*** (1.55)	-14.49*** (4.98)	-12.86*** (1.85)	-11.56** (4.50)	-5.51*** (1.99)	-5.26** (2.46)	-0.99 (1.99)
Personal Income	-0.37 (3.13)	-0.00 (1.76)	-0.92 (3.89)	1.64 (2.49)	2.27 (3.09)	1.41 (1.94)	-0.26 (5.21)	1.15 (2.33)	1.50 (4.72)	0.88 (2.48)	1.95 (2.57)	0.59 (2.47)
Personal Spending	-0.53 (3.11)	-0.42 (2.11)	-9.95** (3.94)	4.55 (2.99)	-2.93 (3.01)	2.57 (2.33)	4.08 (5.14)	-0.42 (2.81)	-9.73** (4.64)	4.66 (2.98)	0.30 (2.54)	3.01 (2.97)
Real GDP Growth Advanced	-12.07*** (4.51)	-5.82* (3.30)	-19.56*** (5.83)	-2.78 (4.68)	-12.42*** (4.18)	-6.42* (3.65)	-12.36* (7.20)	-12.97*** (4.38)	-9.55 (6.52)	-2.22 (4.66)	2.39 (3.58)	8.73* (4.64)
Real GDP Growth Final	3.57 (5.80)	-3.74 (2.38)	3.47 (8.09)	-4.94 (3.38)	-5.51 (5.53)	-4.58* (2.63)	-6.92 (9.50)	-7.04** (3.16)	8.53 (8.59)	-6.45* (3.36)	6.23 (4.71)	-2.43 (3.35)
Real GDP Growth Second	-8.44 (5.56)	-6.14*** (2.38)	-8.74 (7.40)	-0.63 (3.38)	-6.30 (5.47)	0.54 (2.63)	-12.02 (9.22)	-8.82*** (3.16)	2.11 (8.37)	-2.57 (3.36)	-1.81 (4.56)	2.20 (3.35)
Retail Sales	-8.47*** (2.04)	-15.29*** (2.06)	-5.85** (2.78)	-0.02 (2.97)	-8.85*** (2.21)	-0.05 (2.31)	-4.09 (2.91)	-17.77*** (2.75)	3.78 (3.28)	7.37** (2.95)	0.78 (2.27)	6.59** (2.94)

Table B.6: Asset Prices Response to U.S. Macro News: t-test [60-minute window]

News	10Yr T-Note	EUR	GBP	JPY	AUD	CAD
Consumer Confidence	-73.42***	-221.69***	-165.60***	26.38***	-173.62***	-90.53***
Consumer Sentiment Final	-33.83***	-91.44***	-78.57***	-61.44***	-52.06***	-118.45***
Consumer Sentiment Preliminary	-2.10**	11.71***	36.56***	89.36***	-17.70***	-84.83***
Durable Goods Orders	-82.81***	-41.55***	-26.90***	-0.20	-25.66***	-45.46***
Factory Orders	-55.78***	-0.93	60.55***	-21.99***	8.67***	-26.90***
Housing: Existing Home Sales	-98.25***	-76.13***	-18.82***	-76.45***	4.33***	-65.26***
Housing: Housing Permits	19.35***	-51.23***	-52.45***	-54.70***	-58.25***	-36.98***
Housing: Housing Starts	85.43***	20.18***	61.78***	20.33***	18.39***	-18.53***
Housing: New Home Sales	48.00***	13.49***	2.01**	86.75***	-18.74***	-32.45***
ISM Manufacturing Index	-44.81***	-221.50***	-124.06***	158.65***	-156.89***	-155.40***
Industrial Production	-52.30***	52.53***	34.02***	-37.30***	73.04***	2.02**
Inflation: Consumer Price Index	17.26***	-13.91***	-19.64***	13.29***	51.37***	54.74***
Inflation: Producer Price Index	26.28***	-46.78***	-66.21***	69.88***	-68.81***	-46.92***
Initial Jobless Claims	-11.95***	150.38***	19.95***	2.27**	96.89***	72.62***
Nonfarm Payrolls	-204.75***	-76.69***	-98.12***	-16.21***	-64.28***	-66.07***
Personal Income	-5.26***	-26.43***	11.98***	-12.93***	5.97***	18.34***
Personal Spending	-1.55	-137.96***	-71.02***	39.26***	-131.18***	-32.42***
Real GDP Growth Advanced	-54.90***	-105.16***	-52.18***	3.65***	-45.17***	-49.93***
Real GDP Growth Final	60.69***	46.97***	-7.79***	0.64	85.18***	74.20***
Real GDP Growth Second	-19.88***	-48.57***	-58.73***	-17.55***	27.44***	-35.26***
Retail Sales	101.31***	-61.90***	-118.81***	148.02***	-35.27***	-67.36***

Table B.7: Asset Prices Response to U.S. Macro News + day-of-the-week dummies

News	10Yr T-Note		EUR		GBP		JPY		AUD		CAD	
	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008	Pre2008	Post2008
Consumer Confidence	-9.26*** (1.00)	-5.63*** (0.97)	-11.12*** (1.41)	0.41 (1.47)	-6.07*** (1.03)	1.32 (1.28)	-7.29*** (1.31)	-7.62*** (1.39)	-4.57*** (1.49)	4.68*** (1.71)	-1.52 (1.08)	4.96*** (1.64)
Consumer Sentiment Final	-2.61** (1.17)	-0.21 (1.18)	-3.39** (1.49)	-2.47 (1.77)	-3.03** (1.20)	-2.18 (1.54)	-2.66* (1.37)	0.11 (1.69)	-1.96 (1.70)	-2.57 (2.06)	-1.94 (1.25)	1.03 (1.98)
Consumer Sentiment Preliminary	-2.99*** (1.08)	-4.28*** (1.07)	-2.05 (1.38)	-1.53 (1.62)	-1.80 (1.10)	-0.42 (1.40)	-0.68 (1.26)	-6.37*** (1.54)	-0.16 (1.57)	0.17 (1.88)	-1.39 (1.15)	2.75 (1.81)
Durable Goods Orders	-7.55*** (2.59)	-2.19 (1.51)	-5.16 (3.22)	-0.14 (1.95)	-2.33 (2.37)	-0.19 (1.44)	-1.93 (4.20)	-2.91 (1.99)	-3.70 (3.88)	0.89 (1.88)	-1.32 (1.98)	1.33 (1.98)
Factory Orders	-2.73*** (1.01)	0.30 (1.04)	-1.79 (1.38)	-4.08*** (1.56)	-0.10 (1.03)	-3.30** (1.36)	-0.66 (1.30)	-1.31 (1.49)	-2.23 (1.48)	-3.77** (1.82)	-0.57 (1.06)	-2.03 (1.75)
Housing: Existing Home Sales	-7.32*** (1.98)	-4.04*** (0.95)	-7.59*** (2.57)	-1.64 (1.44)	-1.61 (2.44)	-0.49 (1.25)	-8.69*** (2.75)	-8.56*** (1.36)	2.80 (3.65)	1.32 (1.67)	-1.63 (2.73)	2.94* (1.61)
Housing: Housing Permits	-2.01 (2.04)	-2.92* (1.60)	-3.74 (2.42)	0.72 (2.07)	-4.97** (2.05)	-0.48 (1.53)	-4.79* (2.47)	-3.21 (2.11)	-5.51** (2.73)	-0.29 (2.00)	-1.41 (2.18)	0.98 (2.10)
Housing: Housing Starts	-0.33 (2.40)	-6.48*** (2.01)	-2.04 (2.93)	-3.50 (2.59)	-1.20 (2.14)	-2.42 (1.92)	-3.63 (3.77)	-8.98*** (2.64)	0.68 (3.49)	-2.11 (2.51)	0.62 (1.81)	2.13 (2.64)
Housing: New Home Sales	-4.18*** (0.85)	-7.00*** (1.57)	-2.57** (1.13)	-3.94* (2.37)	-2.41*** (0.87)	-1.30 (2.06)	-2.52** (1.10)	-8.78*** (2.26)	-1.99 (1.25)	0.23 (2.76)	-2.05** (0.89)	2.03 (2.65)
ISM Manufacturing Index	-14.14*** (0.90)	-12.87*** (1.06)	-11.33*** (1.27)	-2.47 (1.66)	-6.04*** (0.95)	-1.67 (1.44)	-7.65*** (1.20)	-17.86*** (1.53)	-4.43*** (1.37)	4.98*** (1.92)	-1.67* (0.98)	6.38*** (1.85)
Industrial Production	-4.25*** (0.74)	-0.94 (0.77)	-0.20 (1.11)	-0.75 (1.37)	0.62 (0.89)	-0.54 (1.15)	-4.58*** (1.13)	-0.14 (1.22)	2.64* (1.37)	-0.33 (1.45)	0.40 (1.12)	-0.71 (1.46)
Inflation: Consumer Price Index	-1.46 (1.98)	-4.73*** (1.79)	-0.49 (2.36)	-1.37 (2.31)	-1.84 (2.03)	-0.85 (1.71)	2.28 (2.34)	-4.03* (2.36)	-1.67 (2.65)	-6.93*** (2.23)	0.51 (2.18)	-5.53** (2.34)
Inflation: Producer Price Index	-5.69*** (2.04)	-4.17** (1.75)	-2.76 (2.43)	-0.08 (2.26)	-2.56 (2.09)	-1.11 (1.67)	-2.90 (2.39)	-7.14*** (2.30)	-1.98 (2.74)	-0.04 (2.18)	-2.21 (2.26)	-1.95 (2.30)
Initial Jobless Claims	4.11* (2.33)	6.19*** (1.57)	10.07*** (3.09)	1.36 (2.03)	3.51 (2.28)	1.15 (1.50)	8.10** (3.95)	8.35*** (2.06)	6.88* (3.56)	-1.00 (1.96)	1.13 (1.80)	-3.17 (2.06)
Nonfarm Payrolls	-22.81*** (2.85)	-8.48*** (1.22)	-18.67*** (3.85)	-7.44*** (1.58)	-13.72*** (2.81)	-5.49*** (1.17)	-13.28*** (4.89)	-13.11*** (1.59)	-13.30*** (4.40)	-3.23** (1.53)	-7.33*** (2.22)	0.22 (1.61)
Personal Income	-0.53 (3.00)	-0.34 (1.53)	-1.03 (3.78)	0.73 (1.97)	1.46 (2.97)	0.95 (1.46)	-0.02 (5.11)	0.76 (2.01)	1.86 (4.62)	0.52 (1.91)	1.63 (2.32)	1.72 (2.01)
Personal Spending	-2.23 (2.98)	-0.90 (1.84)	-10.98*** (3.84)	1.83 (2.37)	-3.91 (2.90)	2.05 (1.75)	2.93 (5.04)	-1.04 (2.42)	-9.35** (4.54)	2.93 (2.29)	0.79 (2.29)	2.61 (2.41)
Real GDP Growth Advanced	-10.51** (4.33)	-6.34** (2.87)	-21.11*** (5.67)	-4.44 (3.71)	-11.26*** (4.03)	-5.61** (2.74)	-10.32 (7.06)	-13.54*** (3.77)	-9.72 (6.38)	-1.81 (3.59)	1.32 (3.22)	7.71** (3.77)
Real GDP Growth Final	2.62 (5.56)	-4.94** (2.07)	0.42 (7.87)	-5.34** (2.67)	-7.76 (5.32)	-5.22*** (1.98)	-7.46 (9.32)	-7.93*** (2.73)	5.22 (8.41)	-5.91** (2.58)	5.54 (4.24)	-3.16 (2.72)
Real GDP Growth Second	-8.24 (5.32)	-4.65** (2.07)	-9.60 (7.20)	-1.47 (2.68)	-8.69* (5.27)	0.97 (1.98)	-11.63 (9.05)	-10.21*** (2.72)	2.03 (8.18)	0.43 (2.59)	-0.45 (4.11)	3.98 (2.72)
Retail Sales	-8.04*** (1.94)	-12.26*** (1.80)	-7.04*** (2.63)	-0.44 (2.35)	-8.12*** (2.05)	-0.83 (1.74)	-4.87* (2.74)	-15.13*** (2.37)	3.02 (3.07)	4.46** (2.27)	1.82 (1.96)	4.66* (2.39)

Table B.8: Asset Prices Response to U.S. Macro News: t-test [30-minute window]

News	10Yr T-Note	EUR	GBP	JPY	AUD	CAD
Consumer Confidence	-124.78***	-259.17***	-208.83***	8.04***	-190.92***	-149.78***
Consumer Sentiment Final	-65.70***	-17.96***	-19.72***	-57.26***	10.26***	-56.12***
Consumer Sentiment Preliminary	38.54***	-11.20***	-34.67***	128.81***	-6.05***	-85.65***
Durable Goods Orders	-88.57***	-63.92***	-38.21***	10.70***	-53.78***	-44.53***
Factory Orders	-99.55***	50.19***	86.73***	15.41***	30.77***	32.34***
Housing: Existing Home Sales	-48.76***	-67.46***	-13.47***	-1.42	12.09***	-48.33***
Housing: Housing Permits	14.28***	-57.89***	-72.16***	-19.99***	-63.46***	-32.71***
Housing: Housing Starts	93.39***	17.44***	20.14***	56.34***	31.38***	-21.35***
Housing: New Home Sales	70.76***	22.78***	-21.93***	110.90***	-32.29***	-63.36***
ISM Manufacturing Index	-42.66***	-191.19***	-115.39***	244.34***	-183.14***	-171.98***
Industrial Production	-147.74***	14.20***	36.89***	-126.34***	70.67***	27.98***
Inflation: Consumer Price Index	50.03***	10.98***	-15.33***	78.38***	62.12***	77.84***
Inflation: Producer Price Index	-22.88***	-33.10***	-21.92***	52.33***	-22.56***	-3.28***
Initial Jobless Claims	-37.09***	112.18***	43.48***	-2.94***	99.27***	73.57***
Nonfarm Payrolls	-241.73***	-132.07***	-142.05***	-1.79*	-114.89***	-136.63***
Personal Income	-2.91***	-19.85***	7.96***	-7.51***	14.18***	-1.47
Personal Spending	-19.21***	-135.78***	-89.12***	36.75***	-124.48***	-26.00***
Real GDP Growth Advanced	-39.80***	-117.21***	-57.56***	20.54***	-54.87***	-60.10***
Real GDP Growth Final	66.76***	34.18***	-23.52***	2.58***	67.24***	86.56***
Real GDP Growth Second	-33.18***	-52.06***	-91.17***	-8.08***	10.03***	-45.15***
Retail Sales	68.79***	-81.10***	-117.60***	122.64***	-16.39***	-39.72***

Table B.9: Asset Prices Response to U.S. Macro News: Full Sample [10-minute window]

News	10Yr T-Note	EUR	GBP	JPY	AUD	CAD
Consumer Confidence	-6.83*** (0.49)	-4.09*** (0.68)	-2.10*** (0.51)	-6.89*** (0.64)	-0.01 (0.72)	1.16* (0.61)
Consumer Sentiment Final	0.02 (0.58)	-1.09 (0.75)	-1.23** (0.60)	-1.62** (0.73)	-0.13 (0.85)	-0.64 (0.72)
Consumer Sentiment Preliminary	-0.69 (0.53)	-1.01 (0.69)	0.22 (0.55)	-1.38** (0.67)	-0.22 (0.78)	1.42** (0.66)
Durable Goods Orders	-4.87*** (0.84)	-3.46*** (0.84)	-1.69*** (0.61)	-4.07*** (0.84)	-1.16 (0.89)	0.11 (0.78)
Factory Orders	-2.01*** (0.51)	-2.33*** (0.68)	-1.55*** (0.52)	-2.58*** (0.66)	-1.21 (0.74)	-1.16* (0.62)
Housing: Existing Home Sales	-3.73*** (0.58)	-1.72** (0.84)	-0.29 (0.71)	-6.30*** (0.87)	1.78* (1.00)	1.19 (0.92)
Housing: Housing Permits	-2.22** (1.00)	-1.12 (0.99)	-1.00 (0.76)	-1.33 (1.04)	-0.54 (1.04)	-0.16 (1.00)
Housing: Housing Starts	-2.15** (0.85)	-1.05 (0.85)	-0.94 (0.63)	-2.04** (0.85)	-0.66 (0.90)	-0.23 (0.79)
Housing: New Home Sales	-3.90*** (0.50)	-2.44*** (0.66)	-1.70*** (0.51)	-3.65*** (0.64)	-0.53 (0.73)	-0.09 (0.61)
ISM Manufacturing Index	-11.16*** (0.47)	-4.92*** (0.66)	-2.77*** (0.50)	-8.28*** (0.63)	0.93 (0.72)	1.28** (0.60)
Industrial Production	-3.17*** (0.33)	-0.90* (0.52)	-0.58 (0.43)	-3.39*** (0.48)	0.90 (0.63)	1.32*** (0.48)
Inflation: Consumer Price Index	-3.45*** (1.05)	-1.17 (1.04)	-1.14 (0.80)	-1.83* (1.09)	-2.25** (1.09)	-0.36 (1.05)
Inflation: Producer Price Index	-4.68*** (1.06)	-2.40** (1.06)	-1.80** (0.81)	-4.16*** (1.10)	-1.09 (1.11)	-1.18 (1.07)
Initial Jobless Claims	4.11*** (0.80)	2.54*** (0.83)	2.02*** (0.58)	4.89*** (0.79)	1.20 (0.84)	-0.61 (0.73)
Nonfarm Payrolls	-14.70*** (0.80)	-11.90*** (0.82)	-7.32*** (0.59)	-11.20*** (0.80)	-7.13*** (0.85)	-1.72** (0.75)
Personal Income	0.27 (0.94)	0.43 (0.93)	0.12 (0.68)	-0.11 (0.92)	0.05 (0.97)	0.80 (0.85)
Personal Spending	-1.27 (1.00)	-0.26 (1.01)	0.16 (0.72)	-0.83 (0.98)	0.18 (1.04)	0.54 (0.90)
Real GDP Growth Advanced	-9.18*** (1.44)	-14.02*** (1.50)	-8.63*** (1.04)	-10.12*** (1.42)	-6.70*** (1.51)	-2.22* (1.32)
Real GDP Growth Final	-3.38** (1.48)	-3.28** (1.53)	-1.86* (1.07)	-4.73*** (1.45)	-3.13** (1.54)	-1.74 (1.34)
Real GDP Growth Second	-3.20** (1.46)	-5.34*** (1.48)	-2.70** (1.05)	-7.01*** (1.43)	-2.48 (1.51)	-2.20* (1.31)
Retail Sales	-8.23*** (0.95)	-6.00*** (0.93)	-4.32*** (0.71)	-8.64*** (0.96)	-0.83 (0.98)	0.62 (0.93)

Table B.10: Asset Prices Response to U.S. Macro News: Full Sample [20-minute window]

News	10Yr T-Note	EUR	GBP	JPY	AUD	CAD
Consumer Confidence	-7.45*** (0.61)	-5.51*** (0.87)	-2.49*** (0.67)	-7.01*** (0.81)	-1.05 (0.96)	0.80 (0.78)
Consumer Sentiment Final	-0.55 (0.72)	-0.97 (0.97)	-1.25 (0.79)	-1.68* (0.91)	-0.28 (1.11)	-0.35 (0.94)
Consumer Sentiment Preliminary	-1.85*** (0.66)	0.22 (0.89)	0.94 (0.72)	-2.54*** (0.83)	1.43 (1.02)	1.72** (0.86)
Durable Goods Orders	-6.14*** (1.67)	-3.24 (2.02)	-1.24 (1.51)	-2.23 (2.69)	-1.68 (2.46)	-0.19 (1.35)
Factory Orders	-2.03*** (0.64)	-3.02*** (0.88)	-1.48** (0.68)	-2.03** (0.83)	-2.35** (0.97)	-2.01** (0.79)
Housing: Existing Home Sales	-4.21*** (0.75)	-2.36** (1.07)	-0.99 (0.94)	-7.90*** (1.07)	1.82 (1.32)	2.66** (1.18)
Housing: Housing Permits	-2.13* (1.23)	-1.81 (1.44)	-2.91** (1.17)	-2.99** (1.51)	-2.88* (1.53)	-0.29 (1.34)
Housing: Housing Starts	-1.73 (1.70)	-2.01 (2.04)	-1.22 (1.51)	-4.12 (2.67)	0.15 (2.45)	0.35 (1.36)
Housing: New Home Sales	-4.78*** (0.62)	-3.12*** (0.85)	-1.89*** (0.67)	-4.02*** (0.81)	-0.79 (0.96)	-0.99 (0.78)
ISM Manufacturing Index	-12.43*** (0.59)	-6.64*** (0.85)	-3.88*** (0.66)	-9.06*** (0.79)	-0.94 (0.94)	2.10*** (0.77)
Industrial Production	-2.77*** (0.45)	-0.49 (0.70)	0.33 (0.59)	-3.89*** (0.67)	3.08*** (0.82)	0.97 (0.66)
Inflation: Consumer Price Index	-3.00** (1.25)	-0.32 (1.48)	-0.98 (1.20)	-0.77 (1.50)	-2.39 (1.55)	-1.01 (1.40)
Inflation: Producer Price Index	-5.21*** (1.26)	-2.44 (1.49)	-2.10* (1.21)	-5.28*** (1.50)	-1.30 (1.57)	-1.69 (1.42)
Initial Jobless Claims	4.04** (1.58)	6.37*** (1.99)	2.51 (1.53)	8.14*** (2.68)	3.12 (2.39)	-0.14 (1.28)
Nonfarm Payrolls	-14.29*** (1.61)	-11.59*** (2.02)	-8.74*** (1.57)	-11.78*** (2.75)	-8.50*** (2.45)	-2.70** (1.32)
Personal Income	-0.42 (1.85)	-0.84 (2.23)	1.03 (1.80)	0.06 (3.13)	1.46 (2.79)	1.78 (1.50)
Personal Spending	-2.39 (1.97)	-6.90*** (2.42)	-2.36 (1.89)	0.69 (3.32)	-7.37** (2.96)	0.91 (1.59)
Real GDP Growth Advanced	-8.69*** (2.93)	-16.55*** (3.65)	-9.30*** (2.71)	-10.50** (4.80)	-9.00** (4.28)	1.03 (2.31)
Real GDP Growth Final	-3.29 (2.92)	-4.68 (3.68)	-6.40** (2.77)	-8.68* (4.89)	-1.78 (4.36)	-0.29 (2.35)
Real GDP Growth Second	-6.66** (2.86)	-5.78 (3.56)	-4.69* (2.80)	-12.47** (4.85)	-1.22 (4.33)	1.65 (2.32)
Retail Sales	-10.19*** (1.29)	-4.89*** (1.69)	-6.02*** (1.30)	-7.88*** (1.78)	3.95** (1.91)	2.01 (1.34)

Table B.11: Asset Prices Response to U.S. Macro News: Full Sample [30-minute window]

News	10Yr T-Note	EUR	GBP	JPY	AUD	CAD
Consumer Confidence	-7.75*** (0.71)	-5.91*** (1.03)	-2.99*** (0.80)	-7.43*** (0.96)	-0.72 (1.13)	1.17 (0.92)
Consumer Sentiment Final	-1.70** (0.84)	-3.07*** (1.14)	-2.73*** (0.94)	-1.60 (1.06)	-2.22* (1.31)	-0.89 (1.09)
Consumer Sentiment Preliminary	-3.49*** (0.77)	-1.83* (1.05)	-1.25 (0.87)	-2.87*** (0.98)	-0.01 (1.21)	0.24 (1.00)
Durable Goods Orders	-5.64*** (1.71)	-3.31 (2.10)	-1.57 (1.58)	-2.28 (2.73)	-2.06 (2.53)	-1.38 (1.44)
Factory Orders	-1.57** (0.74)	-2.69*** (1.03)	-1.31 (0.82)	-0.91 (0.99)	-2.80** (1.15)	-1.10 (0.94)
Housing: Existing Home Sales	-4.79*** (0.88)	-3.01** (1.25)	-0.77 (1.12)	-8.61*** (1.24)	1.69 (1.58)	1.91 (1.38)
Housing: Housing Permits	-2.38* (1.31)	-1.86 (1.60)	-3.07** (1.29)	-4.13** (1.63)	-3.32* (1.71)	-0.40 (1.51)
Housing: Housing Starts	-1.65 (1.75)	-2.42 (2.13)	-1.50 (1.58)	-4.70* (2.71)	0.09 (2.52)	0.94 (1.46)
Housing: New Home Sales	-4.64*** (0.73)	-2.78*** (1.00)	-2.21*** (0.81)	-3.54*** (0.97)	-1.60 (1.13)	-1.35 (0.92)
ISM Manufacturing Index	-13.72*** (0.69)	-8.28*** (1.01)	-4.64*** (0.79)	-10.95*** (0.95)	-1.41 (1.11)	0.90 (0.91)
Industrial Production	-2.96*** (0.54)	-0.43 (0.86)	0.18 (0.70)	-2.84*** (0.84)	1.50 (1.01)	-0.03 (0.89)
Inflation: Consumer Price Index	-2.71** (1.33)	-0.81 (1.64)	-1.45 (1.34)	-0.04 (1.64)	-3.59** (1.75)	-1.73 (1.58)
Inflation: Producer Price Index	-5.13*** (1.35)	-1.65 (1.65)	-1.93 (1.35)	-4.55*** (1.65)	-1.12 (1.76)	-2.09 (1.60)
Initial Jobless Claims	4.75*** (1.62)	7.22*** (2.07)	2.83* (1.59)	8.16*** (2.70)	4.53* (2.45)	-0.17 (1.38)
Nonfarm Payrolls	-15.39*** (1.65)	-12.34*** (2.10)	-9.44*** (1.63)	-13.21*** (2.77)	-8.08*** (2.51)	-3.44** (1.41)
Personal Income	-0.45 (1.89)	-0.28 (2.32)	1.22 (1.87)	0.33 (3.16)	1.27 (2.87)	1.68 (1.60)
Personal Spending	-1.81 (2.02)	-6.48** (2.52)	-1.95 (1.97)	1.62 (3.35)	-5.23* (3.03)	1.43 (1.70)
Real GDP Growth Advanced	-9.27*** (3.00)	-15.57*** (3.80)	-9.67*** (2.82)	-11.21** (4.84)	-7.46* (4.39)	3.20 (2.48)
Real GDP Growth Final	-1.80 (2.99)	-3.36 (3.83)	-6.33** (2.88)	-7.71 (4.94)	-1.23 (4.47)	0.53 (2.52)
Real GDP Growth Second	-6.26** (2.94)	-4.78 (3.70)	-3.32 (2.90)	-10.79** (4.89)	1.08 (4.44)	2.08 (2.49)
Retail Sales	-9.34*** (1.35)	-5.05*** (1.81)	-5.91*** (1.40)	-7.94*** (1.88)	3.50* (2.03)	2.69* (1.49)

Table B.12: Asset Prices Response to U.S. Macro News: Full Sample [60-minute window]

News	10Yr T-Note	EUR	GBP	JPY	AUD	CAD
Consumer Confidence	-8.72*** (0.91)	-4.46*** (1.42)	-2.02* (1.12)	-5.75*** (1.32)	-2.38 (1.54)	0.89 (1.28)
Consumer Sentiment Final	-1.60 (1.07)	-1.01 (1.58)	-2.75** (1.31)	-1.10 (1.47)	-0.28 (1.80)	0.65 (1.52)
Consumer Sentiment Preliminary	-3.97*** (0.98)	-1.62 (1.45)	-0.52 (1.21)	-3.28** (1.35)	-0.25 (1.65)	1.53 (1.40)
Durable Goods Orders	-5.56*** (1.81)	-3.46 (2.23)	-1.97 (1.70)	-3.40 (2.82)	-0.95 (2.65)	-1.05 (1.65)
Factory Orders	-0.46 (0.94)	-3.85*** (1.43)	-4.01*** (1.14)	-0.34 (1.35)	-4.80*** (1.57)	-1.88 (1.30)
Housing: Existing Home Sales	-4.92*** (1.15)	-3.07* (1.76)	-3.12** (1.59)	-9.48*** (1.75)	-0.35 (2.16)	-0.75 (1.91)
Housing: Housing Permits	-2.20 (1.44)	-3.02 (1.85)	-4.75*** (1.53)	-4.46** (1.83)	-3.81* (2.01)	-1.96 (1.82)
Housing: Housing Starts	-1.88 (1.84)	-2.59 (2.26)	-1.78 (1.70)	-4.49 (2.81)	0.19 (2.65)	0.78 (1.67)
Housing: New Home Sales	-5.31*** (0.92)	-4.10*** (1.39)	-3.35*** (1.12)	-4.51*** (1.32)	-2.41 (1.55)	-1.30 (1.28)
ISM Manufacturing Index	-14.73*** (0.89)	-9.55*** (1.39)	-4.89*** (1.11)	-12.28*** (1.30)	-1.11 (1.52)	1.17 (1.26)
Industrial Production	-2.70*** (0.76)	0.66 (1.28)	1.12 (1.01)	-2.19* (1.15)	5.81*** (1.36)	1.26 (1.23)
Inflation: Consumer Price Index	-1.41 (1.47)	-3.30* (1.91)	-2.68* (1.59)	-1.72 (1.86)	-6.57*** (2.07)	-2.30 (1.90)
Inflation: Producer Price Index	-7.29*** (1.48)	-1.00 (1.94)	-0.69 (1.60)	-6.26*** (1.88)	-0.32 (2.10)	-2.56 (1.93)
Initial Jobless Claims	5.34*** (1.71)	6.11*** (2.20)	2.21 (1.70)	7.92*** (2.78)	3.94 (2.56)	-1.55 (1.57)
Nonfarm Payrolls	-13.98*** (1.75)	-13.91*** (2.23)	-10.36*** (1.74)	-13.68*** (2.86)	-8.42*** (2.62)	-3.07* (1.61)
Personal Income	-0.22 (2.00)	0.19 (2.46)	1.87 (2.00)	0.37 (3.25)	1.22 (2.99)	1.38 (1.83)
Personal Spending	-0.52 (2.13)	-4.81* (2.67)	-1.13 (2.11)	2.63 (3.45)	-4.89 (3.17)	1.27 (1.95)
Real GDP Growth Advanced	-10.19*** (3.16)	-13.98*** (4.03)	-10.73*** (3.03)	-12.46** (4.99)	-7.44 (4.59)	4.28 (2.83)
Real GDP Growth Final	-0.70 (3.16)	-2.01 (4.06)	-5.01 (3.09)	-6.94 (5.08)	-0.14 (4.67)	1.25 (2.88)
Real GDP Growth Second	-7.18** (3.10)	-3.89 (3.93)	-2.53 (3.11)	-10.12** (5.03)	-0.57 (4.64)	0.52 (2.84)
Retail Sales	-10.56*** (1.45)	-4.07** (2.02)	-6.19*** (1.59)	-8.17*** (2.04)	4.90** (2.27)	2.56 (1.77)

Table B.13: Asset Prices Response to U.S. Macro News: 2-Year Treasury Note

News	10 Min			20 Min			30 Min			60 Min		
	Full	Pre2008	Post2008	Full	Pre2008	Post2008	Full	Pre2008	Post2008	Full	Pre2008	Post2008
Consumer Confidence	-1.36*** (0.15)	-2.79*** (0.34)	-0.46*** (0.11)	-1.50*** (0.19)	-2.79*** (0.43)	-0.68*** (0.13)	-1.70*** (0.22)	-3.16*** (0.49)	-0.77*** (0.16)	-1.75*** (0.28)	-3.04*** (0.62)	-0.93*** (0.20)
Consumer Sentiment Final	-0.16 (0.20)	-0.65 (0.59)	0.05 (0.13)	-0.29 (0.24)	-0.91 (0.69)	-0.01 (0.16)	-0.42 (0.28)	-1.49* (0.81)	0.07 (0.19)	-0.40 (0.35)	-1.06 (1.00)	-0.08 (0.24)
Consumer Sentiment Preliminary	-0.50*** (0.18)	-1.30*** (0.48)	-0.09 (0.12)	-1.16*** (0.21)	-2.58*** (0.56)	-0.42*** (0.15)	-1.17*** (0.25)	-2.35*** (0.66)	-0.57*** (0.17)	-1.09*** (0.31)	-2.08** (0.81)	-0.59*** (0.22)
Durable Goods Orders	-0.70*** (0.27)	-1.21** (0.56)	-0.34 (0.24)	-0.75 (0.71)	-1.12 (1.72)	-0.48* (0.27)	-0.68 (0.72)	-1.09 (1.73)	-0.39 (0.28)	-0.60 (0.75)	-0.98 (1.79)	-0.33 (0.32)
Factory Orders	-0.40** (0.16)	-0.63* (0.36)	-0.25** (0.11)	-0.33 (0.21)	-0.93** (0.45)	0.07 (0.14)	-0.24 (0.24)	-1.02** (0.51)	0.27 (0.17)	0.01 (0.30)	-0.47 (0.64)	0.32 (0.21)
Housing: Existing Home Sales	-0.49*** (0.15)	-1.88 (1.35)	-0.39*** (0.10)	-0.48*** (0.18)	-1.66 (1.55)	-0.40*** (0.13)	-0.64*** (0.21)	-2.43 (1.79)	-0.52*** (0.15)	-0.65** (0.28)	-3.71 (2.40)	-0.43** (0.20)
Housing: Housing Permits	-0.70** (0.30)	-1.89 (1.46)	-0.47* (0.26)	-0.87*** (0.33)	-2.63 (1.61)	-0.53* (0.29)	-1.14*** (0.35)	-4.04** (1.70)	-0.61** (0.30)	-1.02** (0.41)	-3.25 (2.00)	-0.62* (0.34)
Housing: Housing Starts	-0.85** (0.34)	-1.00 (0.69)	-0.71** (0.32)	-0.37 (0.94)	0.30 (2.23)	-0.87** (0.36)	-0.53 (0.94)	0.16 (2.24)	-1.06*** (0.38)	-1.09 (0.98)	-1.04 (2.31)	-1.13*** (0.43)
Housing: New Home Sales	-1.20*** (0.22)	-1.46*** (0.43)	-0.93*** (0.17)	-1.31*** (0.28)	-1.66*** (0.53)	-0.95*** (0.22)	-1.19*** (0.32)	-1.42** (0.61)	-0.96*** (0.25)	-1.17*** (0.40)	-1.57** (0.76)	-0.75** (0.32)
ISM Manufacturing Index	-2.36*** (0.16)	-3.81*** (0.33)	-1.16*** (0.12)	-2.72*** (0.20)	-4.24*** (0.41)	-1.45*** (0.15)	-2.92*** (0.23)	-4.61*** (0.47)	-1.51*** (0.17)	-2.87*** (0.29)	-4.40*** (0.59)	-1.60*** (0.22)
Industrial Production	-0.76*** (0.11)	-1.17*** (0.21)	-0.36*** (0.09)	-0.77*** (0.14)	-1.28*** (0.27)	-0.27** (0.11)	-0.90*** (0.17)	-1.62*** (0.32)	-0.22 (0.14)	-0.88*** (0.23)	-1.37*** (0.43)	-0.41** (0.20)
Inflation: Consumer Price Index	-0.79*** (0.28)	-1.18 (0.83)	-0.50* (0.29)	-0.48 (0.31)	-0.50 (0.93)	-0.48 (0.32)	-0.31 (0.33)	-0.04 (0.98)	-0.52 (0.34)	0.21 (0.38)	0.73 (1.15)	-0.17 (0.39)
Inflation: Producer Price Index	-0.79** (0.32)	-1.12 (1.52)	-0.72** (0.28)	-0.68* (0.36)	-0.85 (1.68)	-0.64** (0.31)	-0.90** (0.38)	-1.43 (1.78)	-0.78** (0.33)	-1.10** (0.44)	-0.92 (2.09)	-1.13*** (0.38)
Initial Jobless Claims	1.29*** (0.24)	1.57*** (0.41)	0.87*** (0.25)	1.12* (0.61)	1.15 (1.18)	1.07*** (0.28)	1.21* (0.62)	1.30 (1.19)	1.06*** (0.30)	1.47** (0.65)	1.74 (1.23)	1.07*** (0.34)
Nonfarm Payrolls	-2.81*** (0.25)	-4.85*** (0.60)	-1.97*** (0.19)	-3.14*** (0.63)	-6.95*** (1.72)	-1.57*** (0.22)	-3.29*** (0.64)	-6.93*** (1.74)	-1.79*** (0.23)	-3.19*** (0.67)	-6.18*** (1.80)	-1.96*** (0.26)
Personal Income	0.38 (0.28)	0.71 (0.57)	0.15 (0.25)	-0.11 (0.71)	-0.20 (1.60)	-0.03 (0.27)	-0.07 (0.72)	-0.19 (1.61)	0.05 (0.29)	-0.01 (0.75)	-0.07 (1.66)	0.03 (0.33)
Personal Spending	-0.39 (0.36)	-0.43 (0.81)	-0.35 (0.29)	-0.67 (0.92)	-1.16 (2.36)	-0.39 (0.33)	-0.49 (0.93)	-1.04 (2.38)	-0.17 (0.35)	-0.15 (0.97)	0.01 (2.46)	-0.22 (0.40)
Real GDP Growth Advanced	-1.29*** (0.46)	-1.70** (0.81)	-0.75 (0.46)	-1.09 (1.23)	-1.56 (2.57)	-0.55 (0.52)	-1.05 (1.24)	-1.28 (2.59)	-0.74 (0.54)	-1.37 (1.29)	-1.96 (2.67)	-0.73 (0.62)
Real GDP Growth Final	-0.47 (0.43)	-0.46 (1.12)	-0.47 (0.33)	-0.48 (1.10)	0.37 (3.27)	-0.77** (0.37)	-0.16 (1.11)	1.00 (3.29)	-0.54 (0.39)	-0.15 (1.16)	1.28 (3.41)	-0.63 (0.45)
Real GDP Growth Second	-0.64 (0.43)	-1.12 (1.10)	-0.45 (0.33)	-0.61 (1.09)	-0.09 (3.11)	-0.78** (0.37)	-0.80 (1.10)	-0.15 (3.14)	-1.01*** (0.39)	-0.67 (1.15)	0.32 (3.24)	-1.02** (0.45)
Retail Sales	-2.10*** (0.36)	-2.93 (2.00)	-2.00*** (0.29)	-2.20*** (0.52)	-4.12 (3.49)	-1.96*** (0.32)	-2.14*** (0.54)	-2.76 (3.60)	-2.06*** (0.34)	-2.46*** (0.60)	-1.73 (3.93)	-2.54*** (0.39)

Table B.14: Asset Prices Response to U.S. Macro News: 5-Year Treasury Note

News	10 Min			20 Min			30 Min			60 Min		
	Full	Pre2008	Post2008	Full	Pre2008	Post2008	Full	Pre2008	Post2008	Full	Pre2008	Post2008
Consumer Confidence	-4.96*** (0.34)	-6.63*** (0.50)	-2.62*** (0.37)	-5.15*** (0.41)	-6.87*** (0.61)	-2.74*** (0.48)	-5.39*** (0.48)	-6.82*** (0.70)	-3.38*** (0.58)	-6.03*** (0.61)	-7.00*** (0.89)	-4.66*** (0.75)
Consumer Sentiment Final	-0.01 (0.40)	-0.16 (0.60)	0.22 (0.45)	-0.32 (0.49)	-0.23 (0.71)	-0.45 (0.59)	-1.29** (0.57)	-1.89** (0.82)	-0.30 (0.70)	-1.13 (0.72)	-1.45 (1.03)	-0.56 (0.91)
Consumer Sentiment Preliminary	-0.39 (0.37)	-0.35 (0.55)	-0.44 (0.41)	-1.25*** (0.45)	-0.78 (0.66)	-2.01*** (0.53)	-2.41*** (0.52)	-2.52*** (0.76)	-2.24*** (0.64)	-2.69*** (0.66)	-2.94*** (0.95)	-2.32*** (0.83)
Durable Goods Orders	-3.63*** (0.60)	-4.67*** (0.83)	-1.77** (0.82)	-4.93*** (1.21)	-6.68*** (1.87)	-1.77* (0.92)	-4.87*** (1.23)	-6.78*** (1.89)	-1.45 (0.97)	-4.76*** (1.29)	-6.65*** (1.96)	-1.35 (1.10)
Factory Orders	-1.24*** (0.35)	-1.44*** (0.51)	-0.92** (0.40)	-1.33*** (0.43)	-2.17*** (0.62)	0.02 (0.52)	-0.87* (0.50)	-1.71** (0.71)	0.46 (0.62)	-0.14 (0.63)	-0.73 (0.90)	0.78 (0.80)
Housing: Existing Home Sales	-2.29*** (0.39)	-3.65*** (1.01)	-1.88*** (0.37)	-2.40*** (0.49)	-3.38*** (1.25)	-2.13*** (0.47)	-2.86*** (0.57)	-4.42*** (1.42)	-2.41*** (0.57)	-2.97*** (0.75)	-7.28*** (1.89)	-1.70** (0.74)
Housing: Housing Permits	-1.60** (0.72)	-1.15 (1.14)	-2.23** (0.87)	-1.64* (0.88)	-1.41 (1.45)	-1.98** (0.97)	-1.78* (0.92)	-1.63 (1.50)	-2.03** (1.03)	-1.54 (1.00)	-0.96 (1.59)	-2.37** (1.17)
Housing: Housing Starts	-1.40** (0.61)	-0.77 (0.76)	-3.79*** (1.10)	-1.19 (1.24)	-0.43 (1.72)	-3.97*** (1.22)	-1.18 (1.26)	-0.44 (1.75)	-3.85*** (1.29)	-1.47 (1.32)	-0.68 (1.81)	-4.33*** (1.46)
Housing: New Home Sales	-2.71*** (0.34)	-2.41*** (0.43)	-4.20*** (0.60)	-3.45*** (0.42)	-3.36*** (0.52)	-3.95*** (0.78)	-3.19*** (0.49)	-3.00*** (0.60)	-4.18*** (0.93)	-3.59*** (0.62)	-3.47*** (0.75)	-4.22*** (1.21)
ISM Manufacturing Index	-7.76*** (0.32)	-8.53*** (0.45)	-6.18*** (0.40)	-8.56*** (0.40)	-9.21*** (0.55)	-7.19*** (0.52)	-9.26*** (0.47)	-10.16*** (0.63)	-7.39*** (0.63)	-9.98*** (0.60)	-11.04*** (0.80)	-7.74*** (0.83)
Industrial Production	-2.33*** (0.22)	-2.99*** (0.32)	-1.29*** (0.27)	-1.96*** (0.29)	-2.57*** (0.41)	-1.02*** (0.39)	-2.10*** (0.35)	-3.07*** (0.50)	-0.58 (0.46)	-2.15*** (0.50)	-2.84*** (0.69)	-1.06 (0.68)
Inflation: Consumer Price Index	-2.34*** (0.75)	-2.20* (1.14)	-2.55*** (0.98)	-1.76** (0.89)	-0.98 (1.39)	-3.02*** (1.09)	-1.52 (0.94)	-0.63 (1.45)	-2.92** (1.15)	-0.44 (1.02)	0.08 (1.55)	-1.24 (1.31)
Inflation: Producer Price Index	-3.13*** (0.76)	-3.49*** (1.18)	-2.57*** (0.96)	-3.33*** (0.90)	-3.82*** (1.43)	-2.55** (1.06)	-3.38*** (0.95)	-3.76** (1.50)	-2.71** (1.13)	-4.31*** (1.03)	-4.10** (1.60)	-4.51*** (1.27)
Initial Jobless Claims	2.93*** (0.58)	2.93*** (0.76)	2.93*** (0.86)	2.97*** (1.15)	2.62 (1.67)	3.76*** (0.95)	3.23*** (1.17)	2.89* (1.69)	3.99*** (1.01)	3.61*** (1.23)	3.45* (1.76)	3.96*** (1.15)
Nonfarm Payrolls	-11.02*** (0.58)	-16.05*** (0.90)	-6.32*** (0.66)	-10.72*** (1.17)	-16.94*** (2.05)	-4.94*** (0.74)	-11.46*** (1.19)	-17.88*** (2.07)	-5.49*** (0.78)	-10.65*** (1.25)	-16.45*** (2.16)	-5.26*** (0.89)
Personal Income	0.56 (0.68)	0.85 (0.98)	0.18 (0.84)	0.13 (1.34)	0.06 (2.15)	0.23 (0.93)	0.03 (1.36)	0.01 (2.18)	0.07 (0.98)	0.11 (1.43)	-0.01 (2.27)	0.30 (1.12)
Personal Spending	-1.23* (0.72)	-1.25 (0.97)	-1.17 (1.00)	-1.51 (1.43)	-1.50 (2.14)	-1.48 (1.12)	-1.04 (1.45)	-1.07 (2.17)	-0.89 (1.18)	-0.15 (1.52)	0.08 (2.26)	-0.52 (1.34)
Real GDP Growth Advanced	-6.66*** (1.03)	-7.78*** (1.35)	-3.89** (1.57)	-6.02*** (2.13)	-7.20** (3.12)	-3.28* (1.75)	-6.48*** (2.16)	-7.50** (3.15)	-4.08** (1.85)	-6.61*** (2.26)	-7.82** (3.28)	-3.77* (2.10)
Real GDP Growth Final	-1.91* (1.06)	-0.51 (1.80)	-2.93*** (1.13)	-2.08 (2.12)	0.28 (4.00)	-3.75*** (1.26)	-1.08 (2.15)	1.76 (4.05)	-3.10** (1.33)	-0.75 (2.26)	1.47 (4.21)	-2.31 (1.51)
Real GDP Growth Second	-2.06** (1.05)	-2.63 (1.74)	-1.59 (1.13)	-4.61** (2.08)	-7.09* (3.82)	-2.64** (1.26)	-4.58** (2.11)	-6.31 (3.87)	-3.19** (1.33)	-4.96** (2.22)	-6.29 (4.03)	-3.88** (1.51)
Retail Sales	-5.93*** (0.68)	-5.40*** (0.95)	-7.13*** (0.98)	-7.68*** (0.95)	-7.82*** (1.43)	-7.32*** (1.09)	-7.15*** (0.98)	-6.86*** (1.46)	-7.72*** (1.16)	-7.95*** (1.04)	-7.12*** (1.53)	-9.79*** (1.31)

Table B.15: Asset Prices Response to U.S. Macro News: 30-Year Treasury Note

News	10 Min			20 Min			30 Min			60 Min		
	Full	Pre2008	Post2008	Full	Pre2008	Post2008	Full	Pre2008	Post2008	Full	Pre2008	Post2008
Consumer Confidence	-9.63*** (0.75)	-11.51*** (1.01)	-6.99*** (1.08)	-10.16*** (0.96)	-11.89*** (1.29)	-7.74*** (1.43)	-11.04*** (1.15)	-11.99*** (1.52)	-9.72*** (1.76)	-12.67*** (1.51)	-13.18*** (1.99)	-11.96*** (2.29)
Consumer Sentiment Final	0.02 (0.89)	-0.61 (1.19)	0.98 (1.32)	-0.59 (1.13)	-0.40 (1.50)	-0.94 (1.74)	-1.35 (1.36)	-2.47 (1.77)	0.40 (2.13)	-1.41 (1.78)	-1.34 (2.32)	-1.59 (2.78)
Consumer Sentiment Preliminary	-1.11 (0.81)	-0.52 (1.10)	-2.03* (1.20)	-2.70*** (1.04)	-0.10 (1.38)	-6.84*** (1.58)	-4.68*** (1.25)	-2.77* (1.64)	-7.69*** (1.94)	-5.71*** (1.63)	-5.26** (2.14)	-6.39** (2.53)
Durable Goods Orders	-6.54*** (1.20)	-8.13*** (1.54)	-3.71* (1.89)	-7.05*** (2.52)	-9.08** (3.81)	-3.42 (2.26)	-5.95** (2.59)	-7.78** (3.88)	-2.68 (2.50)	-6.68** (2.79)	-8.94** (4.11)	-2.64 (2.96)
Factory Orders	-2.92*** (0.77)	-3.45*** (1.03)	-2.04* (1.16)	-2.89*** (1.00)	-4.96*** (1.30)	0.44 (1.54)	-2.19* (1.19)	-4.28*** (1.53)	1.18 (1.88)	-1.45 (1.55)	-3.65* (2.00)	2.08 (2.45)
Housing: Existing Home Sales	-6.07*** (0.94)	-7.46*** (1.97)	-5.63*** (1.06)	-7.63*** (1.22)	-9.17*** (2.51)	-7.17*** (1.41)	-9.11*** (1.49)	-12.12*** (3.00)	-8.20*** (1.72)	-8.98*** (1.98)	-18.21*** (4.12)	-6.19*** (2.25)
Housing: Housing Permits	-2.96** (1.44)	-2.27 (2.09)	-3.91* (2.01)	-2.14 (1.82)	-2.07 (2.72)	-2.25 (2.40)	-2.42 (1.96)	-2.24 (2.90)	-2.70 (2.65)	-2.44 (2.25)	-2.11 (3.25)	-2.93 (3.14)
Housing: Housing Starts	-2.93** (1.21)	-1.31 (1.41)	-9.18*** (2.51)	-2.59 (2.56)	-0.52 (3.50)	-10.33*** (3.00)	-2.14 (2.63)	0.03 (3.57)	-10.25*** (3.31)	-2.91 (2.84)	-0.69 (3.78)	-11.24*** (3.93)
Housing: New Home Sales	-5.30*** (0.76)	-4.36*** (0.86)	-10.07*** (1.74)	-6.55*** (0.98)	-5.72*** (1.10)	-10.73*** (2.32)	-6.24*** (1.17)	-5.48*** (1.29)	-10.02*** (2.84)	-7.44*** (1.52)	-7.14*** (1.68)	-8.92** (3.71)
ISM Manufacturing Index	-15.92*** (0.72)	-15.46*** (0.91)	-16.93*** (1.16)	-17.50*** (0.94)	-16.73*** (1.17)	-19.14*** (1.57)	-19.99*** (1.12)	-19.92*** (1.37)	-20.20*** (1.94)	-22.07*** (1.47)	-21.67*** (1.81)	-22.94*** (2.54)
Industrial Production	-4.25*** (0.53)	-5.03*** (0.67)	-3.05*** (0.84)	-3.69*** (0.74)	-4.51*** (0.95)	-2.43** (1.19)	-4.02*** (0.92)	-6.13*** (1.17)	-0.75 (1.48)	-3.69*** (1.28)	-4.80*** (1.58)	-1.98 (2.17)
Inflation: Consumer Price Index	-5.32*** (1.51)	-4.46** (2.10)	-6.73*** (2.24)	-5.25*** (1.86)	-3.14 (2.64)	-8.76*** (2.68)	-4.90** (2.02)	-3.22 (2.82)	-7.67*** (2.96)	-3.14 (2.32)	-2.80 (3.16)	-3.68 (3.51)
Inflation: Producer Price Index	-7.03*** (1.53)	-7.99*** (2.18)	-5.54** (2.19)	-7.34*** (1.89)	-7.77*** (2.74)	-6.68** (2.62)	-7.11*** (2.05)	-7.13** (2.94)	-7.01** (2.89)	-10.89*** (2.35)	-9.55*** (3.30)	-12.77*** (3.42)
Initial Jobless Claims	5.46*** (1.15)	4.77*** (1.43)	7.09*** (1.97)	6.00** (2.38)	4.89 (3.41)	8.58*** (2.35)	6.68*** (2.45)	5.78* (3.47)	8.74*** (2.60)	7.52*** (2.65)	7.66** (3.69)	7.17** (3.08)
Nonfarm Payrolls	-20.14*** (1.15)	-27.23*** (1.70)	-13.52*** (1.51)	-19.55*** (2.43)	-27.08*** (4.18)	-12.54*** (1.82)	-20.57*** (2.50)	-28.49*** (4.26)	-13.18*** (2.01)	-19.06*** (2.70)	-25.91*** (4.54)	-12.68*** (2.39)
Personal Income	-0.57 (1.35)	-0.10 (1.85)	-1.20 (1.92)	-1.41 (2.78)	-2.00 (4.39)	-0.61 (2.29)	-1.62 (2.85)	-1.87 (4.47)	-1.27 (2.53)	-0.86 (3.08)	-1.10 (4.75)	-0.52 (3.00)
Personal Spending	-2.17 (1.43)	-2.15 (1.82)	-2.21 (2.31)	-5.38* (2.96)	-6.22 (4.36)	-3.67 (2.75)	-3.84 (3.04)	-4.71 (4.44)	-2.07 (3.04)	-2.45 (3.29)	-2.54 (4.72)	-2.23 (3.60)
Real GDP Growth Advanced	-10.86*** (2.06)	-12.72*** (2.53)	-6.31* (3.61)	-12.14*** (4.40)	-14.39** (6.34)	-6.93 (4.31)	-12.94*** (4.53)	-14.74** (6.46)	-8.76* (4.75)	-13.43*** (4.88)	-16.03** (6.85)	-7.43 (5.63)
Real GDP Growth Final	-4.54** (2.11)	-1.11 (3.37)	-7.04*** (2.60)	-4.41 (4.39)	3.51 (8.14)	-10.07*** (3.10)	-2.13 (4.51)	5.54 (8.29)	-7.63** (3.43)	-1.32 (4.87)	6.47 (8.80)	-6.90* (4.06)
Real GDP Growth Second	-3.62* (2.09)	-4.63 (3.29)	-2.85 (2.60)	-6.64 (4.31)	-10.90 (7.81)	-3.31 (3.11)	-6.92 (4.43)	-7.59 (7.95)	-6.35* (3.43)	-9.02* (4.79)	-8.88 (8.45)	-9.09** (4.06)
Retail Sales	-10.65*** (1.35)	-7.87*** (1.74)	-17.06*** (2.25)	-14.16*** (1.81)	-11.75*** (2.48)	-19.69*** (2.69)	-12.99*** (1.93)	-9.86*** (2.61)	-20.18*** (2.98)	-15.14*** (2.21)	-10.71*** (2.92)	-25.34*** (3.52)