Online Appendix to "Policy and Macro Signals from Central Bank Announcements"*

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A.1. Correcting Market-Based Expectation Measures

Market-based measures of inflation compensation are an appropriate indicator of inflation expectations if investors are risk neutral and there is no liquidity premium. However, that is unlikely to be the case, and these premiums might have sizable values and be time varying. At the monthly frequency, these factors are very likely to change from one policy meeting to another. We use a model-free regression approach to correct our compensation measure for these premiums. Gürkaynak, Levin, and Swanson (2010), Gürkaynak, Sack, and Wright (2010), and Soderlind (2011) decompose inflation compensation, $\pi_{t,h}^{COMP}$, between expected inflation $\pi_{t,h}^{PF}$, a liquidity premium $\phi_{t,h}^{l}$ that investors demand to encourage them to hold these assets when they are illiquid, and an inflation

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uncertainty premium $\phi^{ir}_{t,h}$, that compensates investors for bearing inflation risk.[1] We also include a risk premium, $\phi^{risk}_{t,h}$, compensating investors for holding a risky asset.[2] Assuming h is the horizon of inflation expectations, this breakdown can be written as follows:

$$\pi^{COMP}_{t,h} = \pi^{PF}_{t,h} + \phi^{risk}_{t,h} + \phi^{l}_{t,h} + \phi^{ir}_{t,h}. \tag{A.1}$$

We estimate a linear regression model of inflation compensation on proxy measures capturing the different premiums. In the spirit of Chen, Lesmond, and Wei (2007) who control for risk premium using bond ratings, the credit risk premium is proxied by the LIBOR-OIS spread and by the average of U.K. major banks' CDS premiums. Those measures should capture the riskiness of holding financial instruments, especially during the global financial crisis. The liquidity premium is proxied by the FTSE Volatility index (the U.K. equivalent of the VIX), following Gürkaynak, Sack, and Wright (2010) and Soderlind (2011). For the inflation risk premium, we use the implied volatility from swaptions—options on short-term interest rate swaps—maturing in 20 years, which captures inflation uncertainty, following Soderlind (2011).[3] This leads us to estimate the following equation:

[1]Because the central bank may intend to affect the inflation risk premium as well as inflation expectations, we also compute adjusted series for risk and liquidity premiums only and assess the effect of this alternative in table A.4 (all tables are at the end of this appendix).

[2]The credit risk premium has been neglected in most of the literature so far for two reasons. First, most of the studies focus on U.S. Treasury bonds and TIPS, and therefore implicitly assume there is no credit risk, with those bonds being considered as risk free (see Gürkaynak, Sack, and Wright 2010). Second, when considering swap contracts to derive inflation expectations, the collateral is supposed to remove any potential credit risk. However, in a post-Great Recession sample in which sovereign bonds have been shown to be not as risk free as previously thought and collateral value may have changed rapidly, we explicitly assess whether proxies for credit risk correlate with supposedly risk-free inflation compensation rather than assuming ex ante the absence of a credit risk premium.

[3]An alternative indicator to measure inflation uncertainty more precisely would be the standard deviation of the probability density function of inflation options maturing in 10 years, which are available for the United Kingdom only since 2007. Over the same sample, the correlation between this measure and our proxy is 0.76.

$$\pi_{t,h}^{COMP} = \alpha + \beta_h^s spread + \beta_h^{cds} cds + \beta_h^f ftsev + \beta_h^i impvol + \varepsilon_{t,h}^{COMP}. \quad (A.2)$$

We estimate equation (A.2) using OLS for each horizon of inflation compensation from one to five years ahead. The risk premium, the liquidity premium, and the inflation risk premium—directly related to inflation uncertainty—should push inflation compensation up.[4] So we expect the coefficients on the LIBOR-OIS spread, CDS premiums, the FTSE Volatility Index (*ftsev*), and implied volatility (*impvol*) variables to be positive. We also expect the risk and inflation risk premiums to increase with the maturity of the swap. Table A.5 (at the end of this appendix) shows the estimated coefficients for each maturity of the term structure of inflation expectations. Using these estimated parameters, we adjust the inflation compensation series by subtracting the fitted values of the contributions of the risk, liquidity, and inflation risk premiums to obtain corrected inflation expectation series.[5]

For comparison, D'Amico, Kim, and Wei (2010) find that the liquidity premium on U.S. TIPS has varied between 0 and 130 basis points (bp). Gürkaynak, Sack, and Wright (2010) find that the liquidity premium has varied between 0 and 140 bp. Risa (2001) finds an inflation risk premium in the United Kingdom of around 170 bp, and Joyce, Lilholdt, and Sorensen (2010) estimate it to be between 75 and 100 bp. Ang, Bekaert, and Wei (2008) find an inflation risk premium of between 10 and 140 bp in the United States over

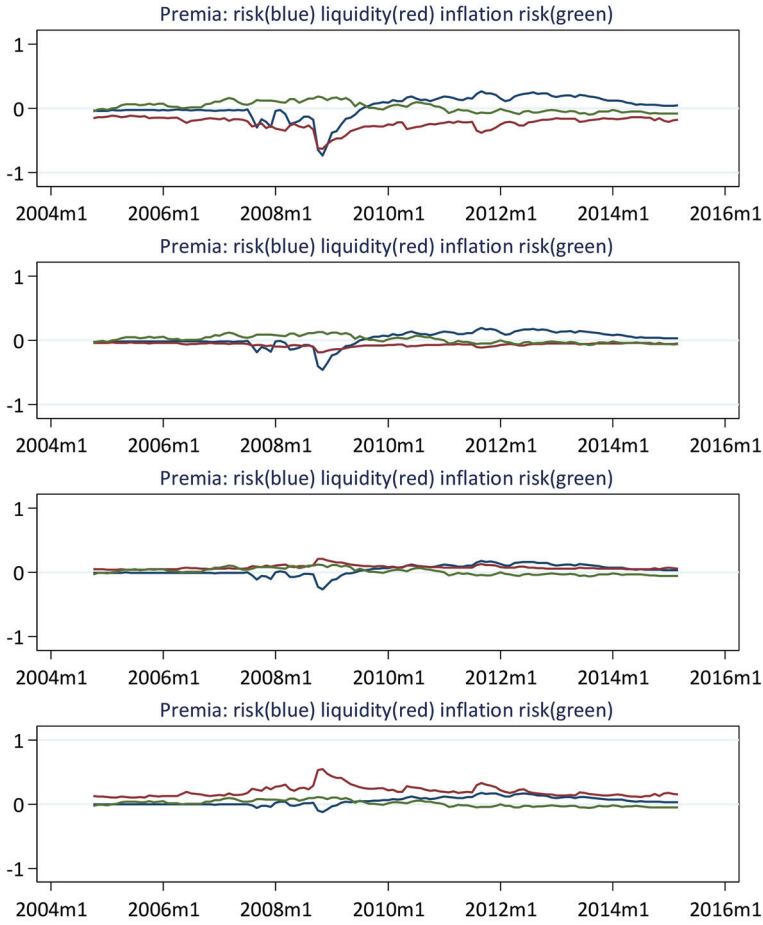
[4]This is in contrast to inflation compensation derived from inflation-indexed bonds, for which we would expect the liquidity proxy to have a negative coefficient, because they are generally less liquid than nominal bonds.

[5]The correlation between the original and corrected series is comprised between 0.69 and 0.97. We assess the robustness of our baseline results using the original market-based measures—inflation compensation—in table A.6. Figure A.1 (at the end of this appendix) shows the evolution of the three estimated premiums. While the risk proxies started to become positive in mid-2007, they had a negative contribution for maturities under five years to inflation compensation when financial stress was most acute at the end of 2008, pushing inflation compensation to negative values. After this episode of severe financial stress, the risk premium had a positive contribution for all maturities of around 20–50 basis points (bp). The liquidity premium spiked at almost 60 bp for longer maturities in the second half of 2008 and remained at around 20–30 bp after that. The inflation risk premium has declined over time and became negative during 2011, which may be associated with the implementation of QE.

the last two decades. Finally, using Gaussian affine dynamic term structure models, Guimarães (2012) finds a total combined premium of 190 bp over 1985–92 and of 30 bp over 1997–2002 for 10 years' inflation compensation derived from U.K. gilts.

Starting with inflation swaps, we first compute adjusted series for risk and liquidity premiums only, because the central bank may intend to affect the inflation risk premium as well as inflation expectations. Second, we use raw inflation compensation, to observe the impact of the correction for the risk, liquidity, and inflation risk premiums. Third, we correct inflation compensation measures for the three premiums by estimating equation (A.2) on two subsamples pre- and post-ELB. By doing so, we assess the impact of the hypothesis that the ELB may affect macro and financial dynamics, so that the pricing relationship of premiums may change pre- and post-ELB. Table A.6 shows that the estimated coefficients for Bank Rate and inflation projections are similar in sign and magnitude.

Figure A.1. Predicted Values of the Three Premiums (in pp)



Notes: These estimates are based on equation (A.2). The first row is for two-year-ahead inflation expectations, the second for three-year-ahead expectations, and so on. The risk premium is in blue, the liquidity one in red, and the inflation risk one in green.

Table A.1. Data Description

Variable	Source	Description
FTSE	Bloomberg	FTSE all-share index. Daily observations or monthly average of daily observations.
PF_h	Bloomberg and Bank of England calculations	Inflation expectation measures derived from inflation swaps. Instantaneous forward inflation rates for annual RPI inflation h years ahead. Daily observations or monthly average of daily observations.
Bankrate	Bank of England	Bank of England's policy interest rate.
Shadow Rate	BoE calculations	Bankrate adjusted for internal estimates of the impact of QE.
BoE_cpi_h	Bank of England	Bank of England's model projections for annual CPI inflation h quarters ahead, based on market interest rate expectations.
BOE_gdp_h	Bank of England	Bank of England's modal projections for annual GDP growth h quarters ahead, based on market interest rate expectations.
PF_gdp_h	Consensus Forecasts/ Survey of External Forecasters	Consensus Forecasts' average projections for annual GDP growth h quarters ahead, for $h = 1$ to 6. Survey of External Forecasters' average projections for annual GDP growth h quarters ahead, for $h = 8$ and 12. Monthly constant interpolation from quarterly frequency.
ir3m_h	Bloomberg and Bank of England	Three-month market interest expectations derived from nominal government bonds h years ahead. Monthly average of daily observations.
IR	Authors' computation	Dummy that equals 1 when there is a change in Bankrate in a month in which the Inflation Report is published.
mc_h	Bank of England	Market interest rate curve used as conditioning path for BoE's macroeconomic projections.
CPI	ONS	Annual percentage change in the Consumer Price Index.
RPI	ONS	Annual percentage change in the Retail Price Index.
Core	ONS	Annual percentage change in the Core Consumer Price Index.
PPI	ONS	Annual percentage change in the Producer Price Index.
Indpro	ONS	Annual real Industrial Production growth seasonally adjusted.
Output Gap	OBR	Difference between the actual GDP and the potential GDP estimated by the OBR.
Cap. Uti.	ONS	Capacity utilization rate.
Unemp.	ONS	Unemployment rate.

(*continued*)

Table A.1. (Continued)

Variable	Source	Description
Oil	FRED	Crude oil spot prices, Brent – Europe. Annual percentage change.
Sterling	Bank of England	Effective exchange rate index, January 2005 = 100. Annual percentage change.
Netlending	Bank of England	Twelve-month growth rate of monetary financial institutions' sterling net lending to private nonfinancial corporations (excluding the effects of securitizations and loan transfers) (SA).
Housing	Halifax and Nationwide	Average of (SA) Halifax and Nationwide measures of average house prices. Annual percentage change.
Sentiment	EC	European Commission surveys of industry, services, and consumers' confidence.
RPI Surprises	ONS and Bloomberg	Difference between the outturn for annual RPI inflation in a given month and the market median forecast one month before.
scottiactiv	Scotti (2016)	U.K. real-time real activity index, capturing the state of economic conditions.
scottinews	Scotti (2016)	U.K. real-time surprise index, summarizing economic data surprises.
scottiuncert	Scotti (2016)	U.K. real-time uncertainty index, measuring uncertainty about the state of the economy.
LIBOR-OIS	FRED and Thomson DataStream	Three-month London Interbank Offered Rate and three-month Overnight Indexed Swap rates. Monthly average of daily observations.
CDS	Markit Group Limited and BoE calculations	Unweighted average of the five-year CDS premiums for the major U.K. lenders. Monthly average of daily observations.
FTSE-Vol	Bloomberg	FTSE 100 Implied Volatility Index, three months constant maturity. Monthly average of daily observations.
ImpVol20	Barclays Live	At-the-money implied volatility of one-year LIBOR swaptions, 20 years constant maturity. Monthly average of daily observations.

Table A.2. Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min.	Max
FTSE	126	6.04	15.50	−36.2	51.2
PF_2y	126	3.01	0.30	1.84	4.01
PF_3y	126	2.95	0.27	1.96	3.84
PF_4y	126	2.91	0.25	2.04	3.68
PF_5y	126	2.87	0.24	2.12	3.54
ε_Bankrate	125	0.00	0.23	−0.95	0.62
ε_Shadowrate	125	0.00	0.29	−1.02	0.83
ε_BoE_cpi_4	126	0.00	0.20	−0.85	0.70
ε_BoE_gdp_4	126	0.00	0.15	−0.53	0.56
CPI	126	2.62	1.04	0.00	5.20
Indpro	126	−0.98	3.44	−11.10	5.10
Oil	126	14.88	35.21	−56.10	86.40
Sterling	126	−1.07	6.49	−21.60	11.00
Netlending	126	4.65	8.77	−4.40	19.60
Housing	126	2.71	7.27	−17.10	17.60
RPI Surprises	126	0.03	0.17	−0.50	0.70
scottiactiv	126	−0.17	0.62	−2.44	0.51
scottinews	126	−0.08	0.28	−0.96	0.53
scottiuncert	126	0.92	0.32	0.41	1.98
RPI	126	3.17	1.62	−1.60	5.60
PPI	126	5.48	10.03	−14.78	34.76
Core	126	89.98	5.90	81.42	99.60
Output Gap	126	−0.85	1.50	−4.15	1.70
Caputi	126	0.57	5.09	−15.30	9.70
Unemp.	126	6.59	1.28	4.70	8.50
CF_gdp_1	126	1.42	1.67	−3.90	3.10
CF_gdp_2	126	1.54	1.36	−3.10	2.90
CF_gdp_3	126	1.69	1.01	−1.50	2.80
CF_gdp_4	126	1.81	0.73	−0.70	2.60
CF_gdp_5	126	1.92	0.52	0.00	2.50
CF_gdp_6	126	1.99	0.40	0.60	2.50
ir3m_1y	126	2.27	1.90	−0.05	5.78
ir3m_2y	126	2.78	1.61	0.24	5.56
ir3m_3y	126	3.21	1.35	0.80	5.42
ir3m_4y	126	3.56	1.14	1.35	5.34
ir3m_5y	126	3.84	0.98	1.83	5.27
ir3m_10y	126	4.52	0.71	2.45	5.87
mc_1y	125	2.42	2.02	0.22	5.93
mc_2y	125	2.88	1.81	0.28	5.89
mc_3y	125	3.22	1.61	0.56	5.79

(*continued*)

Table A.2. (Continued)

Variable	Obs.	Mean	Std. Dev.	Min.	Max
LIBOR-OIS	126	0.34	0.41	0.09	2.21
CDS	126	0.97	0.73	0.06	2.61
FTSE-Vol	126	17.59	7.53	8.85	48.68
ImpVol20	126	−1.42	5.48	−12.93	7.16
ecsent_ind	126	0.08	1.02	−3.36	1.60
ecsent_serv	126	−1.09	1.52	−5.30	1.49
ecsent_cons	126	−0.36	1.32	−3.66	1.98
VIX	126	19.78	9.54	10.82	62.64
ukmove	126	90.32	32.55	52.59	220.01
stlfsi	126	−0.29	1.30	−1.52	5.32

Table A.3. Robustness of Daily-Frequency Estimates

	(1) FTSE	(2) swap_2y	(3) swap_3y	(4) swap_4y	(5) swap_5y
Controlling for Macroeconomic Releases					
MPC Policy Signals	-0.439^{***}	-0.704^{*}	-1.777^{***}	-1.075^{***}	-0.256
	(0.13)	(0.36)	(0.38)	(0.24)	(0.19)
MPC Macro Signals	0.519^{***}	0.974^{***}	1.804^{***}	1.170^{***}	0.473^{***}
	(0.12)	(0.37)	(0.27)	(0.13)	(0.10)
IR Policy Signals	-0.248^{***}	-1.733^{**}	-0.335	-0.068	-0.162
	(0.08)	(0.78)	(0.44)	(0.23)	(0.52)
IR Macro Signals	0.277^{***}	2.661^{***}	1.103^{***}	0.453^{**}	0.206
	(0.08)	(0.67)	(0.37)	(0.20)	(0.32)
Macro Surprises	Yes	Yes	Yes	Yes	Yes
N	173	173	173	173	173
R^2	0.38	0.28	0.25	0.15	0.05
Surprises as Daily Changes in One-Year Interest Rates					
MPC Policy Signals	-0.255^{**}	-0.686	-1.723^{***}	-0.994^{***}	-0.133
	(0.11)	(0.57)	(0.39)	(0.29)	(0.29)
MPC Macro Signals	0.407^{***}	1.180^{**}	1.717^{***}	0.988^{***}	0.253
	(0.07)	(0.56)	(0.17)	(0.10)	(0.20)
IR Policy Signals	-0.256^{***}	-2.259^{***}	-0.364	-0.016	-0.151
	(0.08)	(0.84)	(0.44)	(0.26)	(0.63)
IR Macro Signals	0.274^{***}	3.474^{***}	1.407^{***}	0.528^{***}	0.176
	(0.07)	(0.53)	(0.31)	(0.16)	(0.33)
N	173	173	173	173	173
R^2	0.33	0.32	0.28	0.13	0.01
Cesa-Bianchi, Thwaites, and Vicondoa (2020)'s Monetary Surprises					
MPC Policy Signals	-0.209^{*}	-0.573	-0.610	-0.599	-0.572^{*}
	(0.11)	(0.38)	(0.61)	(0.43)	(0.34)
MPC Macro Signals	0.157^{***}	0.347^{***}	0.769^{***}	0.514^{***}	0.228^{***}
	(0.01)	(0.04)	(0.04)	(0.03)	(0.02)
IR Policy Signals	-0.254^{***}	-1.760^{**}	-0.373	-0.076	-0.134
	(0.07)	(0.76)	(0.44)	(0.22)	(0.50)
IR Macro Signals	0.273^{***}	2.646^{***}	1.112^{***}	0.455^{**}	0.19
	(0.07)	(0.65)	(0.37)	(0.19)	(0.30)
N	173	173	173	173	173
R^2	0.18	0.24	0.22	0.12	0.02

(*continued*)

Table A.3. (Continued)

	(1) FTSE	(2) swap_2y	(3) swap_3y	(4) swap_4y	(5) swap_5y
Subsample Starting on September 15, 2008					
MPC Policy Signals	-0.348^{**}	-0.762	-1.978^{***}	-1.122^{***}	-0.109
	(0.14)	(0.64)	(0.57)	(0.41)	(0.34)
MPC Macro Signals	0.510^{***}	1.298^{**}	2.180^{***}	1.372^{***}	0.511^{***}
	(0.13)	(0.54)	(0.27)	(0.10)	(0.09)
IR Policy Signals	-0.250^{***}	-1.439^{*}	-0.133	-0.029	-0.218
	(0.08)	(0.77)	(0.37)	(0.25)	(0.49)
IR Macro Signals	0.281^{***}	2.358^{***}	0.986^{**}	0.469^{*}	0.263
	(0.09)	(0.75)	(0.40)	(0.24)	(0.30)
N	109	109	109	109	109
R^2	0.39	0.26	0.29	0.18	0.05

Notes: Heteroskedasticity-robust standard errors are in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. Each column corresponds to the OLS estimation of equation (3) where MPC and IR surprises are replaced by their respective policy and macro signals based on equation (4). The constant is equal to zero and never significant, so it has been removed from each panel for the sake of parsimony. The sample period goes from October 2004 to July 2015. The independent variables are the surprise component of MPC announcements and the surprise component of the IR publication, both computed as the daily change in two-year gilt nominal yields. The dependent variable is the daily change in FTSE and in inflation swaps at different maturities from two years to five years. The upper panel (previous page) shows estimates when equation (3) is estimated including surprises to the following nine macro data series (Employment Change 3M, ILO Unemployment Rate 3M, Industrial Production MoM, PMI Services, Avg. Wkly. Earnings 3M YoY, PPI Output MoM) as controls. The second panel (previous page) shows estimates when equation (3) is estimated with MPC and IR surprises computed as the daily change in one-year gilt nominal yields. The third panel (previous page) shows estimates when equation (3) is estimated with monetary surprises estimated by Cesa-Bianchi, Thwaites, and Vicondoa (2020) using intraday data from 10 minutes before to 20 minutes after the policy announcement. The lower panel (this page) shows estimates when equation (3) is estimated on a subsample starting with the Lehman Brothers bankruptcy on September 15, 2008.

Table A.4. Extracting Exogenous Shocks

	(1) Bankrate		(2) BoE_cpi_4	(3) BoE_cpi_8	(4) BoE_gdp_4	(5) BoE_gdp_8
L.Δi	0.772***	L.i	−0.345	−0.117	−0.907***	−0.267*
	(0.18)		(0.21)	(0.09)	(0.16)	(0.15)
PCA_BoE_cpi	−0.178***	L.PCA_BoE_cpi	0.156*	0.044	−0.083	−0.105*
	(0.03)		(0.08)	(0.03)	(0.06)	0.06)
PCA_BoE_gdp	0.038*	L.PCA_BoE_gdp	−0.222	−0.160***	0.186*	0.191*
	(0.02)		(0.14)	(0.06)	(0.11)	(0.10)
PCA_BoE_mc	0.535***	PCA_BoE_mc	0.478	0.345**	1.004***	0.183
	(0.07)		(0.32)	(0.13)	(0.24)	(0.22)
ZLB Dummy	−0.007	ZLB Dummy	0.160	0.803**	−1.279*	−1.326**
	(0.01)		(0.89)	(0.36)	(0.67)	(0.63)
L.PCA_PF_cpi	−0.100***	L.PCA_PF_cpi	−0.070*	−0.021	−0.056*	−0.011
	(0.03)		(0.04)	(0.02)	(0.03)	(0.03)
L.PCA_PF_gdp	−0.077***	L.PCA_PF_gdp	−0.052	0.05	0.043	0.056
	(0.02)		(0.14)	(0.06)	(0.10)	(0.10)
L.PCA_PF_ir3m	−1.231***	L.PCA_PF_ir3m	−0.053	−0.103***	−0.103	0.023
	(0.23)		(0.09)	(0.04)	(0.07)	(0.06)
Constant	2.317***	Constant	2.205**	1.405***	4.071***	3.667***
	(0.22)		(0.84)	(0.34)	(0.63)	(0.59)
Controls: Z_{t-1}	Yes	Controls: Z_{t-1}	Yes	Yes	Yes	Yes
N	125	N	42	42	42	42
R^2	0.99	R^2	0.64	0.86	0.90	0.69

Properties of Exogenous Shock Series

	Mean	SD	Min.	Max.	AR(3)	SF-Test pval.
ε_Bankrate	0.00	0.23	−0.95	0.62	0.20	0.02
ε_BoE_cpi_4	0.00	0.20	−0.85	0.70	0.10	0.00
ε_BoE_cpi_8	0.00	0.08	−0.42	0.39	−0.12	0.00
ε_BoE_cpi_12	0.00	0.06	−0.24	0.22	−0.18	0.00
ε_BoE_gdp_4	0.00	0.15	−0.53	0.56	−0.05	0.00
ε_BoE_gdp_8	0.00	0.14	−0.56	0.50	0.00	0.00
ε_BoE_gdp_12	0.00	0.11	−0.41	0.40	0.37	0.00

Correlation of Exogenous Shock Series

	ε_Bankrate	ε_BoE_cpi_4	ε_BoE_cpi_8	ε_BoE_gdp_4	ε_BoE_gdp_8
ε_Bankrate	1				
ε_BoE_cpi_4	0.07	1			
ε_BoE_cpi_8	0.03	0.53	1		
ε_BoE_gdp_4	0.18	−0.05	0.12	1	
ε_BoE_gdp_8	0.09	−0.44	−0.37	0.56	1

Predictability of Exogenous Shock Series

	ε_Bankrate	ε_BoE_cpi_4	ε_BoE_cpi_8	ε_BoE_gdp_4	ε_BoE_gdp_8
VAR(1) – F-stat	1.21	0.25	0.25	0.18	0.05
VAR(1) – Adj. R^2	0.01	−0.04	−0.04	−0.05	−0.06
VAR(3) – F-stat	1.11	1.28	0.51	1.24	1.00
VAR(3) – Adj. R^2	0.02	0.05	−0.09	0.04	0.00

Notes: Standard errors are in parentheses. *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$. Column 1 and columns 2–5 correspond to the OLS estimation of equation (5) and (6)–(7), respectively. The Z_t vector of controls includes CPI, industrial production, oil prices, the sterling effective exchange rate, net lending, and housing prices. Equation (5) also includes a dummy for when the Inflation Report is published. The SF-test is the Shapiro-Francia W′ test for normal data. Estimates for 12-quarter-ahead inflation and output projections are available from the authors upon request.

Table A.5. Correction of Risk, Liquidity, and Inflation Risk Premiums

	(1) swap_2y	(2) swap_3y	(3) swap_4y	(4) swap_5y
LIBOR-OIS	−0.412***	−0.263*	−0.166	−0.096
	(0.15)	(0.14)	(0.13)	(0.12)
CDS	0.170***	0.117**	0.095**	0.084*
	(0.06)	(0.05)	(0.05)	(0.04)
FTSE-Vol	−0.013	−0.004	0.004	0.011
	(0.01)	(0.01)	(0.01)	(0.01)
ImpVol20	−0.014*	−0.01	−0.009	−0.009
	(0.01)	(0.01)	(0.01)	(0.01)
Constant	3.005***	2.952***	2.906***	2.875***
	(0.10)	(0.09)	(0.08)	(0.08)
N	126	126	126	126
R^2	0.29	0.12	0.06	0.17

Notes: Standard errors are in parentheses. *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$. Each column corresponds to equation (A.2) for a different horizon and is estimated with OLS. The LIBOR (three-month London Interbank Offered Rate) and OIS (three-month Overnight Indexed Swap rates) measures are obtained from FRED and Thomson Datastream. The CDS measure is the unweighted average of the five-year CDS premiums for the major U.K. lenders from Markit Group Limited and BoE calculations. The FTSE-Vol measure is the FTSE 100 Implied Volatility Index (three months constant maturity) from Bloomberg. The ImpVol20 measure is the at-the-money implied volatility of 1-year LIBOR swaptions for 20 years constant maturity, from Barclays Live. All variables are considered as monthly average of daily observations.

Table A.6. Robustness Tests Related to Inflation Swaps

	(1) PF_2y	(2) PF_3y	(3) PF_4y	(4) PF_5y
Without Correction for the Inflation Risk Premium				
ε_Bankrate	-0.209^{***}	-0.174^{***}	-0.157^{***}	-0.142^{***}
	(0.08)	(0.06)	(0.06)	(0.05)
ε_BoE_cpi_4	0.218^{**}	0.183^{***}	0.140^{**}	0.101^{*}
	(0.08)	(0.07)	(0.06)	(0.05)
ε_BoE_gdp_4	0.079	0.062	0.031	-0.004
	(0.11)	(0.09)	(0.08)	(0.07)
Without Correction for Credit, Liquidity, and Inflation Risk Premiums				
ε_Bankrate	-0.193^{**}	-0.162^{**}	-0.145^{**}	-0.128^{***}
	(0.08)	(0.07)	(0.06)	(0.05)
ε_BoE_cpi_4	0.251^{***}	0.206^{***}	0.160^{**}	0.121^{**}
	(0.09)	(0.07)	(0.06)	(0.05)
ε_BoE_gdp_4	0.052	0.068	0.067	0.055
	(0.12)	(0.10)	(0.08)	(0.07)
Pre-/Post-ZLB Pricing of Premiums				
ε_Bankrate	-0.191^{**}	-0.167^{**}	-0.143^{**}	-0.117^{**}
	(0.08)	(0.07)	(0.06)	(0.05)
ε_BoE_cpi_4	0.125	0.090	0.058	0.032
	(0.08)	(0.07)	(0.06)	(0.05)
ε_BoE_gdp_4	0.067	0.049	0.041	0.033
	(0.11)	(0.09)	(0.07)	(0.06)

Notes: Standard errors are in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. Each column corresponds to the OLS estimation of equation (9). The sample period goes from October 2004 to July 2015. Monetary and projection shocks are estimated based on equations (5)–(7). The dependent variable is the level of monthly averaged FTSE price index and inflation swaps at different maturities from two years to five years. These swaps are corrected for premiums based on equation (A.2). For parsimony, only the key coefficients are reported. Complete tables are available from the authors upon request. X_t includes a news variable capturing the information flow between t–1 and t of macro data releases related to inflation, the change between t–1 and t in private output and interest rate forecasts, and the real activity, uncertainty, and news indexes of Scotti (2016). Z_t includes CPI, industrial production, oil prices, the sterling effective exchange rate, net lending, housing prices, and FG and ZLB dummies.

Table A.7. Robustness Tests about Monetary Shocks

	(1) PF_2y	(2) PF_3y	(3) PF_4y	(4) PF_5y
Identification Not Controlling for IR Months				
ε_Bankrate_rob3	−0.204**	−0.171***	−0.154***	−0.139***
	(0.08)	(0.06)	(0.06)	(0.05)
ε_BoE_cpi_4	0.217**	0.181***	0.138**	0.099*
	(0.08)	(0.07)	(0.06)	(0.05)
ε_BoE_gdp_4	0.096	0.074	0.041	0.006
	(0.11)	(0.09)	(0.08)	(0.07)
Without Small Values of Monetary Shocks				
ε_Bankrate	−0.314*	−0.303**	−0.293**	−0.273**
	(0.17)	(0.14)	(0.12)	(0.11)
ε_BoE_cpi_4	0.223***	0.189***	0.147**	0.107**
	(0.08)	(0.07)	(0.06)	(0.05)
ε_BoE_gdp_4	0.112	0.094	0.064	0.028
	(0.11)	(0.09)	(0.08)	(0.07)
Pre-/Post-ZLB				
ε_Bankrate	−0.086	−0.115	−0.126	−0.132
	(0.14)	(0.11)	(0.10)	(0.09)
ε_BoE_cpi_4	0.225**	0.192***	0.150**	0.112**
	(0.09)	(0.07)	(0.06)	(0.06)
ε_BoE_gdp_4	0.040	0.032	0.006	−0.024
	(0.11)	(0.09)	(0.08)	(0.07)
No PCA in Equations (7)–(8)				
ε_Bankrate	−0.226	−0.218	−0.214*	−0.213**
	(0.16)	(0.13)	(0.12)	(0.10)
ε_BoE_cpi_4	0.348	0.296	0.228	0.163
	(0.22)	(0.18)	(0.16)	(0.14)
ε_BoE_gdp_4	0.139	0.095	0.037	−0.022
	(0.18)	(0.15)	(0.13)	(0.11)

Notes: Standard errors are in parentheses. *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$. Each column corresponds to the OLS estimation of equation (9). The sample period goes from October 2004 to July 2015. Monetary and projection shocks are estimated based on equations (5)–(7). The dependent variable is the level of monthly averaged FTSE price index and inflation swaps at different maturities from two years to five years. These swaps are corrected for premiums based on equation (A.2). For parsimony, only the key coefficients are reported. Complete tables are available from the authors upon request. X_t includes a news variable capturing the information flow between $t-1$ and t of macro data releases related to inflation, the change between $t-1$ and t in private output and interest rate forecasts, and the real activity, uncertainty, and news indexes of Scotti (2016). Z_t includes CPI, industrial production, oil prices, the sterling effective exchange rate, net lending, housing prices, and FG and ZLB dummies.

Table A.8. Robustness Tests about BoE Projections

	(1) PF_2y	(2) PF_3y	(3) PF_4y	(4) PF_5y
Projection Surprises Interpolated				
ε_Bankrate	-0.185^{**}	-0.151^{**}	-0.132^{**}	-0.113^{**}
	(0.08)	(0.07)	(0.06)	(0.05)
ε_BoE_cpi_4	0.113^{**}	0.075^{*}	0.052	0.032
	(0.06)	(0.05)	(0.04)	(0.03)
ε_BoE_gdp_4	-0.037	-0.039	-0.053	-0.072
	(0.07)	(0.06)	(0.05)	(0.04)
Projections Interpolated				
ε_Bankrate	-0.235^{***}	-0.179^{***}	-0.150^{**}	-0.127^{**}
	(0.08)	(0.07)	(0.06)	(0.05)
ε_BoE_cpi_4	0.127^{*}	0.103^{*}	0.076^{*}	0.047
	(0.06)	(0.05)	(0.05)	(0.04)
ε_BoE_gdp_4	0.070	0.012	-0.02	-0.045
	(0.07)	(0.06)	(0.05)	(0.05)
Bankrate in Equation (8)				
ε_Bankrate	-0.282	-0.201	-0.146	-0.088
	(0.24)	(0.19)	(0.16)	(0.13)
ε_BoE_cpi_4	0.227^{*}	0.183^{*}	0.148^{*}	0.118^{*}
	(0.11)	(0.09)	(0.07)	(0.06)
ε_BoE_gdp_4	-0.015	-0.025	-0.039	-0.058
	(0.14)	(0.11)	(0.09)	(0.08)

Notes: Standard errors are in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. Each column corresponds to the OLS estimation of equation (9). The sample period goes from October 2004 to July 2015. Monetary and projection shocks are estimated based on equations (5)–(7). The dependent variable is the level of monthly averaged FTSE price index and inflation swaps at different maturities from two years to five years. These swaps are corrected for premiums based on equation (A.2). For parsimony, only the key coefficients are reported. Complete tables are available from the authors upon request. X_t includes a news variable capturing the information flow between $t-1$ and t of macro data releases related to inflation, the change between $t-1$ and t in private output and interest rate forecasts, and the real activity, uncertainty, and news indexes of Scotti (2016). Z_t includes CPI, industrial production, oil prices, the sterling effective exchange rate, net lending, housing prices, and FG and ZLB dummies.

Table A.9. Robustness Tests about Controls

	(1) PF_2y	(2) PF_3y	(3) PF_4y	(4) PF_5y
No Controls				
ε_Bankrate	-0.222^{***}	-0.198^{***}	-0.180^{***}	-0.161^{***}
	(0.07)	(0.06)	(0.05)	(0.05)
ε_BoE_cpi_4	0.181^{**}	0.147^{**}	0.108^{*}	0.074
	(0.08)	(0.07)	(0.06)	(0.06)
ε_BoE_gdp_4	0.136	0.12	0.087	0.047
	(0.11)	(0.10)	(0.08)	(0.08)
Inflation Measures				
ε_Bankrate	-0.216^{**}	-0.165^{**}	-0.142^{**}	-0.128^{*}
	(0.09)	(0.08)	(0.07)	(0.07)
ε_BoE_cpi_4	0.178^{*}	0.149^{*}	0.112^{*}	0.079
	(0.10)	(0.08)	(0.07)	(0.05)
ε_BoE_gdp_4	0.109	0.078	0.043	0.008
	(0.11)	(0.09)	(0.08)	(0.07)
Slack Measures				
ε_Bankrate	-0.239^{**}	-0.199^{**}	-0.176^{**}	-0.155^{**}
	(0.09)	(0.08)	(0.07)	(0.07)
ε_BoE_cpi_4	0.155^{*}	0.133^{*}	0.097^{*}	0.062
	(0.09)	(0.07)	(0.06)	(0.05)
ε_BoE_gdp_4	0.079	0.059	0.027	-0.009
	(0.10)	(0.08)	(0.08)	(0.07)
Financial Stress Measures				
ε_Bankrate	-0.216^{**}	-0.178^{**}	-0.158^{**}	-0.139^{**}
	(0.10)	(0.08)	(0.07)	(0.06)
ε_BoE_cpi_4	0.214^{**}	0.181^{**}	0.141^{**}	0.104^{*}
	(0.10)	(0.08)	(0.07)	(0.06)
ε_BoE_gdp_4	0.09	0.094	0.083	0.066
	(0.11)	(0.10)	(0.08)	(0.07)
VAT Dummies				
ε_Bankrate	-0.200^{**}	-0.167^{**}	0.151^{**}	-0.136^{**}
	(0.09)	(0.08)	(0.07)	(0.07)
ε_BoE_cpi_4	0.216^{**}	0.180^{**}	0.137^{*}	0.098^{*}
	(0.11)	(0.09)	(0.07)	(0.06)
ε_BoE_gdp_4	0.094	0.072	0.04	0.005
	(0.11)	(0.09)	(0.08)	(0.08)

(*continued*)

Table A.9. (Continued)

	(1) PF_2y	(2) PF_3y	(3) PF_4y	(4) PF_5y
EC Sentiment Measures				
ε_Bankrate	-0.223^{**}	-0.185^{**}	-0.165^{**}	-0.147^{**}
	(0.09)	(0.07)	(0.07)	(0.06)
ε_BoE_cpi_4	0.181^{*}	0.157^{*}	0.118^{*}	0.081
	(0.10)	(0.08)	(0.06)	(0.05)
ε_BoE_gdp_4	0.068	0.05	0.02	-0.013
	(0.10)	(0.08)	(0.07)	(0.07)

Notes: Standard errors are in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. Each column corresponds to the OLS estimation of equation (9). The sample period goes from October 2004 to July 2015. Monetary and projection shocks are estimated based on equations (5)–(7). The dependent variable is the level of monthly averaged FTSE price index and inflation swaps at different maturities from two years to five years. These swaps are corrected for premiums based on equation (A.2). For parsimony, only the key coefficients are reported. Complete tables are available from the authors upon request. X_t includes a news variable capturing the information flow between $t-1$ and t of macro data releases related to inflation, the change between $t-1$ and t in private output and interest rate forecasts, and the real activity, uncertainty, and news indexes of Scotti (2016). Z_t includes CPI, industrial production, oil prices, the sterling effective exchange rate, net lending, housing prices, and FG and ZLB dummies.

Table A.10. Robustness Tests about ELB and FG

	(1) PF_2y	(2) PF_3y	(3) PF_4y	(4) PF_5y
Pre-2009				
ε_Bankrate	-0.343^{**}	-0.295^{**}	-0.267^{***}	-0.239^{***}
	(0.13)	(0.11)	(0.09)	(0.08)
ε_BoE_cpi_4	0.743^{**}	0.563^{**}	0.412^{*}	0.288^{*}
	(0.31)	(0.26)	(0.20)	(0.16)
ε_BoE_gdp_4	0.685^{*}	0.555^{**}	0.456^{**}	0.359^{**}
	(0.34)	(0.27)	(0.20)	(0.15)
Post-2009				
ε_Bankrate	-0.220^{*}	-0.174^{*}	-0.150^{*}	-0.139^{**}
	(0.11)	(0.09)	(0.08)	(0.06)
ε_BoE_cpi_4	0.067	0.052	0.039	0.03
	(0.08)	(0.07)	(0.06)	(0.05)
ε_BoE_gdp_4	0.068	0.063	0.031	0
	(0.12)	(0.11)	(0.10)	(0.09)
FG Dummies				
ε_Bankrate	-0.237^{**}	-0.199^{**}	-0.177^{**}	-0.158^{**}
	(0.10)	(0.09)	(0.08)	(0.08)
ε_BoE_cpi_4	0.181^{*}	0.153^{*}	0.115	0.08
	(0.11)	(0.09)	(0.07)	(0.06)
ε_BoE_gdp_4	0.103	0.079	0.045	0.009
	(0.11)	(0.10)	(0.08)	(0.08)

Notes: Standard errors are in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. Each column corresponds to the OLS estimation of equation (9). The sample period goes from October 2004 to July 2015. Monetary and projection shocks are estimated based on equations (5)–(7). The dependent variable is the level of monthly averaged FTSE price index and inflation swaps at different maturities from two years to five years. These swaps are corrected for premiums based on equation (A.2). For parsimony, only the key coefficients are reported. Complete tables are available from the authors upon request. X_t includes a news variable capturing the information flow between $t-1$ and t of macro data releases related to inflation, the change between $t-1$ and t in private output and interest rate forecasts, and the real activity, uncertainty, and news indexes of Scotti (2016). Z_t includes CPI, industrial production, oil prices, the sterling effective exchange rate, net lending, housing prices, and FG and ZLB dummies.

Table A.11. Robustness Tests about the Left-Hand-Side Variable

	(1) PF_2y	(2) PF_3y	(3) PF_4y	(4) PF_5y
First Difference				
ε_Bankrate	-0.215^{***}	-0.171^{**}	-0.153^{***}	-0.138^{***}
	(0.08)	(0.07)	(0.06)	(0.05)
ε_BoE_cpi_4	0.199^{**}	0.169^{**}	0.125^{**}	0.083
	(0.09)	(0.07)	(0.06)	(0.06)
ε_BoE_gdp_4	0.046	0.045	0.027	-0.003
	(0.12)	(0.10)	(0.08)	(0.08)
Deviation from Target				
ε_Bankrate	-0.204^{**}	-0.171^{***}	-0.154^{***}	-0.140^{***}
	(0.08)	(0.06)	(0.06)	(0.05)
ε_BoE_cpi_4	0.217^{**}	0.181^{***}	0.138^{**}	0.099^{*}
	(0.08)	(0.07)	(0.06)	(0.05)
ε_BoE_gdp_4	0.096	0.074	0.042	0.007
	(0.11)	(0.09)	(0.08)	(0.07)
Last Observation of Each Month				
ε_Bankrate	-0.237^{**}	-0.218^{**}	-0.208^{**}	-0.192^{***}
	(0.10)	(0.09)	(0.08)	(0.07)
ε_BoE_cpi_4	0.202^{*}	0.12	0.054	0.005
	(0.11)	(0.09)	(0.08)	(0.07)
‘ε_BoE_gdp_4	0.037	0.002	-0.028	-0.059
	(0.14)	(0.13)	(0.11)	(0.10)

Notes: Standard errors are in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. Each column corresponds to the OLS estimation of equation (9). The sample period goes from October 2004 to July 2015. Monetary and projection shocks are estimated based on equations (5)–(7). The dependent variable is the level of monthly averaged FTSE price index and inflation swaps at different maturities from two years to five years. These swaps are corrected for premiums based on equation (A.2). For parsimony, only the key coefficients are reported. Complete tables are available from the authors upon request. X_t includes a news variable capturing the information flow between $t-1$ and t of macro data releases related to inflation, the change between $t-1$ and t in private output and interest rate forecasts, and the real activity, uncertainty and news indexes of Scotti (2016). Z_t includes CPI, industrial production, oil prices, the sterling effective exchange rate, net lending, housing prices, and FG and ZLB dummies.

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