

Trouble every day:

Monetary policy in emerging economies, a study of South Africa

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Introduction

- ▶ HFI is the leading approach to study monetary policy effects
 - ⇒ Only in advanced economies: **US** (Gürkaynak et al., 2005, Swanson, 2021), **Euro Area** (Altavilla et al., 2019), **UK** (Cesa-Bianchi et al., 2020)

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- ▶ **This paper:** High-frequency identification of MP in SA
 - ▶ Liquid and developed financial markets
 - ▶ Small open economy with modern central banking
 - ▶ Capture the effect of MP announcements with 3 factors:
 - short-term (conventional) monetary surprises
 - two 'communication surprises' to medium- and long-maturities
 - ▶ Study the transmission of monetary policy in
 - event study approach
 - IV-SVAR

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6. Shock at longer horizon compatible to **risk-premia** shocks

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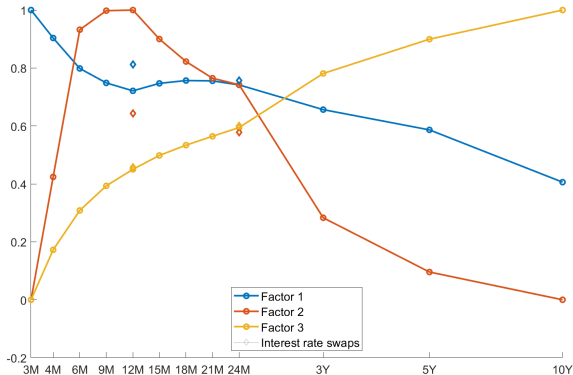
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- ▶ High-frequency surprises in daily window around MPC meeting dates over 2002M6-2020M1
 - follow Gürkaynak et al. (2005) and Altavilla et al. (2019) in factors' construction

Factors extraction

- ▶ Use entire maturity structure and extract 3 principal components
- ▶ Identify factors that load on **short**, **medium** and **long** maturities

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Information content of surprises

- ▶ Control for the **SARB information set** - inflation and output growth forecasts and forecast revisions (Miranda-Agrippino and Ricco (2021)):

$$F_m^i = \alpha_0 + \sum_{j=-1}^3 \theta_j FC_m^{SARB} x_{q+j} + \sum_{j=-1}^3 \eta_j [FC_m^{SARB} x_{q+j} - FC_{m-1}^{SARB} x_{q+j}] + \text{Info}_m^i$$

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Factors' correlation with changes in policy rate:

▶ US, EA

	F1	F2	F3
Correlation coefficient	0.62	-0.08	-0.21

Event study

Market surprise	Factors						Info Robust Factors					
	Constant	F1	F2	F3	Rsqr	Nobs	Constant	F1info	F2info	F3info	Rsqr	Nobs
Overnight	-0.028 (0.02)	0.172*** (0.05)	-0.076 (0.07)	-0.016 (0.01)	0.38	81	-0.035 (0.03)	0.125** (0.05)	-0.005 (0.05)	-0.016 (0.03)	0.18	81
1M Jibar	-0.035** (0.01)	0.212*** (0.02)	-0.023 (0.03)	-0.015 (0.01)	0.79	109	-0.043** (0.02)	0.211*** (0.03)	0.029 (0.04)	0.003 (0.02)	0.58	105
3M Jibar	-0.026*** (0.01)	0.200*** (0.01)	0 (0.02)	0 (0.01)	0.94	109	-0.032*** (0.01)	0.203*** (0.01)	0.014 (0.03)	0.01 (0.02)	0.73	105
1Y bond	-0.013** (0.01)	0.053*** (0.01)	0.035** (0.02)	0.063*** (0.01)	0.65	83	-0.012 (0.01)	0.046*** (0.02)	0.015 (0.02)	0.048*** (0.02)	0.27	83
2Y bond	-0.009* (0.01)	0.081*** (0.01)	0.009 (0.03)	0.087*** (0.01)	0.86	70	-0.006 (0.01)	0.082*** (0.01)	0.011 (0.05)	0.114*** (0.02)	0.55	69
3Y bond	-0.009** (0.00)	0.082*** (0.01)	0.033** (0.01)	0.095*** (0.01)	0.91	79	-0.007 (0.01)	0.084*** (0.02)	0.033 (0.04)	0.111*** (0.02)	0.55	75
5Y bond	-0.014*** (0.00)	0.061*** (0.00)	0.020** (0.01)	0.088*** (0.01)	0.92	92	-0.019** (0.01)	0.060** (0.01)	0.026 (0.02)	0.091*** (0.02)	0.54	88
10Y bond	-0.012*** (0.00)	0.025*** (0.01)	0.001 (0.01)	0.080*** (0.01)	0.78	109	-0.012* (0.01)	0.026*** (0.01)	0.001 (0.01)	0.081*** (0.01)	0.4	105
20Y bond	-0.017*** (0.00)	0.023*** (0.01)	-0.001 (0.01)	0.081*** (0.01)	0.75	105	-0.018** (0.01)	0.021** (0.01)	0.004 (0.02)	0.076*** (0.02)	0.35	101
30Y bond	-0.016*** (0.01)	0.023*** (0.01)	-0.004 (0.01)	0.078*** (0.01)	0.69	103	-0.017** (0.01)	0.022** (0.01)	-0.002 (0.02)	0.069*** (0.02)	0.31	99
JSE All shares ^{1d}	-0.145 (0.11)	-0.390*** (0.14)	0.251 (0.20)	-0.485*** (0.15)	0.21	109	-0.119 (0.12)	-0.413** (0.17)	0.193 (0.28)	-0.542*** (0.19)	0.14	105
JSE All shares ^{2d}	0.039 (0.14)	-0.528*** (0.15)	-0.387 (0.24)	-0.356* (0.21)	0.17	109	0.08 (0.14)	-0.528*** (0.18)	-0.627** (0.30)	-0.545** (0.26)	0.15	105
USD/ZAR ^{1d}	0.101 (0.11)	0.254 (0.17)	-0.154 (0.25)	-0.181 (0.18)	0.07	109	0.112 (0.11)	0.218 (0.18)	-0.515* (0.29)	-0.148 (0.24)	0.07	105
USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	0.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

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USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	0.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

Event study

Market surprise	Factors						Info Robust Factors					
	Constant	F1	F2	F3	Rsq	Nobs	Constant	F1info	F2info	F3info	Rsq	Nobs
Overnight	-0.028 (0.02)	0.172*** (0.05)	-0.076 (0.07)	-0.016 (0.01)	0.38	81	-0.035 (0.03)	0.125** (0.05)	-0.005 (0.05)	-0.016 (0.03)	0.18	81
1M Jibar	-0.035** (0.01)	0.212*** (0.02)	-0.023 (0.03)	-0.015 (0.01)	0.79	109	-0.043** (0.02)	0.211*** (0.03)	0.029 (0.04)	0.003 (0.02)	0.58	105
3M Jibar	-0.026*** (0.01)	0.200*** (0.01)	0 (0.02)	0 (0.01)	0.94	109	-0.032*** (0.01)	0.203*** (0.01)	0.014 (0.03)	0.01 (0.02)	0.73	105
1Y bond	-0.013** (0.01)	0.053*** (0.01)	0.035** (0.02)	0.063*** (0.01)	0.65	83	-0.012 (0.01)	0.046*** (0.02)	0.015 (0.02)	0.048*** (0.02)	0.27	83
2Y bond	-0.009* (0.01)	0.081*** (0.01)	0.009 (0.03)	0.087*** (0.01)	0.86	70	-0.006 (0.01)	0.082*** (0.01)	0.011 (0.05)	0.114*** (0.02)	0.55	69
3Y bond	-0.009** (0.00)	0.082*** (0.01)	0.033** (0.01)	0.095*** (0.01)	0.91	79	-0.007 (0.01)	0.084*** (0.02)	0.033 (0.04)	0.111*** (0.02)	0.55	75
5Y bond	-0.014*** (0.00)	0.061*** (0.00)	0.020** (0.01)	0.088*** (0.01)	0.92	92	-0.019** (0.01)	0.060*** (0.01)	0.026 (0.02)	0.091*** (0.02)	0.54	88
10Y bond	-0.012*** (0.00)	0.025*** (0.01)	0.001 (0.01)	0.080*** (0.01)	0.78	109	-0.012* (0.01)	0.026*** (0.01)	0.001 (0.01)	0.081*** (0.01)	0.4	105
20Y bond	-0.017*** (0.00)	0.023*** (0.01)	-0.001 (0.01)	0.081*** (0.01)	0.75	105	-0.018** (0.01)	0.021** (0.01)	0.004 (0.02)	0.076*** (0.02)	0.35	101
30Y bond	-0.016*** (0.01)	0.023*** (0.01)	-0.004 (0.01)	0.078*** (0.01)	0.69	103	-0.017** (0.01)	0.022** (0.01)	-0.002 (0.02)	0.069*** (0.02)	0.31	99
JSE All shares ^{1d}	-0.145 (0.11)	-0.390*** (0.14)	0.251 (0.20)	-0.485*** (0.15)	0.21	109	-0.119 (0.12)	-0.413** (0.17)	0.193 (0.28)	-0.542*** (0.19)	0.14	105
JSE All shares ^{2d}	0.039 (0.14)	-0.528*** (0.15)	-0.387 (0.24)	-0.356* (0.21)	0.17	109	0.08 (0.14)	-0.528*** (0.18)	-0.627** (0.30)	-0.545** (0.26)	0.15	105
USD/ZAR ^{1d}	0.101 (0.11)	0.254 (0.17)	-0.154 (0.25)	-0.181 (0.18)	0.07	109	0.112 (0.11)	0.218 (0.18)	-0.515* (0.29)	-0.148 (0.24)	0.07	105
USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	0.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

Event study

Market surprise	Factors						Info Robust Factors					
	Constant	F1	F2	F3	Rsq	Nobs	Constant	F1info	F2info	F3info	Rsq	Nobs
Overnight	-0.028 (0.02)	0.172*** (0.05)	-0.076 (0.07)	-0.016 (0.01)	0.38	81	-0.035 (0.03)	0.125** (0.05)	-0.005 (0.05)	-0.016 (0.03)	0.18	81
1M Jibar	-0.035** (0.01)	0.212*** (0.02)	-0.023 (0.03)	-0.015 (0.01)	0.79	109	-0.043** (0.02)	0.211*** (0.03)	0.029 (0.04)	0.003 (0.02)	0.58	105
3M Jibar	-0.026*** (0.01)	0.200*** (0.01)	0 (0.02)	0 (0.01)	0.94	109	-0.032*** (0.01)	0.203*** (0.01)	0.014 (0.03)	0.01 (0.02)	0.73	105
1Y bond	-0.013** (0.01)	0.053*** (0.01)	0.035** (0.02)	0.063*** (0.01)	0.65	83	-0.012 (0.01)	0.046*** (0.02)	0.015 (0.02)	0.048*** (0.02)	0.27	83
2Y bond	-0.009* (0.01)	0.081*** (0.01)	0.009 (0.03)	0.087*** (0.01)	0.86	70	-0.006 (0.01)	0.082*** (0.01)	0.011 (0.05)	0.114*** (0.02)	0.55	69
3Y bond	-0.009** (0.00)	0.082*** (0.01)	0.033** (0.01)	0.095*** (0.01)	0.91	79	-0.007 (0.01)	0.084*** (0.02)	0.033 (0.04)	0.111*** (0.02)	0.55	75
5Y bond	-0.014*** (0.00)	0.061*** (0.00)	0.020** (0.01)	0.088*** (0.01)	0.92	92	-0.019** (0.01)	0.060*** (0.01)	0.026 (0.02)	0.091*** (0.02)	0.54	88
10Y bond	-0.012*** (0.00)	0.025*** (0.01)	0.001 (0.01)	0.080*** (0.01)	0.78	109	-0.012* (0.01)	0.026*** (0.01)	0.001 (0.01)	0.081*** (0.01)	0.4	105
20Y bond	-0.017*** (0.00)	0.023*** (0.01)	-0.001 (0.01)	0.081*** (0.01)	0.75	105	-0.018** (0.01)	0.021** (0.01)	0.004 (0.02)	0.076*** (0.02)	0.35	101
30Y bond	-0.016*** (0.01)	0.023*** (0.01)	-0.004 (0.01)	0.078*** (0.01)	0.69	103	-0.017** (0.01)	0.022** (0.01)	-0.002 (0.02)	0.069*** (0.02)	0.31	99
JSE All shares ^{1d}	-0.145 (0.11)	-0.390*** (0.14)	0.251 (0.20)	-0.485*** (0.15)	0.21	109	-0.119 (0.12)	-0.413** (0.17)	0.193 (0.28)	-0.542*** (0.19)	0.14	105
JSE All shares ^{2d}	0.039 (0.14)	-0.528*** (0.15)	-0.387 (0.24)	-0.356* (0.21)	0.17	109	0.08 (0.14)	-0.528*** (0.18)	-0.627** (0.30)	-0.545** (0.26)	0.15	105
USD/ZAR ^{1d}	0.101 (0.11)	0.254 (0.17)	-0.154 (0.25)	-0.181 (0.18)	0.07	109	0.112 (0.11)	0.218 (0.18)	-0.515* (0.29)	-0.148 (0.24)	0.07	105
USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	0.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

Event study

Market surprise	Factors						Info Robust Factors					
	Constant	F1	F2	F3	Rsqr	Nobs	Constant	F1info	F2info	F3info	Rsqr	Nobs
Overnight	-0.028 (0.02)	0.172*** (0.05)	-0.076 (0.07)	-0.016 (0.01)	0.38	81	-0.035 (0.03)	0.125** (0.05)	-0.005 (0.05)	-0.016 (0.03)	0.18	81
1M Jibar	-0.035** (0.01)	0.212*** (0.02)	-0.023 (0.03)	-0.015 (0.01)	0.79	109	-0.043** (0.02)	0.211*** (0.03)	0.029 (0.04)	0.003 (0.02)	0.58	105
3M Jibar	-0.026*** (0.01)	0.200*** (0.01)	0 (0.02)	0 (0.01)	0.94	109	-0.032*** (0.01)	0.203*** (0.01)	0.014 (0.03)	0.01 (0.02)	0.73	105
1Y bond	-0.013** (0.01)	0.053*** (0.01)	0.035** (0.02)	0.063*** (0.01)	0.65	83	-0.012 (0.01)	0.046*** (0.02)	0.015 (0.02)	0.048*** (0.02)	0.27	83
2Y bond	-0.009* (0.01)	0.081*** (0.01)	0.009 (0.03)	0.087*** (0.01)	0.86	70	-0.006 (0.01)	0.082*** (0.01)	0.011 (0.05)	0.114*** (0.02)	0.55	69
3Y bond	-0.009** (0.00)	0.082*** (0.01)	0.033** (0.01)	0.095*** (0.01)	0.91	79	-0.007 (0.01)	0.084*** (0.02)	0.033 (0.04)	0.111*** (0.02)	0.55	75
5Y bond	-0.014*** (0.00)	0.061*** (0.00)	0.020** (0.01)	0.088*** (0.01)	0.92	92	-0.019** (0.01)	0.060*** (0.01)	0.026 (0.02)	0.091*** (0.02)	0.54	88
10Y bond	-0.012*** (0.00)	0.025*** (0.01)	0.001 (0.01)	0.080*** (0.01)	0.78	109	-0.012* (0.01)	0.026*** (0.01)	0.001 (0.01)	0.081*** (0.01)	0.4	105
20Y bond	-0.017*** (0.00)	0.023*** (0.01)	-0.001 (0.01)	0.081*** (0.01)	0.75	105	-0.018** (0.01)	0.021** (0.01)	0.004 (0.02)	0.076*** (0.02)	0.35	101
30Y bond	-0.016*** (0.01)	0.023*** (0.01)	-0.004 (0.01)	0.078*** (0.01)	0.69	103	-0.017** (0.01)	0.022** (0.01)	-0.002 (0.02)	0.069*** (0.02)	0.31	99
JSE All shares ^{1d}	-0.145 (0.11)	-0.390*** (0.14)	0.251 (0.20)	-0.485*** (0.15)	0.21	109	-0.119 (0.12)	-0.413** (0.17)	0.193 (0.28)	-0.542*** (0.19)	0.14	105
JSE All shares ^{2d}	0.039 (0.14)	-0.528*** (0.15)	-0.387 (0.24)	-0.356* (0.21)	0.17	109	0.08 (0.14)	-0.528*** (0.18)	-0.627** (0.30)	-0.545** (0.26)	0.15	105
USD/ZAR ^{1d}	0.101 (0.11)	0.254 (0.17)	-0.154 (0.25)	-0.181 (0.18)	0.07	109	0.112 (0.11)	0.218 (0.18)	-0.515* (0.29)	-0.148 (0.24)	0.07	105
USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	0.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

Event study

Market surprise	Constant	Factors			Rsqr	Nobs	Constant	Info Robust Factors			Rsqr	Nobs
		F1	F2	F3				F1info	F2info	F3info		
Overnight	-0.028 (0.02)	0.172*** (0.05)	-0.076 (0.07)	-0.016 (0.01)	0.38	81	-0.035 (0.03)	0.125** (0.05)	-0.005 (0.05)	-0.016 (0.03)	0.18	81
1M Jibar	-0.035** (0.01)	0.212*** (0.02)	-0.023 (0.03)	-0.015 (0.01)	0.79	109	-0.043** (0.02)	0.211*** (0.03)	0.029 (0.04)	0.003 (0.02)	0.58	105
3M Jibar	-0.026*** (0.01)	0.200*** (0.01)	0 (0.02)	0 (0.01)	0.94	109	-0.032*** (0.01)	0.203*** (0.01)	0.014 (0.03)	0.01 (0.02)	0.73	105
1Y bond	-0.013** (0.01)	0.053*** (0.01)	0.035** (0.02)	0.063*** (0.01)	0.65	83	-0.012 (0.01)	0.046*** (0.02)	0.015 (0.02)	0.048*** (0.02)	0.27	83
2Y bond	-0.009* (0.01)	0.081*** (0.01)	0.009 (0.03)	0.087*** (0.01)	0.86	70	-0.006 (0.01)	0.082*** (0.01)	0.011 (0.05)	0.114*** (0.02)	0.55	69
3Y bond	-0.009** (0.00)	0.082*** (0.01)	0.033** (0.01)	0.095*** (0.01)	0.91	79	-0.007 (0.01)	0.084*** (0.02)	0.033 (0.04)	0.111*** (0.02)	0.55	75
5Y bond	-0.014*** (0.00)	0.061*** (0.00)	0.020** (0.01)	0.088*** (0.01)	0.92	92	-0.019** (0.01)	0.060*** (0.01)	0.026 (0.02)	0.091*** (0.02)	0.54	88
10Y bond	-0.012*** (0.00)	0.025*** (0.01)	0.001 (0.01)	0.080*** (0.01)	0.78	109	-0.012* (0.01)	0.026*** (0.01)	0.001 (0.01)	0.081*** (0.01)	0.4	105
20Y bond	-0.017*** (0.00)	0.023*** (0.01)	-0.001 (0.01)	0.081*** (0.01)	0.75	105	-0.018** (0.01)	0.021** (0.01)	0.004 (0.02)	0.076*** (0.02)	0.35	101
30Y bond	-0.016*** (0.01)	0.023*** (0.01)	-0.004 (0.01)	0.078*** (0.01)	0.69	103	-0.017** (0.01)	0.022** (0.01)	-0.002 (0.02)	0.069*** (0.02)	0.31	99
JSE All shares ^{1d}	-0.145 (0.11)	-0.390*** (0.14)	0.251 (0.20)	-0.485*** (0.15)	0.21	109	-0.119 (0.12)	-0.413** (0.17)	0.193 (0.28)	-0.542*** (0.19)	0.14	105
JSE All shares ^{2d}	0.039 (0.14)	-0.528*** (0.15)	-0.387 (0.24)	-0.356* (0.21)	0.17	109	0.08 (0.14)	-0.528*** (0.18)	-0.627** (0.30)	-0.545** (0.26)	0.15	105
USD/ZAR ^{1d}	0.101 (0.11)	0.254 (0.17)	-0.154 (0.25)	-0.181 (0.18)	0.07	109	0.112 (0.11)	0.218 (0.18)	-0.515* (0.29)	-0.148 (0.24)	0.07	105
USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	0.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

Event study F1 effect on yields

Market surprise	Factors						Info Robust Factors					
	Constant	F1	F2	F3	Rsq	Nobs	Constant	F1info	F2info	F3info	Rsq	Nobs
Overnight	-0.028 (0.02)	0.172*** (0.05)	-0.076 (0.07)	-0.016 (0.01)	0.38	81	-0.035 (0.03)	0.125** (0.05)	-0.005 (0.05)	-0.016 (0.03)	0.18	81
1M Jibar	-0.035** (0.01)	0.212*** (0.02)	-0.023 (0.03)	-0.015 (0.01)	0.79	109	-0.043** (0.02)	0.211*** (0.03)	0.029 (0.04)	0.003 (0.02)	0.58	105
3M Jibar	-0.026*** (0.01)	0.200*** (0.01)	0 (0.02)	0 (0.01)	0.94	109	-0.032*** (0.01)	0.203*** (0.01)	0.014 (0.03)	0.01 (0.02)	0.73	105
1Y bond	-0.013** (0.01)	0.053*** (0.01)	0.035** (0.02)	0.063*** (0.01)	0.65	83	-0.012 (0.01)	0.046*** (0.02)	0.015 (0.02)	0.048*** (0.02)	0.27	83
2Y bond	-0.009* (0.01)	0.081*** (0.01)	0.009 (0.03)	0.087*** (0.01)	0.86	70	-0.006 (0.01)	0.082*** (0.01)	0.011 (0.05)	0.114*** (0.02)	0.55	69
3Y bond	-0.009* (0.00)	0.082*** (0.01)	0.033** (0.01)	0.095*** (0.01)	0.91	79	-0.007 (0.01)	0.084*** (0.02)	0.033 (0.04)	0.111*** (0.02)	0.55	75
5Y bond	-0.014*** (0.00)	0.061*** (0.00)	0.020** (0.01)	0.088*** (0.01)	0.92	92	-0.019** (0.01)	0.060** (0.01)	0.026 (0.02)	0.091*** (0.02)	0.54	88
10Y bond	-0.012*** (0.00)	0.025*** (0.01)	0.001 (0.01)	0.080*** (0.01)	0.78	109	-0.012* (0.01)	0.026** (0.01)	0.001 (0.01)	0.081*** (0.01)	0.4	105
20Y bond	-0.017*** (0.00)	0.023*** (0.01)	-0.001 (0.01)	0.081*** (0.01)	0.75	105	-0.018** (0.01)	0.021** (0.01)	0.004 (0.02)	0.076*** (0.02)	0.35	101
30Y bond	-0.016*** (0.01)	0.023*** (0.01)	-0.004 (0.01)	0.078*** (0.01)	0.69	103	-0.017** (0.01)	0.022** (0.01)	-0.002 (0.02)	0.069*** (0.02)	0.31	99
JSE All shares ^{1d}	-0.145 (0.11)	-0.390*** (0.14)	0.251 (0.20)	-0.485*** (0.15)	0.21	109	-0.119 (0.12)	-0.413** (0.17)	0.193 (0.28)	-0.542*** (0.19)	0.14	105
JSE All shares ^{2d}	0.039 (0.14)	-0.528*** (0.15)	-0.387 (0.24)	-0.356* (0.21)	0.17	109	0.08 (0.14)	-0.528*** (0.18)	-0.627** (0.30)	-0.545** (0.26)	0.15	105
USD/ZAR ^{1d}	0.101 (0.11)	0.254 (0.17)	-0.154 (0.25)	-0.181 (0.18)	0.07	109	0.112 (0.11)	0.218 (0.18)	-0.515* (0.29)	-0.148 (0.24)	0.07	105
USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	0.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

Event study F1 effect on stocks and FX

Market surprise	Factors						Info Robust Factors					
	Constant	F1	F2	F3	Rsq	Nobs	Constant	F1info	F2info	F3info	Rsq	Nobs
Overnight	-0.028 (0.02)	0.172*** (0.05)	-0.076 (0.07)	-0.016 (0.01)	0.38	81	-0.035 (0.03)	0.125** (0.05)	-0.005 (0.05)	-0.016 (0.03)	0.18	81
1M Jibar	-0.035** (0.01)	0.212*** (0.02)	-0.023 (0.03)	-0.015 (0.01)	0.79	109	-0.043** (0.02)	0.211*** (0.03)	0.029 (0.04)	0.003 (0.02)	0.58	105
3M Jibar	-0.026*** (0.01)	0.200*** (0.01)	0 (0.02)	0 (0.01)	0.94	109	-0.032*** (0.01)	0.203*** (0.01)	0.014 (0.03)	0.01 (0.02)	0.73	105
1Y bond	-0.013** (0.01)	0.053*** (0.01)	0.035** (0.02)	0.063*** (0.01)	0.65	83	-0.012 (0.01)	0.046*** (0.02)	0.015 (0.02)	0.048*** (0.02)	0.27	83
2Y bond	-0.009* (0.01)	0.081*** (0.01)	0.009 (0.03)	0.087*** (0.01)	0.86	70	-0.006 (0.01)	0.082*** (0.01)	0.011 (0.05)	0.114*** (0.02)	0.55	69
3Y bond	-0.009** (0.00)	0.082*** (0.01)	0.033** (0.01)	0.095*** (0.01)	0.91	79	-0.007 (0.01)	0.084*** (0.02)	0.033 (0.04)	0.111*** (0.02)	0.55	75
5Y bond	-0.014*** (0.00)	0.061*** (0.00)	0.020** (0.01)	0.088*** (0.01)	0.92	92	-0.019** (0.01)	0.060*** (0.01)	0.026 (0.02)	0.091*** (0.02)	0.54	88
10Y bond	-0.012*** (0.00)	0.025*** (0.01)	0.001 (0.01)	0.080*** (0.01)	0.78	109	-0.012* (0.01)	0.026*** (0.01)	0.001 (0.01)	0.081*** (0.01)	0.4	105
20Y bond	-0.017*** (0.00)	0.023*** (0.01)	-0.001 (0.01)	0.081*** (0.01)	0.75	105	-0.018** (0.01)	0.021** (0.01)	0.004 (0.02)	0.076*** (0.02)	0.35	101
30Y bond	-0.016*** (0.01)	0.023*** (0.01)	-0.004 (0.01)	0.078*** (0.01)	0.69	103	-0.017** (0.01)	0.022** (0.01)	-0.002 (0.02)	0.069*** (0.02)	0.31	99
JSE All shares ^{1d}	-0.145 (0.11)	-0.390*** (0.14)	0.251 (0.20)	-0.485*** (0.15)	0.21	109	-0.119 (0.12)	-0.413** (0.17)	0.193 (0.28)	-0.542*** (0.19)	0.14	105
JSE All shares ^{2d}	0.039 (0.14)	-0.528*** (0.15)	-0.387 (0.24)	-0.356* (0.21)	0.17	109	0.08 (0.14)	-0.528*** (0.18)	-0.627** (0.30)	-0.545** (0.26)	0.15	105
USD/ZAR ^{1d}	0.101 (0.11)	0.254 (0.17)	-0.154 (0.25)	-0.181 (0.18)	0.07	109	0.112 (0.11)	0.218 (0.18)	-0.515* (0.29)	-0.148 (0.24)	0.07	105
USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	0.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

Event study F3 effect on yields

Market surprise	Factors						Info Robust Factors					
	Constant	F1	F2	F3	Rsqr	Nobs	Constant	F1info	F2info	F3info	Rsqr	Nobs
Overnight	-0.028 (0.02)	0.172*** (0.05)	-0.076 (0.07)	-0.016 (0.01)	0.38	81	-0.035 (0.03)	0.125** (0.05)	-0.005 (0.05)	-0.016 (0.03)	0.18	81
1M Jibar	-0.035** (0.01)	0.212*** (0.02)	-0.023 (0.03)	-0.015 (0.01)	0.79	109	-0.043** (0.02)	0.211*** (0.03)	0.029 (0.04)	0.003 (0.02)	0.58	105
3M Jibar	-0.026*** (0.01)	0.200*** (0.01)	0 (0.02)	0 (0.01)	0.94	109	-0.032*** (0.01)	0.203*** (0.01)	0.014 (0.03)	0.01 (0.02)	0.73	105
1Y bond	-0.013** (0.01)	0.053*** (0.01)	0.035** (0.02)	0.063*** (0.01)	0.65	83	-0.012 (0.01)	0.046*** (0.02)	0.015 (0.02)	0.048*** (0.02)	0.27	83
2Y bond	-0.009* (0.01)	0.081*** (0.01)	0.009 (0.03)	0.087*** (0.01)	0.86	70	-0.006 (0.01)	0.082*** (0.01)	0.011 (0.05)	0.114*** (0.02)	0.55	69
3Y bond	-0.009** (0.00)	0.082*** (0.01)	0.033** (0.01)	0.095*** (0.01)	0.91	79	-0.007 (0.01)	0.084*** (0.02)	0.033 (0.04)	0.111*** (0.02)	0.55	75
5Y bond	-0.014*** (0.00)	0.061*** (0.00)	0.020** (0.01)	0.088*** (0.01)	0.92	92	-0.019** (0.01)	0.060*** (0.01)	0.026 (0.02)	0.091*** (0.02)	0.54	88
10Y bond	-0.012*** (0.00)	0.025*** (0.01)	0.001 (0.01)	0.080*** (0.01)	0.78	109	-0.012* (0.01)	0.026*** (0.01)	0.001 (0.01)	0.081*** (0.01)	0.4	105
20Y bond	-0.017*** (0.00)	0.023*** (0.01)	-0.001 (0.01)	0.081*** (0.01)	0.75	105	-0.018** (0.01)	0.021** (0.01)	0.004 (0.02)	0.076*** (0.02)	0.35	101
30Y bond	-0.016*** (0.01)	0.023*** (0.01)	-0.004 (0.01)	0.078*** (0.01)	0.69	103	-0.017** (0.01)	0.022** (0.01)	-0.002 (0.02)	0.069*** (0.02)	0.31	99
JSE All shares ^{1d}	-0.145 (0.11)	-0.390*** (0.14)	0.251 (0.20)	-0.485*** (0.15)	0.21	109	-0.119 (0.12)	-0.413** (0.17)	0.193 (0.28)	-0.542*** (0.19)	0.14	105
JSE All shares ^{2d}	0.039 (0.14)	-0.528*** (0.15)	-0.387 (0.24)	-0.356* (0.21)	0.17	109	0.08 (0.14)	-0.528*** (0.18)	-0.627** (0.30)	-0.545** (0.26)	0.15	105
USD/ZAR ^{1d}	0.101 (0.11)	0.254 (0.17)	-0.154 (0.25)	-0.181 (0.18)	0.07	109	0.112 (0.11)	0.218 (0.18)	-0.515* (0.29)	-0.148 (0.24)	0.07	105
USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	0.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

Event study F3 effect on risk premium

Market surprise	Factors						Info Robust Factors					
	Constant	F1	F2	F3	Rsqr	Nobs	Constant	F1info	F2info	F3info	Rsqr	Nobs
Overnight	-0.028 (0.02)	0.172*** (0.05)	-0.076 (0.07)	-0.016 (0.01)	0.38	81	-0.035 (0.03)	0.125** (0.05)	-0.005 (0.05)	-0.016 (0.03)	0.18	81
1M Jibar	-0.035** (0.01)	0.212*** (0.02)	-0.023 (0.03)	-0.015 (0.01)	0.79	109	-0.043** (0.02)	0.211*** (0.03)	0.029 (0.04)	0.003 (0.02)	0.58	105
3M Jibar	-0.026*** (0.01)	0.200*** (0.01)	0 (0.02)	0 (0.01)	0.94	109	-0.032*** (0.01)	0.203*** (0.01)	0.014 (0.03)	0.01 (0.02)	0.73	105
1Y bond	-0.013** (0.01)	0.053*** (0.01)	0.035** (0.02)	0.063*** (0.01)	0.65	83	-0.012 (0.01)	0.046*** (0.02)	0.015 (0.02)	0.048*** (0.02)	0.27	83
2Y bond	-0.009* (0.01)	0.081*** (0.01)	0.009 (0.03)	0.087*** (0.01)	0.86	70	-0.006 (0.01)	0.082*** (0.01)	0.011 (0.05)	0.114*** (0.02)	0.55	69
3Y bond	-0.009** (0.00)	0.082*** (0.01)	0.033** (0.01)	0.095*** (0.01)	0.91	79	-0.007 (0.01)	0.084*** (0.02)	0.033 (0.04)	0.111*** (0.02)	0.55	75
5Y bond	-0.014*** (0.00)	0.061*** (0.00)	0.020** (0.01)	0.088*** (0.01)	0.92	92	-0.019** (0.01)	0.060*** (0.01)	0.026 (0.02)	0.091*** (0.02)	0.54	88
10Y bond	-0.012*** (0.00)	0.025*** (0.01)	0.001 (0.01)	0.080*** (0.01)	0.78	109	-0.012* (0.01)	0.026*** (0.01)	0.001 (0.01)	0.081*** (0.01)	0.4	105
20Y bond	-0.017*** (0.00)	0.023*** (0.01)	-0.001 (0.01)	0.081*** (0.01)	0.75	105	-0.018** (0.01)	0.021** (0.01)	0.004 (0.02)	0.076*** (0.02)	0.35	101
30Y bond	-0.016*** (0.01)	0.023*** (0.01)	-0.004 (0.01)	0.078*** (0.01)	0.69	103	-0.017** (0.01)	0.022** (0.01)	-0.002 (0.02)	0.069*** (0.02)	0.31	99
JSE All shares ^{1d}	-0.145 (0.11)	-0.390*** (0.14)	0.251 (0.20)	-0.485*** (0.15)	0.21	109	-0.119 (0.12)	-0.413** (0.17)	0.193 (0.28)	-0.542*** (0.19)	0.14	105
JSE All shares ^{2d}	0.039 (0.14)	-0.528*** (0.15)	-0.387 (0.24)	-0.356* (0.21)	0.17	109	0.08 (0.14)	-0.528*** (0.18)	-0.627** (0.30)	-0.545** (0.26)	0.15	105
USD/ZAR ^{1d}	0.101 (0.11)	0.254 (0.17)	-0.154 (0.25)	-0.181 (0.18)	0.07	109	0.112 (0.11)	0.218 (0.18)	-0.515* (0.29)	-0.148 (0.24)	0.07	105
USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	3.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

Event study

F3 effect on capital flows

Market surprise	Factors						Info Robust Factors					
	Constant	F1	F2	F3	Rsq	Nobs	Constant	F1info	F2info	F3info	Rsq	Nobs
Overnight	-0.028 (0.02)	0.172*** (0.05)	-0.076 (0.07)	-0.016 (0.01)	0.38	81	-0.035 (0.03)	0.125** (0.05)	-0.005 (0.05)	-0.016 (0.03)	0.18	81
1M Jibar	-0.035** (0.01)	0.212*** (0.02)	-0.023 (0.03)	-0.015 (0.01)	0.79	109	-0.043** (0.02)	0.211*** (0.03)	0.029 (0.04)	0.003 (0.02)	0.58	105
3M Jibar	-0.026*** (0.01)	0.200*** (0.01)	0 (0.02)	0 (0.01)	0.94	109	-0.032*** (0.01)	0.203*** (0.01)	0.014 (0.03)	0.01 (0.02)	0.73	105
1Y bond	-0.013** (0.01)	0.053*** (0.01)	0.035** (0.02)	0.063*** (0.01)	0.65	83	-0.012 (0.01)	0.046*** (0.02)	0.015 (0.02)	0.048*** (0.02)	0.27	83
2Y bond	-0.009* (0.01)	0.081*** (0.01)	0.009 (0.03)	0.087*** (0.01)	0.86	70	-0.006 (0.01)	0.082*** (0.01)	0.011 (0.05)	0.114*** (0.02)	0.55	69
3Y bond	-0.009** (0.00)	0.082*** (0.01)	0.033** (0.01)	0.095*** (0.01)	0.91	79	-0.007 (0.01)	0.084*** (0.02)	0.033 (0.04)	0.111*** (0.02)	0.55	75
5Y bond	-0.014*** (0.00)	0.061*** (0.00)	0.020** (0.01)	0.088*** (0.01)	0.92	92	-0.019** (0.01)	0.060*** (0.01)	0.026 (0.02)	0.091*** (0.02)	0.54	88
10Y bond	-0.012*** (0.00)	0.025*** (0.01)	0.001 (0.01)	0.080*** (0.01)	0.78	109	-0.012* (0.01)	0.026*** (0.01)	0.001 (0.01)	0.081*** (0.01)	0.4	105
20Y bond	-0.017*** (0.00)	0.023*** (0.01)	-0.001 (0.01)	0.081*** (0.01)	0.75	105	-0.018** (0.01)	0.021** (0.01)	0.004 (0.02)	0.076*** (0.02)	0.35	101
30Y bond	-0.016*** (0.01)	0.023*** (0.01)	-0.004 (0.01)	0.078*** (0.01)	0.69	103	-0.017** (0.01)	0.022** (0.01)	-0.002 (0.02)	0.069*** (0.02)	0.31	99
JSE All shares ^{1d}	-0.145 (0.11)	-0.390*** (0.14)	0.251 (0.20)	-0.485*** (0.15)	0.21	109	-0.119 (0.12)	-0.413** (0.17)	0.193 (0.28)	-0.542*** (0.19)	0.14	105
JSE All shares ^{2d}	0.039 (0.14)	-0.528*** (0.15)	-0.387 (0.24)	-0.356* (0.21)	0.17	109	0.08 (0.14)	-0.528*** (0.18)	-0.627** (0.30)	-0.545** (0.26)	0.15	105
USD/ZAR ^{1d}	0.101 (0.11)	0.254 (0.17)	-0.154 (0.25)	-0.181 (0.18)	0.07	109	0.112 (0.11)	0.218 (0.18)	-0.515* (0.29)	-0.148 (0.24)	0.07	105
USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	0.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

Event study

F3 effect on stocks

Market surprise	Factors						Info Robust Factors					
	Constant	F1	F2	F3	Rsqr	Nobs	Constant	F1info	F2info	F3info	Rsqr	Nobs
Overnight	-0.028 (0.02)	0.172*** (0.05)	-0.076 (0.07)	-0.016 (0.01)	0.38	81	-0.035 (0.03)	0.125** (0.05)	-0.005 (0.05)	-0.016 (0.03)	0.18	81
1M Jibar	-0.035** (0.01)	0.212*** (0.02)	-0.023 (0.03)	-0.015 (0.01)	0.79	109	-0.043** (0.02)	0.211*** (0.03)	0.029 (0.04)	0.003 (0.02)	0.58	105
3M Jibar	-0.026*** (0.01)	0.200*** (0.01)	0 (0.02)	0 (0.01)	0.94	109	-0.032*** (0.01)	0.203*** (0.01)	0.014 (0.03)	0.01 (0.02)	0.73	105
1Y bond	-0.013** (0.01)	0.053*** (0.01)	0.035** (0.02)	0.063*** (0.01)	0.65	83	-0.012 (0.01)	0.046*** (0.02)	0.015 (0.02)	0.048*** (0.02)	0.27	83
2Y bond	-0.009* (0.01)	0.081*** (0.01)	0.009 (0.03)	0.087*** (0.01)	0.86	70	-0.006 (0.01)	0.082*** (0.01)	0.011 (0.05)	0.114*** (0.02)	0.55	69
3Y bond	-0.009** (0.00)	0.082*** (0.01)	0.033** (0.01)	0.095*** (0.01)	0.91	79	-0.007 (0.01)	0.084*** (0.02)	0.033 (0.04)	0.111*** (0.02)	0.55	75
5Y bond	-0.014*** (0.00)	0.061*** (0.00)	0.020** (0.01)	0.088*** (0.01)	0.92	92	-0.019** (0.01)	0.060*** (0.01)	0.026 (0.02)	0.091*** (0.02)	0.54	88
10Y bond	-0.012*** (0.00)	0.025*** (0.01)	0.001 (0.01)	0.080*** (0.01)	0.78	109	-0.012* (0.01)	0.026*** (0.01)	0.001 (0.01)	0.081*** (0.01)	0.4	105
20Y bond	-0.017*** (0.00)	0.023*** (0.01)	-0.001 (0.01)	0.081*** (0.01)	0.75	105	-0.018** (0.01)	0.021** (0.01)	0.004 (0.02)	0.076*** (0.02)	0.35	101
30Y bond	-0.016*** (0.01)	0.023*** (0.01)	-0.004 (0.01)	0.078*** (0.01)	0.69	103	-0.017** (0.01)	0.022** (0.01)	-0.002 (0.02)	0.069*** (0.02)	0.31	99
JSE All shares ^{1d}	-0.145 (0.11)	-0.390*** (0.14)	0.251 (0.20)	-0.485*** (0.15)	0.21	109	-0.119 (0.12)	-0.413** (0.17)	0.193 (0.28)	-0.542*** (0.19)	0.14	105
JSE All shares ^{2d}	0.039 (0.14)	-0.528*** (0.15)	-0.387 (0.24)	-0.356* (0.21)	0.17	109	0.08 (0.14)	-0.528*** (0.18)	-0.627** (0.30)	-0.545** (0.26)	0.15	105
USD/ZAR ^{1d}	0.101 (0.11)	0.254 (0.17)	-0.154 (0.25)	-0.181 (0.18)	0.07	109	0.112 (0.11)	0.218 (0.18)	-0.515* (0.29)	-0.148 (0.24)	0.07	105
USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	0.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

Event study

F2 effect on yields

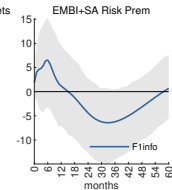
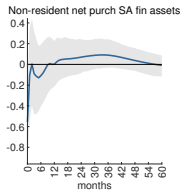
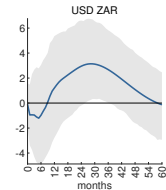
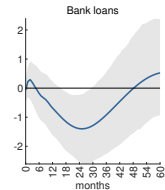
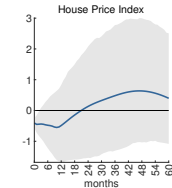
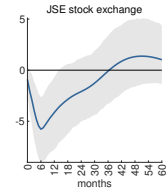
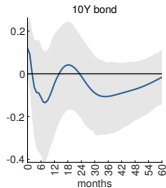
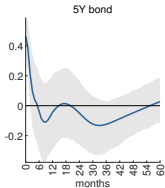
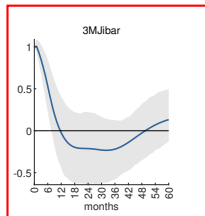
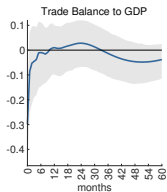
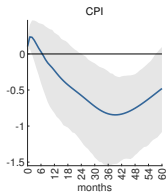
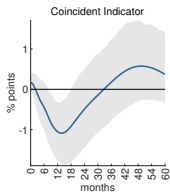
Market surprise	Factors						Info Robust Factors					
	Constant	F1	F2	F3	Rsq	Nobs	Constant	F1info	F2info	F3info	Rsq	Nobs
Overnight	-0.028 (0.02)	0.172*** (0.05)	-0.076 (0.07)	-0.016 (0.01)	0.38	81	-0.035 (0.03)	0.125** (0.05)	-0.005 (0.05)	-0.016 (0.03)	0.18	81
1M Jibar	-0.035** (0.01)	0.212*** (0.02)	-0.023 (0.03)	-0.015 (0.01)	0.79	109	-0.043** (0.02)	0.211*** (0.03)	0.029 (0.04)	0.003 (0.02)	0.58	105
3M Jibar	-0.026*** (0.01)	0.200*** (0.01)	0 (0.02)	0 (0.01)	0.94	109	-0.032*** (0.01)	0.203*** (0.01)	0.014 (0.03)	0.01 (0.02)	0.73	105
1Y bond	-0.013** (0.01)	0.053*** (0.01)	0.035** (0.02)	0.063*** (0.01)	0.65	83	-0.012 (0.01)	0.046*** (0.02)	0.015 (0.02)	0.048*** (0.02)	0.27	83
2Y bond	-0.009* (0.01)	0.081*** (0.01)	0.009 (0.03)	0.087*** (0.01)	0.86	70	-0.006 (0.01)	0.082*** (0.01)	0.011 (0.05)	0.114*** (0.02)	0.55	69
3Y bond	-0.009** (0.00)	0.082*** (0.01)	0.033** (0.01)	0.095*** (0.01)	0.91	79	-0.007 (0.01)	0.084*** (0.02)	0.033 (0.04)	0.111*** (0.02)	0.55	75
5Y bond	-0.014*** (0.00)	0.061*** (0.00)	0.020** (0.01)	0.088*** (0.01)	0.92	92	-0.019** (0.01)	0.060*** (0.01)	0.026 (0.02)	0.091*** (0.02)	0.54	88
10Y bond	-0.012*** (0.00)	0.025*** (0.01)	0.001 (0.01)	0.080*** (0.01)	0.78	109	-0.012* (0.01)	0.026*** (0.01)	0.001 (0.01)	0.081*** (0.01)	0.4	105
20Y bond	-0.017*** (0.00)	0.023*** (0.01)	-0.001 (0.01)	0.081*** (0.01)	0.75	105	-0.018** (0.01)	0.021** (0.01)	0.004 (0.02)	0.076*** (0.02)	0.35	101
30Y bond	-0.016*** (0.01)	0.023*** (0.01)	-0.004 (0.01)	0.078*** (0.01)	0.69	103	-0.017** (0.01)	0.022** (0.01)	-0.002 (0.02)	0.069*** (0.02)	0.31	99
JSE All shares ^{1d}	-0.145 (0.11)	-0.390*** (0.14)	0.251 (0.20)	-0.485*** (0.15)	0.21	109	-0.119 (0.12)	-0.413** (0.17)	0.193 (0.28)	-0.542*** (0.19)	0.14	105
JSE All shares ^{2d}	0.039 (0.14)	-0.528*** (0.15)	-0.387 (0.24)	-0.356* (0.21)	0.17	109	0.08 (0.14)	-0.528*** (0.18)	-0.627** (0.30)	-0.545** (0.26)	0.15	105
USD/ZAR ^{1d}	0.101 (0.11)	0.254 (0.17)	-0.154 (0.25)	-0.181 (0.18)	0.07	109	0.112 (0.11)	0.218 (0.18)	-0.515* (0.29)	-0.148 (0.24)	0.07	105
USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	0.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

Event study

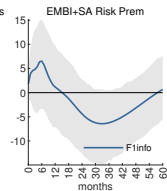
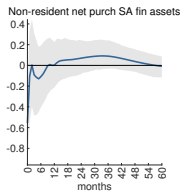
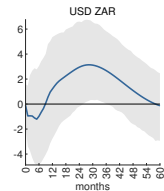
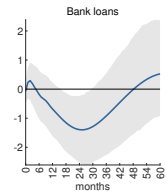
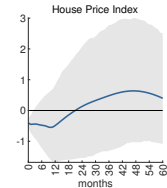
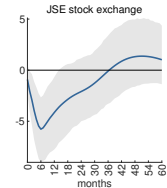
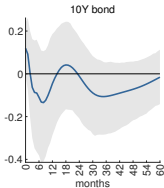
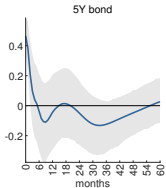
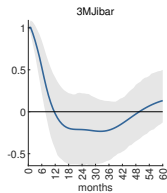
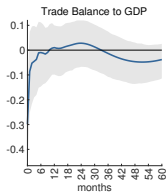
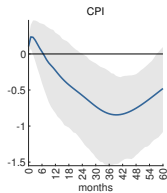
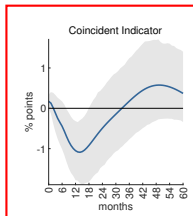
F2 effect on FX and stock market

Market surprise	Factors						Info Robust Factors					
	Constant	F1	F2	F3	Rsqr	Nobs	Constant	F1info	F2info	F3info	Rsqr	Nobs
Overnight	-0.028 (0.02)	0.172*** (0.05)	-0.076 (0.07)	-0.016 (0.01)	0.38	81	-0.035 (0.03)	0.125** (0.05)	-0.005 (0.05)	-0.016 (0.03)	0.18	81
1M Jibar	-0.035** (0.01)	0.212*** (0.02)	-0.023 (0.03)	-0.015 (0.01)	0.79	109	-0.043** (0.02)	0.211*** (0.03)	0.029 (0.04)	0.003 (0.02)	0.58	105
3M Jibar	-0.026*** (0.01)	0.200*** (0.01)	0 (0.02)	0 (0.01)	0.94	109	-0.032*** (0.01)	0.203*** (0.01)	0.014 (0.03)	0.01 (0.02)	0.73	105
1Y bond	-0.013** (0.01)	0.053*** (0.01)	0.035** (0.02)	0.063*** (0.01)	0.65	83	-0.012 (0.01)	0.046*** (0.02)	0.015 (0.02)	0.048*** (0.02)	0.27	83
2Y bond	-0.009* (0.01)	0.081*** (0.01)	0.009 (0.03)	0.087*** (0.01)	0.86	70	-0.006 (0.01)	0.082*** (0.01)	0.011 (0.05)	0.114*** (0.02)	0.55	69
3Y bond	-0.009** (0.00)	0.082*** (0.01)	0.033** (0.01)	0.095*** (0.01)	0.91	79	-0.007 (0.01)	0.084*** (0.02)	0.033 (0.04)	0.111*** (0.02)	0.55	75
5Y bond	-0.014*** (0.00)	0.061*** (0.00)	0.020** (0.01)	0.088*** (0.01)	0.92	92	-0.019** (0.01)	0.060*** (0.01)	0.026 (0.02)	0.091*** (0.02)	0.54	88
10Y bond	-0.012*** (0.00)	0.025*** (0.01)	0.001 (0.01)	0.080*** (0.01)	0.78	109	-0.012* (0.01)	0.026*** (0.01)	0.001 (0.01)	0.081*** (0.01)	0.4	105
20Y bond	-0.017*** (0.00)	0.023*** (0.01)	-0.001 (0.01)	0.081*** (0.01)	0.75	105	-0.018** (0.01)	0.021** (0.01)	0.004 (0.02)	0.076*** (0.02)	0.35	101
30Y bond	-0.016*** (0.01)	0.023*** (0.01)	-0.004 (0.01)	0.078*** (0.01)	0.69	103	-0.017** (0.01)	0.022** (0.01)	-0.002 (0.02)	0.069*** (0.02)	0.31	99
JSE All shares ^{1d}	-0.145 (0.11)	-0.390*** (0.14)	0.251 (0.20)	-0.485*** (0.15)	0.21	109	-0.119 (0.12)	-0.413** (0.17)	0.193 (0.28)	-0.542*** (0.19)	0.14	105
JSE All shares ^{2d}	0.039 (0.14)	-0.528*** (0.15)	-0.387 (0.24)	-0.356* (0.21)	0.17	109	0.08 (0.14)	-0.528*** (0.18)	-0.627** (0.30)	-0.545** (0.26)	0.15	105
USD/ZAR ^{1d}	0.101 (0.11)	0.254 (0.17)	-0.154 (0.25)	-0.181 (0.18)	0.07	109	0.112 (0.11)	0.218 (0.18)	-0.515* (0.29)	-0.148 (0.24)	0.07	105
USD/ZAR ^{2d}	0.117 (0.14)	0.357* (0.19)	-0.477 (0.29)	0.015 (0.21)	0.09	109	0.161 (0.13)	0.381** (0.18)	-0.784** (0.34)	0.204 (0.29)	0.12	105
EUR/ZAR ^{1d}	0.018 (0.10)	0.166 (0.16)	-0.277 (0.20)	-0.034 (0.16)	0.04	109	0.04 (0.10)	0.112 (0.16)	-0.661*** (0.24)	-0.003 (0.19)	0.09	105
EUR/ZAR ^{2d}	0.093 (0.14)	0.398** (0.19)	-0.482** (0.24)	0.086 (0.21)	0.1	109	0.137 (0.14)	0.359* (0.20)	-0.669** (0.26)	0.409 (0.28)	0.12	105
EMBI+SA	0.136 (0.90)	0.275 (1.01)	1.014 (2.51)	3.563*** (1.35)	0.11	103	-0.16 (0.89)	0.079 (1.05)	1.71 (2.51)	7.093*** (1.81)	0.2	100
NNPbonds	0.114 (0.13)	0.026 (0.13)	-0.009 (0.19)	-0.191 (0.16)	0.02	109	0.116 (0.13)	0.01 (0.17)	-0.167 (0.33)	-0.435** (0.18)	0.04	105
BondsPurch	0.464*** (0.12)	0.048 (0.10)	-0.158 (0.13)	-0.182* (0.10)	0.03	109	0.468*** (0.12)	-0.048 (0.15)	-0.087 (0.20)	-0.343*** (0.12)	0.03	105
BondsSales	0.392*** (0.13)	0.031 (0.12)	-0.152 (0.16)	-0.064 (0.14)	0.01	109	0.395*** (0.12)	-0.054 (0.16)	0.015 (0.29)	-0.076 (0.14)	0	105

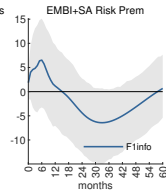
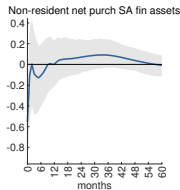
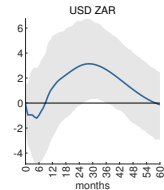
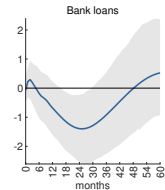
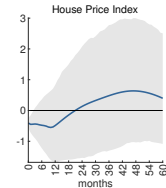
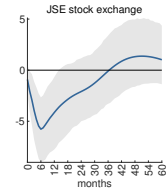
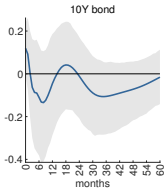
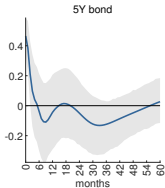
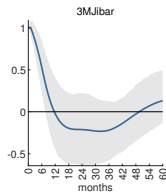
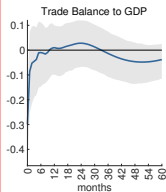
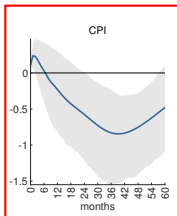
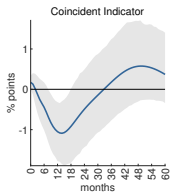
MP shock instrumented with F1:



MP shock instrumented with F1: Real Activity

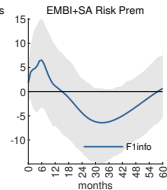
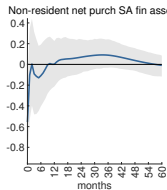
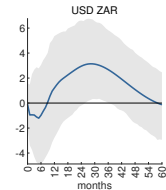
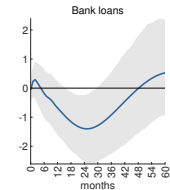
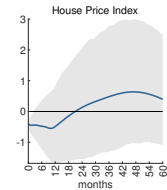
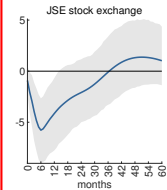
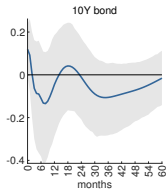
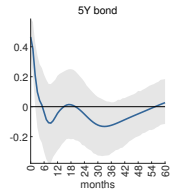
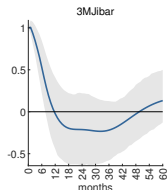
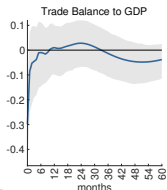
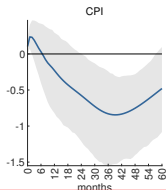
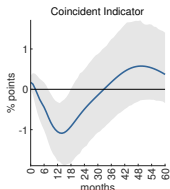


MP shock instrumented with F1: Prices



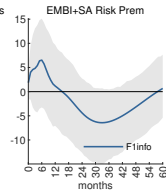
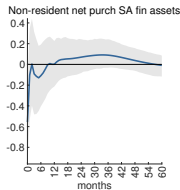
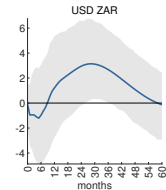
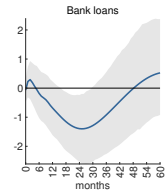
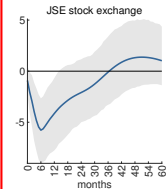
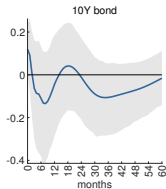
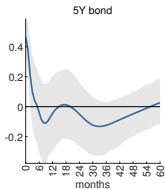
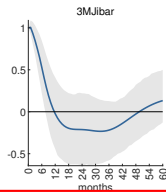
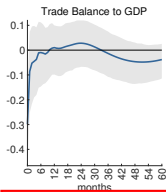
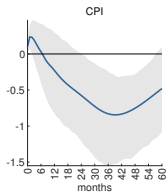
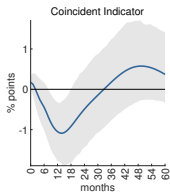
MP shock instrumented with F1:

Interest rates



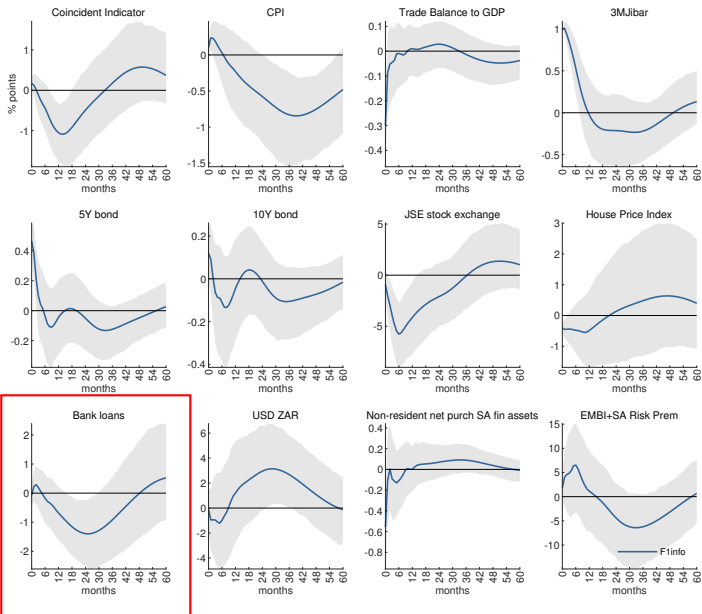
MP shock instrumented with F1:

Assets



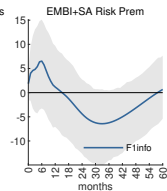
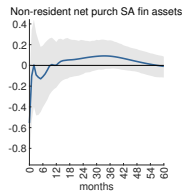
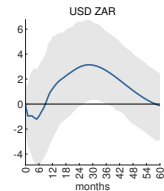
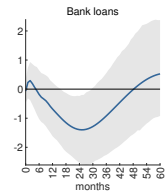
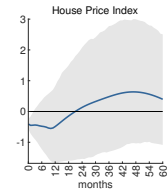
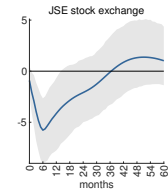
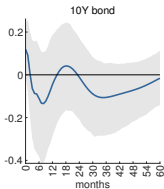
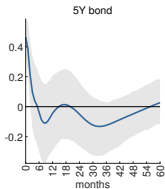
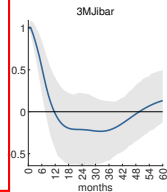
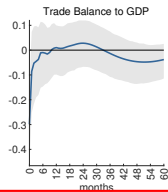
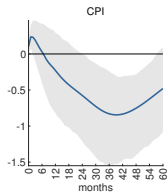
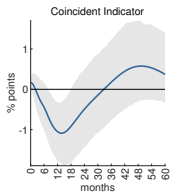
MP shock instrumented with F1:

Credit

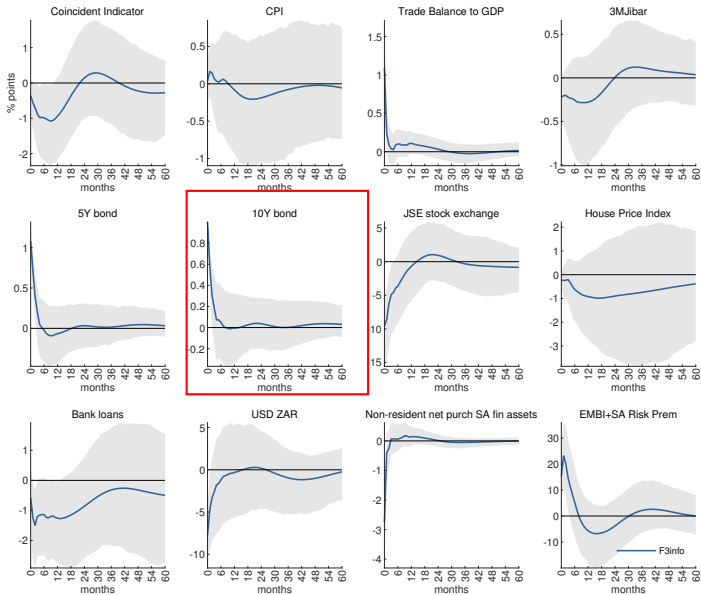


MP shock instrumented with F1:

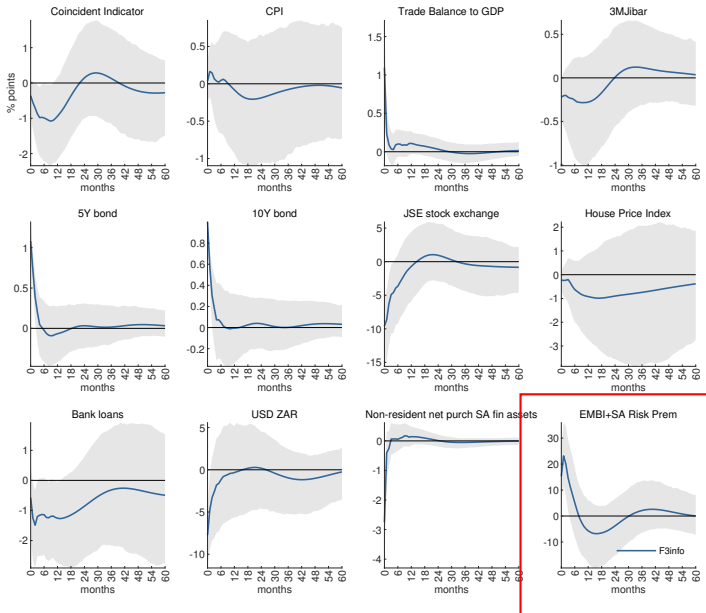
Export



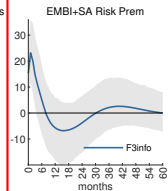
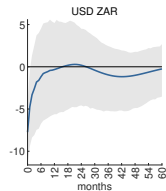
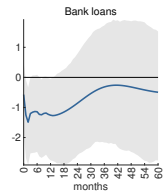
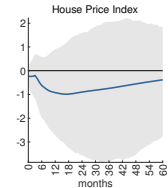
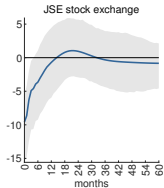
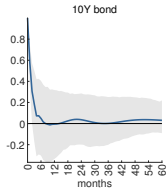
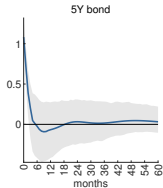
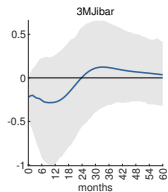
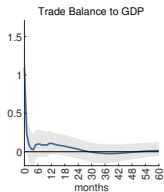
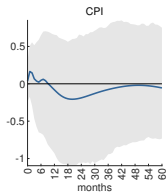
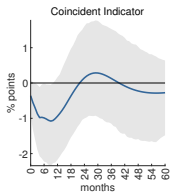
MP shock instrumented with F3:



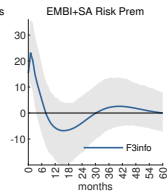
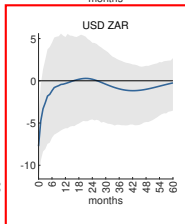
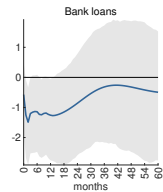
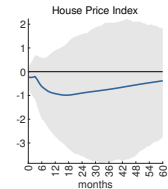
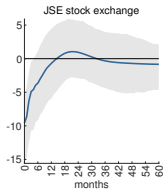
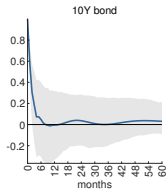
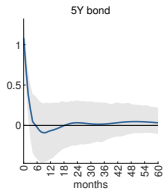
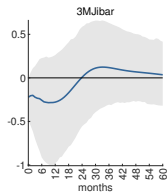
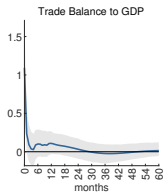
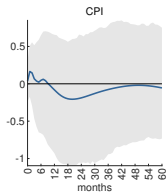
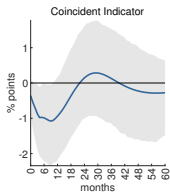
MP shock instrumented with F3: Risk premium



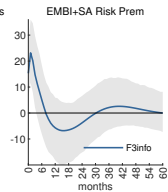
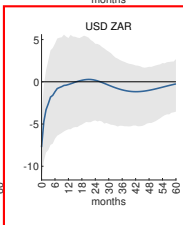
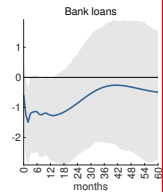
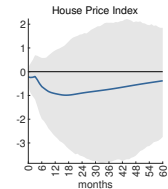
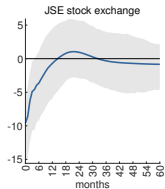
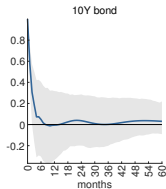
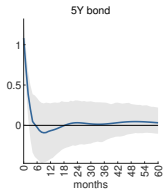
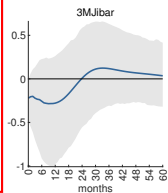
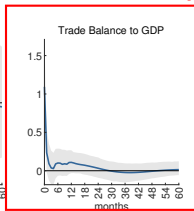
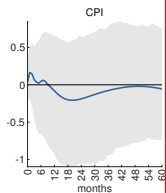
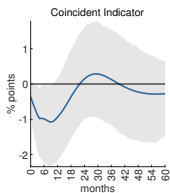
MP shock instrumented with F3: Risk premium



MP shock instrumented with F3: FX

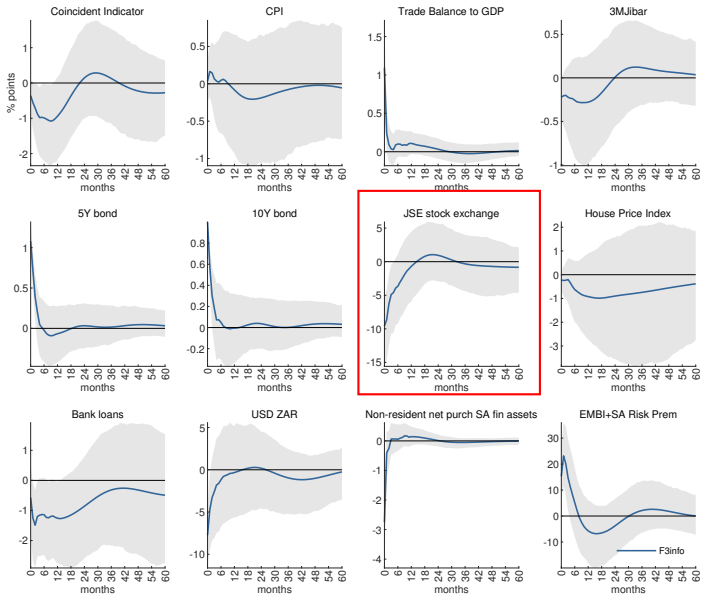


MP shock instrumented with F3: Export



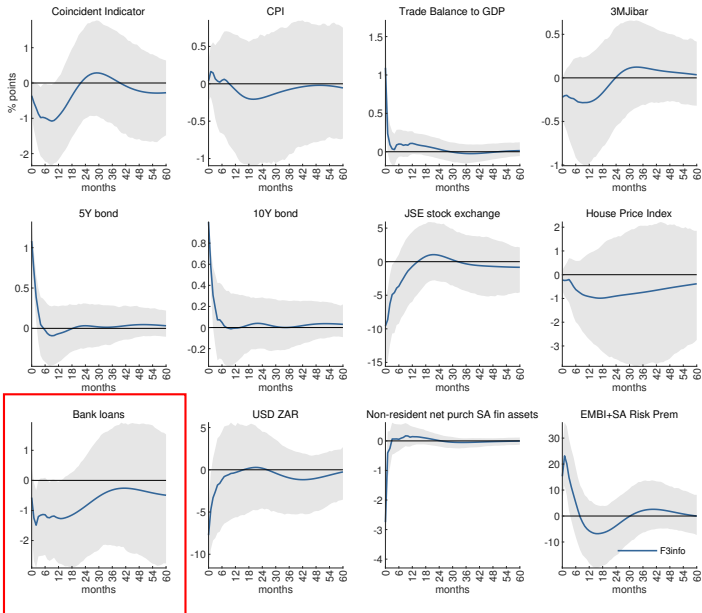
MP shock instrumented with F3:

Stock market



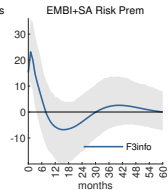
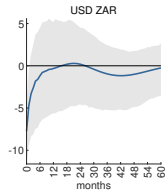
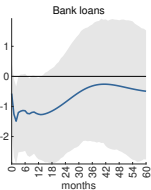
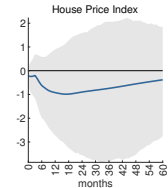
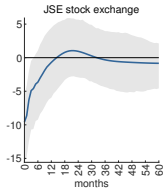
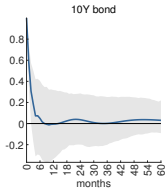
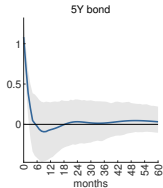
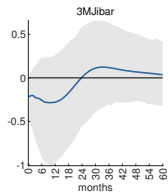
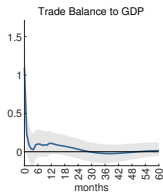
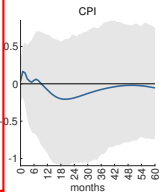
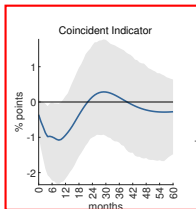
MP shock instrumented with F3:

Credit

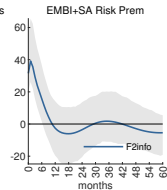
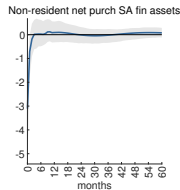
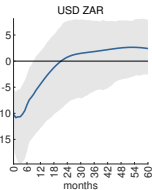
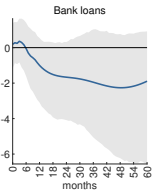
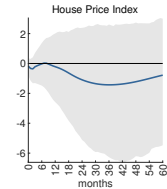
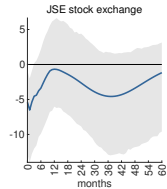
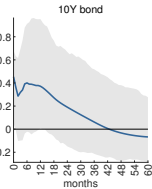
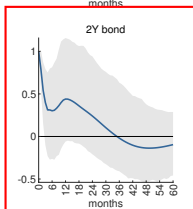
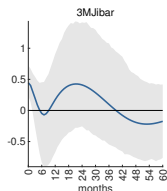
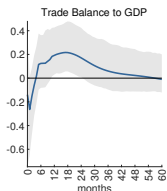
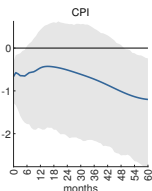
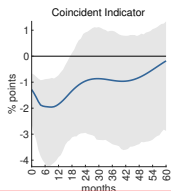


MP shock instrumented with F3:

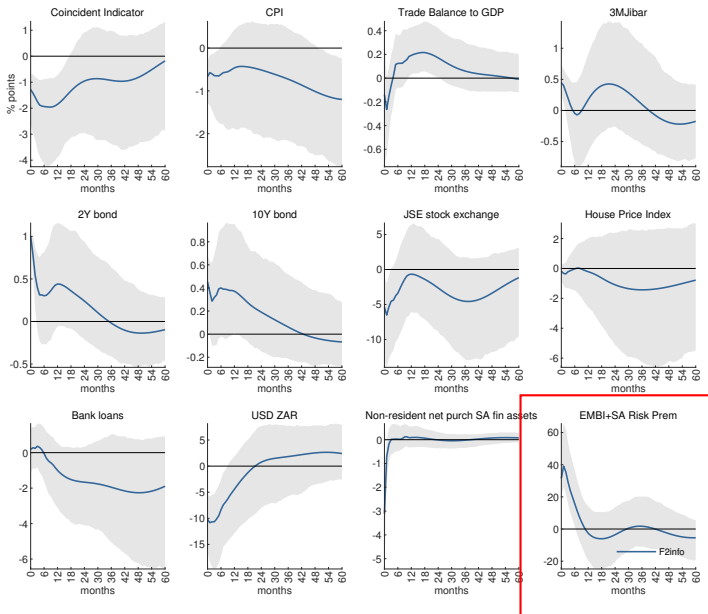
Real activity



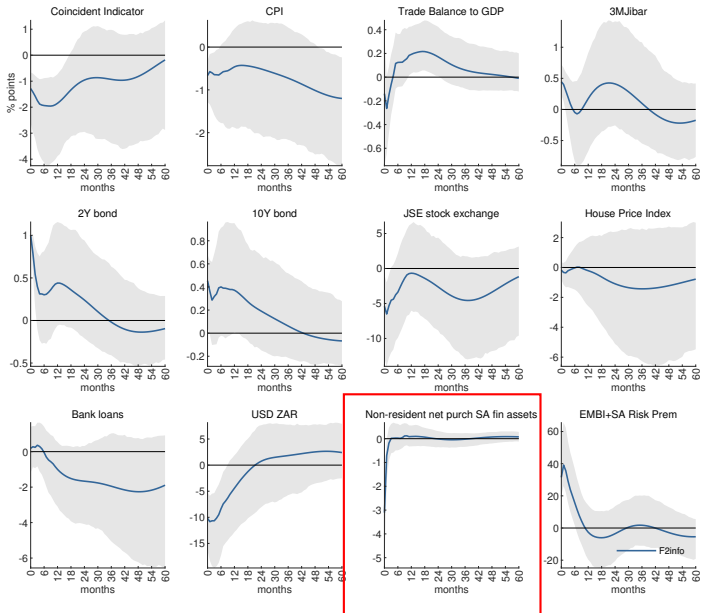
MP shock instrumented with F2:



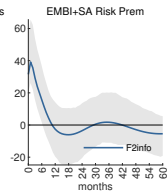
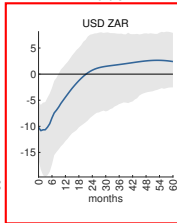
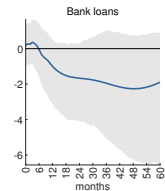
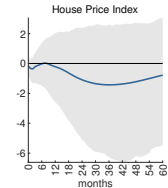
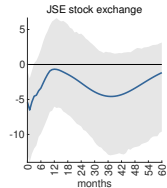
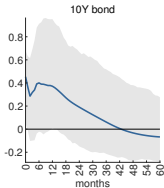
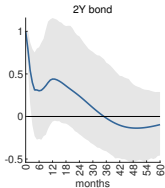
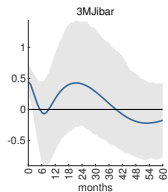
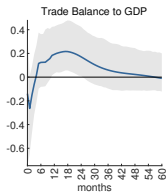
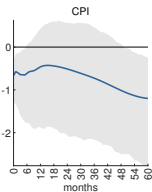
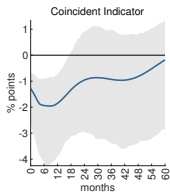
MP shock instrumented with F2: Risk premium



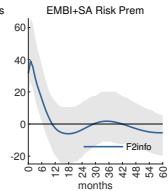
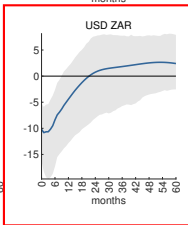
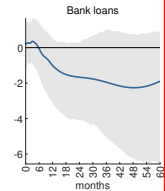
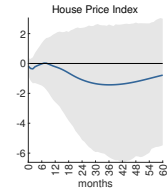
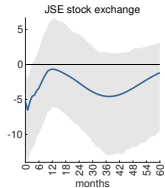
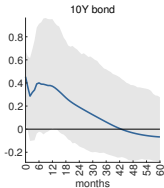
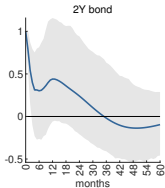
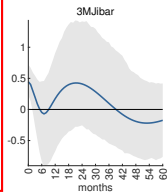
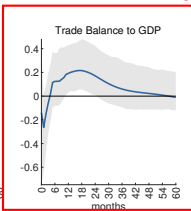
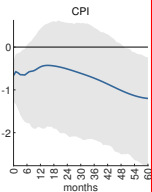
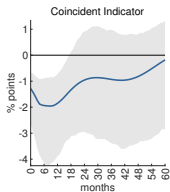
MP shock instrumented with F2: Risk premium



MP shock instrumented with F2: Risk premium

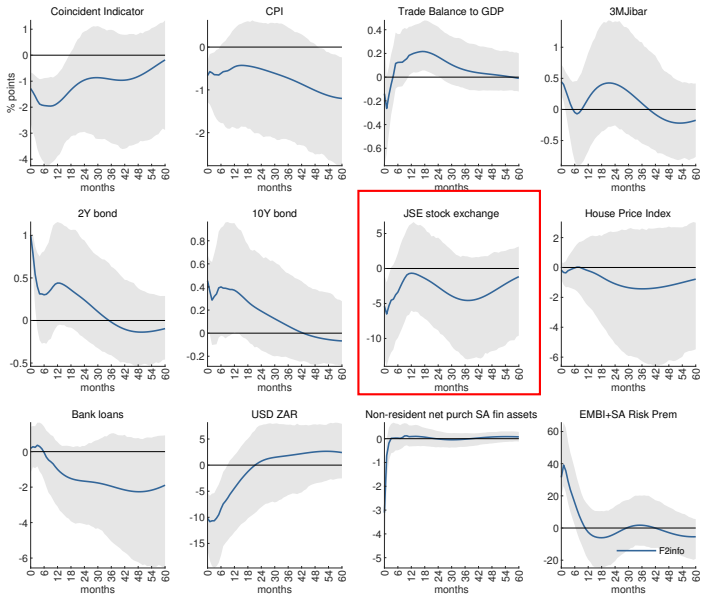


MP shock instrumented with F2: Export



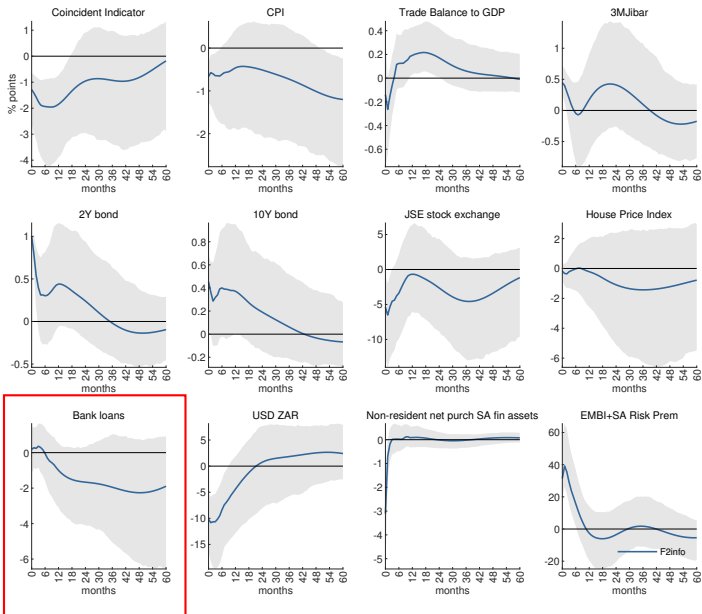
MP shock instrumented with F2:

Stock market



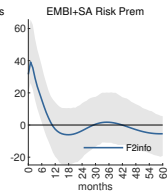
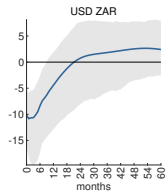
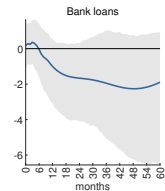
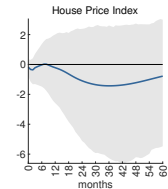
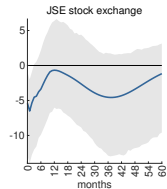
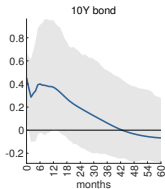
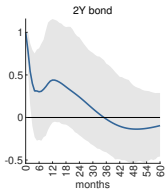
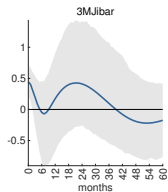
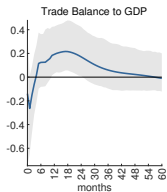
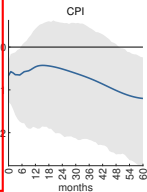
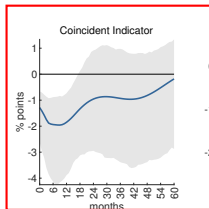
MP shock instrumented with F2:

Credit



MP shock instrumented with F2:

Real activity



Conclusions

- ▶ Every MP decision comes largely as a **surprise**
- ▶ Significant **impact of global shocks** in surprises

Conclusions

- ▶ Every MP decision comes largely as a **surprise**
- ▶ Significant **impact of global shocks** in surprises
- ▶ Possibly due to **uncertainty about the reaction function** of the Bank
- ▶ ... that has to **balance tradeoffs & multiple goals** in a volatile environment

Conclusions

- ▶ Every MP decision comes largely as a **surprise**
- ▶ Significant **impact of global shocks** in surprises
- ▶ Possibly due to **uncertainty about the reaction function** of the Bank
- ▶ ... that has to **balance tradeoffs & multiple goals** in a volatile environment
- ▶ Conventional monetary policy has **textbook effects**
- ▶ SARB communication affects **risk premia** and **macro conditions**

Thank you

Appendix - Factor rotation

Estimate factors - common drivers of market-based surprises by **principal components**

- ▶ **Factor rotation** for their meaningful interpretation (Gürkaynak et al. (2005), Altavilla et al. (2019), Swanson (2021)):

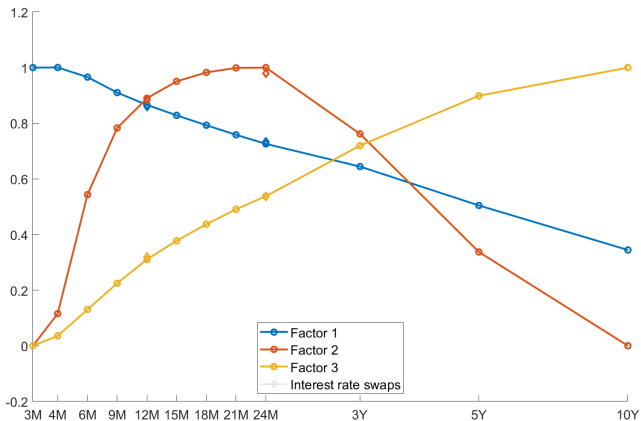
$$X = F\Lambda + \epsilon$$

$$X = \tilde{F}\tilde{\Lambda} + \epsilon, \text{ where } \tilde{F} = FU \text{ and } \tilde{\Lambda} = U'\Lambda, \text{ for every } U: UU' = 1$$

Restrictions to identify U^* :

- ▶ F1 is the only factor that loads on market surprises at the **shortest** horizon
- ▶ F2 explains the smallest share of variation in surprises on the **longest** horizon

Appendix - Factor loadings, market surprises 2 days window



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Appendix - External effects on SA MP factors

	pre-2008						post-2008						
	F1	F1info	F2info	F3info	F2info	F3	F1	F1	F2	F2info	F3info	F1	F3info
Target Fed	-0.383** (0.17)	-0.940** (0.35)	-0.398*** (0.09)	0.380** (0.16)			0.630** (0.31)						
FG Fed	0.025 (0.22)	0.029 (0.16)	-0.033 (0.04)	-0.068 (0.05)			0.004 (0.11)						
QE Fed	0.268 (0.65)	-0.631 (0.90)	-0.809*** (0.22)	0.316 (0.35)			0.056 (0.08)						
Target ECB					0.435** (0.00)			0.261* (0.00)	-0.135 (0.00)	-0.154** (0.00)	-0.082 (0.00)		
Timing ECB					-0.029 (0.00)			-0.059 (0.00)	-0.111*** (0.00)	-0.077*** (0.00)	0.04 (0.00)		
FG ECB					0.012 (0.00)			0.013 (0.00)	0.039* (0.00)	0.031** (0.00)	-0.049* (0.00)		
QE ECB					0.128 (0.00)			-0.033 (0.00)	0.004 (0.00)	-0.018 (0.00)	-0.019 (0.00)		
Oil						0.150* (0.08)							
VIX												-0.013* (0.01)	0.014* (0.01)
Constant	0.018 (0.21)	-0.019 (0.14)	-0.015 (0.10)	-0.049 (0.11)	-0.033 (0.00)	-0.02 (0.15)	-0.05 (0.09)	0.028 (0.00)	0.046 (0.00)	0.039 (0.00)	-0.02 (0.00)	0.251 (0.16)	-0.279 (0.20)
Rsq	0.037	0.163	0.316	0.152	0.312	0.062	0.073	0.11	0.254	0.269	0.083	0.022	0.034
N Obs	33	29	29	29	29	33	72	75	75	75	75	76	76

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Appendix

The Target factor correlation with changes in policy rate:

	US ¹	EA ²	SA ³
2002M6-2008M12	0.15	0.42	0.56
Full sample	0.22	0.35	0.62

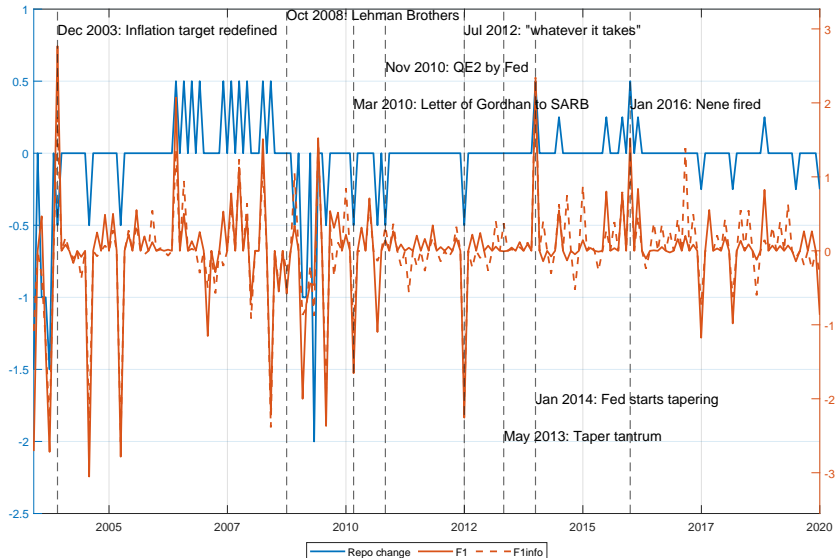
¹ Based on Target factor series from Swanson (2021) and changes in effective FFR data with full sample 1991M5-2019M6.

² Based on Target factor series from Altavilla et al. (2019) and changes in main refinancing operations rate data with full sample 2002M6-2019M12.

³ Based on identified F1 series and the SARB repurchase rate data with full sample 2002M6-2020M1.

Appendix - Factor 1 and important events

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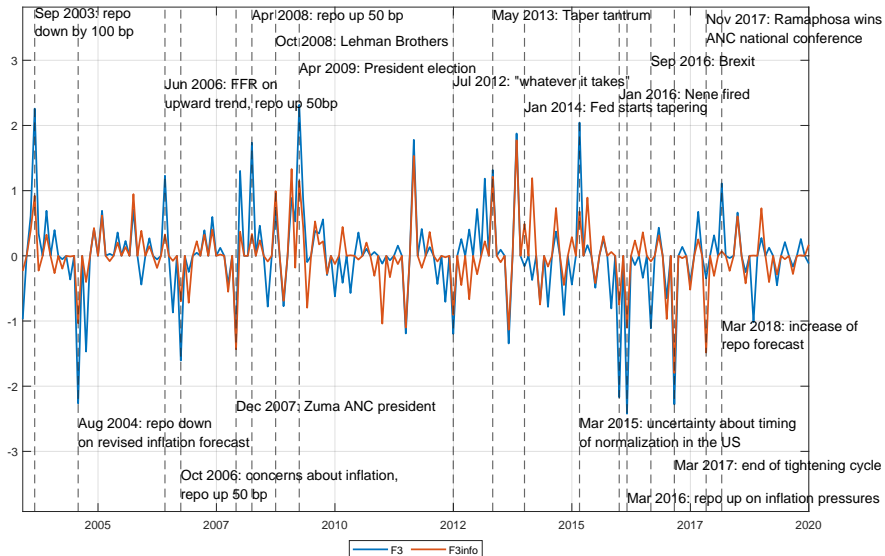
Appendix - Factor 2 and important events

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Appendix - Factor 3 and important events

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Appendix - Selected MPC episodes

MPC date	Repo change	Repo level	F1	F2	F3	Event
			F1info	F2info	F3info	
09.10.2008	0	12	-0.58	3.34	0.69	Lehman Brothers files for bankruptcy
			-0.29	1.88	0.99	
26.03.2015	0	5.75	0.04	-0.20	2.04	Unchanged repo over uncertainty about US policy normalisation
			0.09	-0.36	0.68	
28.01.2016	50 bp	6.75	1.52	-0.20	-2.17	Minister Nene fired
			1.19	-0.24	-0.75	
30.03.2017	0	7	0.20	-0.03	-2.28	Committment to keep low inflation
			1.39	-0.20	-1.80	

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