

Online Appendix

A.1. The historical corporate default data

See the accompanying spreadsheet.

A.2. Additional Robustness Results

As an additional robustness check, we explore whether stock market returns have forecast power for changes in loan growth after controlling for contemporaneous changes in the macroeconomy. Essentially, our goal is to test whether the effects of stock market returns on subsequent loan growth shown in Table 4 are due to collateral effects or whether these returns are just anticipating subsequent changes in the economic environment.

To explore this, we estimate an alternative version of the vector autoregression (VAR) shown in Table 4. Specifically, we include the contemporaneous changes in gross domestic product (GDP) and industrial production in the model. Intuitively, if stock returns are significant only in the VAR in Table 4 because they are forecasting future economic conditions, then stock returns should lose their significance once we include proxies for subsequent economic conditions.

Table A1 reports the results from this alternative specification (we leave out inflation because that is already controlled for in Table 4). As shown, the contemporaneous percentage change in GDP is significant in explaining loan growth, but it is not significant in explaining corporate bond market growth. Similar results hold for industrial production.

Despite this confirmation, Table A1 also shows that, even after controlling for subsequent economic conditions, the effect of lagged stock returns on future loan growth is still highly significant. In particular, the t -statistic for the first lagged stock return is 3.07, and it is easily shown that the lagged stock returns Granger cause bank loan growth, even after controlling for contemporaneous changes in GDP and industrial production.

We also estimate specifications in which we include not only the contempo-

Table A1

Collateral vector autoregression (VAR) results

This table reports summary statistics from the estimation of a VAR for bank loan growth rates, corporate bond market growth rates, banking crisis indicators, and corporate default crisis indicators. *GDP* denotes the annual percentage change in gross domestic product. *IP* denotes the annual percentage change in industrial production. *Loan* denotes the annual percentage change in the amount of bank loans. *Par* denotes the annual percentage change in the par amount of corporate bonds outstanding. *Bank* is an indicator variable that takes value one during a banking crisis and zero otherwise. *Bond* is an indicator variable that takes value one during a corporate default crisis and zero otherwise. Coefficient denotes the coefficient for the indicated lagged variable. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively. The sample period is 1900–1940, 1948–2008 (102 observations).

Variable, lag	<i>Loan</i> equation		<i>Par</i> equation		<i>Stock</i> equation		<i>Housing</i> equation	
	Coefficient	<i>t</i> -statistic	Coefficient	<i>t</i> -statistic	Coefficient	<i>t</i> -statistic	Coefficient	<i>t</i> -statistic
Intercept	−0.0029	−0.26	0.0071	0.64	0.0380	0.83	−0.0013	−0.09
<i>GDP</i>								
0	0.5704	3.40***	−0.1001	−0.63	−1.4014	−2.14**	0.6366	3.18***
<i>IP</i>								
0	−0.0627	−0.94	0.0316	0.50	1.6080	6.17***	−0.0236	−0.30
<i>Loan</i>								
1	0.4817	4.39***	0.0587	0.56	0.5861	1.37	−0.0050	−0.04
2	0.0839	0.71	0.0224	0.20	−1.1078	−2.40**	0.1644	1.17
3	0.0974	1.00	0.1911	2.07**	0.6720	1.76*	−0.0941	−0.81
<i>Par</i>								
1	−0.0781	−0.69	0.1578	1.47	−0.2586	−0.59	0.0384	0.29
2	0.1151	1.13	0.0744	0.77	0.3713	0.93	0.1799	1.48
3	0.0014	0.01	0.2153	2.27**	−0.0018	−0.00	0.0282	0.24
<i>Stock</i>								
1	0.1007	3.07***	0.0523	1.68*	0.0353	0.28	−0.0342	−0.88
2	0.0149	0.49	−0.0155	−0.54	−0.1370	−1.17	0.0362	1.01
3	−0.0473	−1.61	0.0427	1.53	0.1180	1.03	−0.0891	−2.54**
<i>Housing</i>								
1	0.1693	1.83*	0.0255	0.29	0.3938	1.09	0.4039	3.66***
2	−0.0418	−0.43	0.0179	0.20	1.0848	2.88***	0.0367	0.32
3	0.0539	0.60	−0.0403	−0.48	−0.9897	−2.83***	−0.1157	−1.09
Adj. R^2		0.625		0.277		0.328		0.284

raneous changes in GDP and industrial production, but also the changes in these variables one year and two years ahead. The results from these extended specifications are similar to those shown in Table A1. In particular, lagged stock returns remain significantly positively related to subsequent bank loan growth. These findings provide support for the robustness of the results we report in Table 4.

A.3. Impulse response functions

Figs. 2, 3, and 4 provide selected impulse response functions from the VARs. In this Appendix, we provide alternative versions of these figures (Figs. A1, A2, and A3) that include all of the impulse response functions.

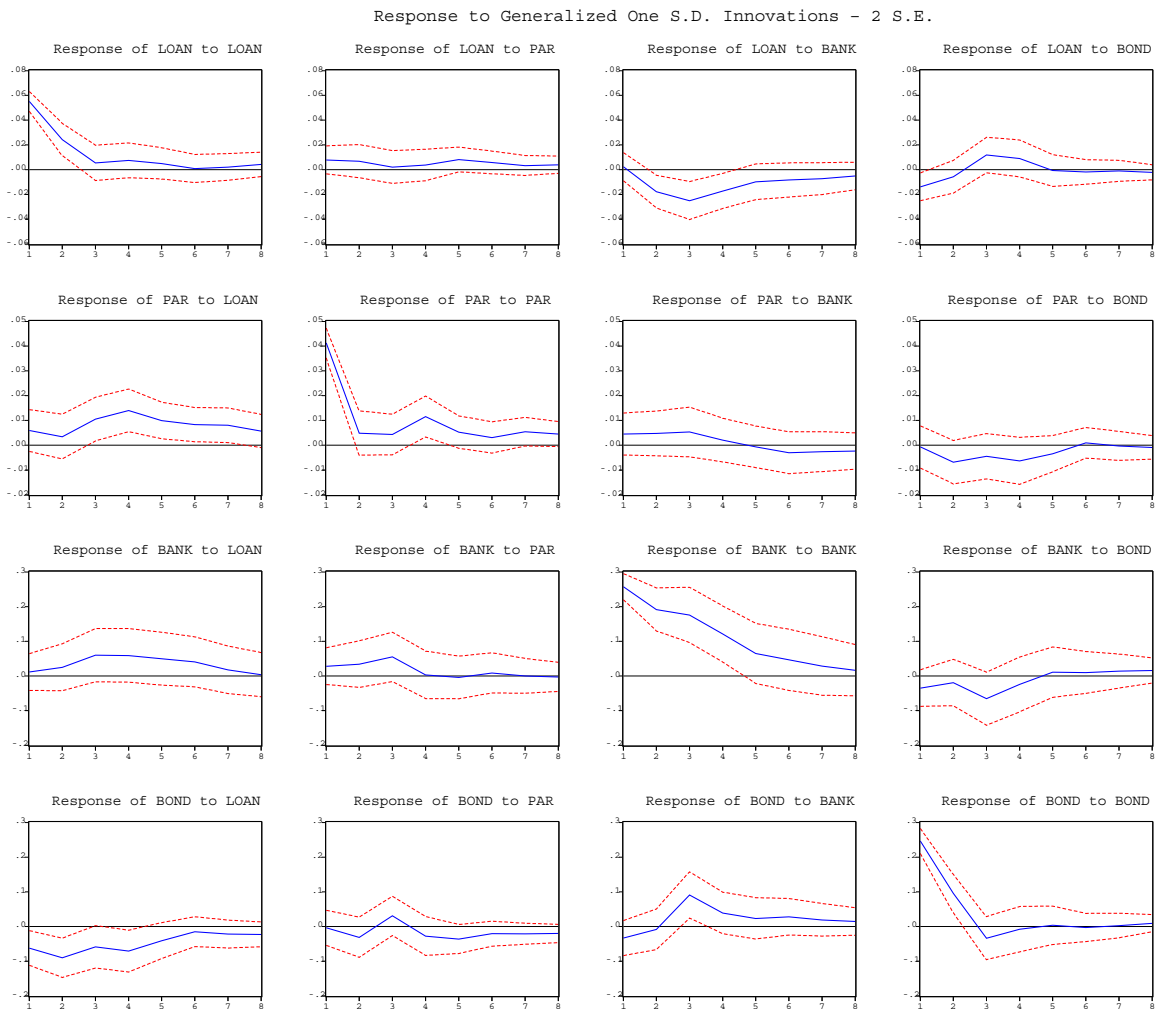


Fig. A1. Impulse response functions from the credit crisis vector autoregression (VAR). The solid lines plot the impulse responses to a generalized one standard deviation innovation from the credit crisis VAR specification reported in Table 3. The dotted lines represent the two standard deviation confidence bands for the impulse response functions.

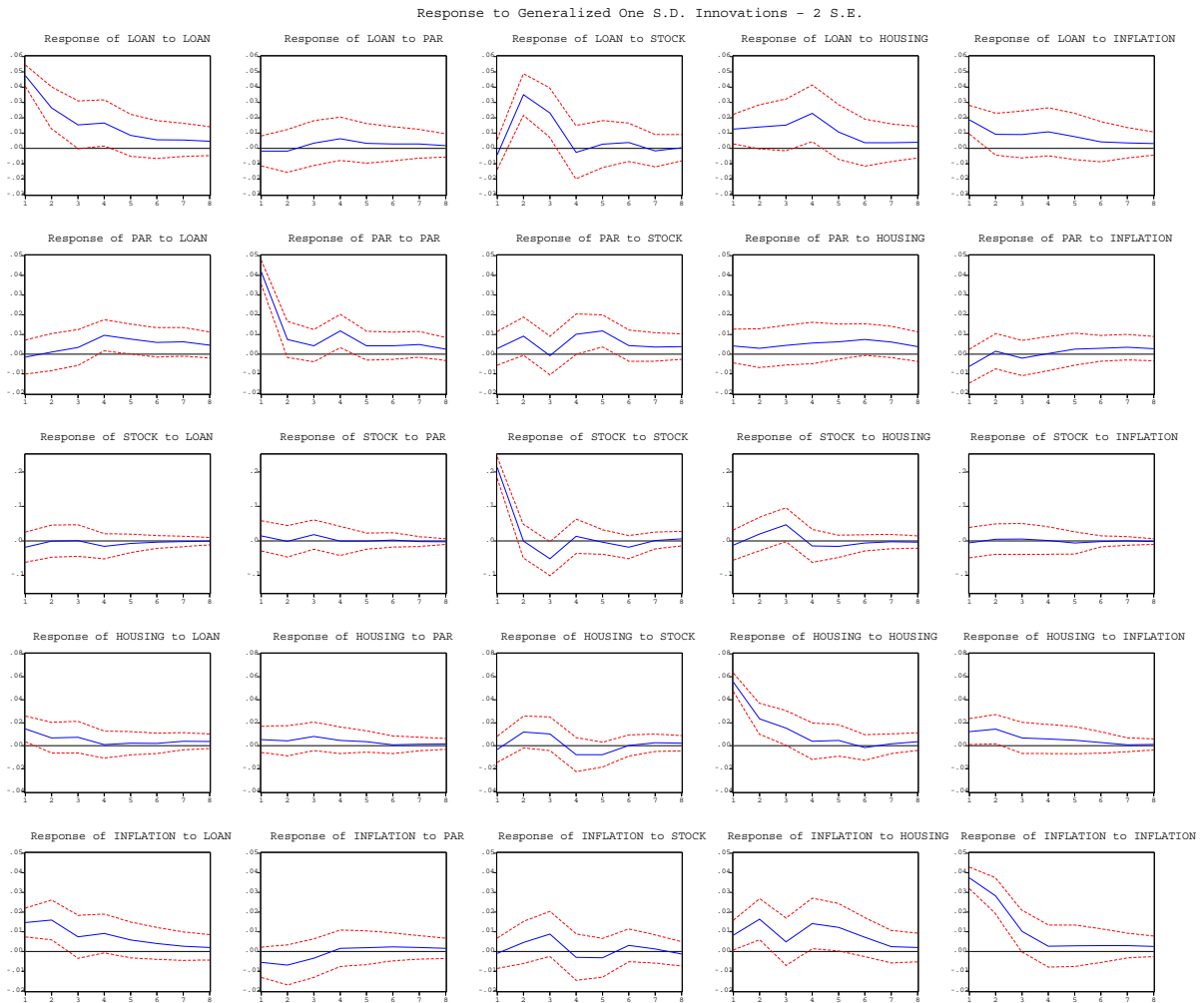


Fig. A2. Impulse response functions from the collateral vector autoregression (VAR). The solid lines plot the impulse responses to a generalized one standard deviation innovation from the collateral VAR specification reported in Table 4. The dotted lines represent the two standard deviation confidence bands for the impulse response functions.

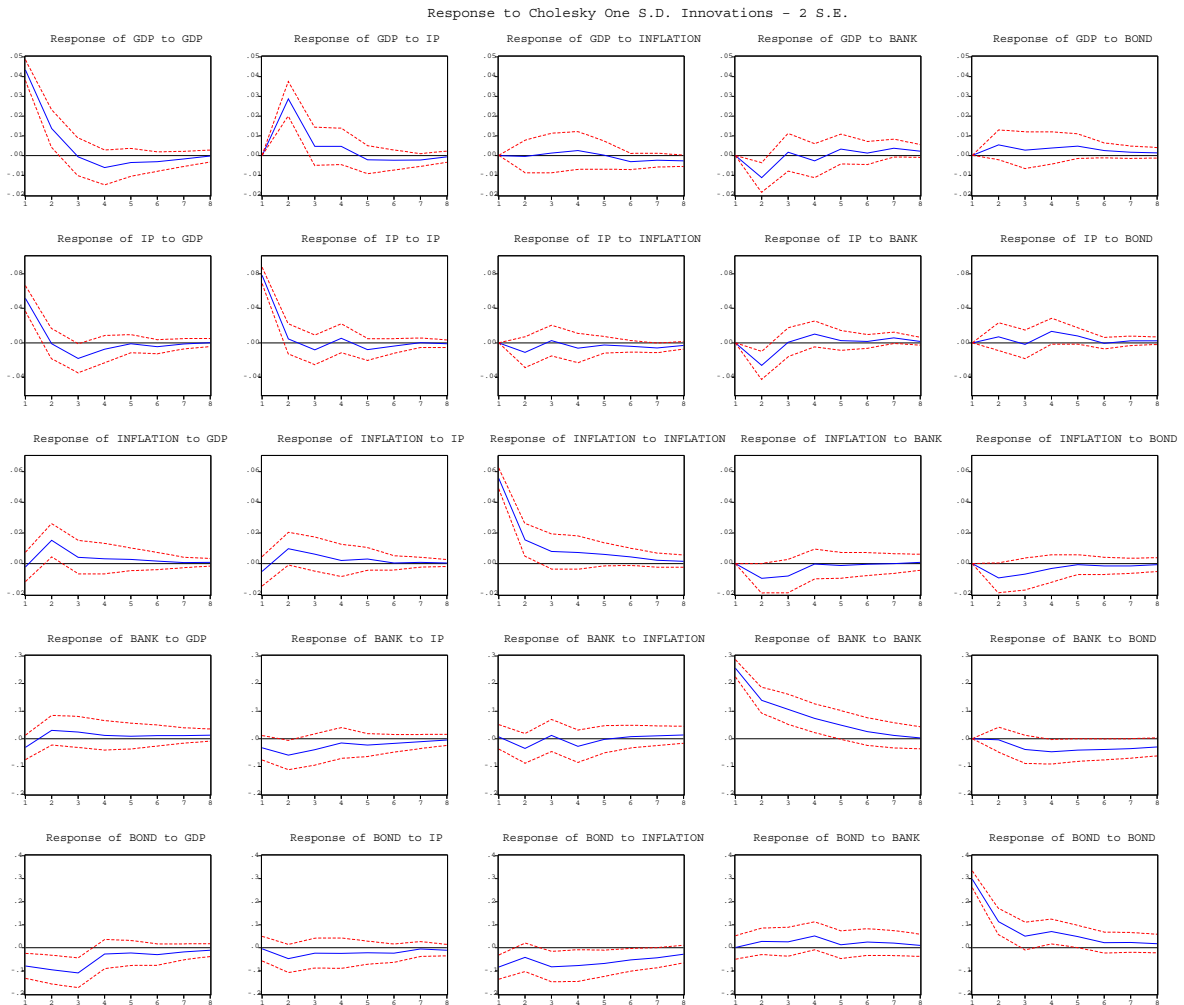


Fig. A3. Impulse response functions from the macroeconomic effects vector autoregression (VAR). The solid lines plot the impulse responses to a generalized one standard deviation innovation from the macroeconomic effects VAR specification reported in Table 5. The dotted lines represent the two standard deviation confidence bands for the impulse response functions.