

FINANCIAL INTERMEDIARIES' INSTABILITY AND EURO AREA MACROECONOMIC DYNAMICS

ONLINE APPENDIX

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ABSTRACT. This document contains the results of the "robustness analysis" section. This supplement is not self-contained. We strongly advise the readers to read the main paper.

APPENDIX A. PRIOR DURATION

We reestimate our benchmark model — i.e., one Markov-switching process on shock variances and one Markov-switching on equation coefficients — under different prior on the average duration of each regime to determine if our main results deliver completely different outcomes. The prior about the average duration of each regime is now about (1) 20 months; (2) 15 months; and (3) 10 months.

Figures 1, 2, and 3 display the impulse responses of endogenous variables across the two regimes under (1), (2), and (3), respectively. As can be seen from the figures, the changes in prior duration do not affect the main conclusions. We are still able to produce important differences in the way macroeconomic variables respond to a credit supply shock across the two regimes.

APPENDIX B. ALTERNATIVE IDENTIFICATION SCHEMES

The following section proposes alternative identification schemes.

B.1. Recursive ordering: p_t , ip_t , r_t and ebp_t . We modify our recursive ordering as follows: p_t , ip_t , r_t and ebp_t , which means that prices industrial production reacts contemporaneously to prices, but prices react to output with at least one lag. The rest of the identification remains unchanged; both variables from the production sector responds with one lag to financial

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TABLE 1. Identification scheme on $A_0(s_t)$

Variable	Sector			
	Prod	Prod	ECB	Bank
p	X	X	X	X
ip		X	X	X
r			X	X
ebp				X

markets. Table 1 summarizes this new identification. The X's indicate that the parameters in $A_0(s_t)$ are unrestricted, while the blank spaces indicate that the parameters are equal to zero. Each column represents an equation of the system. The first two columns "Prod" describes the production sector, the "ECB" column describes the European Central Bank contemporaneous behavior, and the "Bank" column describes the behavior of the financial intermediation sector. Figure 4 shows that the economic implications produced from the model with different identification scheme delivers similar outcomes.

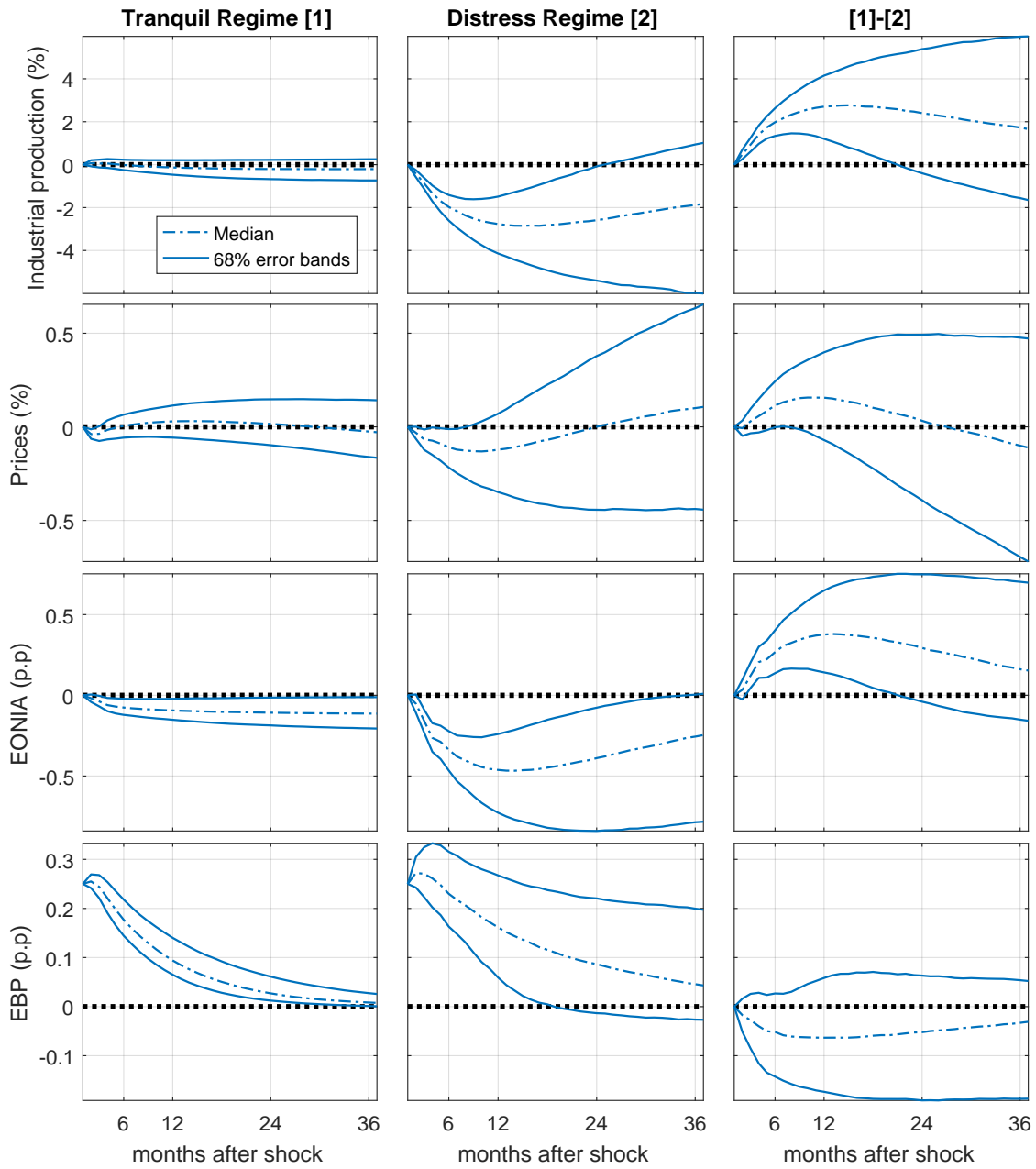
B.2. non-recursive approach: monetary policy reacts with delay. We establish another identification scheme in which the behavior of the European Central Bank reacts with one lag to variations in production sector. Such an identification implies to relax the recursive approach adopted until now. Table 2 summarizes the identification. Figure 5 reports that,

TABLE 2. Identification scheme on $A_0(s_t)$

Variable	Sector			
	Prod	Prod	ECB	Bank
ip	X	X		X
p		X		X
r			X	X
ebp				X

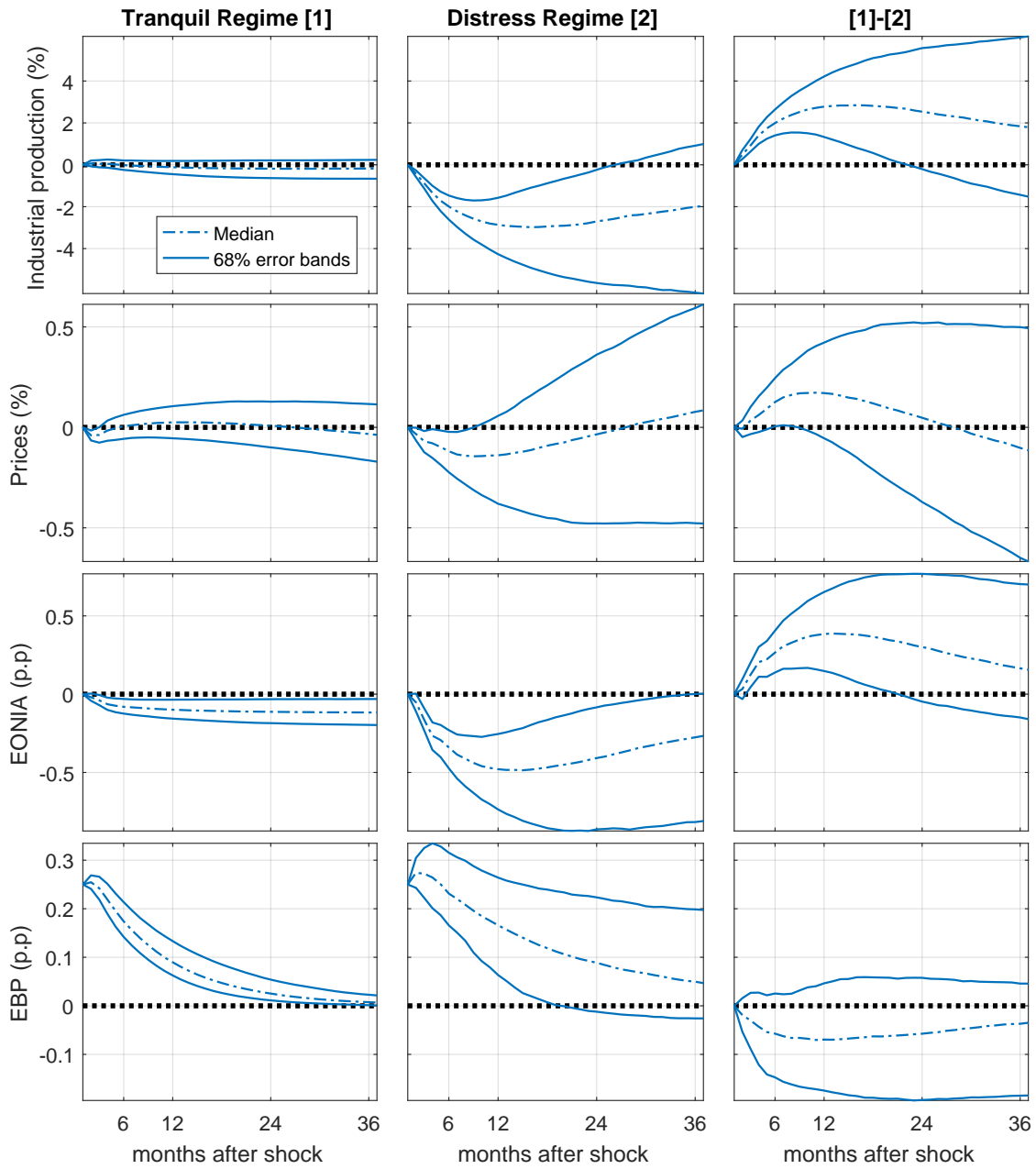
once again the pattern of impulse responses of endogenous variables remain unchanged.

FIGURE 1. Impulse responses to a credit supply shock (prior about average duration is 20 months).



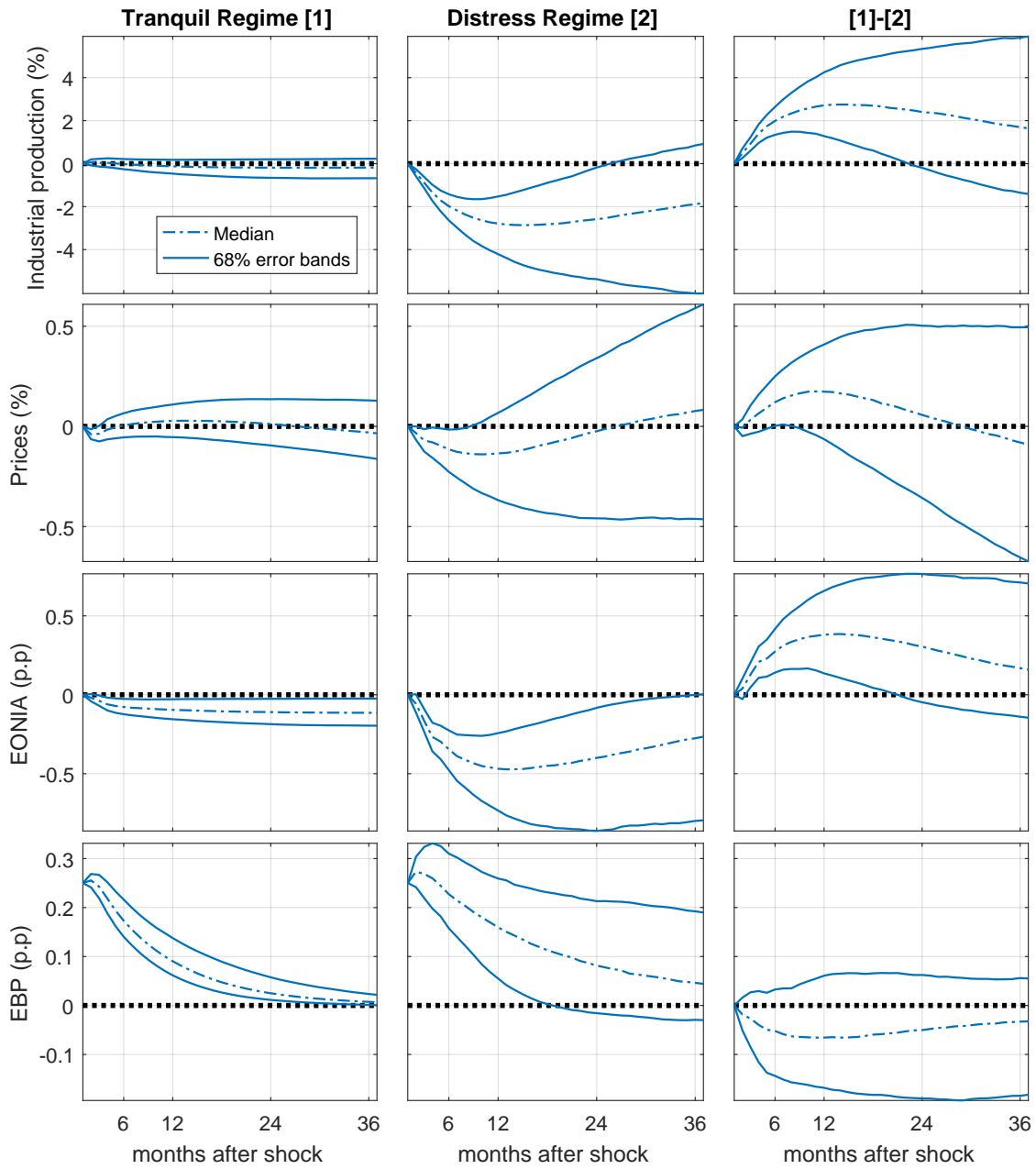
Note: Impulse-response functions to credit supply shock under both regimes from the model in which the prior about the average duration is about 20 months. The first and second column report impulse responses of endogenous variables under tranquil et distress regimes, respectively. The last column displays the difference between the two regimes. In each case, the median is reported in dotted line and the 68% error bands in solid lines.

FIGURE 2. Impulse responses to a credit supply shock (prior about average duration is 15 months).



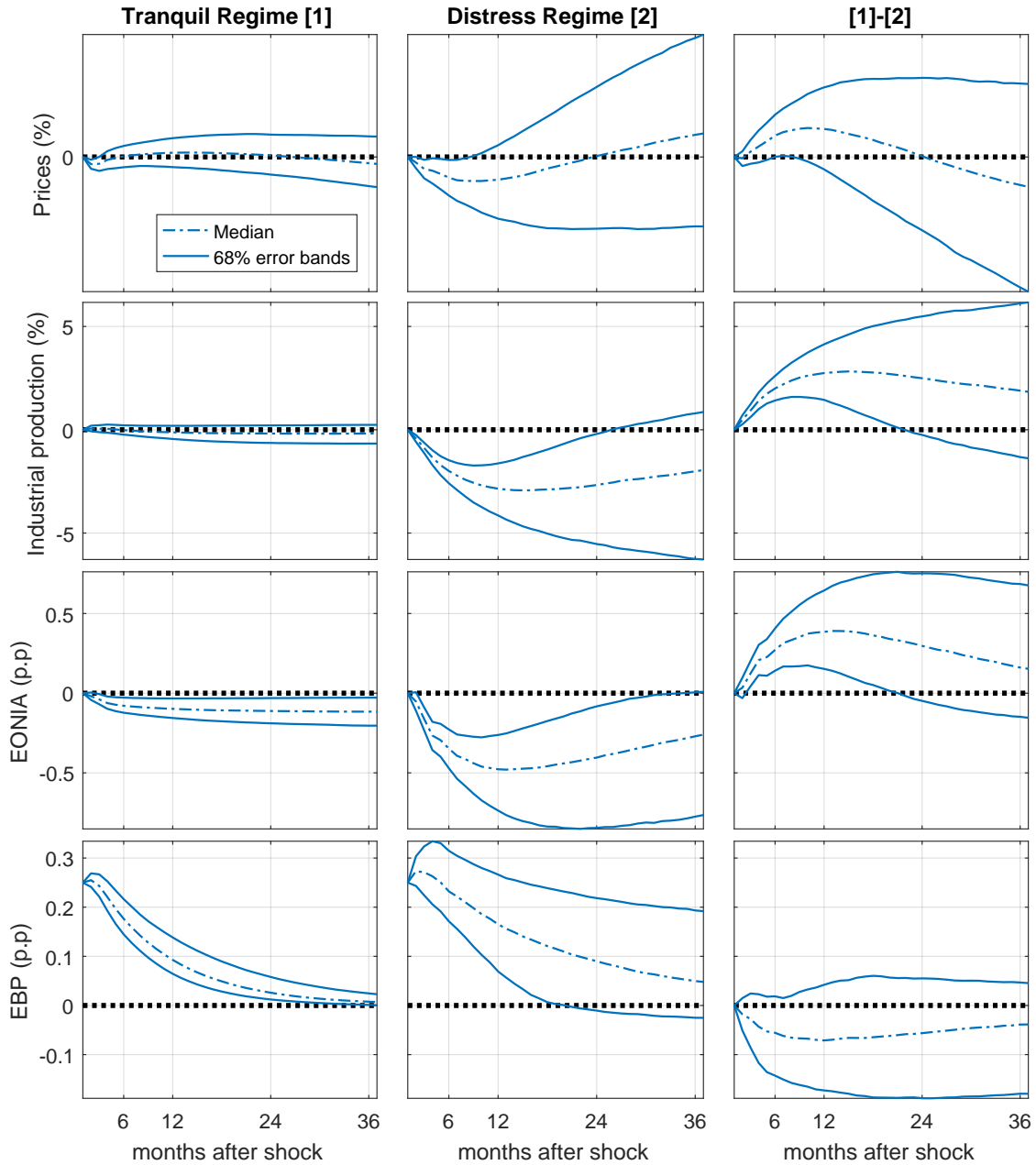
Note: Impulse-response functions to credit supply shock under both regimes from the model in which the prior about the average duration is about 15 months. The first and second column report impulse responses of endogenous variables under tranquil et distress regimes, respectively. The last column displays the difference between the two regimes. In each case, the median is reported in dotted line and the 68% error bands in solid lines.

FIGURE 3. Impulse responses to a credit supply shock (prior about average duration is 10 months)



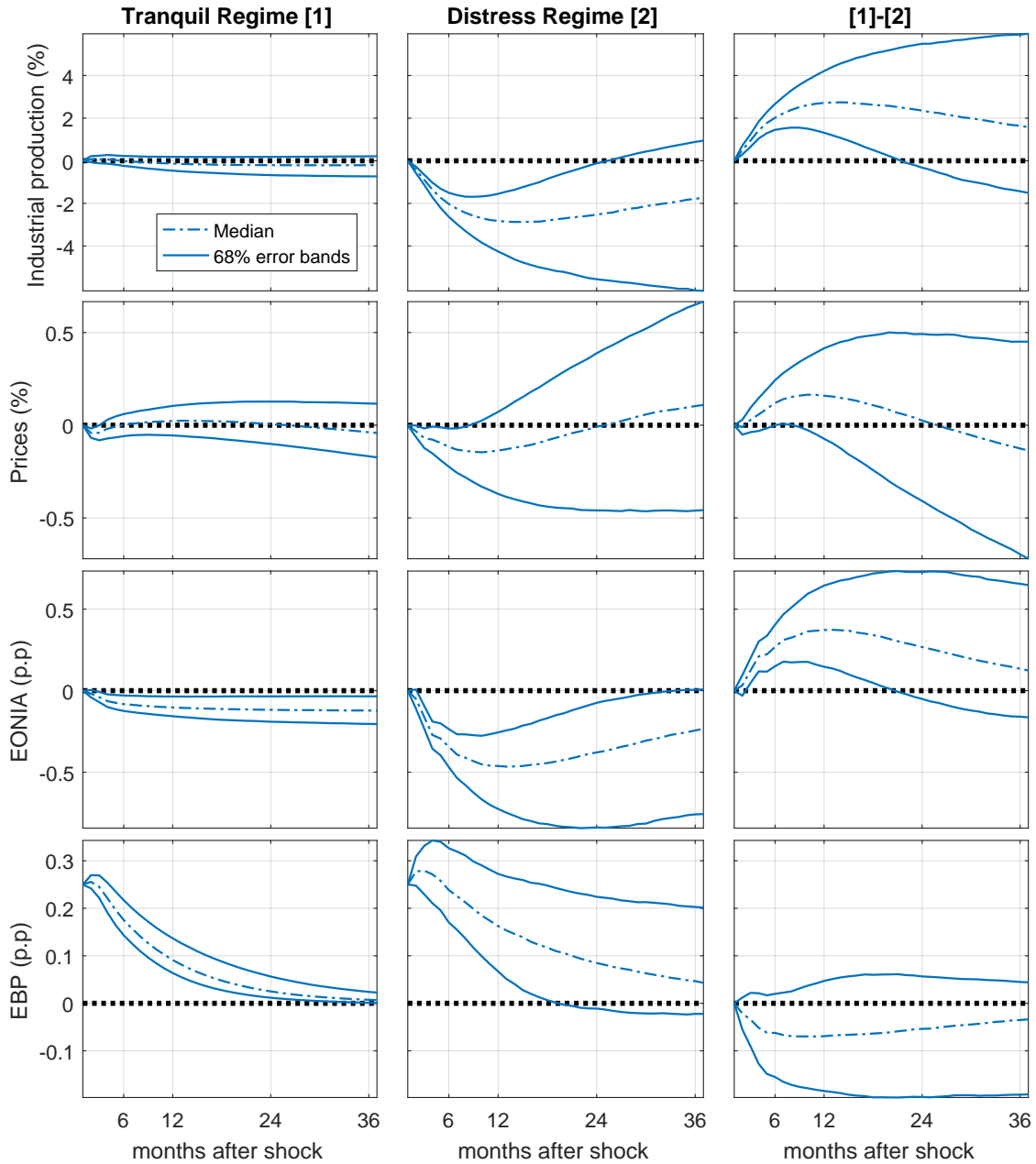
Note: Impulse-response functions to credit supply shock under both regimes from the model in which the prior about the average duration is about 10 months. The first and second column report impulse responses of endogenous variables under tranquil et distress regimes, respectively. The last column displays the difference between the two regimes. In each case, the median is reported in dotted line and the 68% error bands in solid lines.

FIGURE 4. Impulse responses to a credit supply shock (alternate recursive ordering).



Note: Impulse-response functions to credit supply shock under both regimes from the model in which the recursive ordering of the variables is the following: p_t , ip_t , r_t and ebp_t . The first and second column report impulse responses of endogenous variables under tranquil et distress regimes, respectively. The last column displays the difference between the two regimes. In each case, the median is reported in dotted line and the 68% error bands in solid lines.

FIGURE 5. Impulse responses to a credit supply shock (ECB reacts with a lag).



Note: Impulse-response functions to credit supply shock under both regimes from the model in which ECB responds to production sector with one lag. The first and second column report impulse responses of endogenous variables under tranquil et distress regimes, respectively. The last column displays the difference between the two regimes. In each case, the median is reported in dotted line and the 68% error bands in solid lines.