Labor Market and Financial Shocks: a Time-Varying Analysis Online Appendix^{*}

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^{*}The views expressed in this paper are our own and do not necessarily reflect those of the Bank of Italy.

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ADDITIONAL FIGURES Α

Unemployment Rate Vacancies 19⁸³ 19⁹⁸ 109⁹⁸ 19⁹⁵³ Hours of Work Growth Rate Nominal Wage Inflation 0.5 -0.5 -2 -1 -4 19⁸³ 19⁸⁸ ~99³³ **Inflation Rate Participation Growth Rate** 0.5 0.5 -0.5 19⁸⁸ 19⁸⁸ 19⁸³ **Real GDP Growth Rate** -1 -2 19⁰³

A.1 **Estimation Data**

Figure A.1: Labor and macroeconomic variables. All variables but the vacancy index are expressed in percentage points.



Figure A.2: NFCI and its subcomponents.





Figure A.3: CVAR historical decomposition of vacancy rate, sample 1983Q1-2007Q4.



Figure A.4: CVAR historical decomposition of vacancy rate, sample 1983Q1-2016Q3.



Figure A.5: Historical Decomposition of GDP (CVAR).



Figure A.6: Historical Decomposition of GDP (TV-VAR-SV).



Figure A.7: Historical Decomposition of hours (CVAR).



Figure A.8: Historical Decomposition of hours (TV-VAR-SV).



A.3 NFCI Sub-Indexes

Figure A.9: Time-varying impulse response functions to a NFCI (risk) non-standardized shock.



Figure A.10: Time-varying impulse response function of unemployment to a NFCI (credit) non-standardized shock.



Figure A.11: Time-varying impulse response function of unemployment to a NFCI (leverage) non-standardized shock.



Figure A.12: CVAR Historical decomposition of unemployment (NFCI, leverage sub-index).



Figure A.13: TV-VAR-SV historical decomposition of unemployment (NFCI, leverage subindex).



A.4 Excess Bond Premium

Figure A.14: Time-varying impulse response functions to an EBP standardized shock.



Figure A.15: Time-varying impulse response function of unemployment to an EBP non-standardized shock.



Figure A.16: Time-varying impulse response function of vacancy to an EBP non-standardized shock.



Figure A.17: Historical decomposition of unemployment (EBP specification, CVAR).



Figure A.18: Historical decomposition of unemployment (EBP specification, TV-SV-VAR).



Figure A.19: Stochastic volatility of the financial shock (EBP specification).



A.5 Credit Standards

Figure A.20: Time-varying impulse response functions to a CS non-standardized shock.



Figure A.21: TV-VAR-SV historical decomposition of unemployment (CS specification).



Figure A.22: Stochastic volatility of the financial shock (CS specification).



A.6 Fixed VAR Coefficients and Monthly Data

Figure A.23: Historical decomposition of unemployment (CVAR, monthly specification).



Figure A.24: Historical decomposition of unemployment (CVAR-SV, monthly specification).



Figure A.25: Stochastic volatility of the financial shock (monthly specification).



Figure A.26: Impulse response functions (non-standardized, monthly specification).



Figure A.27: Time-varying impulse response functions to a non-standardized NFCI shock (baseline specification + GDP forecast).



Figure A.28: TV-VAR-SV historical decomposition of unemployment (baseline specification + GDP forecast).



Figure A.29: Stochastic volatility of the financial shock (baseline specification + GDP forecast).