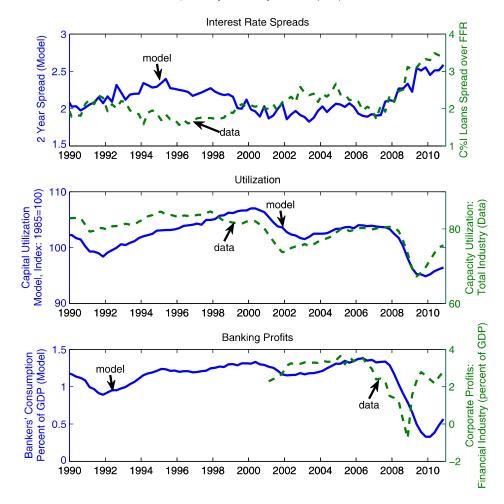**Fig. 4.** External validation: historical decomposition of model series. Note: The solid lines plot model simulated (smoothed estimates) series. The dashed lines plot similar objects from actual data.

otherwise. In particular, given the estimated shocks, I contrast in Fig. 4 the model's simulated time series for interest rate spreads, capacity utilization and bankers' consumption against their data counterparts. The top panel plots the two-year ahead interest rate spread against the C&I Loan Rate Spread for all loans from the Fed Survey of Terms of Business Lending.[12] Both in the model and in the data, the interest-rate spread rises markedly during the 2007–2009 period, although the increase – in percentage terms – is slightly larger in the data than in the model.[13] In the middle panel, the behavior of capital utilization in the model mimics its data analogue,[14] with both the model and the data pointing to a large and persistent decline in utilization around the financial crisis. The bottom panel compares bankers' consumption with a measure of the health of the banking system in the data, namely corporate profits of the financial sector.[15] Both measures tank during the Great Recession.

4.2. The transmission mechanism of financial shocks

Fig. 5 illustrates the model's transmission mechanism for three key markets, at the model's parameter estimates, by plotting the model-consistent demand and supply curves derived from the relevant Euler equations. I focus on how resources

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[12] The series name in the data is *FCIRS@USECON*. I construct the model interest spread as the difference between the lending rate for entrepreneurs (R_E) and the deposit rate (R_H). I construct a model-consistent two-year spread using the expectations hypothesis to match the average duration of C&I Loans in the Survey of Terms of Business Lending.

[13] In the model, spreads rise when banks' financial conditions worsen, since they signal the unwillingness of banks to lend funds. In the data, the rise in spreads reflects default risk that is not priced in the model.

[14] There is no satisfactory counterpart to the model's capital utilization in the data. Existing data refer only to manufacturing, and are calculated by comparing actual production with a measure of full-capacity production. The proxy I use is the total industry capacity utilization is the Board of Governors of the Federal Reserve System (Industrial Production and Capacity Utilization Summary Table, *CUT@USECON*).

[15] The data source for corporate profits is the BEA GDP release. The series name is *YCPDF@USECON*.