

FIGURE II
Differential Change in Price Indices

The differential change in the price index between credit-constrained firms and their unaffected counterparts. The red dashed line (color version available online) denotes the quarter-level price index of the firms that face a large negative credit supply shock, and the blue dotted line denotes the quarter-level price index of the firms that face a small negative credit supply shock. The vertical solid red line shows the timing of the Lehman failure, which is used to measure the credit supply shock, as shown in Section II.B.

within category and time by using the following Törnqvist price index:

(5)
$$\frac{\tilde{P}_{t,c}}{\tilde{P}_{t_0,c}} = \prod_{g \in \Omega_{t,c}} \left(\frac{\tilde{P}_{gt,c}}{\tilde{P}_{gt_0,c}}\right)^{\frac{\varphi_{gt,c} + \varphi_{gt_0,c}}{2}}$$

where $\Omega_{t,c}$ is the set of the product groups g in category c at time t. t_0 is the base time (2004:Q1) and $\varphi_{gt,c}$ is a market share of product group g at time t in each category. The same procedure is used to compare the scanner price index made from Nielsen data with the BLS official price index in Online Appendix S3.A.

Figure II plots the price index measured in equation (5). Although the category-specific measure of the price index does not fully use the credit supply shock variation across firms, the figure clearly illustrates the main empirical results in this article.