TABLE A.1
MAIN RESULTS WITH THE UTILITY-BASED PRICE INDEX

	$\Delta \ln P_{fg}$: 2006q4–2007q2 to 2008q4–2009q2					
	OLS		$(-\Delta L_f)$ instrumented using			
	(1)	(2)	Lehman (3)	ABX (4)	BankItem (5)	All (6)
$(-\Delta L_f)$	−2.25***	−8.57***	−7.32***	−7.00***	−8.80***	−7.88***
	(0.76)	(1.46)	(2.66)	(2.53)	(3.01)	(1.73)
Firm-level controls	No	Yes	Yes	Yes	Yes	Yes
Product group FE	No	Yes	Yes	Yes	Yes	Yes
NAICS four-digit FE	No	Yes	Yes	Yes	Yes	Yes
First-stage F statistic			16.80	7.80	14.90	11.90
J-statistic p-value						.89
$E[\Delta \ln P]$	11.379	11.4	11.4	11.4	11.4	11.4
$E[\Delta \ln P{:}\Delta L_{p90}\text{-}\Delta L_{p10}]$	−4.916	−18.7	−16	−15.3	−19.2	−17.2
Observations	1,658	1,658	1,658	1,658	1,658	1,658

Notes. $^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$; the standard errors are clustered by firm and product group, the regression is weighted by initial sales, and the firm-level controls are the firm's listed status, age, bond rating, number of loans, amount of loans, loan type, loan-year fixed effects, multi-lead fixed effects, number of loans due in the post-Lehman period fixed effects, loan spread, loan maturity, and lagged $\Delta \ln P_{fg}$.

Equation (14) clarifies how this framework perceives UPC-specific and firm-specific qualities, φ_{ut} and φ_{fgt}. These qualities change the market share holding the output price constant. If two products have the same price but one has a larger market share, then this product has a higher perceived quality.

The relative market share can be derived from equation (14):

$$\frac{S_{ut}}{\tilde{S}_{fgt}} = \frac{\left(\frac{P_{ut}}{\varphi_{ut}}\right)^{1-\sigma^U}}{\left(\frac{\tilde{P}^U_{ut}}{\tilde{\varphi}^U_{ut}}\right)^{1-\sigma^U}}, \tag{15}$$

where $\tilde{S}_{fgt} = \left[\prod_{u \in \Omega_{fgt}} S_{ut}\right]^{\frac{1}{N_{fgt}}}$, which is the geometric average of the market share of UPCs for firm f within group g at time t. By plugging equation (15) into equation (13), one can derive the following firm-group-time price index

$$\ln P_{fgt} = \underbrace{\ln \tilde{P}_{fgt}}_{\text{Standard Index}} \underbrace{- \frac{1}{\sigma^U_g - 1} \ln \left[\sum_{u \in \Omega_{fgt}} \frac{S_{ut}}{\tilde{S}_{fgt}}\right]}_{\text{Quality/Variety Correction}}, \tag{16}$$