Brookings Papers on Economic Activity

Are Empowerment and Education Enough? Underdiversification in 401(k) Plans

James J. Choi, David I. Laibson, Brigitte C. Madrian

Brookings Papers on Economic Activity
Brookings Institution Press
2005, 2
pp. 151-213
10.1353/eca.2006.0002

Article

View Citation

Additional Information

In lieu of an abstract, here is a brief excerpt of the content:

Although the Enron 401(k) debacle was highly publicized, Enron was neither the first nor the last company whose collapse decimated its workers' 401(k) accounts. Over the past few years a similar fate has befallen employees of WorldCom, Global Crossing, Polaroid, Kmart, Lucent, and Providian, among others. In response, many bills have been proposed in Congress that would regulate employer stock holdings within 401(k) plans. Compared with existing law on *defined-benefit* pension plans, which strictly prohibits plans from holding more than 10 percent of their assets in employer securities, most of the bills proposed for regulating *defined-contribution* plans appear mild. Common themes in these proposals are empowerment and education rather than prohibition: give employees the right to sell the employer stock in their 401(k), and inform them about the risks of not doing so.

For example, one of only two bills that have so far come up for a vote in either house of Congress, the Pension Security Act (see table A-1 in the appendix), has two key provisions relating to employer stock. First, it would prohibit employers from requiring employees to invest their own 401(k) contributions in employer stock. Second, it would require that employers *allow* plan participants to diversify any matching funds contributed by the employer three years after receiving that match. Other proposed legislation would require that plan participants be notified if the fraction of their assets invested in employer stock exceeds a certain threshold (such as 20 percent), that companies offer a certain number of alternatives to employer stock if it is made an investment option, or that companies educate plan participants about the risks of not diversifying their assets.

This paper assesses how effective the "empower and educate" regulatory approach might be at reducing 401(k) employer stock holdings. We begin by studying five natural experiments in which employees experienced a discrete change in the restrictions on employer stock holdings. In these examples the restrictions changed for one of two reasons: either employees crossed an age or tenure threshold above which they were allowed to diversify their holdings, or the company changed its rules to enable all employees to diversify their investments. We find only a modest employee response to either type of change. Merely allowing diversification does not cause it to happen.

We then consider whether educational efforts might motivate employees to diversify out of employer stock. Although many studies have concluded **[End Page 152]** that financial education does affect employees' choices, the subset of studies that randomly assign education *and* measure subsequent actions have found small effects.[1] These studies still leave open the possibility that other kinds of education might yield larger behavioral changes.

Here we evaluate a different form of education: witnessing the real-life experience of others. Economists since Armen Alchian in the 1950s have argued that the imitation of successful strategies (and, conversely, the avoidance of unsuccessful strategies) is an important force pushing economic actors toward optimal behavior.[2] We test this hypothesis in the context of the media coverage surrounding the Enron, WorldCom, and Global Crossing bankruptcies. Specifically, we investigate how much workers at *other* companies reduced their employer stock holdings in response to the blizzard of media stories early in this decade illustrating the dangers of putting all of one's retirement savings in employer stock.

We chose Enron, WorldCom, and Global Crossing because a large percentage of their employees' 401(k) assets was held in employer stock, and because their bankruptcies, the associated accounting scandals, and their decimated 401(k) plans received so much attention from so many media outlets. For example, the *New York Times* ran 1,364 stories mentioning Enron during the last quarter of 2001 and the first quarter of 2002, of which 112 ran on the front page.

We find that this media barrage had a surprisingly modest impact on employer stock holdings in other 401(k) plans, reducing the fraction of assets held in employer stock by no more than 2 percentage points from an initial 36 percent of balances. We present evidence that this small reaction is not due to restrictions on diversification. In addition, we show that workers in Texas, who were...

JAMES J. CHOI
Yale University

DAVID LAIBSON
Harvard University

BRIGITTE C. MADRIAN
University of Pennsylvania

Are Empowerment and Education Enough? Underdiversification in 401(k) Plans

AT THE END of 2000, current and former employees of the energy trading company Enron Corporation held $2.1 billion in the firm's 401(k) retirement savings plan. Sixty-two percent of that money was invested in Enron stock, then trading at $83 a share. In October 2001 Enron's finances began to unravel as its accounting improprieties came to light. Enron stock plummeted over the next several weeks, and on December 2, 2001, the company declared bankruptcy, rendering its shares worthless. Thousands of Enron employees lost their jobs and a large fraction of their retirement wealth simultaneously.

We thank Hewitt Associates for their help in providing the data. We are particularly grateful to Lori Lucas and Yan Xu, two of our many contacts at Hewitt, for their help with the data and their useful feedback on this project. We appreciate the research assistance of Ananya Chakravarti, Keith Ericson, Jean Lee, Hongyi Li, Shih En Lu, Dina Mishra, and Chris Nosko. We are also grateful for comments from Christopher Carroll, William Gale, Nellie Liang, and other participants on the Brookings Panel as well as at seminars at the American Economics Association, the National Bureau of Economic Research, the University of Chicago, the University of Michigan, and Harvard University. James Choi acknowledges financial support from the Mustard Seed Foundation. All three authors acknowledge individual and collective financial support from the National Institute on Aging (grants R01-AG-021650, P30-AG012810, and T32-AG00186). David Laibson also acknowledges financial support from the Sloan Foundation. The opinions and conclusions expressed are solely those of the authors and do not necessarily represent the opinions or policy of the National Institute on Aging, any other agency of the federal government, Hewitt Associates, or the National Bureau of Economic Research.

Additional Information

ISSN	1533-4465
Print ISSN	0007-2303
Pages	pp. 151-213
Launched on MUSE	2006-02-22
Open Access	No