What economists know about retirement plan design
by Tomas Dvorak, Union College
(This essay was published in the *Chronicle of Higher Education* on November 13, 2016.This version includes all of the links and references most of which were omitted in the Chronicle version.)

This past summer, the Massachusetts Institute of Technology, the University of Pennsylvania, and Yale, Columbia, Duke, and New York Universities, along with at least five other major colleges, were served with lawsuits alleging failure of fiduciary duty towards participants in their retirement plans. The retirement plans at all of these schools either have or previously had a large number of investment options. In addition, some of the investment options were too costly, given the plan size. The lawsuits claim that offering too many investment options - in some cases over a hundred - is imprudent, and that the universities failed to use their size to negotiate lower fees.

The lawsuits will no doubt spark a new wave of changes in the design of higher education retirement plans. As colleges summon their lawyers and consultants to revisit their plans, it is worthwhile to review what academic economists know about the principles that should guide the design of retirement plans. The last twenty years have produced economic research that should carry weight not only in how the courts decide the merits of the outstanding lawsuits, but also in how administrators at universities not yet hit with a lawsuit should continue reshaping their retirement plans.

Principle 1: Offer access to key asset classes

Plans should offer access to key asset classes: stocks, bonds, money market, etc. Access to different asset classes enables employees to invest in assets that match their risk preferences. For example, while younger workers may want to invest more in stocks, older ones may find bonds more appropriate. Economists have long recognized that asset allocation plays a key role in the risk and return of a portfolio. They have also recognized that asset allocation may need to vary with age. There is less agreement on what constitutes a *key* asset class. While few economists would object to U.S. stocks as a key asset class, there will be less agreement with regards to emerging markets or real estate.

Principle 2: Minimize cost

Plans should offer access to key asset classes at the lowest possible cost. Generally, the least costly way to invest in a particular asset class is to buy an index fund that tracks that particular asset class. Index funds buy all securities in an index rather than actively managing which securities to buy and which to sell. One thing that economists know for sure is that active management is a game in which the average investor loses. As the 2008 presidential address to the American Finance Association says, “the typical investor would increase his average annual return ... if he switched to a passive market portfolio.” Nevertheless, plans should recognize that not all index funds are created equal, and carefully monitor their costs.

Principle 3: Don’t chase returns

Plans should not change the investment menu too often. Economists know that past returns don’t predict long-term future returns. Thus, selecting funds based on their past performance is silly. One study found that plans usually add funds that do no better than the funds they dropped. The good news is that if plans invest in low cost index funds as outlined above, their performance will match their benchmarks. Index funds do not under-perform or out-perform benchmarks - they *are* the benchmarks.

Principle 4: Keep it simple

Plans should have few investment options, and what they do have should be simple. Some of the most influential work in economics has been in the area of making participation in defined contribution plans more straightforward. This research gave rise to automatic enrollment, qualified default investments, and automatic escalation in contributions. A related line of research showed that defined contribution participants are largely passive, don’t take full advantage of their employer’s matching contributions, and have a hard time differentiating among investment options. Thus, simplifying plans and providing participant education is essential.

Principle 5: Avoid conflicts of interest

Plans should hire advisors who are free of conflicts of interest. Starting next year, anyone advising retirement assets will have fiduciary duty. Economists have long recognized that financial markets are plagued with conflicts of interest. For example, economists found that advisors who receive indirect compensation give conflicted advice, that advisors’ own 401k plans are cheaper than those of their clients, and that mutual fund companies who serve as trustees of 401k plans favor their own funds. A more subtle conflict of interest arises when advisors over-treat their clients by adding complexity to the products they offer. Even in the absence of indirect compensation, advisors have an incentive to provide (and bill for) more services than are necessary. For example, advisors may be able to justify higher fees to a plan with many options and frequent changes to the menu, than to a plan with few simple and stable options. Plans should avoid this by sticking to the principles above.

Principle 6: Be careful about annuities

Plans should be careful about including annuities. Although, economists have long recognized the benefits of life annuities in retirement, the optimal implementation of annuities within a defined contribution plan is still the subject of much research. The problem is that unlike with mutual funds, the pricing of annuities if far less transparent. This is particularly relevant for the 403b plans prevalent in the higher education market since many of them include annuities.

Without question, there is room for improvement in higher education retirement plans. In particular, these plans are likely to benefit from simplifying the array of options they tend to offer. An example of a well designed plan is that of Stanford University. The plan includes only six

funds in addition to target date/lifecycle funds. The funds are all low cost and passively managed. The recordkeeping costs are covered through a flat annual charge to participants. This is far more transparent and equitable than the typical practice of embedding recordkeeping costs in the expense ratios of different funds. The inclusion of annuity contracts is limited to three. These contracts are clearly marked as distinct from the core options. While Stanford has the advantage of being a multibillion dollar plan, the key features of its design can be replicated in a plan of any size.

There is no doubt that administrators at colleges and universities have the well-being of their faculty, staff and retirees in mind. Using the fruits of economic research as outlined above could help them make more informed decisions as well as effectively respond to and be protected from litigation.

Bibliography:

Agnew, Julie R., Lisa Szykman, Stephen P. Utkus, and Jean A. Young. "Literacy, trust and 401 (k) savings behavior." *Trust and* 401 (2007).

Benartzi, Shlomo, Alessandro Previtero, and Richard H. Thaler. "Annuitization puzzles." *The Journal of Economic Perspectives* 25, no. 4 (2011): 143-164.

Beshears, John, James J. Choi, David Laibson, and Brigitte C. Madrian. "The importance of default options for retirement saving outcomes: Evidence from the United States." In *Social security policy in a changing environment*, pp. 167-195. University of Chicago Press, 2009.

Bodie, Zvi. "Thoughts on the future: Life-cycle investing in theory and practice." *Financial Analysts Journal* 59, no. 1 (2003): 24-29.

Carhart, Mark M. "On persistence in mutual fund performance." *The Journal of finance* 52, no. 1 (1997): 57-82.

Carlin, Bruce I. "Strategic price complexity in retail financial markets." *Journal of financial Economics* 91, no. 3 (2009): 278-287.

Choi, James J., David Laibson, and Brigitte C. Madrian. "Why does the law of one price fail? An experiment on index mutual funds." *Review of financial studies* (2009): hhp097.

Choi, James J., David Laibson, and Brigitte C. Madrian. "$100 bills on the sidewalk: Suboptimal investment in 401 (k) plans." *Review of Economics and Statistics* 93, no. 3 (2011): 748-763.

Davidoff, Thomas, Jeffrey R. Brown, and Peter A. Diamond. "Annuities and individual welfare." *The American economic review* 95, no. 5 (2005): 1573-1590.

Dvorak, Tomas. "Do 401k plan advisors take their own advice?." *Journal of Pension Economics and Finance* 14, no. 01 (2015): 55-75.

Elton, Edwin J., Martin J. Gruber, and Christopher R. Blake. "Participant reaction and the performance of funds offered by 401 (k) plans." *Journal of Financial Intermediation* 16, no. 2 (2007): 249-271.

French, Kenneth R. "Presidential address: The cost of active investing." *The Journal of Finance* 63, no. 4 (2008): 1537-1573.

Hortaçsu, Ali, and Chad Syverson. *Product differentiation, search costs, and competition in the mutual fund industry: a case study of the S&P 500 Index Funds*. No. w9728. National Bureau of Economic Research, 2003.

Ibbotson, Roger G., and Paul D. Kaplan. "Does asset allocation policy explain 40, 90, or 100 percent of performance?." *Financial Analysts Journal* 56, no. 1 (2000): 26-33.

Madrian, Brigitte C., and Dennis F. Shea. *The power of suggestion: Inertia in 401 (k) participation and savings behavior*. No. w7682. National bureau of economic research, 2000.

Mitchell, Olivia S., Gary R. Mottola, Stephen P. Utkus, and Takeshi Yamaguchi. "The inattentive participant: Portfolio trading behavior in 401 (k) plans." *Michigan Retirement Research Center Research Paper No. WP* 115 (2006).

Mullainathan, Sendhil, Markus Noeth, and Antoinette Schoar. *The market for financial advice: An audit study*. No. w17929. National Bureau of Economic Research, 2012.

Pool, Veronika K., Clemens Sialm, and Irina Stefanescu. "It Pays to Set the Menu: Mutual Fund Investment Options in 401 (k) Plans." *The Journal of Finance* (2016).

Sharpe, William F. "The arithmetic of active management." *Financial Analysts Journal* 47, no. 1 (1991): 7-9.

Thaler, Richard H., and Shlomo Benartzi. "Save more tomorrow™: Using behavioral economics to increase employee saving." *Journal of political Economy* 112, no. S1 (2004): S164-S187.