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RESEARCH & IDEAS

The Best Place for Retirement Funds

Q&A with: Daniel Baird Bergstresser
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 Author: Ann Cullen

For many investors planning for retirement, asset allocation is a crucial issue. How much should I put into stocks, bonds, and cash? But Harvard Business School professor Daniel Bergstresser says that households with substantial assets in both taxable and tax-deferred accounts (TDAs) should also be thinking about *where* to hold them, specifically, inside or outside of tax-deferred accounts.

"Getting this decision right can be pretty close to a free lunch," says Bergstresser, who with colleague James Poterba, a professor at MIT's Department of Economics, looked at consumer data in a paper called, "Asset Allocation and Asset Location: Household Evidence from the Survey of Consumer Finances," published by the *Journal of Public Economics* in August, 2004.

Using data from the Survey of Consumer Finances (SCF), the team assessed that in 2001 more than 11 million U.S. households had at least \$25,000 in both a taxable and a tax-deferred account. And while about two-thirds of those households held tax-efficient portfolios, most of the remaining third could reduce their taxes by relocating heavily taxed fixed income assets to their tax-deferred account.

Having access to a tax-deferred account gives an investor a potential subsidy from the government, in the form of a tax deferral, Bergstresser continues. "The magnitude of this subsidy depends on how heavily the assets in the account are taxed. An example of a low-tax asset might be a tax-exempt municipal bond, or an equity mutual fund that holds low-dividend stocks and passes through little in the way of realized capital gains. A high-tax asset might be a standard corporate bond, since the interest payments on a bond held in a taxable account will be taxed at the investors'

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
Turns out location, location, location isn't just about real estate. Professor **Daniel Bergstresser** discusses his research on optimal asset location strategies.

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About Faculty in this Article:



Daniel Bergstresser is an assistant professor in the Finance unit at Harvard Business School.

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income tax rates. So for an investor holding taxable bonds and muni bonds, putting the muni bonds outside of the IRA and the taxable bonds inside of the 401(k) is a winning asset location strategy.

"It may be slightly less obvious, but for an investor with low-tax equity mutual funds and high-tax bonds, they should preferentially locate these bonds inside of their 401(k). Getting this decision right, while not a pure arbitrage, is as close to one as most investors will ever see."

We talked with Bergstresser about his research and what personal investors can take away from the results.

Ann Cullen: *How did you become interested in doing research on this topic?*

Daniel Bergstresser: My interest in asset location is both scientific and personal, in the sense that the topic matters for my own behavior. Leaving aside my personal financial stake, the topic touches on a lot of important issues. It touches on behavioral finance: How rational are individual investors? It touches on the quality of advice that investors get, and the relationships between investors and their financial advisers. As we potentially shift our Social Security system toward one where households will be making important investment decisions, trying to understand how they make decisions now is pretty important.

Q: *Please describe how the research got started.*

A: Jim Poterba and I started the project at the end of my time in graduate school. There had been earlier literature on asset allocation for defined benefit pension plans. While this literature may not seem obviously related to the asset location literature, they turn out to be tightly linked. Fisher Black and Irwin Tepper established that a firm with access to tax-deferred accumulation in a defined benefit pension plan should invest the assets in bonds. This is because bonds are relatively highly taxed, and shifting high-tax assets into the pension plan maximizes the value of the tax subsidy from the government and increases the value of the firm. In principle, the impact of the DB pension plan asset allocation on overall firm leverage can be undone through the firm's choice of non-pension assets or capital structure.

In the late 1990s, as the focus of tax-deferred investing drifted away from defined benefit plans and toward individually managed retirement accounts, a number of people, including John Shoven and Clemens Sialm, and Robert Dammon, Chester Spatt, and Harold Zhang, set out to derive rules for optimal asset location behavior for investors with these individually managed retirement accounts. Two results came out of this work: First, the optimal strategy is to preferentially locate highly taxed assets into the tax-deferred location; second, particularly for investors with large tax-deferred savings vehicles, the asset location decision has a relatively large impact on retirement wealth.

With some allowance for institutional differences between defined benefit pension plans and 401(k)s—for instance, no PBGC (Pension Benefit Guarantee Corporation) equivalent insures 401(k) assets—these two literatures came to the same conclusion: Locate highly taxed assets inside of tax-deferred accounts.

Jim and I came in to this literature from a different angle. Rather than taking a normative

approach, and deriving optimal asset location and allocation rules, we wanted to look at what people were actually doing in their tax-deferred savings accounts. We had each worked with the Federal Reserve Board's Survey of Consumer Finances. This dataset turns out to be a wonderful treasure for research on asset location, not least because it provides a comprehensive picture of households' wealth, both inside and outside of tax-deferred accounts. While useful, the dataset is very complicated. It is complicated enough that it is, in my view, a somewhat under-exploited resource for the economics profession.

I was pretty familiar with the SCF. Prior to starting graduate school I had worked as a research assistant to Karen Dynan at the Federal Reserve. In particular, I worked on several projects using data from the SCF. In addition, one of the chapters of my thesis used data from the SCF. Jim had also used the SCF for a number of projects. So, we were already geared up to apply these data to the asset location question.

Q: Why are tax considerations often not considered by a significant number of households when making decisions about financial investments?

A: Financial markets can seem very complicated. Taxes can seem very complicated. When you put the two together, perhaps a lot of households just throw up their hands and give up.

I do think that optimal asset location is simple enough that it could be explained to most households who have assets to invest. In two sentences: Whatever your desired overall asset allocation, you should preferentially locate your highly taxed assets inside of your tax-deferred account. Locating highly taxed assets in the tax-deferred account maximizes the value of having this account.

There is a wonderful NBER (National Bureau of Economic Research) working paper by Steven Venti and David Wise, entitled "[Choice, Chance, and Wealth Dispersion at Retirement](#)." This paper looked empirically at households' wealth levels at retirement. The authors assess the role that luck, asset allocation, and savings decisions had had in determining how much wealth people had to retire on. It turns out that how much you save is really what matters for how much you have to retire on. It's better to be lucky than unlucky, as far as investment choices go, and choosing the right asset allocation (and location!) is important, but all of that pales in comparison to just the simple decision to save.

I think that message is important. If households get discouraged by the complicated array of investment opportunities, complicated tax rules, and seemingly capricious nature of returns, then they are losing sight of what really matters for how much wealth they have to retire on: how much they saved while they were working. It's an important message.

If choosing the right asset location can make a 20 percent difference in your wealth at retirement, then that is important. But your choice about whether or not to save makes a 100 percent difference in your retirement wealth.

Q: Which types of households, according to your research, make the most tax-efficient asset location decisions?

A: I don't think that Jim and I have been terribly successful at teasing anything out of the

data that have been available to us. Gene Amromin, a scholar at the Federal Reserve Bank of Chicago, has also been working on asset location issues. He has a theoretical paper arguing that households that face a risk of becoming unemployed should hold risk-free assets outside of their tax-deferred accounts. This advice goes counter to the tax-efficient strategy of placing bonds preferentially into the TDA. Amromin also has an empirical paper presenting evidence that households that face higher labor income risk are somewhat less likely to choose tax-efficient asset location strategies, consistent with his theoretical model. The jury is still out on how big these labor-income risk effects are in practice; my own view is that they are present but not terribly important for most investors.

Q: Do you think most consumers are aware of the tax saving differences of holding stocks in TDAs versus bonds?

A: It seems likely that the median consumer is unaware of how big an impact these decisions can make. But wealth is not distributed evenly; the median dollar of wealth is held by a rich person, who can afford better financial advice than the median consumer gets. I think that people are becoming increasingly aware of how important it is to consider taxes in setting their asset location strategy.

Q: What can individuals who control household investments do to make sure their holdings are in financial alignment with their goals, and who can they turn to for advice? Are traditional investment advisers equipped to handle these kinds of TDA tax-related questions?

A: It would have to depend on the investment adviser. I suspect that many investment advisers are unaware of how much of a difference optimal asset location strategies can make. The relationship between financial advisers and their clients is pretty complicated. In related work, John Chalmers, Peter Tufano, and I have been trying to understand how these relationships work.

The big picture is very important; how much you save is the real determinant of how much wealth you will have at retirement. All of the asset location and asset allocation advice in the world doesn't do any good for somebody who isn't saving anything to begin with.

Q: Why hasn't previous research examined the number of households with substantial balances in both taxable and tax-deferred accounts [TDAs]?

A: I think it would be a bit misleading to say that people had never looked at the number of households with both taxable and tax-deferred accounts before. There is earlier literature that focused on whether the existence of tax-deferred savings accounts actually increases saving. Part of the government's rationale for allowing tax-deferred savings accounts is to encourage saving. Thus, the government allows you to have a pretty big tax break: You can save in a 401(k), a 403(b), or an IRA and the returns cumulate tax-free.

But this tax break, in theory, has an ambiguous effect on saving. For example, a person who is already saving a lot may reduce their saving if the government allows them to have an IRA. With the tax benefit of saving in the IRA, the same level of retirement wealth can be achieved with less saving. On the other hand, for somebody who saves nothing in the absence of a tax-deferred savings account, the existence of a tax-deferred savings account can only make saving more attractive, thereby increasing savings.

The magnitude of tax-deferred investing, and the size of the implicit government subsidies made through this channel, make this question a first-order policy issue. There has been a vigorous and contentious debate about which one of these effects, in practice, was more important. Eric Engen, William Gale, and John Karl Scholz have a sequence of papers claiming that IRAs and 401(k)s displace existing savings without adding much new saving. Jim Poterba, Steven Venti, and David Wise have argued the opposite case. I don't think that the matter is totally settled, empirically. The magnitude of tax-deferred investing and the size of the implicit government subsidy that coming from tax deferral in IRAs and 401(k)s make this question a first-order public policy issue.

In both this literature and in the literature on asset location, you need to look at households' entire portfolio. So I think that in this earlier literature on whether tax benefits for saving actually work, you can find some of the seeds for what Jim and I do in our 2004 paper on asset location.

Q: In terms of tax-deferred accounts, most people are familiar with IRAs and 401(k) or 403(b) plans. What other types of TDAs are available to consumers? Do you think the number of options in this category will increase in the future?

A: There are a variety of other tax-favored savings vehicles. For example, there are now tax-advantaged savings vehicles that focus on saving for education. The Education Savings Account program was created in 1997. In 2001 it was renamed the Coverdell Education Savings Account program, after the late Georgia senator Paul Coverdell. This is a federal program that allows you to put after-tax earnings into a special ESA account. Returns cumulate tax-free in this account, and withdrawals, if used for educational expenses, are not taxed. In addition to this federal program, individual states have 529 savings plans, with similar goals and broadly similar features. Susan Dynarski at Harvard's Kennedy School of Government has been looking at the impact of these programs, and my sense is that when the data from the 2004 SCF are released we may find that these programs have become pretty important for a lot of families. There are also tax-favored savings plans focused on medical rather than educational expenses.

It's hard to predict what the future holds, as far as new types of tax-deferred savings vehicles. Retirement, education, and medical care are focal in the minds of voters, so setting up tax-deferred savings programs around these issues is a political winner. Also, given the political power of universities, doctors, and asset management companies, it was perhaps inevitable that winning coalitions would come together to push those programs through.


What else might emerge in the future is difficult to predict. If I had to guess at what is coming down the pike, I think that we can look forward to some kind of vigorous national debate regarding exactly how we define "educational" and "medical" expenditures. Such a debate would be relevant to a variety of federal programs, including the ESAs and to medical savings accounts.

Q: Why is the U.S. Survey of Consumer Finances such a rich source of data for research on consumers and TDAs?

A: The Survey of Consumer Finances is a wonderful resource for scholars thinking about

wealth and income. The Survey is conducted triennially by the staff of the Federal Reserve Board, and there are a number of factors that make it particularly useful.

First of all, it is large, with over 4,000 respondents in each of the surveys. This size means that analysis using the survey has much more precision than would otherwise be the case. The survey has an incredibly high response rate. Somehow, people are very responsive to a personal letter from Alan Greenspan telling them how valuable their participation in the survey is.

Second, the survey has a split-sample design, with part of the survey drawn randomly from the population of all households, and a second part oversampling the very wealthy households who have the bulk of wealth. This means that the same survey can be used to see precisely what is going on both at the median person (who holds very little wealth) and at the median dollar (which is held by a rich person). Third, the survey is remarkably consistent across years, allowing meaningful comparisons between 2001 and 1989. Finally, the Federal Reserve Board staff members who create this survey are top-notch. They are real experts in putting together a very robust survey. 

About the author

Ann Cullen is a business information librarian at Baker Library, Harvard Business School, with a specialty in finance.

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