



## Public Comment to AM-1

Public Feedback on OFR Study on Asset Management Issues

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May 15, 2014

### Introduction

We appreciate the opportunity to comment on the Office of Financial Research (OFR) report: “Asset Management and Financial Stability” (September 2013). We commend the Securities and Exchange Commission for soliciting comments on this important report. Herein we attempt to quantify some of the likely costs to investment funds and their investors using publicly available data. We note that the original OFR report did not attempt to explicitly address potential costs of investment fund designation.



# The Investor Cost of Designating Investment Funds as Systemically Important Financial Institutions

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May 15, 2014

## Summary

- The Financial Stability Oversight Council (FSOC) is currently examining the asset management industry to determine whether to designate certain companies or investment funds as “systemically important financial institutions” (SIFIs).
- SIFI designation of asset managers or funds will be costly for investors. In some cases, investors could see their returns reduced by as much as 25% (approximately \$108,000) over the long term, forgoing several multiples of their initial principal in lost returns over the course of a working life.
- The precise impact on any investor depends on their investment objective, fund choice, and time horizon. But an FSOC SIFI designation must justify the fact that across nearly all of the funds with more than \$100 billion in assets, new capital requirements will have noticeable effects on investors.

It’s clear that if the enhanced prudential supervision regime looks something akin to what is being discussed today, the impact on investors will be significant—especially for young investors with long investment time horizons.

## Financial Stability Oversight Council and the Financial Stability Board

One of the major new regulators to come out of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (“Dodd-Frank”) is the Financial Stability Oversight Council (“FSOC”). The FSOC was a response to a belief that the siloed approach to financial regulation, which built up over several decades, has led to gaps in information about certain institutions and financial activity that could pose threats without an appropriate response. The FSOC is an attempt to coordinate information



and the policies of the relevant regulatory bodies to prevent (or at least mitigate) future systemic crises. Specifically, as Dodd-Frank puts it, FSOC's mission is to:

*identify risks to the financial stability of the United States that could arise from the material financial distress or failure, or ongoing activities, of large interconnected bank holding companies or nonbank financial companies.*

*[t]o respond to emerging threats to the stability of the United States financial system.<sup>1</sup>*

The statute goes on to outline the scope of the FSOC's oversight and authority, which extends to *nonbank financial companies* – a term defined therein in the broadest of terms. One could call this authority over such a potentially large swath of the financial markets the “AIG rule.” AIG, having been nominally an insurance company, was not subject to any meaningful *federal* regulation or oversight. After policymakers deemed AIG a systemic threat in 2008, prompting a large bailout and major political backlash, the authors of Dodd-Frank sought a means to make sure no financial company<sup>2</sup> could pose such a threat again by virtue of falling into a regulatory gap (or otherwise of being subject to uncoordinated activity across agencies).

FSOC has thirteen stated duties prescribed by Dodd-Frank, but perhaps its most significant authority is its ability to “require supervision by the Board of Governors for nonbank financial companies”<sup>3</sup> through its “systemically important” designation process. Thus far the council has voted to designate three companies under this process: AIG, GE Capital, and Prudential Financial.<sup>4</sup>

The FSOC effort runs parallel to a similar process underway at the Financial Stability Board (FSB), made up of regulators from the Group of 20 nations, which is also analyzing how to identify investment firms and other nonbanks to be designated as global SIFIs (G-SIFIs). In January, the FSB issued a report indicating that investment funds with more than \$100 billion in assets should be examined as possible sources of systemic risk. Only 14 funds meet this threshold—and all are U.S.-registered investment companies. If FSB decides these funds should be treated as G-SIFIs, FSOC will likely use that decision to bolster the case for enhanced supervision of those investment funds in the U.S.<sup>5</sup>



Recently, the FSOC has been considering the risks posed by the asset management industry, and has scheduled a forthcoming public conference on the topic.<sup>6</sup> “The council will use the conference as a starting point to decide how to proceed with its review of the asset management industry and its activities” having “already begun preliminarily examining BlackRock Inc. and Fidelity Investments, and the review could extend to other firms or focus on particularly risky activities of industry writ large.”<sup>7</sup> The Office of Financial Research (OFR) has already released a report outlining the council’s concerns and general thinking with respect to the asset management industry “to better inform its analysis of whether – and how – to consider such firms for enhanced prudential standards and supervision.”<sup>8</sup> It is widely believed this report and ongoing discussions are prologue to SIFI designation of some subset of the largest dedicated investment management companies. In addition, media reports indicate the FSOC has already moved two asset managers to “level 2” for possible SIFI designation.<sup>9</sup>

The analytic framework of the OFR report and FSOC’s expected path merit a separate discussion that is beyond the scope of this essay. The presumption here is not that FSOC designation of SIFIs is never appropriate, or that it may not produce benefits. But as always such regulatory actions come with costs. Here we attempt to provide a rough estimate of the potential cost of a designation to investors as a means of comparing presumed benefits.

It is worth noting that asset managers substantively differ from banks and other leveraged institutions.<sup>10</sup> Asset managers “operate with little, if any, leverage,” with “risk limitation rules [that] clearly differentiate [them] from investment banks.”<sup>11</sup> Like other financial companies asset managers are part of the larger financial intermediation mechanism that facilitates the flow of capital from savers to borrowers. However unlike banks which borrow against their own capital and invest capital as a principal, asset managers such as mutual funds act as agents on behalf other investors, allowing “pooling [of] savings” which “can reduce risk by helping individuals diversify their financial wealth amongst many more assets than they could” otherwise individually.<sup>12</sup> “It is true that BlackRock, Fidelity, and other asset managers are large firms. However, every dollar of assets they manage is contributed by an investor and owned by those investors. If, for whatever reason, every investor wanted its money back,



then the money would be there — very unlike a bank. If there was a ‘run’ on an asset manager, it would not fail. It would simply return the equity investors their money,” unlike a commercial bank that many be unable to satisfy creditors’ demands in a time of distress.<sup>13</sup>

## Estimating the Cost of Designation

Determining exactly the impact of a broad (and untested) regulatory action presents a host of issues, not the least of which is the uncertainty surrounding FSOC designation: which and how many companies will be affected; what would enhanced prudential standards applied to investment funds (as opposed to banks) look like; will multiple companies be designated simultaneously or sequentially over time; does the designation apply to the funds themselves or the parent/sponsor? On this last question, the OFR study does not provide a clear answer, as it considers risks emanating from a “certain combination of fund- and firm-level activities.”<sup>14</sup> Though fund assets “are not held on the fund management company’s balance sheet,”<sup>15</sup> for practical purposes designation and compliance with capital requirements is likely to apply to the fund complex/sponsor but the impact will be expressed via the fund itself.

Add to those unanswered questions issues of predicting how investors are likely to respond to the implied costs of additional capital requirements: how might they switch between funds, or substitute other types of financial assets; will they seek higher net returns through higher risk if some costs are passed on to them?

That said, we attempt to get a back-of-the-envelope estimate of the cost of designation. Our estimate includes the following assumptions:

- An eight percent capital set-aside is applied.<sup>16</sup>
- The FSOC designation applies only to funds with over \$100 billion in assets.
- Total future returns (net of asset-weighted expense ratio) are equivalent to prior returns.<sup>17</sup>

The effect of a capital set-aside requirement resulting from FSOC designation of course depends on the individual fund’s returns, which we



assume continue based on the current 10 year total return. Currently there are 14 funds with assets greater than \$100 billion.

**TABLE 1: Eligible Funds (>\$100 billion in assets)<sup>18</sup>**

Sponsor	Fund name	Assets (billions)	Total Return 10YR	Active/ Index	Fund type
Vanguard Group	Vanguard Total Stock Mkt Index	\$318.6	7.93	Index	Long-Term Fund
PIMCO Funds	PIMCO Total Return Fd	\$236.5	5.89	Active	Long-Term Fund
Vanguard Group	Vanguard Inst Index Fd	\$165.3	7.42	Index	Long-Term Fund
Vanguard Group	Vanguard 500 Index Fund	\$163.1	7.41	Index	Long-Term Fund
SSgA Funds	SPDR S&P 500 ETF Trust	\$158.2	7.31	Index	ETF(UIT structure)
Capital Research & Management	Growth Fund of America	\$141.9	8.04	Active	Long-Term Fund
Vanguard Group	Vanguard Prime Money Market Fd	\$130.6	1.72	Active	Money Market Fund
TIAA-CREF <sup>4</sup>	CREF Stock Account	\$126.6	7.15	Active	Long-Term Fund
Capital Research & Management	EuroPacific Growth Fund	\$125.0	8.29	Active	Long-Term Fund
Vanguard Group	Vanguard Total Intl Stk Index	\$118.2	6.86	Index	Long-Term Fund
Fidelity Investments	Fidelity Cash Reserves	\$116.4	1.7	Active	Money Market Fund
J.P. Morgan Chase & Co.	JP Morgan Prime Money Mkt Fd	\$115.9	1.81	Active	Money Market Fund
Fidelity Investments	Fidelity Contra Fund	\$114.4	9.85	Active	Long-Term Fund
Vanguard Group	Vanguard Total Bond Market Index	\$110.9	4.44	Index	Long-Term Fund

**TABLE 2: Returns by Fund Category (Industry Average)**

Morningstar Category	Total Return 10YR
Foreign Large Blend	6.36
Intermediate-Term Bond	4.29
Large Blend	6.92
Large Growth	7.45

These funds represent a variety of strategies, objectives, and assets. Assets data comes from Lipper (as of February 28, 2014), returns represent the largest share class and comes from Morningstar (as of March 31, 2014).<sup>19</sup>

We assume the entire capital set-aside results in an equal reduction (in percentage terms) in return:

$$\text{The loss to fund shareholder} = (1 + r)^t - (1 + r(1 - C))^t$$

where  $r$  = fund annualized average total return  
 $t$  = years  
 $C$  = capital requirement



The intuition of applying the capital charge in this way is straightforward: the total return (averaged over the most recent 10 year period) includes all income and capital gains, reinvested as applicable, as well as the expense ratio. Because fund sponsors (asset managers) do not themselves have any assets at risk, any set-asides must come at the expense of the fund itself.<sup>20</sup> One way to think of how the fund manager satisfies the capital requirement is by it effectively issuing preferred shares. In order to attract these new (fund manager) shareholders, the shares have a claim on a portion of the fund’s returns equal to the capital requirement – they essentially “scrape” off eight percent of the return every year.

Because there is no “representative” investment fund, determining the precise impact of FSOC designation on a typical investor is difficult. Thus we’ve singled out the projected impact on a subset of funds within those considered likely to be considered for designation. The funds displayed in the following tables represent those funds which are largest and smallest, as well as those with the highest and lowest return in order to represent a variety investment objectives and popularity.<sup>21</sup> The funds’ returns with both current and SIFI rates are expressed in terms of an initial investment of \$10,000 (at t=0). At each time (t=10, 20,...,50) the amount is expressed in (nominal) dollar terms, and is simply a multiple of the initial principle. Thus the path of returns can easily be scaled (e.g., halved or doubled) to determine the effect on differing initial investment amounts.

TABLE 3: Return for Largest Fund

Vanguard Total Stock Market Index						
	0	10	20	30	40	50
ROI	\$10,000	\$21,400	\$46,000	\$98,700	\$211,700	\$454,100
ROI (SIFI)	\$10,000	\$20,200	\$40,900	\$82,700	\$162,700	\$338,100
Loss	\$0	-\$1,200	-\$5,100	-\$16,000	-\$49,000	-\$116,000

TABLE 4: Return for Second-largest Fund

PIMCO Total Return Fund						
	0	10	20	30	40	50
ROI	\$10,000	\$17,700	\$31,400	\$55,700	\$98,700	\$174,900
ROI (SIFI)	\$10,000	\$17,000	\$28,700	\$48,700	\$82,600	\$139,900
Loss	\$0	-\$700	-\$2,700	-\$7,000	-\$16,100	-\$35,000



TABLE 5: Return for Highest-return Fund

Fidelity Contra Fund						
	0	10	20	30	40	50
ROI	\$10,000	\$25,600	\$65,500	\$167,500	\$428,600	\$1,096,500
ROI (SIFI)	\$10,000	\$23,800	\$56,700	\$135,000	\$321,300	\$765,000
Loss	\$0	-\$1,800	-\$8,800	-\$32,500	-\$107,300	-\$331,500
S&P 500 ETF	\$10,000	\$20,200	\$41,000	\$83,000	\$168,100	\$340,400

TABLE 6: Return for Lowest-return/Smallest Fund

Vanguard Total Bond Market Index						
	0	10	20	30	40	50
ROI	\$10,000	\$15,400	\$23,800	\$36,800	\$56,800	\$87,800
ROI (SIFI)	\$10,000	\$14,900	\$22,300	\$33,200	\$49,600	\$74,000
Loss	\$0	-\$500	-\$1,500	-\$3,600	-\$7,200	-\$13,800

TABLE 7: Return by Fund Type (Industry Average)

Morningstar Category	0	10	20	30	40	50
Large Growth	\$10,000	\$20,500	\$42,100	\$86,300	\$177,100	\$363,300
Large Blend	\$10,000	\$19,500	\$38,100	\$74,400	\$145,300	\$283,800
Foreign Large Blend	\$10,000	\$18,500	\$34,300	\$63,600	\$117,800	\$218,200
Intermediate-Term Bond	\$10,000	\$15,200	\$23,200	\$35,300	\$53,700	\$81,700
S&P 500 ETF	\$10,000	\$20,200	\$41,000	\$83,000	\$168,100	\$340,400

To more directly display the impact, the figures that follow show how an eight percent capital charge would affect total return on a variety of different funds over a 50-year time horizon. They are expressed as a ratio: an investor begins with an initial numeraire principal of \$10,000 (in the initial year, t=0). Each point along the curve demonstrates the ratio of the return on that investment both with and without SIFI designation resulting in a capital requirement. Note that the curve labeled “Loss” reflects the forgone investment return and is not an actual loss on principal. Figure 4 also includes a market benchmark (S&P 500 ETF) for comparison purposes.<sup>22</sup>



FIGURE 1: Largest Fund (by assets) - Vanguard Total Stock Market Index

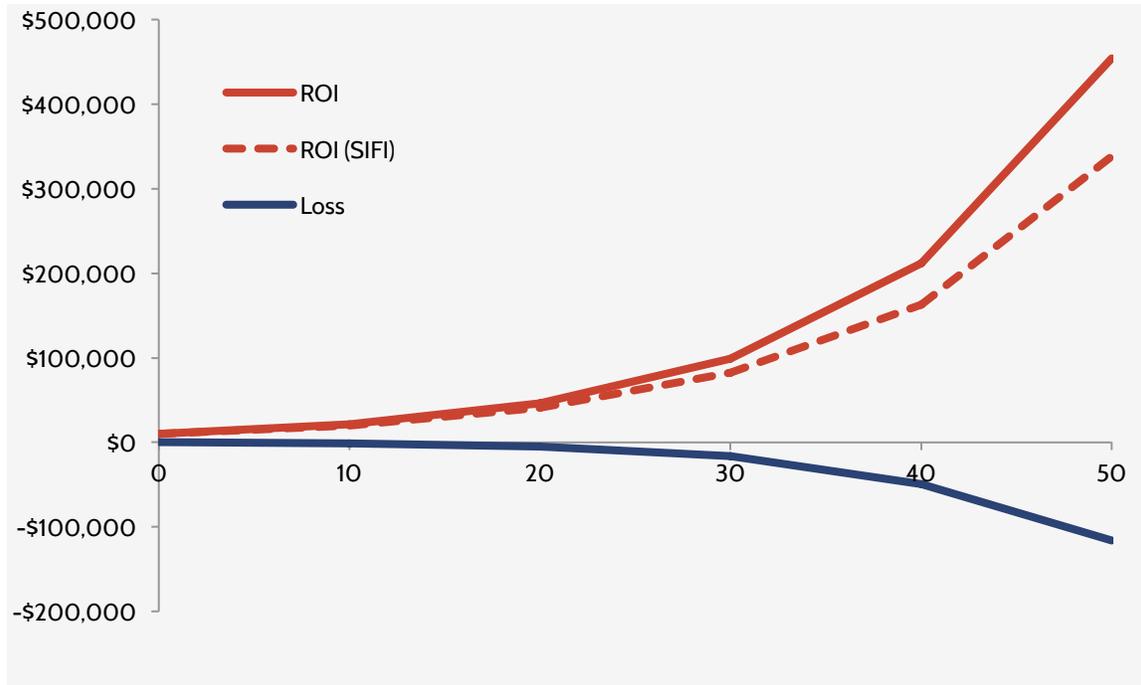


FIGURE 2: Second-largest Fund (by assets) - PIMCO Total Return Fund

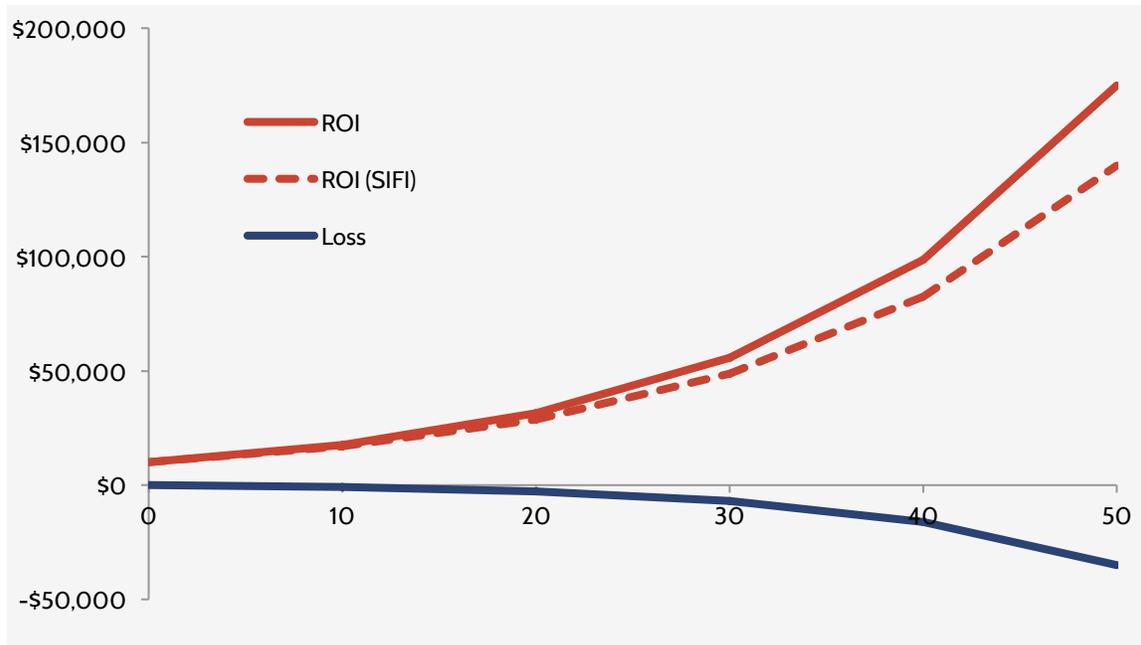




FIGURE 3: Highest Return Fund (and Benchmark) – Fidelity Contra Fund

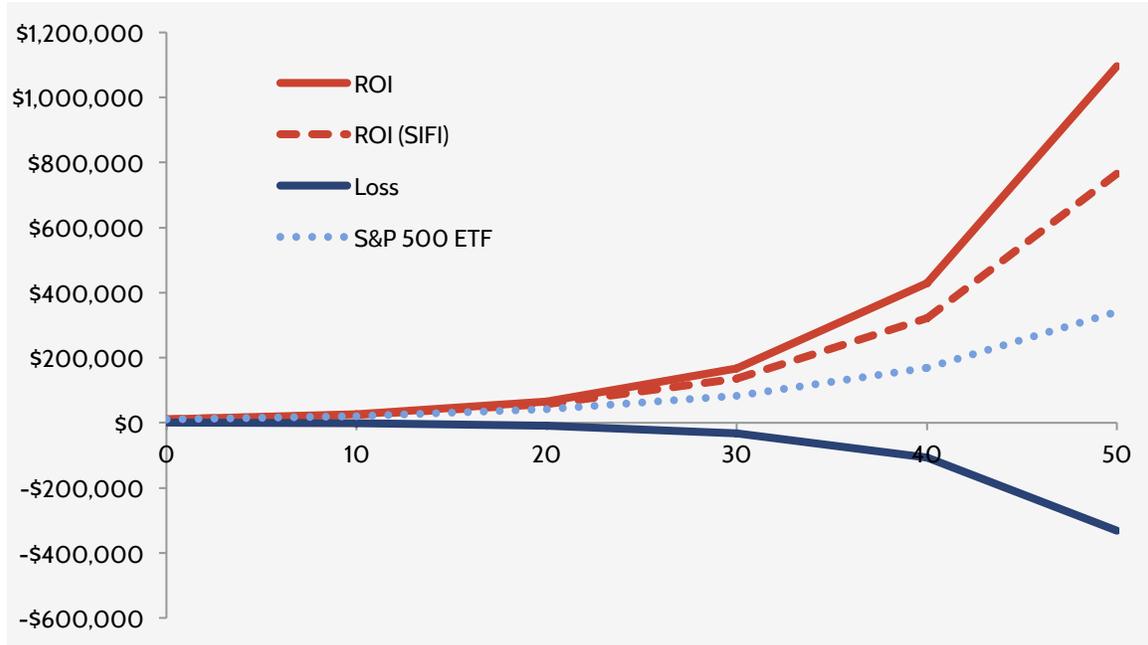


FIGURE 4: Lowest Return/Smallest Fund – Vanguard Total Bond Market Index

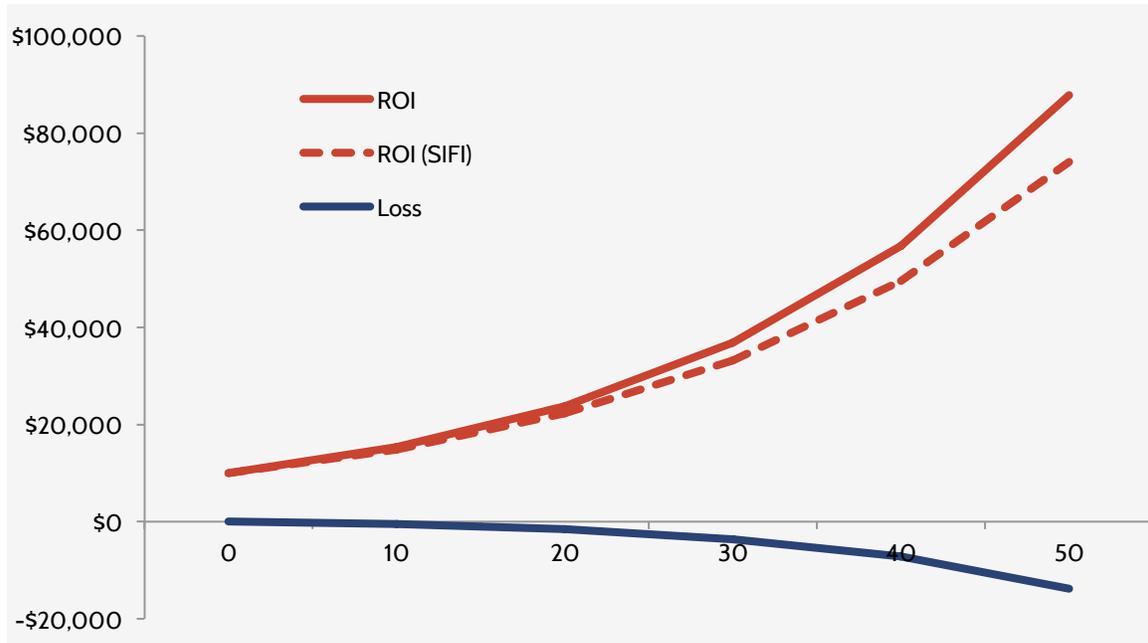




FIGURE 5: Industry Average Returns by Type (and Benchmark)

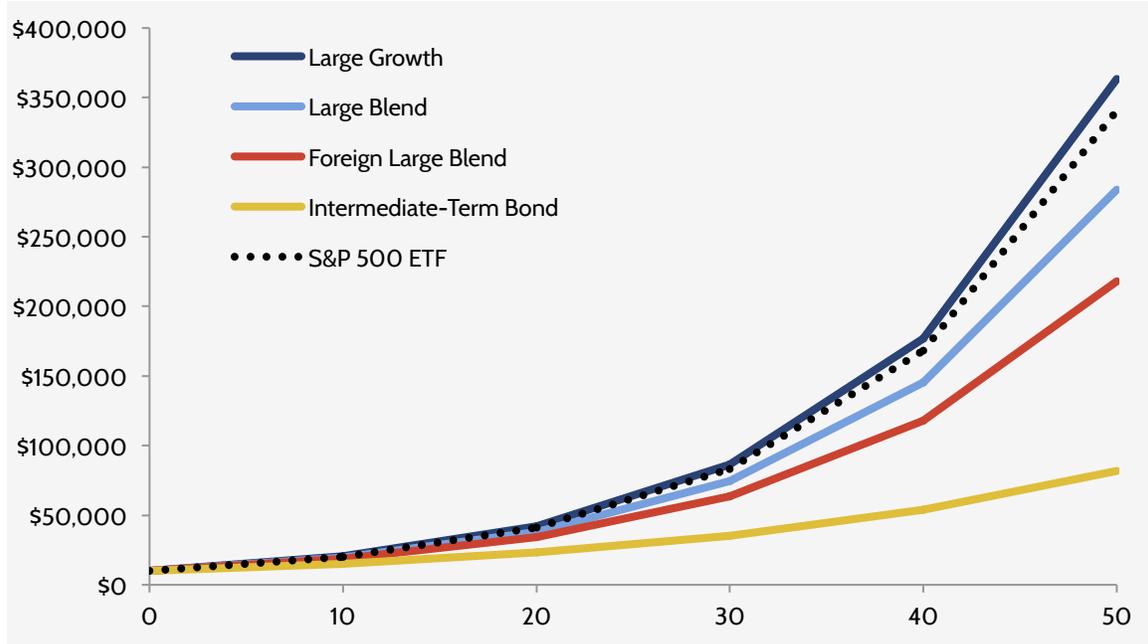
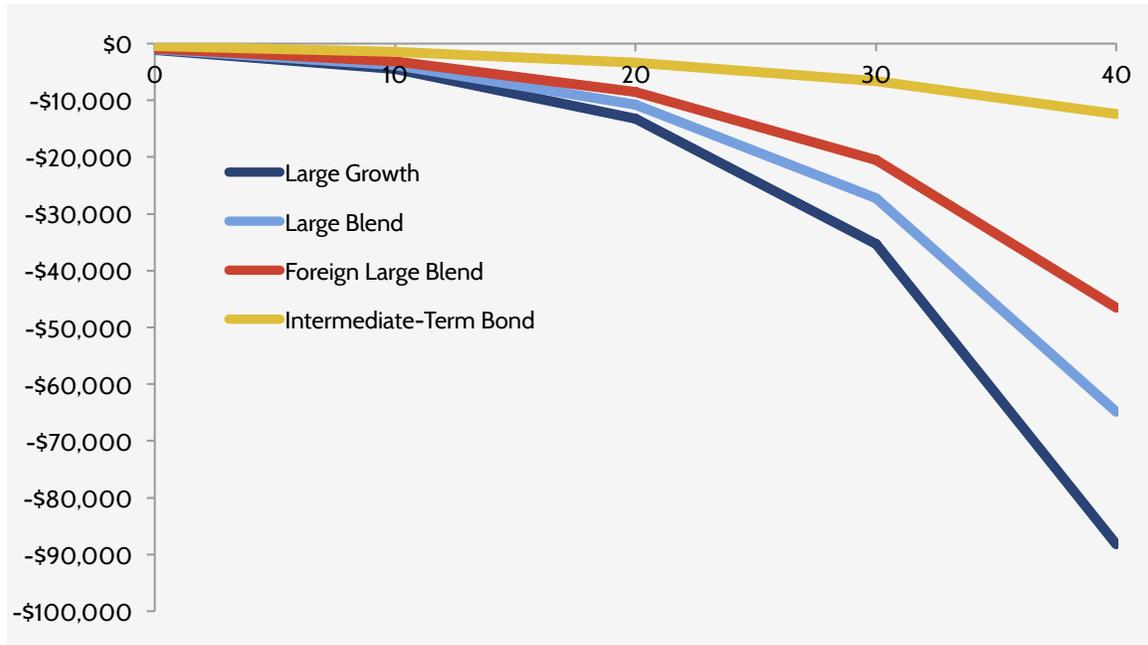


FIGURE 6: Industry Average Post-SIFI Loss





A final way to demonstrate the effect is by using representative retirement savers. Although these are in effect still shown as ratios, for clarity we've treated the initial principal as \$10,000 to better illustrate the scale of the effect. These are shown in the table below.

In the first scenario, a 25-year-old begins with \$10,000 and invests in one of three different funds for 40 years (until retirement at age 65). His return on investment is shown under both pre-SIFI and post-SIFI scenarios, along with the resulting forgone monies. In the second (third) scenario, a 50-year-old (60-year-old) has been saving in one of three funds for 25 (35) years and will continue to do so for the remaining 15 (5) years until retirement – these remaining 15 (5) years either continue as he has (with no capital charge) or under a SIFI designation regime with a reduced return.

Of course one number could never encapsulate an investor's lifetime portfolio behavior so these are meant only as broad indicators. For example, a 25-year-old, with their long investment horizon, will commonly tend toward higher risk/return equity funds. As that investor gets closer to retirement, they might seek to reallocate toward a lower risk/return equity fund. Finally, as retirement nears, the investor will likely seek a safe, low yield bond or money market fund.

**TABLE 9: Retirement Savings over 40 Year Horizon (\$10k Initial Principal)**

Present Age (time to retirement)		Fund Type		
		Largest	Highest Return	Lowest Return
25 (40)	current	\$211,684	\$428,551	\$56,843
	w/ SIFI charge	\$167,490	\$321,085	\$49,510
	loss	-\$44,194	-\$107,466	-\$7,333
50 (15)	current	\$211,684	\$428,551	\$56,843
	w/ SIFI charge	\$193,888	\$384,578	\$53,974
	loss	-\$17,796	-\$43,973	-\$2,869
60 (5)	current	\$211,684	\$428,551	\$56,843
	w/ SIFI charge	\$205,577	\$413,361	\$55,870
	loss	-\$6,106	-\$15,190	-\$973

Note: investors begin with a principal of \$10,000 at age 25 (t=0). Investors are subject to post-SIFI capital charge for whatever period they have remaining until retirement, prior to which they save under the prior regime. All funds are reinvested with no addition of capital.



These scenarios (along with the individual fund performances above) are meant to illustrate only the general scale of the effect of SIFI designation (and specifically any applied capital costs) on the return for investors of these funds. A number of factors could cause these numbers to be either larger or smaller. For instance, investors often switch between different funds to satisfy changing objectives and risk tolerance – insofar as they do so, they will only intermittently be affected by the capital requirements of any one fund. Additionally, lower risk-adjusted returns are likely to encourage fund switching into undesignated funds. So one may think of the estimates above as an upper bound on the cost to investors of FSOC designation-mandated capital requirements.

There may be other costs to SIFI designation not directly attributable to capital requirements. Specifically, the Dodd-Frank Act prescribes a number of requirements for designated non-bank SIFIs, including assessments to fund failing bank or SIFI assistance and additional “prudential supervision” by the Federal Reserve.<sup>23</sup> If this is true, it would of course increase the expected cost of SIFI designation.

To further give readers a sense of scale with respect to capital requirements that may be marginally higher or lower than the presumed eight percent capital charge, the following table looks at the cost to the same set of funds and investors in Table 9 as if they were subject to a one percent capital charge. As one can see, the impact of a nominal one percent charge can be as high as several thousand dollars. The idea here is that SIFI designation is unlikely to require such a small set aside requirement, but uncertainty surrounding such a designation may require analysts to adjust expected costs up or down depending on their preferred regime. Readers wishing to, for instance, approximate the effect of a nine (seven) percent requirement could do so by adding (subtracting) the results in Table 9 with the corresponding number in Table 10.<sup>24</sup>



TABLE 10: Retirement Savings over 40 Year Horizon (\$10k Initial Principal) – Alternate

Present Age (time to retirement)		Fund Type		
		Largest	Highest Return	Lowest Return
25 (40)	current	\$211,684	\$428,551	\$56,843
	w/ 1% charge	\$205,551	\$413,446	\$55,884
	loss	-\$6,133	-\$15,105	-\$959
50 (15)	current	\$211,684	\$428,551	\$56,843
	w/ 1% charge	\$209,363	\$422,823	\$56,481
	loss	-\$2,321	-\$5,728	-\$361
60 (5)	current	\$211,684	\$428,551	\$56,843
	w/ 1% charge	\$210,907	\$426,633	\$56,722
	loss	-\$777	-\$1,918	-\$121

## Conclusion

Whether certain asset managers or the funds they manage should be considered a threat to financial stability is the question now facing the Financial Stability Oversight Council. A second but related question is how regulators should address institutions that indeed pose systemic risks. Discussion of these questions is beyond the scope of this piece but is happening right now in many quarters throughout both U.S. and international policy forums.<sup>25</sup> On at least one thing there appears to be somewhat of a consensus: a full accounting and consideration of the issue before proceeding.<sup>26</sup>

This first-order approximation is meant to give a sense of the scale of the effect of FSOC designation on those who invest in some of the largest investment funds. Of course the actual effect depends on both the exact regulatory regime imposed on designated funds, as well as the numerous responses of investors and the fund managers themselves. So although the exact magnitudes cannot be determined at this time, it's clear that if the enhanced prudential supervision regime looks something akin to what is being discussed today, the impact on investors will be significant—especially for young investors with long investment time horizons.

<sup>1</sup> Dodd-Frank, Section 112.

<sup>2</sup> Or no company at all depending on how one reads the statute



<sup>3</sup> *Supra*, note 1, at subsection (h).

<sup>4</sup> “Designations,” U.S. Department of Treasury, Financial Stability Oversight Council, <http://www.treasury.gov/initiatives/fsoc/designations/Pages/default.aspx#nonbank>.

<sup>5</sup> Ben Moshinsky, “Funds With \$100 Billion May Be Too Big to Fail, FSB Says,” *Bloomberg*, January 9, 2014, <http://www.bloomberg.com/news/2014-01-08/funds-with-100-billion-may-be-too-big-to-fail-fsb-says.html>.

<sup>6</sup> “Financial Stability Oversight Council (FSOC) to Host Public Asset Management Conference,” Financial Stability Oversight Council, press release, March 28, 2014, <http://www.treasury.gov/press-center/press-releases/Pages/jl2338.aspx>.

<sup>7</sup> Ryan Tracy, “Lineup Set For Public Discussion of Asset Management Risk,” Moneybeat, *The Wall Street Journal*, May 13, 2014, <http://blogs.wsj.com/moneybeat/2014/05/13/lineup-set-for-public-discussion-of-asset-management-risk/>. For a more detailed description of the process, see Gregory Rowland, “Designation of Asset Managers and Funds As Systemically Important Non-Bank Financial Institutions: Process and Industry Implications: Part 2 of 2,” *The Investment Lawyer*, Davis Polk & Wardell, Vol. 20, No. 4, April 2013.

<sup>8</sup> “Asset Management and Financial Stability,” Office of Financial Research, report, September 2013, [http://www.treasury.gov/initiatives/ofr/research/Documents/OFR\\_AMFS\\_FINAL.pdf](http://www.treasury.gov/initiatives/ofr/research/Documents/OFR_AMFS_FINAL.pdf).

<sup>9</sup> Ian Katz and Jesse Hamilton, “BlackRock, Fidelity Face Initial Risk Study by Regulators,” *Bloomberg*, November 6, 2013, <http://www.bloomberg.com/news/2013-11-05/blackrock-fidelity-face-initial-risk-study-by-u-s-regulators.html>.

<sup>10</sup> See for example, Norbert Michel, “Financial Stability Oversight Council,” Issue Brief #4215, Heritage Foundation, <http://www.heritage.org/research/reports/2014/05/financial-stability-oversight-council-and-asset-management-firms>; Emily Stephenson and Sarah Lynch, “U.S. senators slam study on systemic risks posed by asset managers,” *Reuters*, January 24, 2014, <http://www.reuters.com/article/2014/01/24/financial-regulation-asset-idUSL2N0KY19A20140124>; Mark Schoeff Jr., “SEC commissioners push back against systemic designation for mutual funds,” *InvestmentNews*, April 3, 2014, <http://www.investmentnews.com/article/20140403/FREE/140409958>; Peter Wallison, “Unrisky business: Asset management cannot create systemic risk,” *Financial Services Outlook*, American Enterprise Institute, January 2014, [http://www.aei.org/files/2014/01/13/-unrisky-business-asset-management-cannot-create-systemic-risk\\_125738458823.pdf](http://www.aei.org/files/2014/01/13/-unrisky-business-asset-management-cannot-create-systemic-risk_125738458823.pdf).

<sup>11</sup> Bernard Delbecq, “Key functions of asset management,” *VoxEU*, March 3, 2012, <http://www.voxeu.org/article/key-functions-asset-management>.

<sup>12</sup> *Ibid.*

<sup>13</sup> Douglas Holtz-Eakin, “The Daily Dish,” American Action Forum, May 9, 2014, <http://americanactionforum.org/daily-dish/may-9th-edition>.

<sup>14</sup> “Asset Management and Financial Stability” (*supra*, note 8), as quoted in PwC, “Nonbank SIFIs: Up next, asset managers,” *Regulatory Brief*, October 2013, [http://www.pwc.com/en\\_US/us/financial-services/regulatory-services/publications/assets/fs-regulatory-brief-nonbank-sifi-asset-manager.pdf](http://www.pwc.com/en_US/us/financial-services/regulatory-services/publications/assets/fs-regulatory-brief-nonbank-sifi-asset-manager.pdf).

<sup>15</sup> “Are asset managers a source of systemic risk?” Buttonwood’s notebook, *The Economist*, April 4, 2014, <http://www.economist.com/blogs/buttonwood/2014/04/financial-sector>.

<sup>16</sup> We do know that two provisions of Dodd-Frank say that SIFIs must meet capital requirements (Section 165(b)(1)(a)(i) and Section 171(b)). And while one of those allows the Fed discretion to tailor capital standards to non-bank SIFIs, senior Fed officials have said that the other – known as the “Collins Amendment” – does not. As a result, a fund or manager could be required to hold at least eight percent capital – the minimum capital requirement for banks. See 12 C.F.R. 217.10(a)(3) – capital adequacy rule for bank holding companies.



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<sup>17</sup> Put another way, funds are assumed to only change asset composition in such a way that maintains equivalent returns net expenses.

<sup>18</sup> For the purposes of this analysis we omit money market mutual funds which we consider to be subject to a sufficiently different regulatory regime. This is supported by the OFR report.

<sup>19</sup> TIAA-CREF data comes directly from their website and is current as of the same dates as the other data. 10 Year Total Return reflects an annualized average and does account for the respective expense ratio, but not for other fees and charges.

<sup>20</sup> Here we assume the capital set-aside requirement of FSOC acts does not act as a loss absorption or liquidity buffer. That is, the requirement does not reallocate eight percent of the fund's assets to cash or cash-like equivalents earning an effectively zero return. Moreover, many funds already hold significant cash assets: to wit, "the average equity mutual fund held 9.7 percent in cash." See Norm Alster, "The Cash Cushion, Making a Comeback in Mutual Funds," *The New York Times*, October 5, 2013, <http://www.nytimes.com/2013/10/06/business/mutfund/the-cash-cushion-making-a-comeback-in-mutual-funds.html>.

<sup>21</sup> Because all data herein come from publicly available sources, it is a fairly simple exercise to extend the analysis to other funds. For brevity, only a few are included here.

<sup>22</sup> Incidentally, the benchmark is nearly coincident to the "ROI (SIFI)" curve in Figure 1, but is omitted for clarity.

<sup>23</sup> Paul Schott Stevens, "Don't Put Retirement Savers on the Hook for Bailouts," Commentary, *Roll Call*, April 17, 2014, [http://www.rollcall.com/news/dont\\_put\\_retirement\\_savers\\_on\\_the\\_hook\\_for\\_bailouts\\_commentary-232186-1.html](http://www.rollcall.com/news/dont_put_retirement_savers_on_the_hook_for_bailouts_commentary-232186-1.html).

<sup>24</sup> Strictly speaking this additive method is not the most accurate way to create such estimates, but is a fairly simple way to approximate the result.

<sup>25</sup> See for example, Andrew Haldane, "The age of asset management?" speech at the London Business School, April 4, 2014, <http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech723.pdf>; Ian Katz and Jesse Hamilton, "BlackRock, Fidelity Face Initial Risk Study by Regulators," *Bloomberg*, November 6, 2013, <http://www.bloomberg.com/news/2013-11-05/blackrock-fidelity-face-initial-risk-study-by-u-s-regulators.html>; Emily Stephenson and Sarah Lynch, "U.S. risk council warns about asset managers, mortgage servicers," *Reuters*, May 7, 2014, <http://www.reuters.com/article/2014/05/07/financial-regulations-risks-idUSL2N0NT21320140507>.

<sup>26</sup> Ryan Tracy, "Treasury Arm Gets Earful From Asset Managers," *The Wall Street Journal*, November 17, 2013, <http://online.wsj.com/news/articles/SB10001424052702303755504579204111242005806>; James Hamilton, "In Letter to Treasury, Senator Crapo Says OFR Asset Management Study Flawed due to no SEC Input," blog post, *Jim Hamilton's World of Securities Regulation*, February 4, 2014, <http://jimhamiltonblog.blogspot.com/2014/02/in-letter-to-treasury-senator-crapo.html>; Zachary Warmbrodt, "Warner writes to Lew on OFR, FSOC," *POLITICO Pro Whiteboard*, May 9, 2014; Sarah Lynch, "House Republicans demand documents on systemic risk tags," *Reuters*, May 9, 2014, <http://www.reuters.com/article/2014/05/09/us-financial-regulations-congress-idUSBREA480SV20140509>.