

The asset management industry in the United States

Gerald Epstein



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Gerald Epstein



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Abstract

Asset Management is an agency activity in which financial assets are managed on behalf of end investors, institutional and retail. The industry that manages these assets has gotten very large, grown extremely rapidly, and is expected to keep growing apace. Three main factors are driving this rapid growth in the asset management industry: (i) the global pool of savers has become larger, older and richer; (ii) the sharp rise in the ratio of global wealth to income; and (iii) the cutback in the adequacy of socialized/institutionalized means of saving such as social security and defined benefit pensions for which private asset management has become a substitute.

The rapid and expected continued growth of the Asset Management Industry has been accompanied by concerns about the impacts of the industry on savings security and over all macroeconomic stability. These include concerns about, concentration and interconnectedness, illiquidity, and pro-cyclicality. These concerns are relevant to the entire industry, but they are especially relevant to the US financial asset management industry because the US industry is the largest and, arguably, the most innovative in the world.

This paper describes the dimensions and activities of the asset management industry in the United States locating the industry in the global context. It also discusses the evolution of asset management strategies utilized by the industry, setting up the discussion of the potential risks associated with this set of strategies and identifies the potential risks to the industry and explore the overall risks they raise for the global financial system. Finally, it provides regulatory responses to deal with these potential problems and briefly summarizes some suggested modifications of regulations to address these shortcomings.

Introduction

Asset management is an agency activity in which financial assets are managed on behalf of end investors, institutional and retail (Haldane, 2014, p. 1). The industry that manages these assets has gotten so large, grown so rapidly, and is expected to keep growing apace, that Andrew Haldane, executive director of financial stability at the Bank of England suggested that we are entering “The Age of Asset Management” (Haldane, 2014). A cursory glance at some data shows that Haldane has a good point. Total global Assets Under Management (AUM) have grown from 37.3 trillion dollars (US) in 2004 to almost \$85 trillion in 2016 (Price Waterhouse Coopers, 2019, p. 7). Price Waterhouse Cooper forecasts that global AUM will almost double in size by 2025, growing to \$145 trillion (PWC 2019, p. 7).

The United States, along with the United Kingdom, is a key center in both the source of assets under management, and, even more importantly, as a dominant force in the asset management industry itself. AUM have risen almost fivefold relative to GDP since 1946 from around 50% of GDP to 240% by 2014, with similar trends in the UK (Haldane, 2014, p. 1). In the years to come, experts forecast that the most growth in sources of assets will be Asia (Price Waterhouse Cooper 2019). Of course, the main existing asset managers, many of them housed in the United States, will do their utmost to retain as much of that business as possible.

Haldane usefully identifies the main factors driving this rapid growth in the asset management industry: First, the global pool of savers has become larger, older and richer. Second, as identified by Piketty and co-authors, there has been a sharp rise in the ratio of global wealth to income as asset prices have boomed following financial liberalization and reductions in global taxes. Finally, there has been a cutback in the adequacy of socialized/institutionalized means of saving such as social security and defined benefit pensions for which private asset management has become a substitute (Haldane 2014).

The rapid and expected continued growth of the Asset Management Industry has been accompanied by concerns about the impacts of the industry on savings security and over all macroeconomic stability (see for example, IMF 2015, Office of Financial Research (OFR) 2015 and Financial Stability Board 2017). These include concerns about, concentration and interconnectedness, illiquidity, and pro-cyclicality. These concerns are relevant to the entire industry, but they are especially

relevant to the US financial asset management industry because the US industry is the largest and, arguably, the most innovative in the world. And as the Great Financial Crisis (GFC) of 2007-2008 illustrated, some financial innovations can lead to dangerous financial instability. It is worthwhile assessing the degree to which this is true in the case of Asset Management.

In this paper, I will present a picture of the US Asset Management Industry which leads into a discussion of the potential problems for financial instability and some regulatory steps that could be taken to manage these risks.

The rest of the paper is organized as follows:

In the next section I describe the dimensions and activities of the asset management industry in the United States and locate the industry in the global context. In section III, I summarize the evolution of the industry in the US. Section IV discusses the evolution of asset management strategies utilized by the industry, setting up the discussion of the potential risks associated with this set of strategies. In section V I discuss the potential risks to the industry and explore the overall risks they raise for the global financial system. Section VII describes regulatory responses to deal with these potential problems and briefly summarizes some suggested modifications of regulations to address these shortcomings. In section VIII, I summarize the main findings of the report.

I. Dimensions and activities of the asset management industry in the United States in an international context

As mentioned in the introduction, globally, assets under management (AUM) have grown significantly over recent decades.

The total discretionary Assets Under Management of the top 500 managers, as ranked by Willis Towers Watson (2018), equaled \$93.8 trillion at the end of 2017, up 15.6% from the year before (Willis Towers Watson (2018, p. 3). Of these \$93.8 trillion, AUM in North America was \$54.5 trillion, or 58.1%. US Asset managers occupied the top 3 slots of largest managers, with BlackRock keeping its top billing since 2009, and with Vanguard and State Street rounding out the top 3 positions for the last 4 years.

Even though the US (and North America generally) dominate the industry, there has been significant growth in AUM in other parts of the world, especially when measured in local currency values that are not affected by the appreciation of the US dollar (see table 1 and figure 1). Table 1 shows that recent growth has been substantial in many parts of the globe.

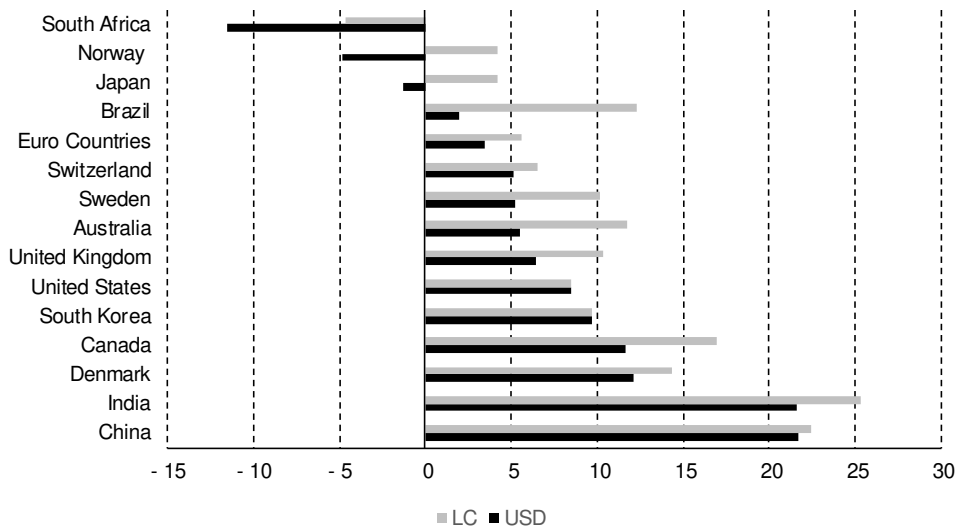
Table 1
Assets under management, 2007-2017
(US\$ Trillions)

	2007	2016	2017
North America	24.1	33	37.4
Europe	14.3	20.8	22.2
Japan and Australia	4.3	5.7	6.2
Latin America	0.6	1.5	1.8
Middle East and Africa	0.9	1.3	1.4
Asia	1.5	3.1	3.5
China (mainland)	0.9	3.4	4.2

Source: Boston Consulting Group, 2018.

As figure 2 shows, there has been even more rapid recent growth when measured in local currency over the last five years in China, India, Denmark, Brazil and Canada.

Figure 1
Growth of AUM, in dollars and local currency



Source: Willis Towers Watson, 2018, p. 12.

The US is the largest client base for managers, with managers receiving 59.3% of their assets from the US. Europe, by contrast, contributed 15.1% of the total in 2017. The UK itself contributed almost as much as Europe as a hole at 14.7%. All told, these three regions contributed almost 90% of total assets under management to the top 500 managers (Willis Towers Watson, 2018).

US based asset managers dominate the asset management industry. In 2017, 12 out of the top 20 managers were from the US accounting for about 70% of the top 20 assets. In addition, concentration

in asset management among the top 20 has increased over the recent past. Looking more broadly, it is clear that US companies dominate the top 50 Asset Managers as well (table 2).

Table 2
Asset management industries, ranking 2017, firms 1 to 50

Rank	Manager	Market	Total Assets
1	BlackRock	United States	6 288 195
2	Vanguard Group	United States	4 940 350
3	State Stree Global	United States	2 781 693
4	Fidelity Investments	United States	2 448 807
5	Allianz Group	Germany	2 358 037
6	J.P. Morgan Chase	United States	2 034 000
7	Bank of New York Mellon	United States	1 892 941
8	Capital Group	United States	1 778 134
9	AXA Group	France	1 731 232
10	AMUNDI	France	1 709 475
11	Goldman Sachs Group	United States	1 494 000
12	Deutsche Bank	Germany	1 453 321
13	BNP PARIBAS	France	1 432 968
14	Prudential Financial	United States	1 393 628
15	Legal and general Group	United Kingdom	1 333 162
16	UBS	Switzerland	1 254 401
17	Northern Trust Asset Management	United States	1 161 000
18	Wellington Management	United States	1 080 307
19	Wells Fargo	United States	1 040 900
20	Natixis Global Asset Management	France	997 849
21	T. Rowe Price	United States	991 100
22	Aegon Group	Netherlands	982 916
23	Nuween	United States	970 459
24	HSBC Holding	United Kingdom	943 000
25	Invesco	United States	937 598
26	Morgan Stanley	United States	935 501
27	M and G Prundetial	United Kingdom	907 457
28	Affiliated Managers Group	United States	836 300
29	Sumitomo Mitsui Trust Holdings	Japan	791 467
30	Standard Life Aberdeen	United Kingdom	780 551
31	Sun Life Financial	Canada	778 161
32	Mass Mutual	United States	771 000
33	Legg Mason	United States	767 241
34	Manulife Financial Corporation	Canada	756 477
35	Franklin Templeton	United States	753 766
36	Ameriprise Financial	United States	714 300
37	Nippon Life Insurance	Japan	701 396
38	Principal Financial	United States	668 600
39	Mitsubishi UFJ Financial Group	Japan	663 782
40	Metlife	United States	663 451
41	Schroder Investment Management	United Kingdom	589 470
42	Dimensional Fund Advisors	United States	577 096
43	Great-West Lifeco	Canada	557 839
44	Generali Group	Italy	555 823
45	New York Life Investment	United States	542 890
46	Asset Management One	Japan	520 400
47	Royal Bank of Canada	Canada	515 871
48	Crédit Suisse	Switzerland	464 156
49	Blackrock Group	United States	434 100
50	Eaton value	United States	432 200

Source: Willis Towers Watson, 2018.

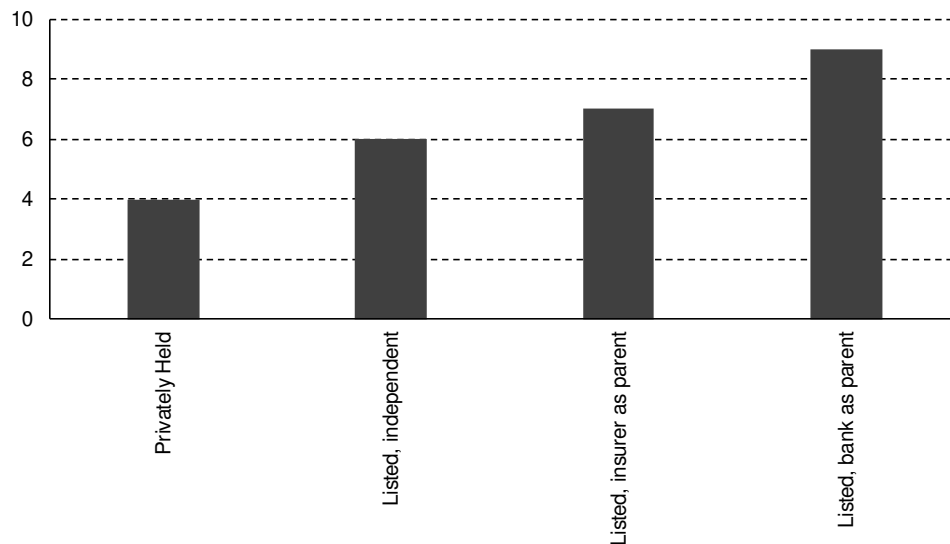
As seen in table 2, of the top 50 managers, US companies occupied 28 of the slots. The rest of the slots were occupied by British (5), Canadian (3), European (10) and Japanese (4) managers.

Large banks are active in asset management, though, quantitatively speaking, they do not appear to dominate it. Of the top 10, 3 are banks and the rest are independent managers (table 2). Of the top 20, 8 are banks (but see below where we discuss ownership connections between banks and asset management companies).

The direct role of banks vs. independent managers has fallen over the last decade with banks representing 11 spots out of the top 20 in 2008 and only 8 in 2017 while independent managers increased from 6 to 10 over this period (insurance companies have held down 3 of the top spots throughout). In 2017, independent managers managed 60.4% of the top 20 assets, with banks managing 26.1% of the top 20 assets. The average independent manager in the top 20 had \$2.4 trillion under management and the average bank in the top 20 had \$1.5 trillion.

Still, US banks are among the fastest growing of asset managers and US managers generally are among the fastest growing managers over the period 2012-2017. During this period, three US banks made significant gains in the rankings: Wells Fargo (31st to 19th), Morgan Stanley (35th to 26th) and Goldman Sachs (16th to 11th). Indeed, figure 2 below shows that among the top 25 Asset Managers globally, more than a third are listed as being owned by banks. And as table 3 indicates (in the case of the US) cross ownership between banks and independent asset managers is quite substantial. The significant interconnections between banks and asset management potentially raises financial stability concerns (see our discussion below).

Figure 2
Ownership structure of the 25 largest global asset management companies



Source: IMF, 2015.

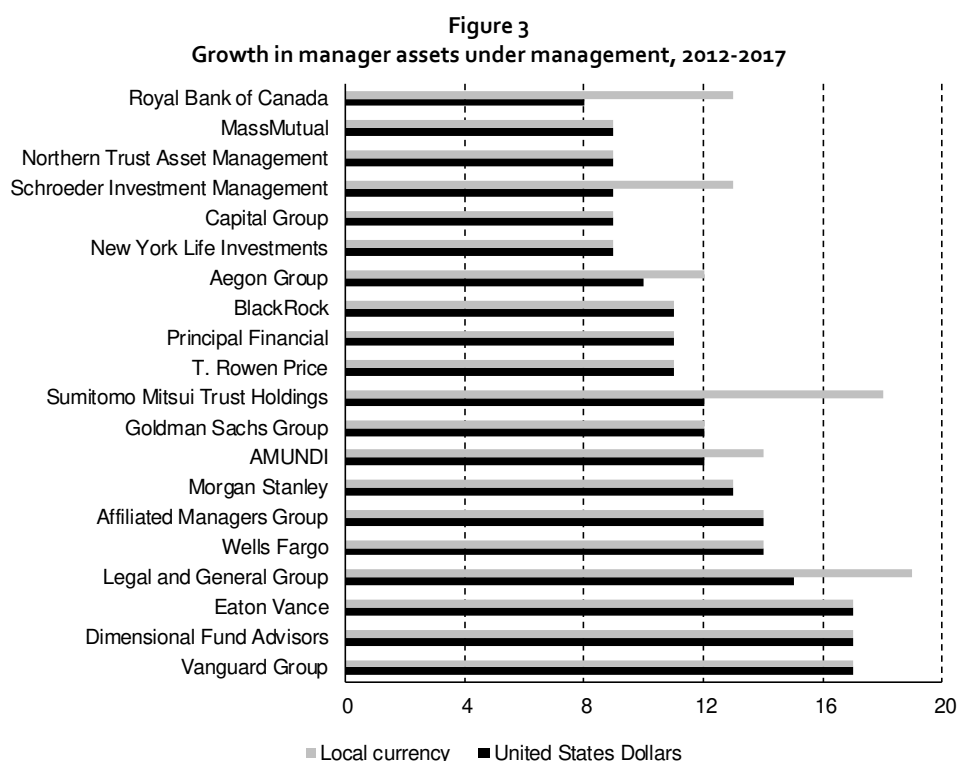
Note: Parent banks include Amundi, Bank of New York Mellon, BNP Paribas, Deutsche bank, Goldman Sachs, HSBC, J.P. Morgan Chase, Natixis Global Asset Management, and UBS. Parent insurance companies include Allianz (for PIMCO), Axa, Metlife, Generali, Legal and General Group, and Prudential.

Table 3
Ownership of large United States banks by asset management companies
(2002 and 2013)

Top five owners of the largest six United States banks (by deposits in the second quarter of 2013, 2002; first quarter)					
JP Morgan Chase	%	Bank of America	%	Citigroup	%
BlackRock	6.4	Berkshire Hathaway	6.9	BlackRock	6.1
Vanguard	4.7	BlackRock	5.3	Vanguard	4.4
State Street	4.5	Vanguard	4.5	State Street	4.2
Fidelity	2.7	State Street	4.3	Fidelity	3.6
Wellington	2.5	Fidelity	2.1	Capital World Investors	2.4
Wells Fargo	%	United States Bank	%	PNC Bank	%
Berkshire Hathaway	8.8	BlackRock	7.4	Wellington	8.0
BlackRock	5.4	Vanguard	4.5	BlackRock	4.7
Vanguard	4.5	Fidelity	4.4	Vanguard	4.6
State Street	4.0	State Street	4.4	State Street	4.6
Fidelity	3.5	Berkshire Hathaway	4.3	Barrow Hanley	4.0
Top five owners of the largest six United States banks, 2013; second quarter					
JP Morgan Chase	%	Bank of America	%	Citigroup	%
Capital Research	6.0	AXA	4.2	State Street	4.4
Barcalys	3.9	Barclays	4.0	Fidelity	3.9
AXA	3.7	Capital Research	3.6	AXA	3.7
States Street	2.5	Fidelity	3.2	Barclays	3.7
Fidelity	2.3	State Street	2.4	Wellington	1.8
Wells Fargo	%	United States Bank	%	PNC Bank	%
Barcalys	3.4	Putnam Investment	7.4	Fidelity	6.8
Fidelity	3.2	Barclays	3.7	Barclays	3.9
Berkshire Hathaway	3.1	United States Bank	3.0	Barrod Hanley	3.7
Citigroup	2.9	JP Morgan Chase	2.8	Wellington	2.9
State Street	2.3	State Street	2.5	State Street	2.3

Source: Azar, Schmalz and Tecu, 2018.

Concentration in the asset management industry appears to be increasing. This is partly because, in the asset management industry, size begets growth: the largest asset managers appear to attract a higher share of funds over time. Figure 4 shows that the largest funds have achieved sizeable growth in AUM over the 2012-2017.



Source: Aznar, Schmalz and tecu, 2018.

Note: Fastest growing firms among the top 50 by compounded annual growth rate.

This phenomenon tends to reinforce concentration in the asset management industry. Haldane reports the size and concentration of the asset management industry compared with the global banking industry (table 5). In 2012, the top 10 banks controlled 22.4% of banking assets, while the top 10 asset managers controlled 28.3% of the assets under management (AUM).

Table 4
Largest Banks (by assets) and asset managers (by assets under management), end 2012

Bank	Country	Assets (US\$ billion dollars)	Percent of the total	Manager	Country	Assets (US\$ billion dollars)	Percent of the total
ICBC	China	2 789	2.5	BlackRock	United States	3 792	5.6
Mitsubishi UFJ Financial	Japan	2 709	2.4	Allianz	Germany	2 448	3.6
HSBC Holdings	United Kingdom	2 693	2.4	Vanguard	United States	2 215	3.3
Deutsche bank	Germany	2 655	2.4	State Street	United States	2 086	3.1
Credit Agricole	France	2 649	2.4	Fidelity	United States	1 888	2.8
BNP Paribas	France	2 516	2.2	AXA	France	1 475	2.2
JP Morgan Chase and Company	United States	2 359	2.1	JP Morgan Chase	United States	1 431	2.1
Barclays	United kingdom	2 351	2.1	Bank of New York Mellon	United States	1 385	2.0
China Construction Bank	China	2 221	2.0	BNP Paribas	France	1 303	1.9
Bank of America	United States	2 212	2.0	Deutsche Bank	Germany	1 247	1.8
TOP 10		25 154	22.4	TOP 10		19 270	28.3

Source: Haldane (2014).

II. A longer run perspective of the growth of asset management companies in the United States

As shown in the previous section, the large US asset managers dominate the global industry in terms of size. But the growth of asset management in the US is a relatively new phenomenon. Thus, the large footprint of US asset management companies in the global arena reflects a rapid growth and increasing importance of asset management in the US economy itself. A few facts illustrate this point. The value added in asset management in the US grew from \$82.8 billion in 1997 to \$341.9 billion in 2007 which represents a jump from less than 1% of GDP in 1997 to almost 2.5% in 2007, just before the global financial crisis (GFC), (Greenwood and Scharfstein, 2013, table 1, p. 8).¹

From a longer-term perspective, revenue from asset management activities, and especially the fees accruing to the asset management industry, grew substantially over the 1980-2007 period. In fact, over this period, total asset management fees grew by 2.2 percentage points of GDP, which is over one-third of the growth in financial sector output (Greenwood and Scharfstein, 2013, p. 11). At the same time, management fees per dollar of assets managed has not increased over the period. What explains the growth in fees as a share of the US economy? According to analysis by Greenwood and Scharfstein, the two major factors are: the growth in total amount of financial assets in the US economy during this period and the growth in the share of assets managed by professional managers (Greenwood and Scharfstein, 2013, p. 11). Total assets grew over this period from 107% of GDP in 1980 to 323% of GDP between 1980 and 2007 (ibid). The share of these assets managed by professionals also increased. According to Greenwood and Scharfstein, for example, only 25 % of household equities were professionally managed in 1980, whereas 53% were professionally managed in 2007; over the same period, the share of US common stocks that were held by institutions grew from 32% in 1980 to 68% in 2007 (Greenwood and Scharfstein, 2013, p. 12).

¹ See Epstein and Montecino 2016 and Baker, Epstein and Montecino 2018 for estimates of these costs in the case of the United States and the United Kingdom.

Greenwood and Scharfstein note that: “The direct cost of professional management at 1.3% is high. The present value of this fee paid over 30 years amounts to approximately one-third of the assets initially invested—a large price to pay a manager who does not outperform passive benchmarks” (Greenwood and Scharfstein, p. 13).

This relatively high cost of active management has contributed to a shift in the asset management industry to “passive” strategies that are lower cost. It turns out, however, that these lower cost strategies raise some potential financial stability concerns.

III. The evolution of financial management strategies

There are many types of asset management strategies utilized in the industry, and the mix of these strategies has evolved over time in response to competitive pressures, like those described in the previous section, changes in the interest rates and macroeconomic environment, as well as regulatory, financial and technological changes. This evolution is informative in its own right, but is especially important to the extent that different strategies and products have different implications for financial stability.

Table 5 shows the distribution of different strategies in the asset management world and the types of companies that engage in asset management.

Table 5
Investment vehicles and their location

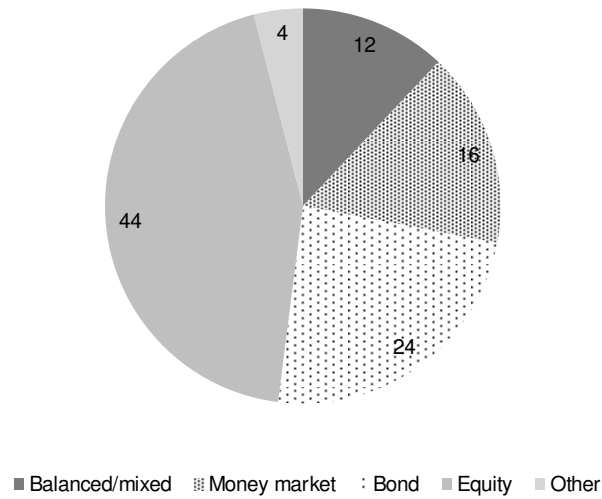
Investment Vehicles (percent of \$43 trillion dollar assets under management, end 2013)		Mutual funds by fund domicile	
Institution	Percentage of the total	Percent of US\$ 32 trillion total assets under management, 2014:02	
Hedge funds	5	Brazil	3
Private equity funds	9	China	2
Exchange traded funds	6	Other emerging markets	4
Money market funds	12	Luxembourg	10
Closed-end mutual funds	2	Ireland	5
Other alternatives	3	France	5
Open-end mutual funds	63	United Kingdom	4
Total	100	Other developed Europe	7
		Other developed	8
		Japan	3
		United States	49
		Total	100

Source: IMF, 2015.

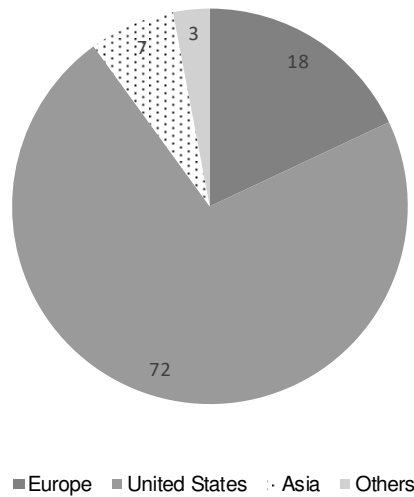
As table 5 shows, the largest category of investment vehicle is open-ended mutual funds. Figure 7 shows the breakdown of investment strategies of open-ended mutual funds. Most are in equity funds or bond funds.

Figure 4
Mutual funds by investment focus and exchange traded funds by region

A. Mutual funds by investment focus
(Percent of US\$ 30 trillion total assets under management, end-2013)



B. Exchange-traded funds by region
(Percent of US\$ 2.3 trillion total assets under management, end-2013)



Source: IMF (2015).

In recent years there has been a significant shift between so-called active managed funds and so-called passive funds, where the investments follow or are tied to some kind of market index.

Passive funds as a share of the total over the period 1995 to 2018, increased from a small percentage in 1995 to almost 40% in 2018. Exchange traded funds (ETFs) are a popular “passive” investing strategy, especially in the United States (see the second panel of figure 4).

As table 6 shows, the large US asset managers are also the top passive and ETF managers.

Table 6
Top five passive mutual fund and ETF Managers, March 2018

	Overall market share (Percentage) ^a		Passive fund. Assets unde Management (US\$ billions)
	Mar-99	Mar-18	
Vanguard	11	23	3 404
BlackRock	0	8	1 410
State Street	0	3	613
Fidelity	14	9	422
Charles Schwab	0	1	174

Source: Center for Securities Pricing. Wharton Research Data Services

^a Assets manager’s share for all (actively and passively managed) mutual funds and EFTs.

The shift from more active investment strategies to more passive ones in which asset managers are not involved in day to day decisions concerning picking investments or re-balancing portfolios, has been driven to a great extent by the lower costs associated with passive investments and the consequent increased demands for these types of investments from clients. For asset management firms, meeting such client demands is a profit seeking strategy.

But at lower profit margins, these types of investment products are not ideal for enhancing the profits of asset management companies. In addition, the low global interest rate environment has also created challenges for the bottom line of asset management companies. In response, at the same time as there has been a move towards more passive investing, firms have also designed and shifted toward other types of investment strategies with higher profit margins. As a result, what we see is a bifurcated picture: while there has been a move away from core, traditional investment strategies and products, there has been an accompanying shift toward both low cost/low margin passive investments and toward higher margin enhanced investment products. From a financial stability perspective, the latter are likely to be less liquid, less transparent, and possibly, more risky.

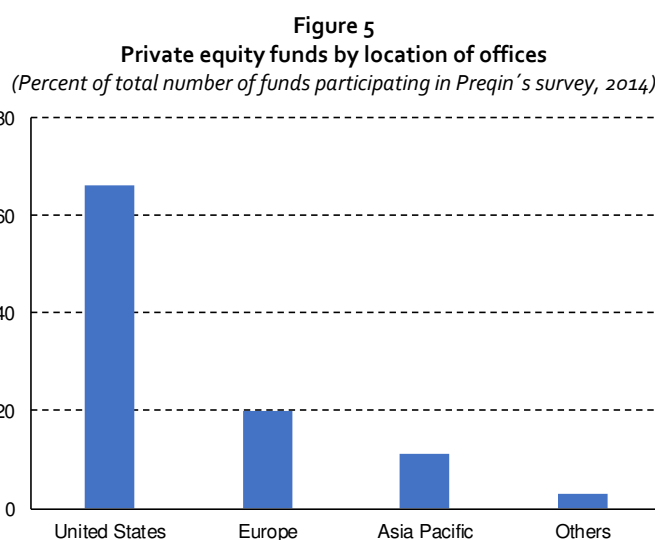
Table 7 illustrates, these points. Looking at the evolution from the perspective of assets under management, and even more so, of revenue sources, table 7 shows that “alternative investments” account for a major growth in the revenue of asset management companies, while the revenue share from passive investments has remained relatively low and stable. Given the relatively large profit margins of “alternative investments” they are expected to continue to grow relatively rapidly while “active traditional (core)” strategies are expected to continue to shrink in relative terms (see table 7 for a more specific definition of “core” and “alternative” strategies).

Table 7
Passive and alternative asset management growth, 2003-2017

Assets under management by product (US\$ trillions, percentage of the total and compounded annual growth rate)			
2003			
Product	Trillions	Percentage of total	Compounded annual growth rate
Alternatives	3	9	16
Active specialties	6	19	4
Solutions/LDI/balanced	2	6	14
Active Core	18	57	0
Passive	3	9	9
2017			
Product	Trillions	Percentage of total	Compounded annual growth rate
Alternatives	12	15	8
Active specialties	15	19	6
Solutions/LDI/balanced	11	14	10
Active Core	26	33	3
Passive	16	20	10

Source; Boston Consulting Group, 2018.

Hedge funds and private equity funds are especially dominated by the US industry (see figure 5 and table 8). Hedge funds are also domiciled in off-shore entities, such as the Cayman Islands, meaning that they are less subject to national regulation and oversight. Most of these are managed from the US (FSB, 2018).



Source: Preqin.

The relative lack of regulatory oversight of hedge fund operations might raise concerns about financial stability. And, in general, the mix of investment products and investment strategies, and institutional housing of asset management activities is of primarily of interest here in terms of their implications for financial stability.

Table 8
Hedge funds by country

(Percent of US\$ 1.4 trillion dollar assets under management covered in Hedge Fund Research, 2014)

Country of domicile	Percentage of total
Cayman Islands	35
United States	20
British Virgin Islands	10
Channel States	5
Luxembourg	5
Ireland	5
Others	20
Country of operation	Percentage of total
United States	65
United Kingdom	20
Switzerland	3
Singapore	3
Japan	3
Sweden	3
Others	3

Source: On the basis of IMF (2015).

IV. Financial stability implications of the evolution of the asset management industry

In recent years, several important public financial authorities have investigated whether asset management firms and activities pose financial stability risks to national and/or global markets and institutions. The Bank of England (Haldane, 2014), Federal Reserve (Anadu, et. al., 2018), the US Financial Services Oversight Committee (FSOC 2015), the International Monetary Fund (IMF, 2015), and the Financial Stability Board (FSB, 2017) among others have evaluated the possible emerging risks associated with practices and institutions in the Asset Management industry, and some of them have proposed a set of regulatory changes to address the more serious ones. As I will discuss in more detail in the next section, there has recently been a divergence in approaches with regard to these matters taken by regulatory authorities in the United States, under the Trump administration, and those pursued in Europe and elsewhere. This divergence on financial regulation of asset management institutions and practices might add an additional financial stability risk. This section draws significantly on these analyses.

A. Introduction to financial stability risks of the asset management industry

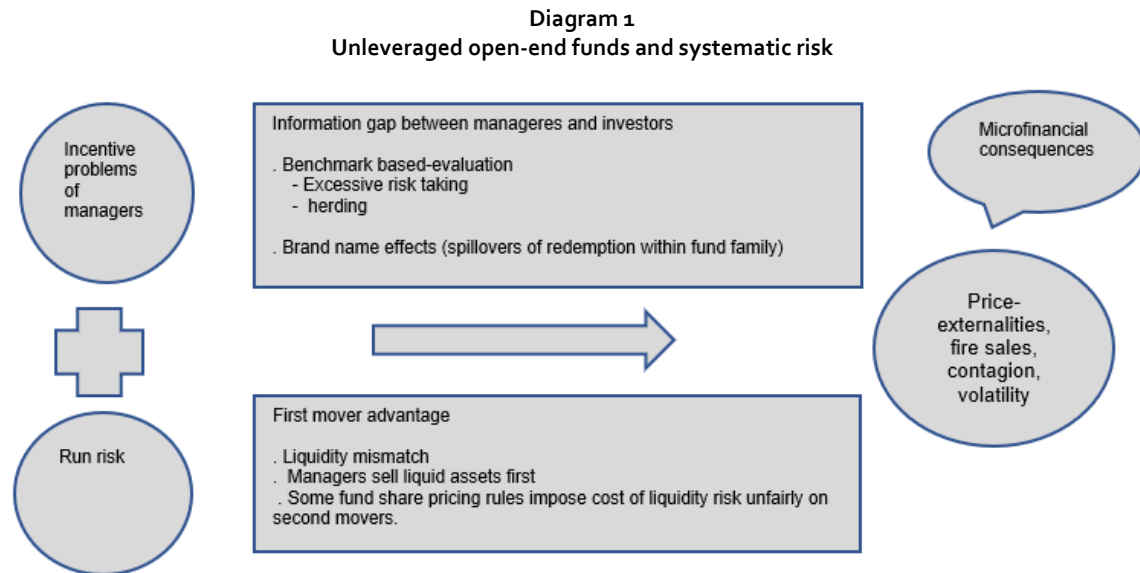
The FSB has identified four “structural vulnerabilities” associated with asset management that call for regulatory responses (FSB, 2017):

1. Liquidity mismatches between fund investments and redemption terms and conditions for open-ended funds
2. Leverage within investment funds;
3. Operational risk and challenges at asset managers in stressed conditions and
4. Securities lending activities of asset managers and funds.

The IMF (2015) emphasizes that different types of funds and different types of strategies appear to be most subject to these various risks.

A focus of the analysis are the incentives facing asset managers that might lead them to engage in activities that lead to higher risks. These include herding, first mover advantage actions leading to runs, and excessive risk taking in response to asymmetric pay-off structures for managers and clients.

Diagram 1 illustrates some of the potentially problematic incentive issues with respect to open ended mutual funds, as an example.



Source: IMF, 2015.

Asymmetric information between managers and investors can lead to excessive risk taking on the part of managers if their compensation schemes are asymmetrically structured. Similarly, compensation schemes based on beating benchmarks can lead to excessive risk taking including herding into assets that temporarily have higher than average returns.

In addition to compensation schemes, pricing structures and redemption structures of assets can lead to first mover advantages for those buying or selling assets, making such investments pro-cyclical. These kinds of compensation schemes and pricing and redemption rules can lead to macro level financial instability issues such as fire sales and contagion effects. These problems become particularly problematic if they are accompanied by 1) high leverage and 2) strong interconnectedness with other institutions and markets.

As this example illustrates, vulnerabilities of funds depend on multiple factors including the compensation schemes employed, the information available to investors and asset managers, the investment strategies of the funds, and the rules governing redemptions, among other factors. Taking these into account, I discuss here those types of funds and strategies that appear most vulnerable, according to the analyses of these institutions by the IMF and other institutions.

Table 9
Fund types: relative sizes, features and risks

Type of Fund	AUM (2013) (Trillions US \$'s)	Features	Risks
Open Ended Mutual Fund	25.0	Issues redeemable securities available on demand, invested in equities and bonds.	Liquidity Mismatch, runs
Closed-end Mutual Funds	0.5	Invests in securities that are not redeemable; enhances returns with leverage.	Solvency risks associated with excessive leverage.
Money Market Mutual Funds	4.8	Invests in short term cash assets; redeemable at constant Net Asset Value	Liquidity mismatch, runs
Exchange Traded Funds (ETFs)	2.3	Invest in an index	Herding, first mover advantage
Synthetic ETFs	0.1	Swaps and derivatives used to track an index	Leverage and opacity risk
Private Equity Funds	3.5	Takes equity positions that are not tradeable.	Leverage and operational risks
Hedge Funds	2.2	Variety of trading and investment strategies	Leverage risk; non-transparency risks.
Separate Account	22.0	Primarily private management of institutional investors like pension funds. Little is known about this segment.	??? non-transparency

Source: Adapted from IMF (2015), table 3.1 and Annex table, 3.1.1.

The liquidity mismatches described in table 9 can be further specified depending on the type of investment strategies and products. The key determinants can be described as a function of two variables: the ease with which clients can redeem assets and the degree of liquidity of the assets in which the fund is invested. For example, according to the IMF's analysis, emerging market funds and advanced economy high yield funds have the greatest liquidity mismatches among those funds about which we have sufficient information to judge. But, as table 7 reveals, there are some important segments of the market about which relatively little is known, including the "Separate Account" funds, private equity funds and hedge funds.

In addition to the factors explored in table 9, a number of analysts at these regulatory agencies have expressed concerns about the move toward more passive investments associated with ETFs and other investments. Analysis by the Federal Reserve have identified some of the potential issues associated with passive investments (table 10 below).

The analysis in table 10 includes several risks that we have not discussed yet. These are increases in industry concentration, and strategies that increase asset price volatility. Table 10 suggests that passive investment strategies might increase industry concentration risk and volatility amplification risk.

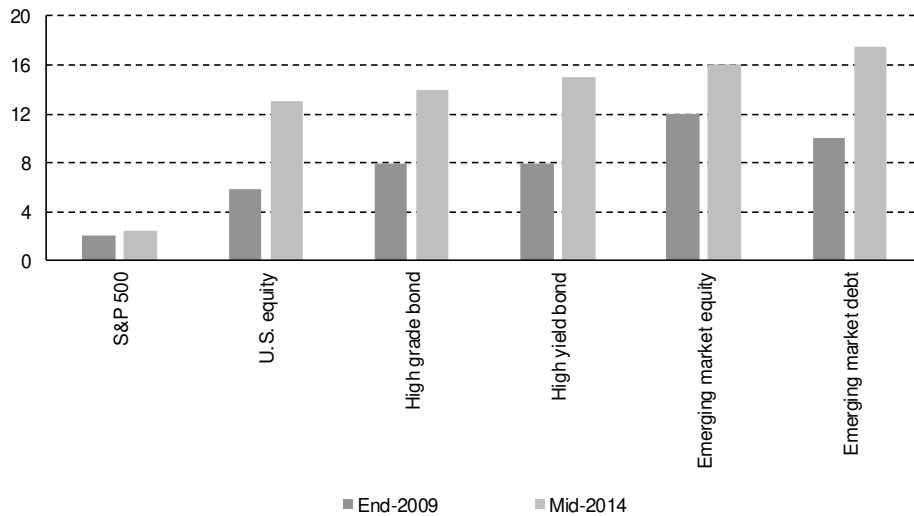
Table 10
Passive v/s active strategies and financial stability

Risk type	Description	Impact of active-to-passive shift on FS risks
Liquidity transformation and redemption	Funds redeem daily in cash regardless of portfolio liquidity; investor flows respond procyclically to performance	Reduces
Investing strategies that amplify volatility	Leveraged and inverse exchange-traded products require high-frequency momentum trades, even in the absence of flows	Increases
Asset-management industry concentration	Passive asset managers are more concentrated than active ones, so the shift to passive increases concentration	Increases
Changes in assets valuations, volatility and com-movement	Index-inclusion effects: assets added to indexes experience changes in returns and liquidity, including greater co-movement	Unclear

Source: On the basis of IMF (2015)

Volatility is increased by herding effects, which appear to be on the rise, as illustrated in figure 6.

Figure 6
Average measure of herding by security type
(Means across securities, four-quarter average)



Source: IMF (2015)

Note: The average measure of herding is obtained by correlating among mutual funds investing in each security. A greater number implies greater herding.

Herding is on the rise in US mutual funds, according to this IMF analysis (IMF, 2015). This is true across investing styles and for both US corporate bond funds and equity funds. Herding can lead to procyclical movements which can exacerbate asset bubbles on the way up, and crashes and fire sales on the way down. These problems can lead to systematic problems when leverage is significant, which we discussed above, and also when there is significant interconnectedness to other institutions and markets.

B. Interconnectedness and connectivity with the rest of the global financial industry

Financial interconnectedness was identified as one of the factors that exacerbated the breadth and depth of the great financial crisis of 2007-2008, and has thus remained a concern since that time. Interconnectedness was so important because, not only was it more significant than most analysts and regulators had understood, but because so much of it was hidden from sight. Hence, identifying risky interconnectedness takes on importance in assessing potential risks emanating from the growing Asset Management industry (FSB, 2019).

The term interconnectedness self describes the underlying problem at hand. For example, as the FSB describes it, if one or more banks, particularly one with high leverage and/or significant maturity/liquidity transformation are significant borrowers from non-bank financial institutions, the deterioration of the bank's balance sheets could precipitate contagion across a variety of bank and non-bank financial institutions. Similarly, if a large asset management firm has a bank as a significant counterparty in a trade or lending activity, then contagion could similarly arise.

More systematically, linkages can be direct or indirect (FSB, 28). Borrowing/lending between two counterparties is an example of direct interconnectedness. This can have multiple chains connected by a chain of obligations. Indirect interconnectedness arises when two entities hold common assets or when the market value of their equity or debt securities move together (FSB, 28).

C. Interconnectedness through ownership

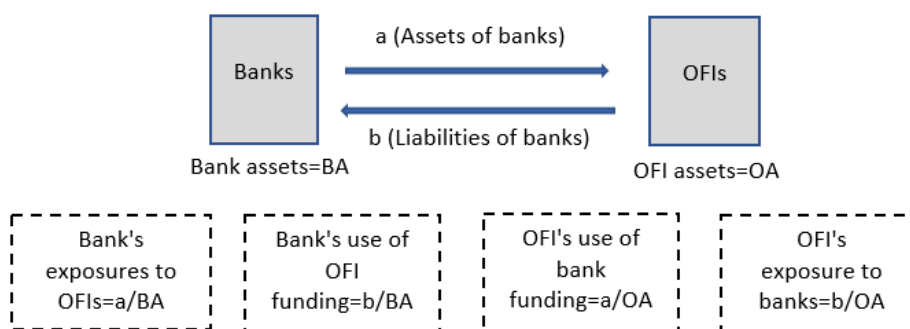
Interconnectedness can be a particularly difficult problem for financial stability if it involves the banking system, which is at the heart of most financial systems and the economy more generally. Interconnectedness between the asset management industry and other parts of the economy including banking can develop through several different channels. One channel, which we have already discussed briefly, is through ownership connections between asset management companies and banks. As figure 2 below, shows that banks are the parent of more than a third of the 25 largest asset management companies. And as I discussed earlier (Section II above), large asset management companies own a significant amount of shares in the largest banks. So the interconnections through ownership are quite significant between the large asset managers and the large banks in the United States.

D. Interconnectedness through direct lending and borrowing

Mutual funds are important direct lenders to banks in the United States (and other countries as well). The main funding linkages are for short-term funding, but in the US, longer-term funding is also significant (IMF, 2015). The financial crisis of 2008 made abundantly clear the ways in which herding and first mover advantages leading to "runs" on money market funds and mutual funds could significantly impair the financial system. Regulatory changes implemented since the crisis have probably reduced these risks, but to the extent that these regulations are being rolled back in the US and elsewhere, these risks are likely to reemerge (see next section).

In a recent monitoring report, The Financial Stability Board (FSB, 2018) provides some detailed information on direct forms of interconnectedness through lending and borrowing activities. Diagram 2 provides a schematic view of this type of direct interconnectedness. In the FSB's terminology, OFI refers to "other financial intermediaries"² The measures of direct interconnectedness includes borrowing and lending between these intermediaries and other financial institutions. Tables 11 and 12 illustrates the measure in the case of interconnectedness with banks and the evolution of this interconnectedness in recent years.

Diagram 2
A framework to analyse interconnectedness between banks and OFIs



Source: FSB, 2018.

Table 11
Banks interconnectedness with OFIs
(18 jurisdictions and the euro area, percent of bank assets^a)

	Bank exposures to OFIs ^b	Bank use of funding from OFIs ^c
2002	4.5	5.3
2003	4.8	5.1
2004	4.9	5.0
2005	5.0	5.5
2006	6.0	6.0
2007	7.0	6.6
2008	6.8	6.7
2009	7.0	7.5
2010	6.6	8.0
2011	5.4	7.0
2012	5.5	6.6
2013	6.2	7.4
2014	6.3	7.3
2015	5.5	5.9
2016	5.6	5.4

Source: FSB Global Shadow Banking Monitoring Report 2017.

^a Based on historical data included in jurisdictions' 2017 submissions. Changes in interconnectedness measures may also reflect improvements in the availability of data over time on a jurisdiction level. Exchange rate effects have been netted out by using a constant exchange rate (from 2016).

^b Banks exposure to OFIs = Banks' claims on OFIs as a share of bank assets.

^c Bank use of funding from OFIs = Banks' liabilities to OFIs as a share of bank assets.

² This refers to all financial intermediaries that are not central banks, banks, insurance companies, pension funds, public financial institutions and financial auxiliaries. This will include most of the asset management industry.

Table 12
OFIs interconnectedness with banks
(18 jurisdictions and the euro area, percent of OFI assets^a)

	OFI exposures to banks ^b	OFI use of funding from banks ^c
2002	6.2	5.5
2003	5.8	5.6
2004	5.8	5.8
2005	6.2	5.8
2006	6.4	6.6
2007	7.4	8.0
2008	9.5	9.8
2009	9.5	9.1
2010	9.8	8.3
2011	9.0	7.1
2012	7.7	6.6
2013	7.9	6.8
2014	7.4	6.5
2015	7.0	6.7
2016	6.3	6.7

Source: FSB Global Shadow Banking Monitoring Report 2017.

^a Based on historical data included in jurisdictions' 2017 submissions. Changes in interconnectedness measures may also reflect improvements in the availability of data over time on a jurisdiction level. Exchange rate effects have been netted out by using a constant exchange rate (from 2016).

^b OFIs use of funding from banks = OFIs' liabilities to banks as a share of OFI assets.

^c OFIs exposures to banks = OFIs' claims on banks as a share of OFI assets.

The indicators suggest that these peaked around the time of the financial crisis and have either remained steady (at a relatively low level) or come down since that time.

E. Financial stability board's monitoring of risks of non-bank financial institutions

In an attempt to enhance the available data on potential financial stability risks of non bank financial institutions, including asset management companies, the Financial Stability Board (FSB) has collected and analyzed data on the "Shadow Banking Industry" now rebranded as the non-bank financial institutions. From a general universe of all non-bank financial industry assets, the FSB has identified what it calls a "narrow measure" of non-bank financial assets which it believes have potential systemic financial stability implications. In 2017 this amounted to \$52 trillion, out of a universe of \$117 trillion assets of Other Financial Intermediaries (OFIs) as defined above. These assets were identified as having potential systemic risk implications such as being susceptible to runs, dependent on short-term funding, facilitates credit intermediation, and/or engages in securitization-based intermediation: in other words, have "bank like" characteristics.

The United States is the largest home of these non-bank financial assets that have bank like characteristics and therefore, have potential for financial stability concerns to arise. The US made up 29% of the global assets in this category. If one adds the Cayman Islands assets (KY) to this figure, it reaches 39%, more than a third of the total.

Table 13
Annual growth of the narrow measure of shadow banking
(Percentages)^a

	2011-2015 compound growth ^b	2016 exchange rate-adjusted growth
Argentina	47.1	34.3
Hong Kong	18.4	31.4
Indonesia	7.0	30.6
China	48.1	25.4
Singapore	1.7	22.3
Brazil	13.4	21.4
Turkey	15.9	20.8
United Kingdom	2.3	20.6
Chile	11.4	13.2
Germany	9.8	9.4
Cayman Islands	17.4	8.7
Canada	12.8	8.6
Luxembourg	11.5	8.2
Ireland	10.3	7.2
Switzerland	6.0	6.5
France	-1.3	6.5
South Africa	16.7	5.4
Korea	13.7	5.3
Mexico	9.3	4.7
Spain	3.5	4.6
India	16.2	4.4
Japan	8.2	1.5
Russia	10.7	0.9
United States	0.1	0.7
Italy	2.4	0.4
Netherlands	4.1	0.3
Saudi Arabia	14.8	-5.9
Belgium	21.9	-7.4
Australia	4.9	-9.2

Source: FSB Global Shadow Banking Monitoring Report 2017.

^a Based on the economic functions approach. Calculated based on historical data included in jurisdictions' 2017 submissions.

^b For Russia, the compounded growth rate is based on 2014-2015 because prior data are incomplete. For Hong Kong, the compounded growth rate is based on 2012-15, due to incomplete data in 2011. For Belgium, the compound growth rate is based on 2014-2015 data due to incomplete data in prior years. For China, the compounded growth rate is based on data from 2013-15 as well as estimated values for certain entity types.

Table 14
The narrow measure of shadow banking shares by jurisdictions
(Based on 2016 observations)

	MUNFI <i>(As a percent of NFAs)</i>	Narrow measure of shadow banking <i>(As a percent of MUNFI)</i>
Advanced economies		
Australia	47.0	13.1
Belgium	49.2	10.7
Canada	66.9	20.5
Switzerland	50.0	22.9
Germany	35.7	30.9
Spain	29.7	21.8
France	37.5	24.9
Hong Kong	17.8	12.4
Ireland	84.2	54.9
Italy	32.0	21.4
Japan	29.6	27.7
Korea	48.3	23.9
Cayman Islands	86.2	71.6
Luxembourg	93.3	22.7
Netherlands	75.6	6.2
Singapore	25.4	3.3
United Kingdom	45.6	11.8
United States	60.7	25.7
Emerging market economies		
Argentina	25.5	29.8
Brazil	36.8	42.1
Chile	55.8	15.4
China	24.2	58.9
Indonesia	16.4	11.8
India	29.1	44.1
Mexico	39.8	30.2
Russia	20.6	14.9
Saudi Arabia	3.3	66.5
Turkey	11.1	44.0
South Africa	53.2	25.4

Source: FSB Global Shadow Banking Monitoring Report 2017.

MUNFI = Monitoring Universe of Non-bank Financial Intermediation, includes OFIs, pension funds, and insurance corporations; NFAs = total national financial assets

As the FSB report shows, among the main risks associated with this group of assets are those associated with so called "run risk" connected to open-ended mutual funds, and possible herding and pro-cyclical behavior of these funds (FSB, 2018). The potential systemic danger for these US funds is increased by possible interconnectedness with the larger domestic and global financial markets, as indicated above.

These kinds of risks raise the question: what should be done to reduce the potential financial stability risks associated with these funds?.

V. Policies to address financial stability risks

Since the Great Financial Crisis of 2008, a number of national and international regulatory bodies have attempted to assess and propose regulations to address the risks associated with various components of the financial system. Work on the asset management industry has been intensive since it has been growing so rapidly and has become such a large component of the global financial system while being relatively understudied. The Financial Stability Board (FSB) and International Organization of Securities Commissions (IOSCO) have been particularly active, while domestic regulatory institutions, especially in the United States, have also been evaluating risks and regulations. By the current time, FSB and IOSCO, along with economists at the IMF and elsewhere, have developed intensive analyses and proposals to increase oversight and limit systematic risks associated with these activities. However, political changes in the United States have altered the regulatory landscape and future action to identify and address these risks are now in some doubt. The Trump administration has shown significant skepticism about the necessity for and cost-effectiveness of many of the financial regulations passed in the wake of the financial crisis, and are especially wary of increased regulations (see, for example, the useful summary in KPMG, 2018). Some analysts refer to this divergence between analytical and regulatory trends in Europe and in the US as a possible “Parting of the Ways” (KPMG, 2018).

Since asset management is a global industry in which competition is strong, regulatory divergences can lead to competitive divergences, and pressures for regulatory competition can become significant. So what happens in New York doesn't necessarily stay in New York. Brexit might add to the competitive pressures facing financial regulatory decision making in Europe as well.

As a result of these changes and uncertainty created by them, discussions of additional oversight and regulations of the asset management industry are especially speculative at this juncture.

In what follows, I will discuss proposed changes in oversight and regulation discussed by the key international regulatory bodies, with a focus on those which might be especially relevant for the United States. I will then briefly summarize some of the views expressed by the current US administration concerning proposals such as these.

A. Proposals to address financial stability risks

A number of regulatory institutions have assessed possible financial stability risks associated with the asset management industry and have proposed monitoring and possible regulatory measures to help address them.

The Financial Stability Board (FSB) has been perhaps the most active in trying to assess these risks (see for example, FSB 2017) but the US Federal Reserve and Financial Stability Oversight Council (FSOC), the US Office of Financial Research (OFR) (2013) and the Bank of England (BOE) have also looked into some aspects of these potential problems (Eg. Anadu, et. Al., 2018, FSOC, 2015, and Haldane, 2014).

These assessments have identified several potential problems associated with the trends described in the previous section.

The following limitations of the current oversight structure have been identified:

Data gaps remain significant with respect to many of the largest classes of investment pools and some of the fastest growing ones. Separate Accounts have few reporting requirements so they remain largely a black hole. Hedge funds and private equity funds, some of the fastest growing funds in the US likewise have weak reporting requirements.

Regulations often lack specificity and therefore cannot be assessed. Unlike for banks, where metrics for capital and liquidity have become much more specific and stress tests have been implemented, asset management companies are not subject to such specific metrics and tests. In the US, there are some important restrictions on leverage and use of derivatives. Synthetic ETS are discouraged as well. But whereas funds in the US are restricted from holding illiquid assets, this term is often not well defined.

Interconnectedness and systemic risks not well assessed. Despite the efforts made to integrate systemic risks into the analysis of banking vulnerability, the same has not been done with respect to other large and interconnected financial entities such as asset management companies. The analytical work undertaken by the FSB and IMF among others has been important in terms of highlighting some of these potential problems, but little has been done, especially in the United States, to try to address them. With respect to banking, stress testing, liquidity requirements, capital requirements, leverage requirements and limits on proprietary trading (the Volcker Rule) have been implemented to attempt to address systemic risk. But there is great resistance to extending these types of restrictions to asset management companies, where they might be relevant.

Macroprudential rules are not in place with respect to asset management companies. Recent analysis, some of it summarized in the previous section, identifies price and liquidity contagion (externalities) as a danger associated with large investment pools. Liquidity and capital restrictions are important speed bumps to reduce these risks, but regulations lack an overall systemic perspective and therefore cannot accurately judge the effectiveness of these rules under a variety of scenarios.

B. Improving oversight

The FSB (2017, 2019), IOSCO, and IMF (2015) have proposed a number of regulatory/enforcement enhancements to address these weaknesses.

These include:

1. More timely and accurate information on some less transparent asset management schemes. More information on investment strategies, liquidity of holdings, leverage, and counter-party risk would be important as a step towards enhanced oversight.
2. Develop more specificity of measures to assess financial stability risks, especially with respect to liquidity, leverage, interconnectedness, first mover advantage, and agency risks.
3. Implement strong micro-prudential regulations to reduce principal-agent problems in the industry that arise from problematic inventive schemes and asymmetric information.
4. Stronger measures to avoid herding and first-mover incentives that can lead to runs on investment funds.
5. Continue to monitor interconnectedness both direct and indirect with the domestic and global banking industry.

FSB (2017, 2018), IMF (2015), IOSCO (2018) have proposed these and other changes to improve financial stability. But, as mentioned at the start of this section, US regulators, under pressure from the Trump administration, appears to moving in the opposite direction (KMPG, 2018).

“After the financial crisis, regulators around the globe agreed (to) common aims to enhance the integrity of markets and to reduce risks for governments and consumers. There was consensus on the overall regulatory agenda and priorities, leading to a convergence of worldwide regulatory standards. That consensus now appears to be breaking down: there is a parting of the ways.

The US administration believes the raft of post-crisis regulation has encumbered its asset management industry. There is a desire to deregulate and take a path that forks from that of other countries, which are forging ahead with the implementation of new rules. A parting of the ways is especially clear in the ongoing debate about systemic risks inherent in asset management activities and investment funds. Outside the US, the application of a banking policy mind-set to open-ended funds is creating tension within the global industry” (KPMG, 2018, p. 1).

Having described this “parting of the ways”, the analysis at KMPG ask a key question: will international competition lead to regulatory “arbitrage”, a kind of “race to the bottom”?

“It will be interesting to see whether and how the deregulatory agenda in the US impacts policy makers’ views on the extent to which EU legislation should be rationalized. **Will competitiveness become a key theme in regulatory debates?** (KPMG, 2018, pp. 1-2)”.

Should the US, followed by Europe and other jurisdictions, move more emphatically toward de-regulation (or fail to implement stricture regulations) on the growing asset management industry, the kinds of financial instability concerns described here might be exacerbated.

VI. Summary and Conclusions

The asset management industry is growing rapidly in many parts of the world, but the US, and offshore hubs connected to the US, remain the center of it. The strategies adopted by asset management firms in the US have evolved over time in response to changes in competitive pressure, macroeconomic developments, technological innovations and regulatory changes. A key focus of research by domestic and international monitoring and regulatory agencies has been on trying to assess the potential financial stability risks associated with this rapidly growing industry and what policies should be implemented to address these risks. Analysts have identified risks associated with direct and indirect forms of interconnectedness with domestic and international financial markets and institutions, excessive leverage, insufficient transparency, incentives for excessive risk taking, and risks of runs and pro-cyclical behavior. Recent research has identified that different types of funds and products seem more prone to some of these risks than others. But overall, there is no consensus on a critical level of riskiness in the current environment, though concerns remain in some areas.

These analyses point to increased data gathering, more supervision and the adoption of a macro-prudential perspective, including effective liquidity buffers, leverage constraints, stress testing and restrictions on excessively risky practices such as the adoption of highly leveraged bets with large amounts of swaps and derivatives.

What happens in the US asset management industry and regulation is crucial for the whole world because of the outsized role played by the US industry in the global market. For this reason, the move toward less financial regulation initiated by the Trump administration, if it is sustained, is likely to make waves throughout the global industry.

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