“Uneasy lies the head that wears a crown”: A Conversation with Jack Bogle

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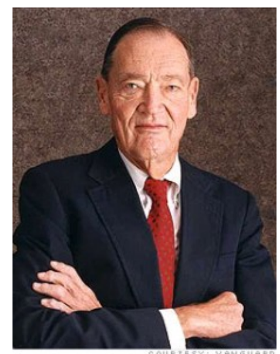
by Laurence B. Siegel


COURTESY: VANGUARD

On January 8, 2018, I interviewed John C. (Jack) Bogle, the founder of Vanguard, the largest manager of U.S. index funds and the second largest investment management organization in the world. Bogle, born in 1929, founded Vanguard in 1974 and launched the first index mutual fund, designed to track the S&P 500, in 1975. He served as chairman and CEO of Vanguard until 1996 and senior chairman until 2000. He now runs the Bogle Financial Markets Research Center and remains actively engaged in the investment industry.

Jack Bogle’s early years and the first index fund

Let’s begin at the beginning, not of your life but of the index fund revolution, which I date to Bill Sharpe’s 1964 article on the Capital Asset Pricing Model. A few years after that, you began to set up a firm that had an index fund at its core. What were you thinking? What evidence did you have that anybody would want it, and what were the steps by which you came to where you are now?

I talked about the idea of an index fund in my senior thesis at Princeton in 1951. The idea had always intrigued me, but I had never thought about following up much with it. But I did point out, at that time, that mutual funds can make no claim to superiority over the market averages. If my involvement with index funds began anywhere, it began there.

When did you begin to implement the idea?

A couple of decades after Princeton, there I was in mid-career at Wellington Management with the index fund idea going nowhere in an industry that doesn’t innovate very much. I was fired as Wellington’s CEO in 1974. A few months later, I created Vanguard. After a long struggle, Vanguard finally succeeded in making its funds independent of Wellington Management Company, which was at that time the manager of its funds. The key to launching an index fund was in the Vanguard structure. We created a novel, truly mutual structure in which the fund manager would be owned by its fund shareholders, rather than by insider executives or outside stockholders. Because Vanguard’s interests are closely aligned with those of our fund shareholders, we were interested in seeking fee reductions rather than higher fees and higher revenues. The whole idea was to reduce fees, not maintain or increase them. In those early years, we reduced the fees paid by our funds some 205 times.

We also made the fee reductions prospective, so they would only apply to assets not yet gathered. Therefore, the negotiations with Wellington Management Company were not very difficult. We would say, "let's reduce the fee to 15 basis points on fund assets over $10 billion." When you do that on a fund that manages $500 million, no one much cares.

The idea of a fee reduction led, all of a sudden, to the idea of a fund that would pay no fees whatsoever. If you have a mutual company, this is something you want to do. As with a crime, you need both the opportunity and the motive; everybody had the opportunity, but we alone had both the opportunity and the motive to start what was, in fact, the first index mutual fund.

At that time, of course, there was a lot of activity surrounding recent academic advances, including the idea of an index fund. We are all familiar with the work that was being done at Wells Fargo on behalf of the Samsonite pension plan.

What was the dynamic between you and the Wells Fargo index or quantitative group led by John McQuown?

I think that the Wells Fargo effort failed at the beginning because they picked an equally-weighted index that wasn't easy to manage. The execution was a nightmare. After we had started our fund, they moved over to the S&P 500, which is, of course, capitalization-weighted. In that very important way, we are even older than they are.

Since then, Samsonite has gone through bankruptcy. God knows whether the pension plan even exists any more; I do not. But that little germ of an idea back in 1974 turned into the first index fund, which was approved by the Vanguard board in September 1975. After a flop of an IPO (the fund raised only $11 million, not even enough to buy round lots of all 500 stocks in the index), the fund now holds assets of some $625 billion in the two series of the 500 Index Fund.

Why you? When an idea is "in the wind" like that, it is there for the taking by whoever is most enterprising, by what we now call the first mover. How did you come to be that person?

I'd experienced the worst part of investment management during my career. I was on the Wellington Fund Investment Committee. I did a merger with a "go-go" firm called Thorndike, Doran, Paine, and Lewis, which managed the Ivest Fund, among others. They were abject failures. To make matters worse, Wellington brought in a guy named Walter Cabot (who eventually became treasurer of Harvard and president of Harvard Management Company) to run the Wellington fund. Over 10 years he ran it into the ground. The fund managed $1.9 billion when he started, and $685 million when he got through, the worst performance record of any balanced fund in the industry.

Nothing like a little failure to get the juices moving.

I was fed up with investment management. I could see what a tough business it was. I'd been on the investment committee. It's hard to win on performance, so why not just rely on cost savings to win over the long term, a logical proposition that couldn't be rebutted. In the very long run, he who has the lowest costs has the highest returns.

Index funds go into high gear

What events began to catapult index funds toward the prominent or even dominant position they occupy today?

What I've told you so far was the genesis. Thereafter, I became the passionate advocate of the index strategy. My books have been a huge accelerator for the index idea. I wrote my first book, *Bogle on Mutual Funds,* in 1994 in which the index fund was first of the *New Perspectives for the Intelligent Investor*. It sold 250,000 copies. My *Little Book of Common Sense Investing,* now in its 10th anniversary edition, almost entirely on the topic of indexing, also sold 250,000 copies.

Those two books were read, then, by 500,000 people, and were commented on favorably. Investor acceptance became a meme, and was a big part of what would follow after what was a dismal start. Skeptics said, "Index funds are un-American," "Help stamp out index funds" and "If you had a brain tumor would you go to an average brain surgeon?" We took a lot of criticism.

How did the growth of indexing affect your venture, Vanguard?

Vanguard's growth began to accelerate concurrently with the growth of the index fund, which took off during the late 1980s. By the 1990s, our cash flow was coming in mostly to index funds. Vanguard's rolling 5-year growth rate was running at 20% to 25% a year during the late 1980s and early 1990s. That's a remarkable rate of cash-flow growth; it doesn't take the rise in the market into account. Even today's 8.5% growth in cash flow is pretty remarkable, but it's only one-third of what it was in those days, albeit from a much larger base.

Year after year, the index fund became more and more important to Vanguard. It was less than 5% of our assets in 1980, about 25% in 1995, 40% in 1998, 50% in 2005, 60% in 2010, and now index funds are 77% of our assets. Indexing has been the key to Vanguard's growth. The cause of our success is not just indexing taken alone, but – I emphasize– the pairing of the index strategy with the mutual structure, the idea of running funds for the shareholders.

In those early days we had no ability to finance new funds. So I had to put up $100,000 to get that tiny underwriting kicked off. I wouldn't have dreamed it would grow to what it is now.

Is there too much indexing?

With all this indexing, how much can the economy and the market absorb? Many critics of indexing have pointed out that if everyone does it, then there will be no one analyzing securities and the markets will be profoundly inefficient. Does this critique resonate with you? And, if not, why not?

It doesn’t resonate; let’s take the easy part first. There are two categories of index funds. The traditional index fund (TIF) I started back in 1975 was broadly diversified, low-cost and designed to be bought and held forever. TIFs now holds about 5% of the shares in each company in the U.S. The TIF has been to some degree superseded by the exchange-traded fund (ETF), whose initial tag line was, “Now you can trade the S&P 500 all day long in real time.” When Nathan Most, the creator of the first U.S. ETF, came to talk to me about it, I asked him, “What kind of a nut would want to do that?” As we now know, a lot of nuts would like to do that, and not just with the S&P as the trading vehicle.

The largest ETF is the State Street SPDR or “Spider,” Standard and Poor’s Depository Receipts (SPY), which turns over around 2000% a year. It seems there are few true investors in it. They are largely traders and speculators. I look at that as, at best, a benign business that is not very interesting and has little investment implications or corporate governance consequences.

If we are talking about broad market indexing, meaning people who are trying to capture the market return over the long term, I’m going to guess that maybe $2 trillion is in broad market indexes, less than half the index fund total. Indexing’s true share of mutual funds, the share that represents passive ownership of the broad market, is something much less than the 40% that is frequently cited. However, it’s true that index funds in-the-large, including specialized or undiversified index funds, are 40% of U.S. equity mutual fund assets.

To estimate the total in broad-market, buy-and-hold index funds, you’d probably take out the specialized funds as well as index funds that are traded, like the SPDRs. That would get you down to a core of maybe $1.5 trillion, out of a total index fund capitalization of almost $4 trillion.

The economic impact of indexing is overstated. A little later on, I’ll discuss exchange-traded funds, which are, for me, a real problem.

What is wrong with trading in and out of funds? I think I know, but I want to hear it from you.

One of the hidden, unseen advantages of an index fund is its performance predictability. There is a syndrome in the fund management business that when funds have very good records of beating the market, more money pours in. The better the record, the worse the syndrome. Then, because there is an inevitable reversion to the mean in returns relative to the market, when funds start to do badly, as they inevitably do, the money pours out. The fund’s return may look all right, but, according to Morningstar, the investor’s return typically lags the fund’s return by 1.5 percentage points per year, and that’s a huge lag. Investors are their own worst enemy.

That is a huge lag, all right. I once wrote an article, mercifully unpublished but written up by Jason Zweig who at the time was at *Money* Magazine, saying the lag was 4%. However, that was in 1997-2001 when the market was exceptionally volatile. Maybe the lag is less now – still very large.

But I would ask, are they really their own worst enemy? Aren’t brokers telling them to do things? Aren’t advisors telling them to do things? Don’t we all pay far too much attention to exceptional past performance, despite the knowledge that it doesn’t recur? Past performance reverts to the mean. We ignore that. Yet the questions investors ask are: How many stars do you have from Morningstar? What percentile are you in, based on your competitive peer group or whatever the universe may be?

There is too much emphasis on the past and that hurts you in the future.

One of the great merits of traditional index funds is that you don't switch back and forth. When you cut through all this, the power of indexing in the marketplace is greatly overstated by the popularity of ETFs, including those invested in the S&P 500. They may have shareholder turnover of a couple of thousand percent a year because of their heavy trading by financial institutions.

Bottom line – is there too much indexing?

When Cliff Asness of AQR, one of the more notable money managers, writes an article that says, "No, there's not too much indexing, there is still too much active management," I take him at his word. He and I have been very close. We share a lot of ideas. It is possible for us to find a remarkable mutual respect and admiration. I think Cliff would say the same thing about me. I'm a great admirer of his brain, his ability to produce research, and his writing skills. I've written 16 papers for the *Journal of Portfolio Management*, but he's written 23.

You are making me feel inadequate. I only have 10 – one of those was an editorial – and Cliff is younger than me.

I also have had 11 papers published in the *Financial Analysts Journal*. I love the academic side of the business. You must be able to intuit that.

Where do we start to worry? It depends on how you define indexing – I'm not trying to be cute– but all this junk that is going on with betting whether the market will go up or down today using triple leverage, or creating a new ETF that is long electronic retail and short traditional retail – that is not indexing. It is speculation, which is not a very good idea.

Would I be troubled if traditional indexing got to 70% or 80% of stock ownership (which would imply a substantial drop in stock market turnover)? True, indexing may never get there, but if true indexing got to 50%, the market would continue to function. There wouldn't be a problem. The problem only occurs when indexing gets to be 100%, and that is never going to happen. It would mean no quotes and no activity in the market place. Indexing accounts for only about 5% of the trading in the stock market anyway, because traditional index funds don't trade much. Even ETF portfolios (as distinct from their investors) tend to have low turnover.

Private versus public ownership of fund companies

Well, that's where I come out too; there's still too much active management. Let's now consider the question of fund company ownership, about which you have been very outspoken. You've said that publicly traded fund companies cannot serve two masters, the investors and the shareholders. But what is unique about fund companies in that respect? Doesn't every public company have a fiduciary obligation to its shareholders and a

commercial obligation to its customers to deliver the best possible products at a fair, competitive price?

First, a little bit of background. Publicly held companies are a small minority in the mutual fund industry. Of the 50 largest fund companies, one is mutual. That, of course, is Vanguard. Eight firms remain private. Fourteen companies are held by the public, and 27 are held by financial conglomerates.

While the public owners are not able to inflict their will on the manager very easily–typical publicly held companies have widely dispersed investors – the conglomerate gets its way. The conglomerate owners can say, “Pal, we bought this thing for $1 billion, we want to take out $200 million a year, and if you can’t earn us the $200 million we will get somebody who can.” The conglomerate owner has absolute power; that’s more of a problem than the mere fact of public ownership.

Yes, every public company has a fiduciary obligation to its shareholders. However, it does not have an obligation to deliver the best possible product at a fair, competitive price. That’s the way we’d like to think the world works. But, as you well know, there is a lot of shoddy and overpriced merchandise in the fund business. Every public company does have an obligation to its shareholders, but the mutual fund manager’s obligation to provide the best possible product at a fair price is completely overwhelmed and lost in the shuffle of the emphasis on past fund performance. Moreover, investors think past performance is more important than future cost; it is not.

Managers want to provide the best possible product, meaning the best performance. Given good performance, variations in cost don’t make a great deal of difference. If you have great performance, it is not going to matter much in any given year or short-term cycle whether you are charging 0.5% or 1.5%. Thus, we have lost sight of what is a fair competitive price. However, we at Vanguard have brought the cost factor up towards the importance that it truly deserves in the field of finance and investment management.

How has Vanguard’s attention to cost affected the industry, or how will it affect the industry going forward?

We’ve made it much more difficult to raise costs or to bring out funds with very high costs. But there isn’t going to be very much price-cutting. Let’s say an index fund can operate at 4 basis points and you’ve got somebody like Fidelity operating at, say, 70 basis points. If Fidelity cut its expenses from 70 to 50, that would have a staggering impact on the firm’s operations. It would eliminate their profits. It would be a mess, for the want of a better word. Yet even that lower cost would still be 12 times as high as the going rate for index funds. There’s really not much point in shaving prices in the world of active management.

Have fees come down?

Fees charged by active managers have come down a little bit, but not a lot. But, over a long, long period, the economies of scale have been shared inadequately, if at all, with mutual fund shareholders. This is the industry’s Achilles’ heel in terms of fiduciary duty. Back in the early years, roughly 1951 to 1961, the industry’s costs dropped from about a 62 basis point asset-weighted expense ratio to 56 basis points, according to the early studies I performed.

In those days, it was about a $3 billion industry. Now it is a $20 trillion industry, and the overall expense ratio is about 65 basis points weighted by size. Costs have actually gone up! Zero economies of scale have been shared with the shareholders, and that's because of the dominance of the manager that controls the fund and the monetary incentives sought by the manager, whether public or private. The private manager can deal pretty well with the issue of cost, because the cost reduction is out of his own pocket . . . if he wants to do that.

How does the difference between private and public ownership play out in practice?

For example, early in my career at Wellington, which was a privately held company at that time, we reduced the fee on assets over about $100 million from 50 basis points to 37.5, that is, three-eighths of 1%. An individual owner or possibly a management group owner can afford to do those kinds of things without wondering if that is the right thing to do for public shareholders.

Nonetheless, as many fund managers did after a decision in the Ninth Circuit Court of Appeals, Wellington Management Company went public in 1960. Fifteen or 20 other companies went public as well. Their owners got huge windfall gains. But then the transition was over and the companies were actually traded, often sold to financial conglomerates. There was trafficking in investment management contracts, just what the SEC had opposed.

The whole question of public ownership, the difference between publicly held and conglomerate held and, for that matter, privately held, all comes out in the wash. I certainly accept your point that publicly held companies have better disclosure; at least the idea of it is there.

This brings me to the point that, whatever their ownership structure, all fund managers should have to make those disclosures, whether public, private, conglomerate or even mutual. They should all be required to make the same broad disclosures. They should all show their P&Ls. They should all be disclosing their management compensation. That's just the way the world should work. Disclosure is always the sunlight that we need to keep us on the right side of the scales of fairness.

"Money is a demanding mistress"

We both know a number of people who became billionaires in the fund management industry. They earned it fair and square. Yet, there is something quaint and sweet about the old-fashioned idea of a person who becomes moderately rich and no more by managing people's money for a living. Like a doctor or a lawyer, an investment manager could think of himself or herself as engaged in a profession. How did we get so far away from that?

Money is a demanding mistress. Executive compensation in our country has gotten totally out of hand. Compensation consultants have introduced a process of "ratchet, ratchet and bingo," to use Warren Buffett's felicitous phrase. Nobody wants their CEO to be in the fourth quartile of compensation, for God's sake, so they bump them up to the first or second. As a consequence, another CEO else falls into the fourth quartile. It has to be that way. That board says, "Not our man, not good old Harry over there. He is definitely a second quartile or first quartile guy." And so the process iterates. Bingo!

This process has become the basis of executive compensation in the U.S., and it is an outrage – a moral outrage, a social outrage. It's just the wrong way to run a fair compensation plan.

I don't know exactly what to do about it. I would hope that, in this new era that we are moving into where funds are going to be much more transparent – and Vanguard has made huge strides in that area – we will set up a whole new basis for executive compensation. It would ideally have to do with return on total capital. If an industry in total earns an 11% return on total capital, you don't get paid until you earn 11% on your company's capital – nothing. You can get a salary, but no incentives until you can produce a return on capital to your investors in excess of the industry's return on capital. The compensation criterion should not be the price of the stock. A stock price is the most misleading thing in the world, for it so often strays from a firm's intrinsic value.

Compensation is one of the big issues that has been at the center of corporate governance discussions in the period since Berle and Means wrote their classic book, *The Modern Corporation and Private Property*, in 1932.[1]

Value, growth and smart beta

If you were to cross an index fund with an active manager, and breed them, you would get something that today is called smart beta. As far as I'm concerned, that is just factor investing, something that emerged from the academic world in the late 1970s and early 1980s with small caps, which was the first factor to emerge, and then value investing. Is factor investing a good idea? I'm a value-oriented investor myself, but I haven't beaten the market with it. The value premium comes and goes, and sometimes it goes negative for a long time, as it has recently. Where do you come out on this? Are you a value investor, or do you believe holding the broad market, including growth stocks, is the right thing to do?

The total market is so much better for just about every investor for one significant reason: The relationship between growth and value changes. Figure 1 below shows, all the way back to 1928, the relationship between a dollar invested at the outset in growth stocks and value stocks. (The growth and value indexes are from CRSP.) I used this chart in a presentation at the 2017 JOIM seminar in Boston last September.

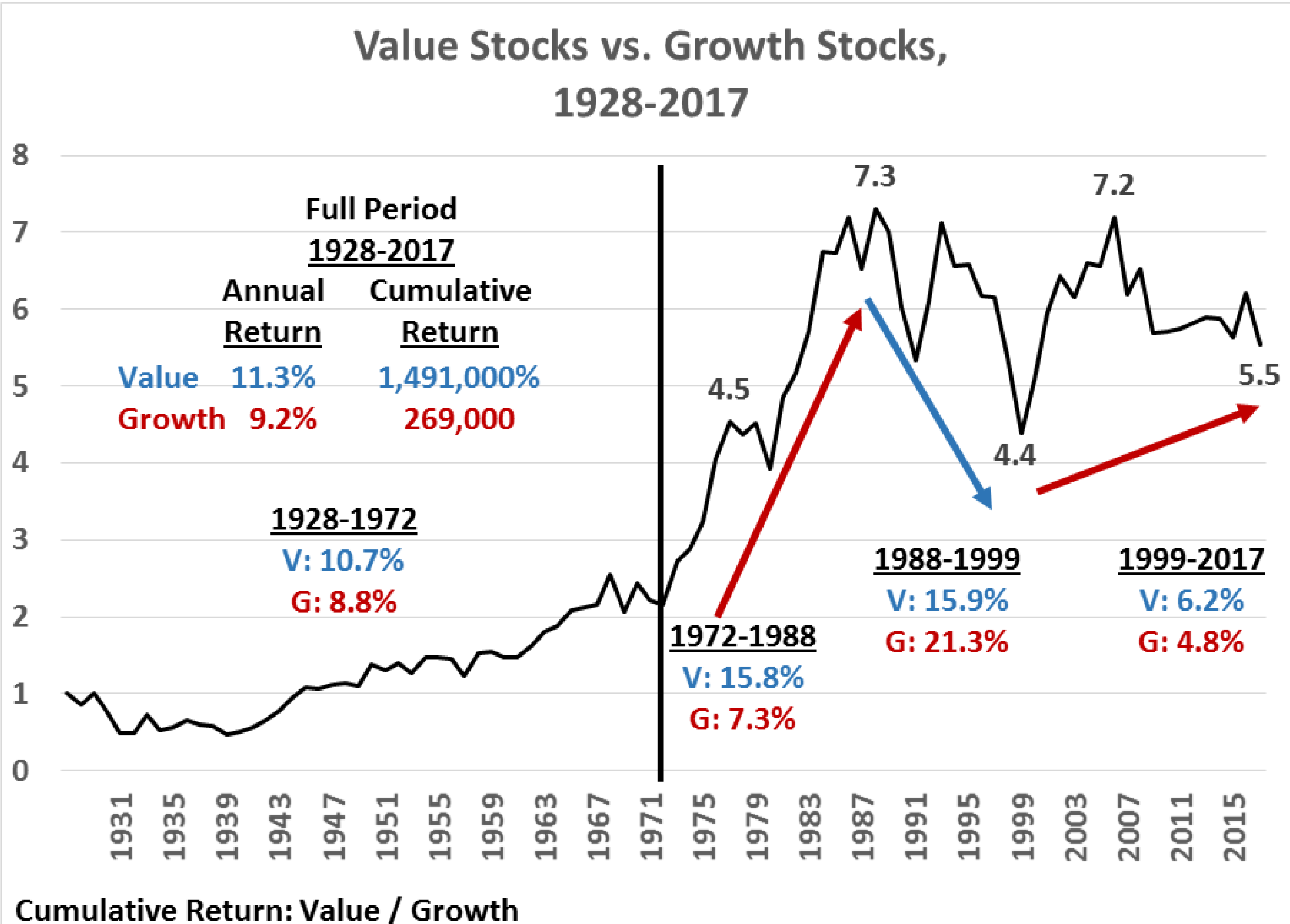
At the end of this period, value had produced 5.5 times as many dollars as growth. That is essentially where the thesis that value beats growth comes from.

But wasn't most of the gain in the distant past?

Yes. The trick here is that, if you go back to 1983, the ratio was also about 5.5. In other words, value and growth have been equal for the last 34 years. Something changed in the early 1980s – likely the fact that value was repriced to reflect its past superiority.

If you look at Figure 1 you can see what changed. There was a general upward trend through 1972 where value returned 10.7% and growth 8.8%. Then the picture became choppy and unpredictable. Value soared from 1972 to 1988, 15.8% per year versus 7.3% per year, and then growth did better from 1988 to 1999, 21.3% versus 15.9%. Value then had a huge run up that ended in 2006, and growth has done better since 2007.

Figure 1
Ratio of cumulative returns of value index to growth index, July 1928-August 2017



Source: CRSP,

You have all these fluctuations and it's very befuddling to an investor who picks value. Investors should have no confidence at all that value will win in the long run, for the obvious reason. Once everybody "knows" that value does better than growth, the prices of value stocks consequently go up relative to growth, driving down the subsequent value return; and the prices of growth stocks go down relative to value, driving up the subsequent growth return. The market seems too often unaware of this pattern.

When you look at Figure 1, 1928 to 1972 had a gradual upward slope in favor of value. Then the chart is all over the place, up, down, and sideways, big drops, small drops, uneven. Just as factor investing, by and large value investing, became popular a couple of years ago, value fell on its face. Last year growth was up 21%, and value 14%.

Value could be the right approach for the future, but why gamble? Nonetheless, back in 1993, I decided investors should be entitled to a choice between growth and value. It had nothing to do with factor investing.

How could growth and value index funds have nothing to do with factor investing? They are two of the most basic factors.

My idea at that time was if you accumulated money in growth, you have a higher percentage of your return without taxes; and a lower percentage of your return in income, which is highly taxed. Then, when you got to retirement, you'd move over to value where you'd have less volatility, and a higher income component in your return. I warned in those early annual reports that you shouldn't trade back and forth between the two funds. Nobody knows which is going to do better over the next 25 years. If I had to guess, I'd say they will do the same.

What happened over those 25 years, since 1993? Both the growth and value funds themselves had a 9% return. These are the Vanguard growth and value index funds, which differ somewhat from the CRSP indexes in Figure 1. However, the average investor in our growth index fund earned 5%, and the average investor in our value index fund earned 5%. By comparison, if the two funds were used from the beginning to accumulate, you would have gotten a 9% return from either one. By switching back and forth you got a 5% return, and imagine what the difference is from compounding at 5% versus 9% is for 25 years.

To what do you attribute the terrible performance of investors versus the funds they own? How could investors be such bad market or factor timers?

The temptation to "do something" is one of the worst temptations that investors face. There is always some bluebird on the horizon. Maybe it's bitcoin or some other kind of coin. These things come and go. In an investor's lifetime he's going to be so much better off owning American businesses in the S&P 500 or the total stock market, and never trading it. He is guaranteed to have the same non-manager the day he starts as the day he retires. In contrast, with the counter-productivity of swapping from one expensive fund to another the odds are about 0% that an average investor can outpace the stock market over that long a time period. People are going to tell you there's a certain chance, a 1% chance or a 2% chance. That's the chance that a given fund will beat the market, not a given investor. I don't happen to think even that's right.

Should we be global investors?

You've made the point before, many times in many places, that investors should own American businesses. What's wrong with Japanese, European or Chinese businesses? The U.S. is 4.5% of the world population, and a larger but not overwhelming percentage of its economy. Aren't there opportunities that are missed by just being a U.S. market investor?

People misunderstood my position on this question. In my first book in 1993, *Bogle on Mutual Funds*, I said that U.S. companies had, at that time, 40% of their revenues and 40% of their profits coming from abroad. You shouldn't think that the S&P 500 is not internationally diversified. Yes, fluctuations in the value of the dollar – nominal returns in foreign markets, and dollar-adjusted returns – can vary. But in the long run, I would expect them to iron out.

Then, look at what is in the global market index. The largest investment is the U.K. I'm not happy about that, with Brexit and all. This is a personal judgment. Japan is next, and France is next after that. I don't think those countries can do better than the U.S., and they are the three largest holdings.

I could be wrong, but what I said then was, you don't need non-U.S. stocks because you already have non-U.S. exposure in the S&P 500. In any event, because of the risks – sovereign risk, dollar risk – you don't need more than, say, a 20% holding in non-U.S. equities. Avoiding your home currency, in which you spend and save money, carries its own risk.

In the period since then, since 1993, the U.S. market is up approximately 800%, and the non-U.S. market is up about 250%, not even close. I was right. Does that say anything about the next 10 years? No! If you believe strongly enough in reversion to the mean, you ought to go into non-U.S. stocks. But I don't like timing. You are almost always better buying and then holding a given position in non-U.S. stocks, but no more than 20%, because of the risks. But I do not have any special knowledge. It's just the way I invest my own assets. That strategy has been right for the right reasons. Will it continue? God alone knows, and he is not telling me.

Index fund proliferation

Let me move toward the conclusion. If everything you say is correct, then only the index funds representing the broad market are passive investing. Everything else – value, growth, small and large cap, auto stocks, tech stocks, all the other choices the index fund industry offers are active investing. If the virtues of passive, low-cost, low-trading investing are the philosophical premise behind Vanguard, why offer investors so many non-market choices? Is that a commercial decision, or is there something else behind it that I am not understanding?

The mutual fund business used to be a business in which we sold what we made, and now we are business in which we make what we sell. The marketing pressures are substantial. Someone brings out a new fund and you think you have to have one too. The reality is that, generally speaking, funds that are good marketing ideas are bad investment ideas.

You see this clearly with exchange-traded funds. Since 2004 the average TIF investor return has been 7.4% a year. The average ETF investor return has been 4.6% a year, which means a 70% gain versus a 135% gain for the TIF. Even the active funds' investor return has been 6.2% a year, better than the ETF investor has done. Creating things to meet market demand has not been a profitable enterprise except for the people who start them, the entrepreneurs, the financial buccaneers, and for that matter legitimate people who just want to be more competitive in the market place and don't dare miss something.

There are 9,000 funds in our industry. We at Vanguard have 370 funds. But the one thing that distinguishes our company, which I said earlier, is that index funds are 75% of Vanguard's total assets, now almost $5 trillion. That huge number is one that doesn't actually warm my soul. But the reality is that our indexed assets are much, much, much higher than 75%, probably more like 97%, 98%.

Why is that?

Take a fund like the Wellington Fund. It has a 98% R-squared, or coefficient of determination, with the two indexes it tracks – 65% S&P 500 and 35% Barclays/Bloomberg corporate bond index. Ninety-eight percent! Is that an actively managed fund? Well, 2% of it is. But does it go in the actively managed category when it is 98% tracking its benchmark? This is what people forget about in the mutual fund industry. We are all heavily influenced and our performance is determined by the action of the market. The average Vanguard actively managed fund has an R-squared of 95%, but even the average equity fund in the industry has an R-squared of 88%.

We talk about the difference between indexing and active, but the difference can be as small as the difference between a 98% R-squared and 100%, or as large as maybe an 80% R-squared, which leaves 20% of variation that is not explained by the market; very few funds fall outside that range. There's a misunderstanding about managers operating in the abstract. They are all tied to the market. If you are a closet index fund, you can get to a 98% or 99% R-squared very easily. You would be amazed at the number of funds that have over 95% of their returns explained by the S&P 500.

In many ways, index versus active is not a clear distinction, because many of the big funds have their return 92% to 96% explained by the market's fluctuation. When you look at Vanguard in total, we can't completely differentiate our index funds from our other funds – all, finally, earn returns that are heavily market-determined.

Why not? Don't you know when you are actively managing a portfolio?

A good example is that I was never able to create a true municipal bond index fund. There are too many bonds to try to track all of them. We therefore created index funds for municipal bonds but they were not called index funds. They all have 93% to 97% correlations with the comparable municipal bond index. We are now actually starting an index fund in that sector. It will be interesting to see how it does, but it won't be easy to run.

I was determined to provide returns that were solid compared to their competitive market indexes, have a high R-squared, and then win on cost. Winning on cost doesn't make much of a difference in a year, but if you can pick up 50 basis points on expense ratio; if you can pick up another 50 basis points on low turnover (a key part of our advisor selection process); and another 50 or even 100 basis points on no-load, the low-cost fund can earn 20% more than the average fund over a decade at no extra risk. It's basically guaranteed to be a great investment strategy. It also happens to be, I'm embarrassed to say, a great marketing strategy, as Vanguard's growth certainly attests.

The growth of Vanguard and the competitive pressures of the fund industry

And Vanguard's growth has been…what, numerically?

We are at a 25% market share of long-term mutual fund assets. No one has ever been over 15% before. Massachusetts Investors Trust was the largest firm for 30 years. (it is now part of Massachusetts Financial Services.) They were the largest starting in 1932, and by 1952 they got to a 15% market share. They were succeeded by the old Investors Diversified Services, now Columbia Threadneedle, which was the leader for 30 years, also rising to a 15% share of assets. They were succeeded by Fidelity, which also got to a 15% market share. So 15% was a stopping point, yet here we are at a 25% market share.

What flows from that unprecedented dominance? A lot of competitive challenges, regulatory challenges, percentage ownership challenges, and other challenges that no fund firm has ever faced before. I'm a little sorry about our present status as a colossus; I loved the years of challenge that I faced at the beginning – the greatest challenge of all . . . to survive. We really didn't know whether we'd be in business at the end of the week or not. Then we got into the years of momentum, beginning in the early 1980s, and we've been thriving on momentum ever since. I would not know how to run today's Vanguard. I have to entrust that task to our new management.

This has been a lot of fun just for me to sit here and listen. I really appreciate your time and effort. My last question is: is there a question that you wish I had asked that I did not?

I wanted to talk about, "Uneasy lies the head that wears a crown." The head that wears a crown is indexing's 25% market share of mutual fund assets – that's the true share, not including index funds used as trading vehicles – and that share continues to grow. It's amazing.

Uneasy lies the head that wears a crown?

Henry the Fourth, Part Two. Vanguard's share of total mutual fund assets grew by almost 500 basis points over the past two years. That's amazing. Most firms in this industry are not growing market share at all. But we have several rivals. The rivalry between ETFs and TIFs is going to be an important factor in the future. But, given the known failure of ETFs to deliver to investors the returns they might have expected, the winning course is a TIF – a broad market index bought and held forever at low cost. Passive management with passive investors is what I would do. The ETF business, in contrast, is passive management (sort of) with active investors. There, the activity returns, the trading costs return, and the emotions return. By chasing performance, investor returns go down. The traditional route will be the winning route in the long run.

By the way, over the last 10 years, index funds have taken in $3.3 trillion in net cash flow, and active funds have taken in just $150 billion. Active funds have taken in only 5% of total industry cash flow.

A lot of people were selling their active funds to buy index funds.

That's right, and there is also a lot of new money being drawn into them from new investors. I hear from these investors every day.

But still, active managers run a pretty vibrant business when you realize that, in the last 10 years, assets of active managers have gone from $7.3 trillion to $11.4 trillion. That's about a 60% gain. Since there is not much net new money coming in, almost all of that gain comes from market appreciation. They are sitting on very profitable businesses, and I don't think they yet feel the pressure to make changes or make some kind of strategic adjustments. When they do – I think it's almost predictable as the night that follows day – they will go into ETFs and not the TIF route. As it has been in the past, that will be a loser's game.

Why are ETFs a loser's game?

With all the cash flows into ETFs, $840 billion in the last 10 years, compared to $400 billion into TIFs, I wondered how TIFs could have kept up in terms of their asset growth. The answer is that ETFs have had $504 billion in market appreciation, and TIFs have had $800 billion. Two-thirds of the growth in TIF assets has been in the form of investment returns, and only one-third of the growth in exchange-traded funds has been investment returns. That's where the performance differential that I cited earlier comes from. The investor return for TIFs average 7.4%, for ETFs it was 4.6%, even less than the 6.2% investor return in active funds.

Those numbers are not ready for a *Financial Analysts Journal* article, but if you average them they do cross check closely against the known returns we have for all the ETFs and all the TIFs (Strategic Insight data). It's a pretty good indication of where things are going.

The mutual fund industry faces a lot of challenges. With $20 trillion in assets, we are America's largest financial institution. The indexing business is highly concentrated, with BlackRock (which is growing well) Vanguard, and State Street, which is by far the smallest of the three.

But, ultimately, BlackRock faces a real challenge, and this goes back to the publicly held versus privately held issue. Their business is essentially an index fund business, so there is no investment management component that can improve returns for their fund investors. If they want to reduce fees on their ETFs, or they are required to for competitive reasons, that will hurt the earnings of the management company, the other master. If they want their earnings to go up, they'll have to create funds with higher fees. That is going to be a very tough conflict in the years ahead for a publicly held company like BlackRock, a giant conglomerate interested in making its corporate owners rich, which is the job of modern capitalism. They are going to have to deal with this challenge in a price-competitive business.

I want to thank you profusely for this generous contribution of time.

You're most welcome.

[1] s SEC v. Insurance Securities Incorporated, 1958.
https://www.courtlistener.com/opinion/244940/securities-and-exchange-commission-v-insurance-securities-incorporated/?order_by=dateFiled+desc&page=3

[2] Berle, Adolf A., and Gardiner C. Means, *The Modern Corporation and Private Property* (New York: Harcourt, Brace & World, [1932] 1968).

