Transcript: Rob Arnott

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Robert Arnott on Global Asset Management (Podcast)
Masters in Business

Know why you feel how you feel.
The transcript from this week’s, *MiB: Rob Arnott, Research Affiliates* (https://ritholtz.com/2021/04/mib-robert-arnott-rafi/), is below.


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BARRY RITHOLTZ, HOST, MASTERS IN BUSINESS: This week on the podcast, I have an extra special guest. His name is Rob Arnott and he is the Chairman and Founder of Research Affiliates, a firm who essentially patented the concept of fundamental indexing, pretty much they invented it, and I know Rob for a couple years. He was on the show in 2018 and his office just cranks out so many fascinating research pieces, hence the name Research Affiliates that after you read the third or fourth thing from somebody in a couple months, it’s like damn, I got to get Rob back on. This is some really interesting things.

We went deep into the woods on electric vehicles and Tesla and we talked about what makes a big market delusion when an entire sector, not just a company, a whole sector, runs amok. We talked about everything, really, from ESG to bitcoin to value. I thought it was really intriguing.

If you’re at all interested in fundamental indexing or smart beta, if you’re interested in where alpha comes from and what the sources of various value and other types of factor premiums are, then you’re going to find this to be absolutely fascinating.
So, with no further ado, my conversation with Research Affiliates’ Rob Arnott.

VOICEOVER: This is Masters in Business with Barry Ritholtz on Bloomberg Radio.

RITHOLTZ: My special guest this week is Rob Arnott. He is the Founder and Chairman of Research Affiliates, a firm that has created and patented a methodology for creating indexes based on fundamental metrics instead of the traditional market-cap weighting, various asset managers are running over $160 billion using strategies developed by Research Affiliates. Rob is the author of over 100 academic papers, seven of which one Graham and Dodd scrolls and awards.


ROB ARNOTT, FOUNDER & CHAIRMAN, RESEARCH AFFILIATES: Thank you so much. It’s a privilege.

RITHOLTZ: Well, it’s pleasure to have you back. There’s so much to go over since the last time we had you on the show, about three years ago. Let’s just start out with Research Affiliates or RAFI as I know it.

You guys don’t manage assets directly but advise on over $160 billion in assets. Explain to the listeners how that process works.

ARNOTT: Well, we want to focus on our area of competitive advantage and that is in doing research in developing investment strategies, in carrying out and exploring potentially disruptive ideas for the investment management community. To run an asset management firm also typically means call center, means portfolio accounting, it means trading desk, trade reconciliation departments, and the list goes on and on and on.

So, the last time I ran an asset management firm, First Quadrant, back in 2004, we had about 120 people and roughly 12 are unresearched. Here, we’ve got about 80 people and roughly half of them are in research. So, we’re able to concentrate our attention on our area of competitive advantage while at the same time using Affiliates’ external distribution partners to handle distribution and client relationships.

And so, basically, they view us as an extension of their R&D capabilities, certainly if you’re not going to replace their R&D efforts. But if our ideas are complementary, then were an extension of that and we view them as our distribution channel.
RITHOLTZ: Let’s talk about one of the strongest research ideas and strategies that you and your firm are behind and that’s the basic concept that, hey, we’re doing this index waiting thing over along instead of doing it based on market cap or the size of the company, it’s instead, it should be based on fundamental metrics like revenues or profits. Explain why that’s a better approach?

ARNOTT: Thank you for asking that. A lot of the attention in the world of so-called smart beta is on formula-based techniques for investing and the umbrella term, smart beta, began as a focus on strategies that no longer weight companies in direct proportion to their price which is what cap weighting does and it’s cap weighting heel, Achilles’ heel.

If you weight companies in proportion to the — their price, then any company that is above its eventual fair value and destined to underperform will have in a current weight that’s too high. And any company that’s cheap and destined to outperform will have a current weight in the portfolio that’s too low.

So, you’re going to be overweight and be overvalued and undervalued and undervalued even though you don’t know which ones are which, which is an interesting nuance. But the term smart beta has since been broadened to embrace factor investing and basically anything that uses a formula, even momentum investing is called smart beta, although it’s the antithesis of the original definition.

Fundamental index was an idea that we came up with in 2003 in the aftermath of the bursting of the tech bubble. A dear friend of mine who was on the board of the New York State Pension and was so founding president of common fund which manages commingled university endowments, he was horrified that the amount of money that was lost by major pension funds by investing in cap-weighted indexes as the tech bubble burst, four percent of the portfolio on invested the — in the largest market cap company at the time, Cisco.

And Cisco subsequently went down something like 90 percent, so there went — if you had four percent in it, you — there went 3.6 percent of your money in one single stock. OK. He challenged us to think about better ways to invest and we came up with the idea — an idea I’d been playing around with for a few years, why on Earth do you want to invest in proportion to market capitalization which means that the more expensive the company is, the more heavy its weight in the portfolio. Why not wait companies in accordance with sales or with profits or with book value or even with number of employees?

So, we went back and tested the idea, first starting with sales and book value and going back 30 plus years, we found that if you chose the thousand largest businesses in the U.S. based on their sales and weighted them by their sales,
that you wound up two and a half percent a year better off than with cap
weighted indexing.

And we tested it with book value. We tested it with profits, with cash flow, with
EBITDA, with number of employees. And everything we tested had one and a
half to two and a half percent excess return, so that was our first a-ha moment
that it doesn’t matter what measure you’re using, what matters is whether the
measure incorporates price because if the price is too high, then any — any
weighting scheme will do better. You could use darts or you could base it on the
number of executives who like to have a mustache or whatever and you’re still
breaking the link with price and you’re still going to add one and a half to two
and a half percent a year. Coo.

And so, we developed the idea of fundamental index which has become a very
important part of our business. It’s over 140 billion in assets now and it’s under
license to other distribution partners, PIMCO, Schwab, Invesco, Nomura and
the list goes on and on. We have at least eight-part distribution partners with at
least 10 billion each, managed using our ideas.

So, what is cool about fundamental index is that you’re earning a profit based
on two things. First, the obvious one, a value tilt. If growth stock is priced at
lofty multiples to fundamentals, then you’re reweighting those stocks down to
their economic footprint, the size of the business and if a stock is trading at
deep discounts, you’re reweighting it up, so you have a stark value tilt all the
time and value investing usually wins.

But it turns out that’s not the dominant source of incremental return. It turns
out that the dominant source of excess return is a rebalancing discipline. If a
stock soars and the fundamentals don’t, then RAFI, the fundamental index, will
say thank you for the lovely gains. Let’s reweight this investment down to its
economic footprint.

And if this company tumbles and its fundamentals, don’t RAFI will say, thanks
for the lovely discount. Let’s reweight you back up to our economic footprint.
So, since the market is constantly changing its mind, as to how much a
company is worth, you’re constantly rebalancing contra trading against the
markets most extravagant bets and your biggest bets will be on the companies
where the market is making the biggest bet in the opposite direction.

The companies that have soared the most, GameStop, tremendously this
quarter on top of an already stupendous rise in 2020. So, you’d look at that and
if you owned it, which we did, we owned it as a value investment with a cost
basis of around a little under four bucks a share, if you owned it, you’d say thanks for this great gain, the underlying fundamentals haven’t changed, let’s take some profits and rebalance.

That rebalancing alpha is the dominant engine for incremental return and that is not true of most of the strategies that currently carry the smart beta label.

RITHOLTZ: That’s interesting. The pushback I’ve heard from the traditional market cap-weighted indexers are on the — on the one hand, you’re selling stocks that have rallied and very well may continue to rally if — if you’re rebalancing away from Amazon or Apple anytime over the past, I don’t know, 12 years.

You saw the stock go higher and on the other hand, on the cheap ends, you have a tendency to buy into the value traps, things that look cheap, because they’re inexpensive and still have revenues but aren’t. What’s the counter to that critique?

ARNOTT: That critique is absolutely correct. Here’s the deal, though. For every Amazon, there is a company that is perceived as a disruptor that subsequently gets disrupted. Apple has been hugely successful and contra trading out of Apple has not been a good thing but who came before Apple? Blackberry, Palm.

Palm was dominating the world of handheld communication devices back in the year 2000 when it was spun off from 3Com. It spun off at a valuation briefly greater than General Motors. At the time of the spinoff, it was spun off from 3Com at a total market value larger than 3Com’s market value before the spinoff, isn’t that interesting?

And of course, it went to zero and Blackberry disrupted Palm’s business. And then no soon it was blackberry dominance in world straddling on handheld communication devices and Apple came along with the iPhone and said, hey, hey, this is a lot better and so did the marketplace.

So, disruptors due to disrupted, and yes, we missed the boat on highly successful companies that go from strength to strength to strength until they don’t. And on the downside, you do have value traps. You’ll rebalance into them in theory all the way to zero which is one reason you absolutely do not want to rebalance a fundamental index strategy daily because then you’ll just buy in to the value traps all the way to zero.

So, there’s two broad flavors of fundamental index. One rebalances annually, the other does what’s called quarterly staggered rebalancing which means every quarter you move one fourth of the way to your target weight. That way,
you’re going be hurt by valued traps only modestly, only occasionally.

And for every value trap, there are several companies that look cheap and in fact are. So, case in point, 2009, trough of the financial crisis that the March 2009 rebalancing that took place in fundamental index, we rebalance to the economic footprint of businesses. B of A and Citi were both priced at a fraction of a percent of the market and yet both of them were about two percent of the U.S. economy measured in terms of revenues, profits, book value, dividends and so forth.

General Motors was about one percent one percent of the economy and a tenth (ph) of a percent of the market. So, we rebalanced in to all three. We rebalanced back up to a one percent weight in GM and two percent each for B of A and Citi.

And GM went to zero in the next quarter, went bust. Value trap. There went one percent of our portfolio.

The two percent each in B of A and City tripled, so you wound up going from two to six percent in two stocks and from one to zero in a third stock. So, the beauty of fundamental index is not that it has any special insights into what the fair value of the company is, but that it contra trades against the market’s most extravagant bets which often, in the long run, turn out to be wrong.

People love to buy growth stocks because they’ve got a great, great story but the right question to ask is not is this company a great company? If it’s a growth stock, of course it’s a great company. The question is, how much good news is there in the future for this business that isn’t already in the consensus opinion and already in the current price?

Is there more likely to be downside surprise growth that is less extravagant than expected or upside surprise where lofty expectations are actually exceeded? Amazon is a beautiful example of the case where lofty expectations have been exceeded again and again and again. And at some point, they won’t be, but who knows when. It’s a brilliantly run company with a brilliant product that is disrupting vast swathes of industry.

Kudos to Bezos and his team but the price of the stock reflects an expectation that the growth of the last decade will a persist in the next decade and that’s a little dangerous.

RITHOLTZ: So, you guys actually received a patent for this methodology of selecting securities and creating indexes? Why a patent? What does that do for the firm? It’s really kind of fascinating to see a financial methodology actually awarded a patent.
ARNOTT: Well, method patents are not new. They’ve been around for decades. Early days of patents that had to be something you could hold in your hand to be patented. But overtime, with the advent of computers and so forth, the notion of method patents applied to software methods, computer software methods, even business methods, if they were truly unique, truly different and truly disruptive to an industry, why shouldn’t it be patented?

Now, the issue that I think bears mention is we could be in the business of product innovation or in the business of patent litigation, which expertise do we have the former not the latter? So, I view the patents really as a stake in the ground to say to the financial services community, hey, this is our idea. Please respect it. Please license from us at modest fees. If you want to use this idea, work around the patent if you want to explore something similar but different. Competition is a great thing.

And what we found is the financial services community is a whole lot more honest and has more integrity than its reputation, a few bad eggs in financial services community tarnished the reputation of the whole community. So, what we found is that there’d been a handful of cases where somebody just took the idea and ran with it and the vast majority of folks in the financial services community, if they like the idea, they’ll come to us and say we’d like to license it.

And if they don’t like the idea, they don’t have to use it. So, the patent is not so much a basis for going after people. It is a basis for saying, hey, please respect our space.

RITHOLTZ: Speaking for credit for respecting intellectual property, for a long time, I’ve heard you credited with creating the phrase smart beta but you’ve described that as more something you’ve popularized and created, give us a quick explanation of that.

ARNOTT: Sure. There’s a consulting firm that works with some of the largest pension funds in the world called Towers Watson. Their London office coined the expression smart beta and the idea was not that cap-weighted index funds were stupid beta. The idea was that the cap-weighted index funds were a neutral form of beta. They called bulk data.

And the stupid beta is those who chased fads and load up just on whatever has gone up the most. And the phrase smart beta was attached initially just to strategies that broke the link with price, that would trim a stock if its price went up and all else remained unchanged.
And so, that included equal weighting, equal weighting is about as simple a strategy as you can imagine. How could it be smart? Well, it's smart because it has embedded rebalancing although it does have a profound small-cap tilt that makes it the less liquid and more expensive to trade.

Fundamental index was the inspiration for the term smart beta. But I never invented the term, I liked it. I thought that's a clever way to label it. And then pretty soon, everybody under the sun was saying we do smart beta. You had index calculators saying, hey, our growth and value indexes are both smart beta. No. They're both tied to the price of the stock, they're still cap weighted.

You had factor investors saying our value factor is smart beta. Well, that's true because it does counter trade our momentum factor is smart beta. No. That chases whatever's gone up the most.

Our quality factor is smart beta. No. That's going to load up on whatever is expensive also. So, you had lots of organizations, embrace the phrase because the phrase itself sells. It helps selling product.

So, I like the expression smart beta. But I like its original definition and if smart beta is applied to everything under the sun, smart ideas and stupid ideas and the term ceases to mean anything and I think that's where we are now.

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RITHOLTZ: Rob, you wrote a really fascinating piece with your team titled “Big Market Delusions: Electric Vehicles. I want to start with your definition of, quote, “big market delusion,” that's when all the firms in an evolving industry rise together even though their competitors and ultimately some will win and some will lose, why does it not make sense for investors to just own all of the basket of everybody in that space and eventually the market will self-correct the winners they'll outweigh the losers.

ARNOTT: Well, that is the basic definition of diversification and it makes sense unless all of the firms in the industry are priced as if they will be outlier winners because they won’t. If a company is priced as if it will achieve stupendous success and it achieves stupendous success, wonderful. You did fine. You didn’t get hurt by that.
If five companies are all priced as if they’re going to be stupendous successes, and you know that only one or two of them will, then you’ve just bought a basket that collectively is destined to perform badly.

The guy who coined the term big market delusion is Brad Cornell, past professor at UCLA and at Caltech. And it’s an idea that’s been around but it’s a great term to capture the concept. Back at the peak of the tech bubble, there were several of us. Me, Cliff Asness and probably dozens of others who pointed out that not all the tech companies will win and they’re all priced as if they will all win. So, as a segment, they were collectively extravagantly overpriced. You can even have it on the other side, an anti-bubble like at the trough of the financial crisis, financial services companies were all priced based on the perceived risk of bankruptcy.

And so, they were priced as a call option on future survival. And yet, with each company that failed, that went out of business the landscape was now cleared for the others to earn outsized profits and the subsequent economic rebound. So, big market delusion can play out in both directions.

We singled out electric vehicles because at their peak, during this last quarter, Tesla was priced at 34 times its annual run rate sales. Now, there’s eight companies around the world that specialize in electric vehicles.

Tesla was the second cheapest of the eight in terms of measured market value to prior year revenues, 34 times sales was second cheapest on the list. The others were ranged from — the others ranged from about 20 times sales to literally 10,000 times sales.

So, when you have those kinds of valuations, the winners might — might be worth their valuations but the losers most assuredly won’t. And that’s the nature big market delusion.

I have no idea if Tesla will be worth its current price. I very much doubt it, but I have absolute confidence that the collective EV market is not worth its current price.

RITHOLTZ: Well, I know they’ve had a fantastic run ending the — in the research piece, you used January 31st of this year to show how far all of these companies have — have come. Are they remotely like — I’m thinking of the old days of biotech where it was impossible to come up with a valuation because it was so binary, you would end up with, hey, either this company develops a molecule that does what it’s supposed to and then becomes a stupendous success or it doesn’t and it’s a zero or can’t — should we be looking at these EV
companies the same way? Either they're going to put out a successful car and that's what jump starts them or they're just expensive R&D shops for now and perhaps might be worth nothing?

ARNOTT: Well, the correct way to do the kind of analysis you're talking about is if this company produces a disruptive product that massively changes the industry, what's it going to be worth and what are the odds that this will happen with this company is the dominant winner?

The missing piece in a market — big market delusion is that latter piece if all of them are priced as if they have the potential to be massive successes, then you have a problem.

And that's — that's the issue we're dealing with. Tesla is its current valuation to hire as it did in bubble territory. One of the things that I think is interesting is as everyone (inaudible) 0:28:25.7 the word bubble, as if it has some clear meaning and it doesn't.

Usually, it's used in retrospect after a bubble has burst. So, we came up with a definition back in 2018 that we think can be used in real time and that definition is very simple. If you're using a discounted cash flow model, you would have to make implausible assumptions about future growth to justify the current price and second part of the definition just as important, the marginal buyer has no interest in valuation models.

Let's take Tesla as an example. We did a piece on Tesla last December as it was on its way into the S&P and we had done an analysis where we assumed let's say Tesla's book of business, its sales grow 50 a year for the next 10 years. Now, how plausible is that?

Well, Amazon, the big winner of the 2010s grew 26 percent a year over the decade ended 2020, 26 percent a year, that's enough to make a company 11 times as large in just 10 years.

Fifty percent a year makes a company 55 times as large. So, tacitly, we were assuming that a Tesla would be five times as successful as Amazon over the coming decade versus Amazon over the last decade. All right. That's a pretty darned extravagant assumption.

We then said, let us further assume that Tesla is — has an after-tax profit margin 10 years from now that is — that matches the highest after-tax profit margin of any automaker in the world in the last decade. Well, there was one year when Toyota hit a 10 percent after-tax profit margin.
So, let assume 10 percent gross profit margin. Well, that’s pretty good profits. If you discounted that back to current prices, you could justify a price of $430. The peak was twice bad.

So, that’s an example of using a definition of bubble to test it in real time. Now, can Tesla wind up using other markets to justify the current price? Perhaps. But you’re really dealing with some pretty extravagant assumptions.

And the point of big market delusion wasn’t that Tesla is a bubble poised to crash, I do think Tesla’s an extravagantly overpriced company that investors will be very lucky to have a positive return over the next 10-20 years, very lucky indeed.

But the point a big market delusion is if you look at the electric vehicle industry in aggregate, it’s worth about 80 percent as much of all other vehicle makers combined. And by the way, over half of all electric vehicles are made by those other existing players who make conventional cars and electric cars.

So, the EV specialists comprise less than half of the EV market and have total valuation very nearly that of companies that collectively produce nearly a hundred times as many vehicles.

ARNOTT: A hundred times as many vehicles. What’s so fascinating about that is how, after really taking their time, the traditional internal combustion engine car manufacturers have really ramped up their EV game. I had a Ford Mustang for a week I got to play with, really a very nice, very well-made car, good-looking very high quality, surprisingly high quality, and in many ways, way superior to not the software of Tesla, just the physical vehicle.

The Volkswagen ID.4 is getting really good reviews out were — and that’s before we start talking about what’s coming out of Mercedes and Audi. Audi has run of RS cars that are very competitive, the same with the Porsche Taycan Turbo as fast as cars that cost 10 times as much.

So, I know the EV manufacturers are all battling amongst themselves, but there’s a really strong case to be made that the future of electric vehicles is coming from the internal combustion group.

ARNOTT: I think that’s exactly right. I think that’s exactly right. When Volkswagen or Toyota decide, well, Toyota’s been a pioneer in hybrid technology which by definition means they’ve been a pioneer in electric vehicle technology, for longer than Tesla’s been in existence. So, nobody’s going to deny that Tesla has been a massive disruptor, that Tesla has big head start, and that Tesla has surprisingly good product for a newbie automaker.
But when Toyota decides to spend more on electric vehicle innovation than Tesla could plausibly take in as gross revenues over the coming three to five years, and to do that every year, OK, Tesla’s going to have some serious competition.

So, the whole notion of big market delusion is that people look at disruptors and say these disruptors have the future in their sites, they know what’s coming, their positioned for it beautifully, and they overlook the fact that disruptors get disrupted. It happens again and again and again.

RITHOLTZ: There’s no doubt Tesla has a lead in things like over the air updates and autonomous driving and the supercharging network, but you already see companies like Lucid which their new vehicle, the Air, is coming out later this year, much longer range, much smaller electric motor. It’s a mid-sized car on the outside, and in the inside, it’s a full-size vehicle because they were able to miniaturize so many components. They really brought a lot of impressive technology to the game.

Disrupting the disruptors. What is history tell us that’s like, so you mentioned phones, what about other things like PCs or televisions or railroads? Is that historically consistent? The disruptive technologies themselves eventually gets disrupted?

ARNOTT: That happens again and again in industry after industry. It’s hard to — it’s hard to come up with any industry where the disruptors weren’t ultimately displaced by new disruptors. I mean how many search engines did Google displaced in its rise to dominance of the search engine space? I read one study that said there were 26 search engines that came and went with Google as the ultimate survivor.

Will somebody disrupt Google? Who knows? Is it priced to allow for the possibility that a disruptor will knock them from their perch? No, it’s priced for the expectation that that can’t possibly happen. And it could happen. This is — this is the Achilles’ heel of growth and momentum investing that disruptors to get disrupted.

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RITHOLTZ: I recall a couple years ago, you had done a study about the additions and deletions to various indexes and it turns out, especially the S&P 500, the companies that get added underperformed the companies they replace. And in Tesla’s case, that would be apartment investment and management, you guys are forecasting that this is going to outperform Tesla over the next one, five, 10 years? What do those numbers look like historically for additions and deletions?

ARNOTT: Well, just to be clear we aren’t forecasting that that Tesla will underperform AIV by 2,000 basis points. We’re observing that historically, that’s been the norm. And so, that’s a little bit different. But the norm is that the companies that are added to the S&P 500, underperformed by about two percent in the subsequent 12 months after they’re added.

Companies that are added and/or already in the top 100 by the time they are added underperform by about seven percent over the coming year. No company other than Tesla’s ever been added which ranked in the top 10, the day it was added. And so, one would assume extrapolating from history that its performance in the first year would be expected to be negative to an extent that’s larger than those historic norms.

The companies that are dropped on the other hand, usually are small thinly traded illiquid and they just get clobbered as they get removed but their underlying fundamentals usually are mediocre, that’s why they’re dropped. Fully reflected in the price before they’re dropped and bludgeoned down to unreasonable levels on the way out. 

And the result is the companies that are dropped from the S&P, and here we’re excluding corporate actions, a company that’s dropped from the S&P because it doesn’t exist anymore doesn’t count. But discretionary deletions like apartment investment and management on average historically, beats the S&P by over 2000 basis points in the first year after they’re deleted.

So, that would suggest to us. But based on history, apartment investment and management would be expected to beat Tesla by maybe 30 percentage points in the first year after the change was made. Tesla’s kind of was kind of a special case because everyone knew that S&P was going to have to add Tesla and the investment committee of S&P just basically said, hey we’ve got a rule. If you don’t have profits for the last four quarters, we’re not going to add you.
And so, in March of 2020, I remember seeing speculation in the media that if the first quarter was profitable, Tesla would finally have four consecutive positive quarters and the S&P would have no choice but to add them. And that set Tesla on a tear.

So, Tesla was up, I think, the number was 600 percent or 700 percent from its March lows until the decision was announced in November to add them and then it up another 50 percent or more from the announcement date to the actual inclusion in the index, just astounding numbers because Tesla was a big company, big market cap company.

And so the addition of the S&P meant that the market — the index funds would have to buy upwards of $200 billion worth of the stock on that same day. And of course, it’s not that anyone didn’t anticipate that, hedge funds would load up on it in anticipation of flipping it to the index funds. And of course, they did.

So, additions and deletions to indexes have their own special characteristics and are very much disrupted. I continue to be amazed that academia used to the notion that markets are efficient.

RITHOLTZ: Right. Has anyone thought to put a long/short fund together of these additions and deletions? It sounds like that’s a potential alpha generator.

ARNOTT: I think it’s a potential Alpha generator it’s going to be a very niche-oriented strategy because let’s say there’s — let’s say there’s 20 changes in the index in a given year, you’re going to go long 20 very illiquid stocks just before they’re dropped. In short, 20 very liquid, very popular stocks, just as they get at it.

So, you’re going to wind up having a big short on large-cap stocks and the big long on small-cap stocks, a big short on growth stocks, a big long on value stocks, and a big short on highly liquid stocks, and big long on highly illiquid stocks in a lumpy concentrated portfolio.

So, I think as part of a broad strategy, it would be a fun thing to put together. As a standalone strategy, I think it would have a little too much risk for the taste of most investors.

RITHOLTZ: To say the least. So, let’s talk a little bit about value. You wrote an interesting piece with your team titled “Reports of Values Death May Be Greatly Exaggerated.” Tell us about why value ain’t dead yet.
ARNOTT: Well, whenever anything in the finance world is called dead, chances are it’s — it's about come back to life. However, I would say that we’ve been hearing reports of values death for three or four years now. And so, it sure took a long time to begin its recovery.

The narrative is growth stocks are better, growth have better growth and better profit margins than they used to. Value stocks are more disrupted and disruptors are getting better and faster at disrupting and just demolishing vast laws of business. And so, values really had its day and is not coming back.

Well, why would value fail? Again, the narrative fills in the details. One of the core engines for the value factor is migration. A company that in the growth segment falls out of favor, tumbles and valuation multiples pulling down the performance of the growth portfolio and then it’s kicked out and replaced with a new high flyer.

A company is on the value side, turns out not to be facing a severe headwinds as people feared, so it's valuation multiple soar and then it's replaced with a new deeply unloved value company. So, so you get this constant rotation for growth underperforming out for value, outperform and out, and that's the dominant engine for the value factor.

It's largely offset, but not entirely offset by the main profit engine for growth which is the companies are growing faster. They're more profitable. They're better companies, of course they are, that's why they have the higher multiples. And so, if in an efficient market the benefit of growth should pretty much exactly offset the benefits for value from its migration, from its rotation.

Now, the narrative is that that rotation is slowing and the difference in quality between growth and value stocks has widened. There’s truth in that narrative. There’s truth in most narratives.

The migration has been slowing, but not by much. The differential and profit margins for growth versus value has widened but not by much. And so, one of the shocking findings was that during the worst period for value investing in history, a period of time when if you’re using price-to-book to define value, value underperform growth by 59 percentage points over a 13 year span, just horrific underperformance.

How much of that came from value falling out of favor and becoming cheaper relative to growth? Well, it turns out, well over 100 percent of the underperformance was value getting cheaper, not value companies
underperforming. So, what we found was that the relative cheapness of value went from being one fourth as expensive value — as growth to one-twelfth as expensive in that 13-year span.

That means that value cheapness fell by 67 percent while its performance fell by 59 percent. OK. That sounds like a subtle nuance. But what it means is that if the relative valuation hadn’t moved, value would have beat growth again in the last 13 years.

And again, in the last three years, during the really dreadful meltdown for value. If you’ve got a stock that has fallen by 60 — 50 percent or 60 percent but it’s P/E ratio has fallen by 60 percent or 70 percent, do you look at that and say get me out of here, I can’t stand the pain or do you look at that and say, I can’t believe it’s this cheap, let me buy it. I lean towards the latter interpretation.

Now, the second nuance in the paper that I think is very important is the price-to-book is the worst measure for defining value. If you use price-earnings ratios, the peak wasn’t back in 2007. The peak was in 2014. If you use price to sales, it was 2017.

If you use fundamental index to cap weight, our strategy, it was 2017. It makes a big difference between whether you’ve got a 13-1/2 your dry spell were value is underperforming and a three-and-a-half-year dry spell of the former is really hard to stay the course, the letter is less so.

So, I look at price-to-book as a terrible measure and we, in fact, in that same paper dive in to that and show that price-to-book, that book value itself misses all the intangibles. We’ve heard — we’ve all heard the cliché that our assets go up and down in the elevator every day. Well, that is true of bigger and bigger loss (ph) of the U.S. economy or the world economy then used to be the case.

So, we found that intangibles were about 30 percent as large as tangible book value 50 years ago. And now, it’s 100 percent as large and book value double, literally double if you include intangibles.

We also did a test and found that if you use price-to-book value were you adjust the book value for intangibles, firstly, the performance of the price to book value factor is twice as good over that last 57 years as it was without adjusting for intangibles.

And again, the peak was 2014, not 2007. So, it works much better if you take account of intangibles. But price-to-book is not the only measure. It’s not even by a long shot the best measure.
RITHOLTZ: And, Rob, when were talking about things like intangibles, we’re referring to things like patents, copyrights, processes, methodologies, things that just don’t show up in the traditional, hey, here’s our factories, here’s our headquarters, those sort of measures of book value.

ARNOTT: That’s exactly right.

RITHOLTZ: Quite interesting. So, for value to start generating that value premium again, what has to happen? Do we need to see mean reversion against growth? Do rates have to tick up or do we need to see a recession? What’s going to be the thing that could kick off value reclaiming its premium?

ARNOTT: Well, we’ve already had that recession last year and it was a doozy. The narrative was, and again narratives are always based on some measure of fact, the problem with narratives in investing is that they move prices much too far. The narrative was that the growth companies are beautifully positioned for a COVID world and the post-COVID. True.

The narrative was value stocks have much higher risk bankruptcy. And in the face of the of the COVID crisis, especially the business lockdowns, is going to be sweeping bankruptcies. True.

Now, what was overlooked was almost all those bankruptcies were in companies that were too small to be publicly traded. So, there were literally millions of companies that went out of business last year. But shockingly few of the 30 million businesses in the U.S., only 3,500 are publicly traded. And of those 3,500 let’s say 2,500 or value stocks shockingly few, went out of business as a consequence of the lockdowns.

So, all you needed was for people to realize, gee, these value companies didn’t fail, maybe I should now start pricing it not based on bankruptcy bit risk, but based on its likely future P&L.A. And all of a sudden, the turn happened at the beginning of September just when people were starting to realize, hey, vaccines are about to be rolled out, this is looking promising as an end to the crisis and a lot of these value companies are just not going to go bust. So, maybe I should reprice them for their future success.

RITHOLTZ: And we’ve seen that in energy stocks, in cycicals, and bank stocks, it — that rotation, away from growth, a lot of which were work from home stocks, and towards traditional economic early cycle recovery stocks, that seems to be really moving along unless I’m — I’m seeing it wrong. What are your thoughts on that?
ARNOTT: I think that's exactly right. We did a test looking at drawdowns when value underperformance growth and it ranges from you know what one month value underperformance growth by half a percent. So, that's a half percent drawdown from the last peak.

And 13 years underperforms by 59 percentage points. We asked the question, historically, is there a link between the magnitude of the drawdown and the magnitude of values outperformance in the subsequent two years. And we found that when — when value has underperformed by more than 3,000 basis points, it has no examples historically of failing to outperform over the next two years with an average outcome of between 4,000 and 5,000 basis points of outperformance.

So, when you see the nature of that particular relationship, extrapolating to the current size of the drawdown and extrapolating is always dangerous. But if past this prologue and if extrapolating that relationship to today's unprecedented drawdown works, then value would be expected to outperform growth by over 100 percentage points over the next two years. If it's a third of that, I'll be thrilled.

RITHOLTZ: To say the very least.

VOICEOVER: According to do OnePoll research shared by Paycom, employees are so frustrated with the tech they used at work, that 67 percent said they're willing to take a pay cut for something better. Ouch. Only Paycom’s comprehensive technology automates their HR and payroll tasks in a single software that's easy to use and for employers automatically measures the ROI that results. Learn how the right HR tech can help by visiting paycom.com/frustrations. That's paycom.com/frustrations.

RITHOLTZ: Let's talk a little bit yields and inflation. We've been hearing a lot of chatter about yields starting to take up higher from admittedly low historical levels. Does this have any meaning for value stocks or the market as a whole? What — what should we take away about rising yields?

ARNOTT: Well, firstly, it bears mention that yields are not well correlated with the stock market. The stock market has — stocks and bonds tend to have a negative correlation except during inflationary times when inflation is rising or is materially elevated.

And so, what — what we find is that it's a poor linkage. But again, the narrative is low rates justify high valuation multiples and justify a bigger spread between growth and value than historic norms because growth stocks are going to grow
for a long time and if you're discounting at a very low rate, that future growth is more valuable than it was at a high rate.

OK. It makes intuitive sense. Going back over long periods of time in history, you still — you'd find lots of anomalies. OK. In the early ’50s, when interest rates were not too much above current levels, what was the average valuation multiples for the market? It was a third of what it is today. What was the average spread between growth and value? It was a fraction of what it is today.

So, and when you look at non-U.S. markets European and Japanese markets in particular, where rates are zero, you find valuations are not as elevated as in the U.S. If the rates are even lower, why not, that the spread between growth and value is not as wide as the U.S. If the rates are lower, why not?

But a narrative can drive markets. And so, the rising interest rates, think has a lot to do with the recent underperformance of things, stocks, and the recent outperformance of value stocks. Basically, the rumor that this might happen becomes a self-fulfilling prophecy on a short-term basis. On a long-term, basis I don’t think the linkage is all that useful or interesting.

RITHOLTZ: And assume the same goes for inflation and inflation expectations or does that result in a different outcome?

ARNOTT: That’s a little bit different. Rising inflation clearly does horrible things for bonds and also increases investors’ risk aversion inequities. So, when stocks are expensive, rising inflation has a nasty impact. So, the real question is, is the current increasing rate of inflation a temporary consequence of deflationary pressures 12 months ago and a snapback in pricing over the last 12 months or is it a sustained consequence of today’s central bank and fiscal policies around the world which looked all the world, to me, like a full wholehearted embrace of modern monetary theory.

RITHOLTZ: So, let me ask the question now, just as far as the eye can see, it doesn’t matter if it’s a Democrat or Republican in the White House, either its tax cut and spend or tax hike and spend, but we’ve seen nothing but deficits for my entire adult life with a couple of, I think, in ’98 or ’99, we had a balanced budget for a year or so, what is — what is the rise of modern monetary theory mean for markets?

ARNOTT: Well, modern monetary theory is a little bit like Keynesianism on steroid. Keynes basically said, hey, you can spend more money than you’re taking it in taxes than you need to do during an economic downturn, then you
cut your deficit spending when the economy recovers because the money — the spending isn’t as needed and you can run a surplus to pay back the increase in the debt.

Well, that’s gone right out of the window. I think Keynes would be horrified at current economic theory and practice. Modern monetary theory takes it another step basically saying central bank can print whatever money, the policy it really wants to spend as long as that spending goes to increase employment and therefore to increase future revenues to pay this back.

OK. As you said, it’s not sensitive to who’s in the White House. I joked last year in the run-up to the election, when people would ask about the election, I said, look, we have an incredibly important choice ahead of us. We have a choice between somebody who will run $2 trillion deficit as far as the eye can see and somebody who will run $3 trillion deficits as far as the eye can see.

I may have heard on the downside on that latter one. But ...

RITHOLTZ: Yes. To say ...

ARNOTT: In any event ...

RITHOLTZ: To say the last.

ARNOTT: Yes. In any event, the usual immediate question was yes, but who is who to which I would reply, exactly.

RITHOLTZ: That’s right. So ...

ARNOTT: And as you say ...

RITHOLTZ: So, let’s ...

ARNOTT: Both parties have embraced MMT.

RITHOLTZ: Yes. It certainly seems that way. Let’s stick with the topic of recessions and recoveries. I am a big fan of Campbell Harvey, an academic, who is now a part of the team at Research Affiliates went — when did Campbell Harvey joined RAFI and what does he do? I’m a huge fan of his work.

ARNOTT: I’m a huge fan too. We kept inviting him to join our advisory panel which is to meet once a year where we would gather notable academics, usually including a couple of Nobel laureates, together to pose big picture
questions not, where should people invest today or what strategies and product should we look at developing tomorrow but how’s the world going to change in the coming 10 years?

And he joined our advisory panel two or three times but he was always committed to work for the folks that Man Group. And as soon as PIMCO recruited Manny Roman to become their new CEO, it turns out Manny had not only hired Cam Harvey, he also went to university with Cam Harvey and they were very good friends.

So, with the help of Manny, we went to Cam and said, hey, why don’t you join us in a more formal relationship? And so, we’re his dominant consulting relationship. We have access to a certain portion of his time. He is the guiding light for our R&D. He’s already led some pathbreaking work in what’s called pairs trading.

And when you mention that you’re a big fan of his work, one of the things I find fascinating is unlike most academics, his work is squarely focused on what’s practical, what’s useful. And in modern academic finance, practical and useful are two of the most damning things you can say about somebody’s work. If it’s practical, my goodness what use are they in academia?

Well, I love that that about Cam. He’s a tremendous innovator, a deep thinker, and has been an enormously important addition to our team.

RITHOLTZ: Let me ask about another one of your team members, your colleague, Alex Pickard, who wrote a fascinating piece about bitcoin and I thought this was really intriguing. So many people are sort of dancing around bitcoin, given the run-up there. They’re afraid to get in the way of it.

Pickard wrote, quote, “bitcoin is not a capital asset or a store of value. The price of BTC is nearly certainly a bubble and likely manipulated.” What are your thoughts on that?

ARNOTT: Well, firstly, you’re asking the wrong guy. Bitcoin, how do you value using discounted cash flow? How do you value something that has no cash flow and never will?

RITHOLTZ: Right.

ARNOTT: In that sense, it’s no different from a dollar bill. A dollar bill has a value but discounted cash flow, it doesn’t have any. So, the price a bitcoin in the price of the U.S. dollar is exactly what the consensus in the marketplace thinks it ought to be worth.
In the case of the dollar, that moves slowly and sadly inexorably in the
direction of worth less and less. It’s worth on the order of 100, but it was worse —
— worse worth a century ago, in terms of purchasing power. Bitcoin seems to
move the opposite direction. But in both cases, there is no — there is no
measurable value. There is no way to say this is worth that amount.

So, when Alex says bitcoin is near certainly a bubble and likely manipulated,
my response to that is, yes, I agree. But the reason I say I’m the wrong person to
ask is that unlike Alex, I never bought much in the way of bitcoin. I think it was
back in 2015, I bought one bitcoin, just as an item of curiosity to watch it and I
missed that entire boat.

I do think bitcoin is a speculative asset. People talk about it as a replacement
for fiat currency because the supply is strictly limited and is capped at a level
that is not that much larger than today’s outstanding float. And they’re right,
but a fiat currency is used as a mechanism for exchange of goods and services
and a store of value across time too. And it can’t be a store of value if its price
fall (ph) goes around.

RITHOLTZ: Right. Right.

ARNOTT: That’s a problem with bitcoin. It can’t be a means of transacting,
buying, and selling goods and services because transacting in bitcoin has very
large transaction costs. So, it can’t be a replacement for fiat currency. And as
such, I wouldn’t own it but hey, my son, a year and a half ago, bought a — put
his money half in Tesla and a half in bitcoin and at the end of last year, sent me
his statement which was up 380 percent and asked me how’d you do, dad?

So, I ...

RITHOLTZ: That’s very interesting.

ARNOTT: ... have to admit of having been dead wrong on both for a while now.

RITHOLTZ: That’s pretty funny. Let’s talk about ESG for a moment. Some people
have been making the case ESG, environmental, social, and governmental styles
of investing are a factor. You make the case that it’s more of a seam benefactor.
Please explain that. What’s the difference?

ARNOTT: Sure. Sure. A theme — a factor is something that can be clearly
defined where the stocks on the one side of the factor and the stocks on the
other side of the factor of strongly correlate with members of that same
cohorts. So, growth versus value. Growth stocks correlate with one another,
value stocks correlate with one another, and the difference in performance has historically favored value and does so for a reason that you can reasonably explain.

ESG, one of my colleagues did a test where he looked at a half dozen different vendors of ESG product at their definitions of what is an ESG, how an ESG score is calculated for each company, and found that the correlation between ESG definition is shockingly low, not much above zero.

So, my ESG and your ESG are likely to be very, very different. It's hard to create a factor when that's the case.

RITHOLTZ: Right. Makes a lot of sense.

ARNOTT: The other element that I think is also interesting and a little disturbing is it used to be called SRI ...

RITHOLTZ: Socially responsible investing.

ARNOTT: Socially responsible investing.

RITHOLTZ: Right.

ARNOTT: And back then, the narrative was you ought to invest in ways that align with your values, with your principles, and you can do so with a portfolio that's going to perform reasonably in line with the broad market.

RITHOLTZ: Right.

ARNOTT: Don't expect to win with SRI investing but don't expect to give up much either. That narrative has shifted. Now, it is with ESG investing, you can invest in line with your principles and as more and more people shift over to ESG investing, you get a tailwind and you will outperform as well as aligning your investments with your principles. You do well by doing good, in fact, you do better than the market.

Well, that narrative offends me because anytime you narrow your opportunity set, in theory you shouldn't be boosting your performance, you should be degrading it and you'd be boosting your performance only if ESG stocks were inherently superior.

I have no problem with ESG. I have a problem with marketing. It is a superior source of higher investment performance. And so, I look at ESG as a major trend in the marketplace, one that must not be ignored, one that indeed we
have offered product to help people invest in ESG in a fundamental index fashion that can beat the market because of fundamental index, not because of ESG.

And we’re pretty proud of that. But ESG stocks are trading at a large premium.

RITHOLTZ: That raises a really interesting question and you’ve touched on this in three separate groups of assets. One was domestically higher-priced U.S. stocks are trading pretty well especially compared to Europe and Japan. Bitcoin, there remains a firm bid beneath that, that's doing well. And now ESG as a potential tailwind was the phrase you used which really raises the question for all of these tradable assets, is it simply a function of demand and supply? If enough people want to buy something regardless of valuation, arguably, we’ve seen elevated PE multiples in the United States especially if we use the Shiller Cape Index since the early ’90s.

ARNOTT: Yes.

RITHOLTZ: At what point is it strictly more dollars chasing, fewer shares or coins and that relative imbalance causes prices to go higher and higher?

ARNOTT: Well, what you’ve described is the nature of a bubble. Bubbles persist longer and can go further than anyone could possibly imagine. My favorite example is Zimbabwe stocks which during the summer of 2008, when the currency was first going into freefall, let's split the summary into the first half and second half of the summer.

First half of the summer, the currency fell — fell tenfold in purchasing power, in just six weeks. And the Zimbabwe stock market grows 500-fold, not 500 percent, 500-fold, 500 times the price. Adjusted for the currency, it rose 50-fold, meaning that if you thought this market’s overpriced and the currency is headed for a cliff and get me the heck out of there, in fact, I’m going to make a modest short position, a two percent short position. Those six weeks would have wiped you out. You would be bankrupt because the two percent short position went up 50-fold.

OK. Well, that's daunting. What happened in the next eight weeks, the currency fell another hundredfold and the stock market basically went to zero. So, you were right over the next quarter, but bankrupt.

So, be very careful when dealing with bubble assets. Do not bet against them in any material way, but that doesn’t mean you necessarily want to hold them.

RITHOLTZ: Very interesting.
VOICEOVER: The only way to get out of this pandemic is mass vaccination. But the problem is many Americans just don’t trust vaccines. This skepticism didn’t start with roll vaccines or in March 2020 or even with Donald Trump. This moment has been brewing for decades.

I’m Kristen V. Brown, the host of Doubt, a new series from Bloomberg Prognosis. In this podcast, well trace the rise of vaccine skepticism in America to show how we got here and where we’re going. Doubt launches on March 23rd. Subscribe to Prognosis today, on Apple podcast, Spotify, or wherever you get your podcasts.

RITHOLTZ: I know that you’re fan of motorcycles and a couple years ago, they were described as underpowered toys, but there was a really interesting and Hanna Elliott column in Bloomberg about the EV market for motorcycles is surging with exciting new possibilities including some powerful bikes. What you driving these days? What are you riding these days? And would you ever consider an electric bike?

ARNOTT: Well, I absolutely would consider an electric bike. The problem with electric bikes today and this isn’t problem with cars, is the weight. I mean, if you — if you have a 1000-pound battery in a car, so what? If you have 100-pound battery on a motorcycle, that’s a big deal.

RITHOLTZ: Right.

ARNOTT: And so, it disrupts the handling and the range is problematic. In other words, I think electric cars are already at a point where they are practicable and useful for anyone other than long-distance driving. And with motorcycles, that’s just not true.

I’m old enough at this stage that I don’t really ride that much. I’ve been in Florida all of this year to date, the last time I was out of Florida was last October. And I won’t ride in Florida. So, I haven’t ridden this year yet.

But the bottom line is, so electric vehicles are here to stay, electric motorcycles are coming. It’s just that the technology isn’t there yet. That said, they are blindly fast.

RITHOLTZ: I was looking at the Arc Sector and that thing is a bolt of lightning, literally.

ARNOTT: Yes.
RITHOLTZ: It’s quite fascinating. So, let me ask you a different automobile question. I’m not a car collector, I’m a driver. I don’t understand people who buy sneakers and don’t wear them. Sneakers or for wearing. Cars a for driving.

That said, I’m kind of fascinated with the thought of all of these collectible internal combustion engine vehicles, what happens to that market in 30 or 50 years, will there still be people who can repair them, rebuild them, renovate them or is this market you know on a — on a short timeline?

ARNOTT: Well, short answer would be, of course, there will be people who can repair them. There’s a market for anything that any — that have enough customers that are interested. And I do think 20 years from now, electric vehicles will utterly dominate the roads and that self-driven cars, cars that a human being drives, will probably be illegal because we’d be a — we’d be a threat. Autonomous cars are going to be electric. Can you imagine an autonomous going to gas station and saying fill her up ...

RITHOLTZ: Right.

ARNOTT: ... versus just going to a recharging station and plugging itself in?

RITHOLTZ: Right.

ARNOTT: The latter is very easy. So, with autonomous cars, you’re going to have electric vehicles utterly dominant. That means that today’s collectible cars, almost all of them conventionally powered are going to be an anachronism and have no practical value. They’ll have collector value and there will be races where people take Ferraris and whatnot.

What I think that means is if you got a Chevy, it’s going to be pretty, pretty much worthless in 10-20 years. If you got a Ferrari, it will have collector value. And, OK, that’s the nature of a changing marketplace.

RITHOLTZ: Quite interesting. What are you streaming these days? Tell us favorite Netflix or Amazon Prime show or whatever podcast you might be enjoying?

ARNOTT: Sure. My wife is Russian, and so one of the things we love to do is find an obscure Russian film or an obscure Russian TV series where she watches in the original language and I read the subtitles. There’s a Russian crime series from 2015 called ‘The Method” which is about a fellow who solves crimes using all kinds of illegal methods to find and take — take down the bad guys and a woman who becomes more or less his apprentice. And ultimately, his health is not very good. So, she really is his perspective replacement.
And it ran for, I think, two seasons and was great fun to binge watch. It’s called “The Method.” Fantastic actress. She also appeared in a later TV series called “Better Than Us” in which she plays — played the role of a robot that was able to have emotions and able to think and feel, and therefore, better than us.

So, anyway, two wonderful Russian series.

RITHOLTZ: Very interesting. Tell us about your mentors, who helped to shape your career?

ARNOTT: Gosh. There were so many of them. Jack Bogle was a mentor. Harry Markowitz was and still is a mentor. Peter Bernstein was a giant in shaping who I am and how I think about investing. Bill Sharpe. The list goes on and on.

Basically, I look to anyone, and I still do this, I think it’s fair to say I still have mentors. But I look to anyone who has insights that are interesting that I can learn from and who has ways of approaching the business that I can emulate and seek to build on.

RITHOLTZ: Very interesting. Let’s talk about books. What are some of your favorites and what are you reading right now?

ARNOTT: There’s a fun book that I — I had last week called “Ten Trends that Every Smart Person Should Know.” It’s an extremely fast read. It’s extremely simple. And basically, it looks at — the narrative is, look at how many things are going wrong with the world. And this one just turns that on its head and says look at how many things are going right with the world, life expectancy, up the subsistence poverty, was something like 60 percent of the world population 30 years ago and it’s dropped from 60 percent to eight percent.

And so, it goes through a whole series of trends and basically poses the question, hey, why — why is everybody so quick to criticize how the world is? The world has its flaws, but it’s way better than it has ever been in human history.

RITHOLTZ: Very interesting.

ARNOTT: And I thought it was just a marvelous piece. Another that I love — that I finished about six or eight months ago was 1491 and 1493, two big tomes detailing how the western world looked before Columbus and how the advent of global trade in the aftermath of Columbus has reshaped the world and reshaped opportunities the world over.

Those are three really cool books that I would heartily recommend.
RITHOLTZ: Very interesting. Let’s look at some advice for a recent college grad if they were interested in a career in finance. What sort of advice would you give them?

ARNOTT: My advice would be very, very simple. Whatever you’re taught from whoever teaches it to you, ask the question, is this true? Have people tested it? And I think I could credit my career to the notion that basically, I always ask the question has somebody tested this? If there’s a bit of conventional wisdom floating around, I’d love the test it. And half the time, I find it’s absolutely correct. And half the time, I find that it’s absolutely falls.

And it’s in that latter category where something is widely believed but false, that profit opportunities can be found. So, be skeptical. Be skeptical. Ask. And if you have access to the data, test it.

RITHOLTZ: Very interesting. And our final question. What do you know about the world of investing today that you wish you knew 30 or 40 years ago when you were first getting started?

ARNOTT: Yes. That’s an easy one. Thirty or 40 years ago, I was doing that stuff, testing, conventional wisdom, often finding it to be wrong and then publishing my results and having — expecting people to say, wow, this is cool. And instead, the reaction was very, very often how dare you, how dare you challenge of what we know to be true.

And I wrote a piece in the 2000 entitled Death of the Risk Premium and about five years later met a guy at a conference and asked him things were going and he said, things are going fine. By the way, I no longer hate you. And I said, what?

He said you wrote Death of the Risk Premium. You challenged everything I believe in investing and I hated you for that, I now realized, you were right.

So, 30 years ago, I used to be really disappointed when my work angered people. Now, I just shrug it off. It’s a given. If you upend somebody’s worldview, they’re going to be angry because they’ve build their career on the basis of a premise that you just demonstrated was wrong. Of course, they’re going to be angry.

And so, I roll with criticism. I’m almost amused by criticism these days where 30 years ago it just — I was thin-skinned and it really hurt.
RITHOLTZ: Well, Rob, thank you for being so generous with your time. This has been really fascinating. We have been speaking with Rob Arnott. He is the Founder and Chairman of Research Affiliates.

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I would be remiss if I do not thank the crack staff that helps put these conversations together each week. Maru Ful (ph) is my audio engineer. Atika Valbrun is our project manager. Michael Batnick is my head of research. Michael Boyle is my producer. I’m Barry Ritholtz, you’ve been listening to Master in Business on Bloomberg Radio.

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