

Economics and Investing

The most important thing to know about economics and investing is that you have to know the first one in order to do the second one well. In 1989, Deborah Allen and I wrote *Rust to Riches* to make the case that the demise of the U.S. economy had been overstated, and that the U.S. was *not* going to be taken over by Japan Inc. as many people then believed. After a decade of restructuring their businesses for low inflation, American companies were strong and lean. Japan was headed into a deflation, which would sap their economic strength. Those who undersold American companies would pay the price.

We told business managers that the lesson of the 1980s was that they should not be so focused on the day-to-day operations inside their businesses that they forget to manage the outside of their businesses—by making sure that their companies were structured to take advantage of the massive economic changes taking place in the global economy. The same goes for investors managing public or private equity portfolios.

Changes in government policies and in technology can lead to changes in behavior that turn normal markets on their heads.

This chapter is a short summary of the most important things I have learned about economic change—and how to use them to manage a portfolio.

Growth is Good

Thirty-five years of traveling the world have convinced me that growth is the answer. Economic growth is the only reliable engine for lifting people out of poverty and improving their lives, and for providing challenging opportunities to engage young people's energies.

There are people who do not like growth. Some because they think it causes inflation. Some because they think it causes global warming. They are idiots. Growth is the greatest thing that ever happened.

Growth requires capital. Access to capital, along with people's focused productive energies, are the principal drivers of growth.

Capital comes in many forms: efficient factories, modern equipment, new technologies, high-speed communications networks, financial capital and a highly educated workforce, to name a few. All represent the stored energy of previous generations of investors, innovators, entrepreneurs, managers and workers. All make workers more productive, increase output, and provide paychecks that give people the resources to achieve their economic, personal and social goals. Incentives for creating capital and for the productive use of all forms of energy are the keys to increased growth.

As a young economist, I taught graduate and undergraduate students in macroeconomics, monetary theory, econometrics, international trade and finance. Like other academics, I taught students how to build and manipulate all the textbook models of economic behavior. I did so for three reasons. First, the models were precise and mathematically elegant, which made them both beautiful and easy to teach. Second, pub-

lishing journal articles about the models was the key to attaining the Holy Grail of the economics profession—tenure. And third, and most importantly, having never set foot in the real world, it was all I knew how to do.

Later I ventured into the real world, where I learned that the models were not up to the task of helping policy makers, business managers and investors understand change. Keeping my healthy respect for the limitations of economic models, my colleagues and I at Claremont Economics Institute (CEI) and later at Rutledge Capital developed a framework of our own to guide our thinking. That framework, of course, is a permanent work in progress. It underlies all of our work.

Stuff Matters

The first pillar of our thinking framework is also the simplest: Stuff Matters. No macroeconomic analysis is complete without accounting for people's multi-trillion dollar holdings of "Stuff." What I mean by stuff is the collection of items on our balance sheets, including tangible assets (land, office buildings, collectibles, used cars and other physical claims on future services), financial assets (stocks, bonds, bank accounts, cash and all other claims on future cash flow), and all forms of liabilities (credit card debt, mortgages, and the obligation to service and repay the national debt).

Analyzing the income statement, i.e., GDP and its components, is just not possible without accounting for all the stuff on the balance sheets. That's true simply because there is so much stuff out there. This year, in 2008, U.S. GDP will amount to just over \$14 trillion—this means that Americans will produce just over \$14 trillion worth of goods and services with their current work. But this number is nothing in comparison with asset markets. At the end of 2007, even after a credit crunch and a year of falling home prices, Americans owned nearly \$200 trillion worth of assets at market values—roughly 14 years worth of GDP. And

that does not include the value of their human capital (another \$200 trillion) or the value of the more than 700 million acres of land (another \$10 trillion or so) owned by the federal government. In all, the U.S. balance sheet likely amounts to more than 30 years worth of GDP.

Stuff matters too because the values of the individual items on our balance sheets determine our net worth and our solvency; they serve as collateral for our obligations and they influence our behavior. Asset values are set in markets based on investors' perceptions of the relative risks and after-tax returns of different assets and liabilities.

Assets are the key to understanding how policy works. Government policies that force abrupt changes in relative risks and returns of different assets and liabilities induce massive responses in desired holdings of private investors. They produce tsunamis of economic and financial change that can swamp the effects described in textbooks.

Shift Happens

Government economic policies influence our lives in many ways. Government taxes influence our paychecks, the prices of the things we spend them on, and our incentives to work, save and invest. Their biggest and most convulsive impacts on the economy, however, occur when government policies drive a wedge between the returns on some assets relative to others, or when they temporarily disrupt the flow of information transmitted by asset prices. These balance sheet effects dominate all other events in driving economic change.

In the late 1970s, for example, rising inflation artificially enhanced the returns on tangible assets, like real estate, while rising income tax rates artificially depressed the after-tax returns on financial assets. The resulting shift of investor demands drove a boom in hard asset prices and destroyed three-quarters of the real value of the stock and bond markets.

As a second example, the 1981 Reagan policies of falling inflation and falling tax rates reversed this shift by boosting financial asset returns relative to returns on tangible assets. This led to a decade of restructuring in U.S. industry, rising investment spending and a 20-year bull market in bonds and stocks.

As a third example, the 1996 Telecom Act artificially subsidized the returns of communications companies that did business by using other companies' capital, known as Competitive Local Exchange Carriers or CLECs—at the expense of the companies that provided the capital to build the networks. The resulting wedge between their respective returns on capital led to massive overinvestment in the former, a multi-trillion dollar loss of market value for the latter, and contributed to both the stock market bubble of the late 1990s and the dot-com bust that followed.

The 2003 dividend tax cut provides a fourth example. The reduction in dividend tax rates from ordinary income levels to 15% abruptly raised the after-tax return on assets paying taxable dividends relative to the after-tax returns on all other assets. This return gap caused investors to shift their portfolios toward dividend-paying assets, which drove a huge increase in stock prices and subsequently led to a wave of changes in corporate dividend policies, such as the special dividend announced by Microsoft later that year.

Shift happens internationally too. The systematic opening of China to foreign investors has exposed the gap between the high Chinese returns on capital and returns in the U.S. and Europe, leading to a massive flow of capital out of Japan, the EU and the U.S. into China, which has fueled an extended period of high Chinese growth. The high returns earned on this capital have also increased the profits of U.S.-based companies as a share of sales by more than half; today more than half the

profits of the companies in the S&P 500 are earned on sales outside the United States.

I will talk more about the economics of the balance sheet in Chapter 3.

Thermo-Economics

The principal of arbitrage lies at the heart of all economic analysis. Indeed, the statement that people engage in arbitrage may be the only positive statement that economics has to make. Arbitrage, however, is immensely powerful, and in turn is simply a restatement of the bedrock of physics: the second law of thermodynamics.

Thermodynamics says that temperature differentials cannot persist over time between objects in physical communication, i.e., within the same closed system. In physics, when two objects are brought into contact, heat flows from the hotter to the colder object as long as there remains a temperature differential. This is known as the second law of thermodynamics—the most inviolable rule in all of science. At the final point where temperatures are equal, after which point there is no further tendency for temperature to change, the system is said to be in thermal equilibrium. Physicists call it *heat death*.

All activity in life is driven by the second law of thermodynamics. It is why the chemical reactions occur in our cells. It is why sunlight leads to photosynthesis. It is why volcanoes erupt and tectonic plates shift to make earthquakes. Thermodynamics explains why temperature and pressure differentials produce weather systems that cause storms. And it explains economics, where price, wage, or return differentials lead to the arbitrage behavior that drives prices and returns together and changes the allocation of resources.

Our “Shift Happens” methodology, discussed in the previous section, is nothing more than a restatement of the second law of thermodynamics in the language of economics and finance. Unfortunately,

economists insist on analyzing what happens at the point of equilibrium. Thermodynamics, however, reminds us that nothing of interest happens at equilibrium. All change takes place *away* from equilibrium.

Thermodynamics deals with systems, not with particles. There is no thermodynamics of a particle. Recent work in far-from-equilibrium physics has led to a fuller understanding of the situations in which systems fail to adjust smoothly. These situations lead to system failures (blackouts), which help us understand recessions, depressions, currency collapses, credit-market failures and other discontinuous events in economics. Interestingly, Irving Fisher, Knut Wicksell and John Maynard Keynes studied these topics a century ago. I will discuss the implications of thermodynamics for economics and investing in Chapter 6.

Asset Allocation

Most investors spend the lion's share of their time and energy on deciding which stock or bond to hold in their portfolios. In my experience, asset allocation is much more important: how to divide a portfolio among different markets and types of securities. If you get the asset allocation right, everything else will work out. If you get it wrong, you are sunk.

Professionals pay a lot of attention to asset allocation, but individual investors often overlook it. Too bad—today, investors can implement asset allocation decisions cheaply and easily. Exchange traded funds (ETFs), which aim to reproduce the average results of investing in different countries or different sectors, allow investors and investment advisors to manage asset allocation themselves, without high fees and without high turnover. Exchange traded funds are tailor-made for placing modest bets on the economic and financial storm systems I discussed above. I use them to do so myself.

Don't look to asset allocation for entertainment; you don't change your bets very often. In my 35 years in the business, there have been

only a handful of tectonic shifts big enough and long-lasting enough to justify major asset allocation bets. One was the Carter period of rising inflation and increased tax rates—a good time to be out of stocks and bonds and into real estate. Falling inflation and lower tax rates during the Reagan years made domestic stocks and bonds the place to be. In the \$1.3 trillion Resolution Trust Corporation (RTC) property deflation of 1990-93, it would have been smart to be out of real estate. The post-1990 collapse of the Japanese stock and real estate markets was a time to be out of Japanese investments. The dot-com boom, bubble and bust was another, as was the credit crunch that followed it. The 2003 dividend tax cut, the opening of China and the mortgage crisis can also join this list of tectonic shifts big enough—and long-lasting enough—to warrant major changes in asset mix.

Pretty simple. An investor who got all these right—about one decision every five years—would be reading this book on his own private beach.

But yesterday's trends are no help for today's investor. My asset allocation bet over the next few years would be to own large-cap U.S. stocks with plenty of exposure to Asia. I will talk about why in later chapters.

Intrinsic Value

Investors own securities for one reason—they want to get paid. Stocks and bonds are simply claims on the future cash flow that the underlying assets on the company's balance sheet generate. The present value of those future free cash flow streams is the *Intrinsic Value* of the company and of its securities.

Over the past fifteen years, Deborah Allen and Paul Davis (my partners at Rutledge Research) and I have developed a set of forecasting models to estimate the intrinsic value of the U.S. stock market, its prin-

cial sectors, and individual stocks. We have used the model to identify situations in which stock prices were over- or undervalued.

Intrinsic value estimates are only as good as the estimates of the underlying business' value drivers—such as sales, price, cost, margins, tax rates, capital requirements and cost of capital—that are behind the calculations. These value drivers are strongly influenced by government policies.

From time to time, the interactions between buyers and sellers in the asset markets result in market prices that we find to be significantly above or below the intrinsic value of the securities. That's when stocks or bonds are overvalued or undervalued. Investors that consistently buy securities when they are undervalued and/or sell securities when they are overvalued will earn a higher after-tax return than other investors. It pays to do the work. I will discuss this—and other lessons I learned during my time in the private equity industry—in Chapter 5.

Intrinsic Risk

Risk does not mean volatility; risk means losing your money. That happens when a business fails to deliver the operating performance that is embodied in the price an investor paid to acquire it. We call this *Intrinsic Risk*, and we measure it by explicitly estimating the probability that the value drivers that underlie a given market price will fail to deliver the expected free cash flow stream embodied in that price.

Wall Street is crazy for betas, which equate a stock's risk with its historical volatility relative to the market. I think betas are nonsense. No serious investor worries about volatility; they worry about losing their money.

There are two fundamentally different types of risk. *Market Risk* is the risk that you build a great business, but no buyer will pay you a fair price for it. Market risk is important for short periods but not meaningful for a patient investor who does his homework.

Intrinsic risk is when your initial judgment about a company's ability to generate sustainable free cash flow is wrong. You may have overestimated revenues or sales growth, underestimated costs, failed to anticipate capital needs, or had too high an opinion of the company's franchise or management. The bottom line is that it fails to deliver the sustainable growing cash flow you had anticipated in your intrinsic value estimate.

Intrinsic risk is much more important than market risk for investors. Patience won't make intrinsic risk go away. When investments die, it is almost always intrinsic risk that killed them.

You Have to be Patient

The intrinsic value investor has two assistants to help him make money: Mr. Market and Mr. Momentum. Mr. Market is the wonderful fellow that Benjamin Graham and David Dodd wrote about over a half-century ago in their book *Security Analysis* (1934). He shows up at your door every day to give you a price at which he is happy to buy, and another price at which he would be happy to sell for every security in the market. He is quiet and sober. Most days his prices are fair—he will buy or sell a dollar of value for about one dollar. Most days the intrinsic value investor is not interested. Mr. Market is also polite; he will keep showing up every day even if you never do business with him. It's up to you.

Mr. Momentum is a different sort of guy. He tells you loudly what the smart investors are doing, and advises you to do the same while you still have time. When prices go up, he advises you to buy more. When they go down, he wants you to sell.

From time to time, Mr. Momentum pushes market prices far from their intrinsic values for long periods. This is when the intrinsic value investor makes his money.

Market prices exhibit a kind of tomcat stability. They wander away from home from time to time—sometimes a long ways away—and can

be gone for months or even years at a time. But sooner or later, they always come home.

Weather Map Investing

To me, a weather system is the best and simplest metaphor for economic change. We all know what happens when high and low pressure systems try to occupy the same space—thunder, lightning, tornadoes and hurricanes.

I think of global investing as an exercise in meteorology. My job is to identify the thermodynamic shifts—usually changes in tax rates, government spending, regulatory policies, or monetary policy—that lead to localized temperature or pressure differentials—price and return differentials—which, in turn, set up the arbitrage situations that we use to make money.

A change in zoning laws that alters cash flows, for example, creates a return differential that forces a change in the value of a piece of land. A tax law change that impacts after-tax returns leads to a return differential that forces a change in the value of a piece of capital equipment. A change in monetary policy that increases inflation increases the returns on tangible assets relative to securities, forcing a change in stock and bond prices. All can be viewed as weather systems moving across the weather map of the global economy.

I also like the weather map metaphor because it reminds me of two important facts. First, extraordinary investments, like weather systems, are all transitory phenomena. Even the best investments don't last forever.

Second, investing, like meteorology and thermodynamics, is not an exact science. It can help you to identify the storm systems that are going to make things happen. And it can tell you what things will look

like when the storm has passed and thermal equilibrium has once again been restored. But it tells you nothing about what happens in between.

There is no exact science in either physics or economics that describes the disequilibrium states where change takes place. This is important for investing because all of the money is made and lost during the disequilibrium adjustment—nobody makes or loses money in equilibrium. That's why faith in the end result and the liquidity to withstand the turbulence and chaos along the way are so important.

The global weather map gives me a hat rack where I can hang the thousands of factoids that fill the news every day, so I can boil them all down to a manageable number of themes to watch closely.

The way to make money investing is to identify a storm system that is powerful enough, and likely to be long-lasting enough, to serve as an energy source for revaluing a portfolio. Then you move capital into position to take advantage of the implied prices changes. I will discuss this further later on in this chapter, and will discuss the link between recent work on information networks, recessions and credit crunches in Chapter 7.

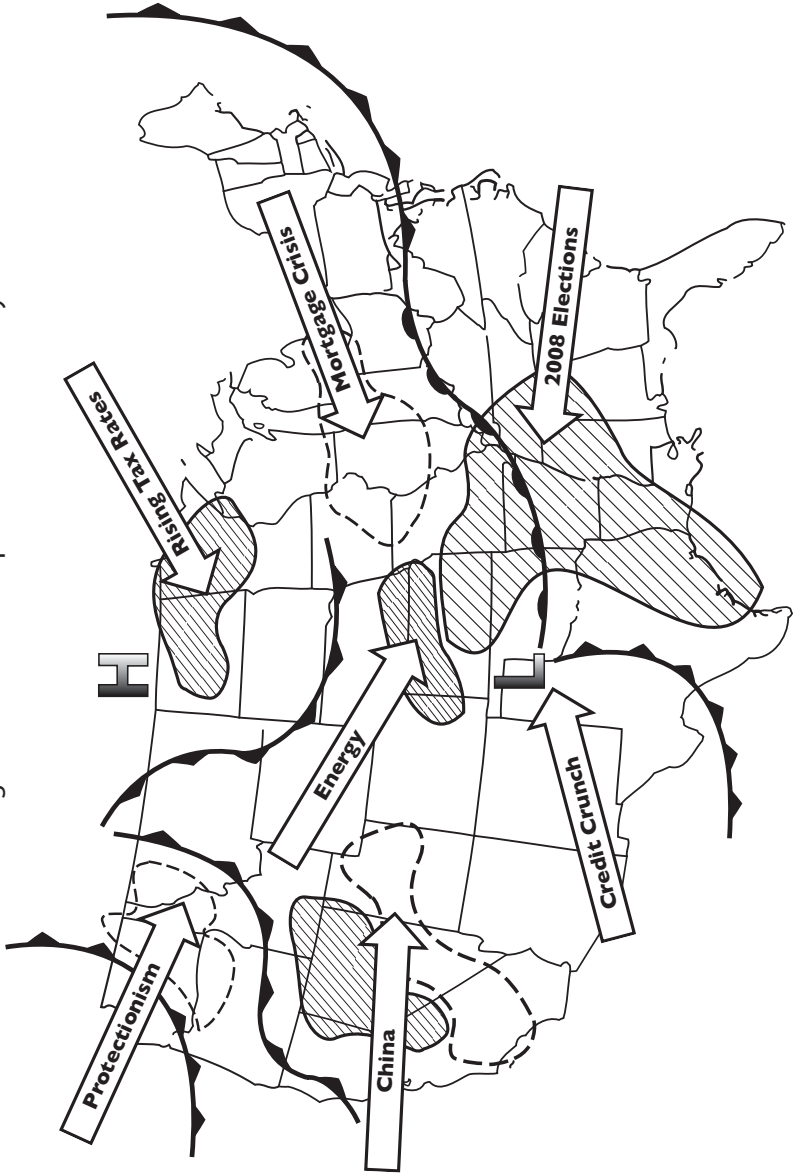
Storm Systems to Watch Today

These are some of the storm systems on my weather map today. I will discuss them briefly below.

2008 Elections

First the disclaimer. I am not a partisan; I am a principle-an. That means I will support any candidate, from any party, whose principles (if I am able to detect any) make sense to me. I decided long ago that I can't live with two masters—I can't always be loyal to my principles and to my tribe at the same time. I chose principles. Some people don't like that. They should learn to get used to disappointment.

Figure 1: Weather Map of the U.S. Economy



I have often advised Republican administrations. I have also advised Democrats, the occasional monarchy and the People's Republic of China. Republican platforms often, but not always, support the ideas of personal liberty and limited government that I think are important; when they do I am on board. I do not like any government that exploits people's fears (about terrorism, about bird flu, about global warming) or anger (at the rich, at big oil companies, at immigrants, or at foreign workers) for political gain. This year's presidential election has plenty of both.

At the time of this writing, John McCain and Barack Obama are poised to take the stage in the November elections. This is an interesting time for the weather map investor, as the winner of the election will have a huge and immediate impact on the sorts of storm systems we can expect to see over the next four years.

Rising Tax Rates

The most interesting difference between the two candidates for investors is tax policy. Senator McCain has indicated that he will support the extension of the 2003 reductions in the top marginal tax rates on ordinary income, dividends and capital gains. Senator Obama has indicated that he would support the expiration of the tax rates along with further increases, which would sharply increase tax rates on all three forms of income.

Tax rates are important for our weather map for a number of reasons. First, they impact incentives for work, saving and investment. Second, they're important for small businesses, which provide all new jobs; 80% of taxes collected at the top marginal tax rate are paid by small business owners. Third, changes in the tax rates on dividend income, capital gains and corporate profits drive wedges between the after-tax

returns on some assets relative to others, setting up huge changes in asset prices.

Protectionism

Protectionism is on the rise in America and has become an important topic in the 2008 presidential election. Protectionism is also growing in other countries. Ironically, as we will discuss in Chapter 6, rising protectionism may be a side effect of strong global growth.

Protectionist policies—tariffs, quotas, subsidies, currency bashing or restrictions on foreign investments—always lead to retaliation. The result is slower growth in both countries and declining stock prices. It will pay investors to keep an eye on trade policy during and after the election.

Energy

Everyone agrees that high energy prices are bad for growth and increase the price level. Continued growth in China, India and other emerging economies will keep prices high for the foreseeable future. Not everyone agrees on what to do about it. Policies to increase supply (increased exploration and production, ethanol, alternative energy) or reduced demand (mileage standards, technology mandates) will have major implications for investors.

Subprime Mortgage Crisis

Increased delinquencies on subprime mortgages, after years of rising home prices, caused a virtual blackout in the mortgage-backed securities market. As a result, prices have declined sharply in the last year, and the wipeout of construction spending has reduced 2008 GDP by one

full percentage point. But blackouts always come to an end. And when they do, bond and stock prices will change in a hurry.

Credit Crunch

Previous slowdowns have been triggered by sudden reductions in the availability of working capital for small, private companies. This time it's different. So far, lending problems have been concentrated in mortgages, asset-backed loans and large leveraged credits; business loans that provide working capital for the small companies that generate all new jobs have continued to grow. That's why GDP has continued to rise and employment has remained relatively stable. If the mortgage problem extends to business loans, the economy will be in trouble.

United States–China Relations

The U.S. presidential elections and the Beijing Olympics ensure that U.S.-China relations will continue to be a front-page story all year. American voters are all aware of the issues, including product quality, trade, investment, Taiwan and Tibet—but few of them have enough first-hand experience to make reasoned judgments. This is ripe ground for political demagogues who prey on people's fears, and a great opportunity for those of us who have taken the time to get to know the people to help.

Government Spending

The aging baby boomers and complete absence of political courage in Washington make today's Social Security and Medicare programs unsustainable. The prospect of universal health care legislation following this year's election would further worsen the problem.

Climate Change and Green Power

Projections of climate change have captured media attention as well as the political process. Congress will likely pass climate change legislation in the next year. The form of that legislation—whether taxes, subsidies, carbon trading schemes, regulations or unfunded mandates—will have major impacts on the profits and stock prices of different industries and sectors.

There's No Room for Emotions in Investing

I know what you're thinking. "JR, if I follow your advice, on most days I'm not going to get to buy or sell *anything!* Shouldn't I be paying attention to the breaking news stories on TV all day?"

You should definitely pay attention to the news shows. After all, many of the producers and anchors are my friends and they need to make a living too. I watch the business news shows and read newspapers from all over the world every day so that I know everything that's happening. But you should never allow your emotions to influence your investment decisions. Every time I have done so, I have lost money.

Investing is not about emotion. It's about identifying situations where some assets will earn a higher return than others. Here are a few things to keep in mind when you watch the news.

Don't be distracted by the crisis *du jour*. The positive news on growth and profits always gets drowned out by a tsunami of breathless reports on oil prices, Iran, North Korea, trade, immigration, global warming, inflation and the Fed. That's why investors have been confused, frightened and sitting in cash. This is an emotional reaction, not a strategy. The world is not going to end, and we still need to educate our children and save enough so that we can eat when we are too old to work. This is when an investor needs the discipline to stay focused on long-term objectives, investment fundamentals, tax planning and a long-term strategy for building wealth.

Long-term investment fundamentals are actually strong. Productivity is rising and the U.S. economy is growing. Profits are growing and are at the highest percent of GDP ever recorded. Dividends are rising. The global economy is growing too, led by reforms in China and India. Capital owners have more choices of where to invest their money at attractive returns than ever before. The Fed and other central banks have shown that long-term inflation will be 1-2%. Bond yields are below 4% and likely to remain low. Stocks are cheap relative to projected earnings. These are great long-term fundamentals for equity markets.

Understand and manage risks, but don't let risk drive your investment strategy. China's growth has fundamentally changed world oil and commodity markets; high prices are here to stay. High oil prices have brought Iran, Russia, Venezuela and the Gulf Region back into the headlines. Home prices are falling. Protectionism is on the rise. Tax rates may go up.

Investment strategy should focus on long-term returns. Defensive strategies—extra cash, short bond maturities, defensive sectors—are okay in the short-term. But in the long-term, focus on high-quality U.S. companies with strong cash flows and rising dividends, and on countries, sectors and industries selling products and services to fast-growing Asia. I think U.S. stocks will produce upwards of 10% returns over the next five years, compared with 4% for bonds, 2% for cash and 0% for real estate. Asian equity markets will produce 10-15% returns—but don't chase hot commodity prices or Asian IPOs. And don't invest in places where you don't understand the law, the courts and the financial statements.

Diversification and tax planning still matter. I like to use ETFs to place small bets—less than 5% of the portfolio—on countries, regions, sectors, or industries where policy or technology change has raised after-tax returns on capital relative to the market. I reserve company bets for

(rare) situations where I believe I have an information advantage over the market.