

CHAPTER 1

A RECIPE FOR SUCCESS

A wise chef follows a good recipe. Likewise, wise investors should have a good recipe they follow when building a portfolio. The 7Twelve Portfolio is that recipe. By following it, investors will build a diversified, multi-asset portfolio.

The 7Twelve portfolio invests in “7” core asset classes (or investment categories) by utilizing “Twelve” underlying mutual funds—hence the name 7Twelve. The 7Twelve portfolio has both depth and breadth. 7Twelve has diversification *depth* within each separate mutual fund, and diversification *breadth* across seven core asset classes.

The 7Twelve Portfolio Recipe

7 Core Asset Classes

U.S. Stock	Non-U.S. Stock	Real Estate	Resources	U.S. Bonds	Non-U.S. Bonds	Cash
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12 Underlying Mutual Funds

Large Companies	Developed Companies	Real Estate	Natural Resources	Aggregate Bonds	International Bonds	U.S. Cash
Medium-sized Companies	Emerging Companies		Commodities	Inflation-Protected Bonds		
Small Companies						

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7Twelve represents a complete portfolio by itself because it incorporates 12 different mutual funds. Alternatively, 7Twelve can be used as the starting point, or core component, in virtually any portfolio. The success of the 7Twelve portfolio is not the result of special skill. Rather, the success of the 7Twelve portfolio is the result of genuine diversification across multiple asset classes. The various mutual funds within the 7Twelve portfolio complement each other because they behave differently—the essential benefit of diversification.

Achieving diversification is critical to success in so many aspects of life. For example, only by combining a wide variety of very different instruments can an orchestra produce beautiful music. In the world of sports, the analogies abound. Teams combine players with different talents in order to maximize their chances for success.

Likewise, only by combining a wide variety of asset classes can an investment portfolio produce superior performance with lower levels of risk. Better risk-adjusted performance is the benefit from building broadly diversified investment portfolios.

The 7Twelve Recipe

Think of the 7Twelve model as a recipe for building a broadly diversified investment portfolio with 12 different mutual funds—where each mutual fund is itself a diversified investment product.

For those new to investing, a mutual fund is a collection of stocks, bonds, or any other investable asset. Mutual funds are purchased in shares, just as stock in a company is purchased in units called shares. The difference being that mutual funds represent a diversified collection of “stuff,” whereas a single

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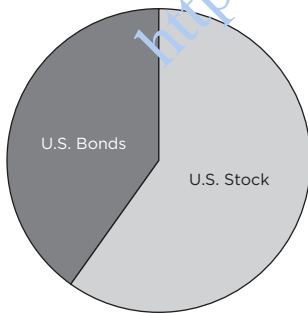
issue of stock is not diversified. Building a portfolio using a wide variety of mutual funds is an ideal way to achieve maximum diversification. The trick is putting the right types of mutual funds together so that redundancy is avoided and diversification is maximized. Welcome to the 7Twelve portfolio “recipe”—your guide to building a portfolio that provides an ideal blend of risk-controlled performance.

As shown in Figure 1.1, each mutual fund has an equal share in the 7Twelve recipe, meaning that each mutual fund is equally valued for its specific contribution to the overall portfolio’s performance.

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The 7Twelve is a diversified portfolio of 12 different mutual funds—where each mutual fund is itself a diversified investment product.

Typical “Balanced” Portfolio
60% U.S. Stock/40% Bond



7Twelve Portfolio
Each slice has 8.33% allocation

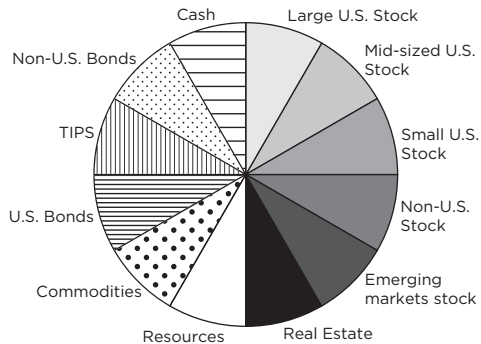


Figure 1.1 Two-Fund Portfolio versus Twelve-Fund Portfolio

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The pie chart on the right (the multi-asset 7Twelve portfolio) is far more diversified than the pie chart on the left (a typical balanced portfolio that has a 60 percent stock allocation and a 40 percent bond allocation). The 7Twelve portfolio utilizes 12 different mutual funds to gain exposure to a wide variety of investable asset classes. The typical “balanced” portfolio utilizes only U.S. stock and U.S. bonds. As will be shown in this book, the broadly diversified 7Twelve portfolio provides better performance with less risk than the typical two-asset balanced portfolio.

Throughout this book, the words “stock” and “equity” will be used interchangeably. A stock mutual fund is the same as an equity mutual fund. Likewise, bonds can also be referred to as fixed income products. So a bond mutual fund might also be called a fixed income fund. Of course, there are many different kinds of stock funds and many varieties of bond funds.

Salsa Anyone?

The 7Twelve portfolio is a recipe for combining 12 asset classes that optimizes performance and minimizes risk. It’s not complicated, but it does require more asset classes than typically used. It’s like making salsa with 12 ingredients instead of salsa with just two ingredients. Salsa with two ingredients won’t cut it.

Just as new recipes often call for unfamiliar ingredients, the 7Twelve portfolio recipe will integrate investment asset classes that may seem exotic. Remember that some recipes call for ingredients that we would never eat individually (say, Tabasco sauce). However, when combined with other ingredients the exotic ingredient is magically integrated in a way that enhances the overall dish . . . or portfolio.

It is the diversity of the ingredients that makes salsa taste great. It’s just hard to imagine great salsa that has only two

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ingredients. Even if you use the best tomatoes and onions available, having only two ingredients will not produce great salsa. How about using a wide variety of tomatoes and a wide variety of onions? Nope, doesn't solve the problem. Even though you have diversity within the two ingredients, you still have only two ingredients—and that ain't salsa.

The salsa metaphor describes the approach many investors (and mutual fund companies) use today when building what they claim to be a diversified portfolio. Here is a common approach: A stock mutual fund that contains 500 U.S. stocks is combined with a bond mutual fund that contains several hundred bonds. The resulting portfolio is referred to as a diversified balanced portfolio—the classic 60/40 model, with 60 percent of the portfolio allocated to large cap U.S. stocks and 40 percent of the portfolio allocated to bonds.

With so many individual stocks and bonds, it appears that a diversified portfolio has been created. Wrong. No matter how much diversification there is within each ingredient, this supposedly diversified portfolio still has only two different ingredients (or asset classes): large-cap U.S. stock and U.S. bonds. Variety *within* specific asset classes is very important, but variety *among* asset classes is just as important—perhaps even more important.

Variety within an asset class represents “intra-asset” diversification, whereas variety among asset classes represents “inter-asset” diversification. Both forms of diversification are important. Nearly all mutual funds provide intra-asset

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The classic 60/40 balanced fund is 60 percent allocated to large-cap U.S. stocks and 40 percent allocated to bonds.

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diversification. Very few provide inter-asset diversification. The 7Twelve portfolio provides both.

Very simply, more types of ingredients are needed to create a truly diversified portfolio (or great tasting salsa). Investment portfolios with genuine diversification have variety *within* and *among* asset classes, just like a good salsa that has a variety of tomatoes and onions *and* a wide array of other ingredients, such as peppers, lime juice, cilantro, salt, vinegar, and so on. Similarly, a great recipe for a diversified investment portfolio calls for 12 diversified ingredients, not just two.

In broad terms, the 7Twelve portfolio has an allocation of about 65 percent (66.6 percent to be exact) that is devoted to “Equity and Diversifying Funds” (U.S. stock, non-U.S. stock, real estate, resources) and about a 35 percent allocation (33.4 percent to be exact) to “Fixed Income Funds” (U.S. bonds, Non-U.S. bonds, and cash).

This two-thirds/one-third allocation pattern between stocks and bonds represents a classic “60/40 balanced” model, where 60 represents a 60 percent allocation to stocks (or equity investments) and 40 represents a 40 percent allocation to bonds (or fixed income). This general 60/40 allocation pattern is a useful starting point when building investment portfolios. However, the 7Twelve portfolio represents a much-needed diversification “upgrade” to the generic 60/40 model. In fact, the 7Twelve portfolio will be compared to the classic 60/40 portfolio throughout this entire book.

The seven core asset classes in the 7Twelve portfolio include U.S. stock, non-U.S. stock, real estate, resources, U.S. bonds, non-U.S. bonds, and cash. Underneath the seven core asset categories are 12 specific mutual funds. You can also use exchange-traded funds (ETFs) instead of mutual funds. An exchange traded fund is a mutual fund that trades like a stock.

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The seven core asset classes in the 7Twelve portfolio include U.S. stock, non-U.S. stock, real estate, resources, U.S. bonds, non-U.S. bonds, and cash.

The 12 different mutual funds represent the specific ingredients in the 7Twelve recipe. Let's take a look at the ingredients in first four broad asset classes, namely, U.S. stock, non-U.S. stock, real estate, and resources.

The first asset class to examine is U.S. stock. U.S. stock is often considered to be the “core” of many investment portfolios.

U.S. Stock

U.S. Stock	Non-U.S. Stock	Real Estate	Resources	U.S. bonds	Non-U.S. Bonds	Cash
<i>Large Companies</i>	<i>Developed Companies</i>	<i>Real Estate</i>	<i>Natural Resources</i>	<i>Aggregate Bonds</i>	<i>International Bonds</i>	<i>U.S. Cash</i>
<i>Medium-sized Companies</i>	<i>Emerging Companies</i>		<i>Commodities</i>	<i>Inflation-Protected Bonds</i>		
<i>Small Companies</i>						

The 7Twelve portfolio utilizes three specific mutual funds in the U.S. stock asset class:

- Large-cap companies
- Midcap companies
- Small-cap companies

Each mutual fund has an 8.33 percent weighting (or allocation) in the 7Twelve portfolio; thus the U.S. stock “asset class” has a total allocation of about 25 percent in the 7Twelve portfolio—which is the largest allocation to any of the seven core asset categories. In other words, the 7Twelve portfolio's largest single commitment is to the U.S. stock asset class.

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Let's talk first about large-cap U.S. stock, the first mutual fund in the U.S. stock asset class. Examples of large-cap U.S. stock (i.e., companies) are ExxonMobil, Microsoft, General Electric, Procter & Gamble, Johnson & Johnson, and the list goes on. Companies are classified as large cap (or mid-cap or small cap) based on their market capitalization (or "cap"), which is simply the current price of their stock multiplied by the number of shares of their stock that have been sold to investors. Large-cap stocks have a market cap of something over \$8 billion. Small-cap stocks are market cap below about \$1.5 billion. Midcap stocks are in between. These market cap boundaries are flexible, but these figures are general guidelines.

A well-known collection of large-cap U.S. companies is the Standard & Poor's 500 Index (or S&P 500). There are dozens of mutual funds that mimic the S&P 500 Index. Such funds are referred to as "index" funds, and index funds can mimic any index they choose. The most popular index to mimic is the S&P 500 Index. Funds that attempt to replicate the performance of the S&P 500 Index are referred to as *S&P 500 Index funds* (weird, huh?). More generally, they are simply referred to as *index funds*. But it's important to remember that there are other indexes that can be replicated by "index" funds. (This may come as a shock to the good folks at Standard & Poor's.)

Investing in the S&P 500 Index (by selecting an index fund) is a logical and appropriate way to invest in large-cap U.S. stock. Other large-cap U.S. stock indexes include the Russell 1000 Index or the Morgan Stanley U.S. Broad Market Index. Each of these indexes is investable via an appropriate index fund that has been chosen to mimic that particular index.

Let's assume an investor chooses to invest in an index fund that mimics the S&P 500 Index. The good news is that the investor has instant diversification across 500 large-cap U.S.

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stocks. But that's all they have—a diversified fund that invests in only one specific subasset class, namely, large-cap U.S. stock. Our diversified portfolio recipe calls for 12 ingredients—there are eleven other ingredients missing.

Creating an investment portfolio by using only one mutual fund (using an S&P 500 Index fund, for example) would be comparable to making salsa using tomatoes only. However, being clever, you diversify and use five (or 500!) kinds of tomatoes. Sure, you have diversification among tomatoes, but diversified tomatoes doesn't create salsa! You need salt, cilantro, onions, peppers . . . and whatever else turns you on.

What I'm describing here represents a very common misunderstanding of diversification. Many investors believe they are diversified if they have a mutual fund that includes 500 different large-cap U.S. stocks. True, they have a diversified mutual fund. But it represents diversification only within one specific investment category, and there are many investment categories needed within a diversified portfolio.

The 7Twelve recipe creates a diversified portfolio using diversified individual ingredients (actual mutual funds). A mutual fund that mimics the S&P 500 Index represents only one diversified ingredient within a broadly diversified multi-asset portfolio. If we're making salsa, we need more than tomatoes. If we're making a diversified portfolio, we need more than 500 large-cap U.S. stocks. As of late 2009, there were about 750 large-cap stocks in the U.S. stock market (using data from Morningstar Principia).

There are two additional mutual funds we need to obtain to complete the U.S. stock category, namely, a mutual fund that invests in midcap U.S. stocks and a mutual fund that invests specifically in small-cap U.S. stocks.

Midsized and small U.S. companies are not as well known but often have more growth potential than large-cap U.S. companies. Think of large-cap U.S. stocks as adults, midcap

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U.S. stocks as teenagers, and small-cap U.S. stocks as children. Children have the most growth potential, but they also present more risk (use your imagination here). Teenagers also have growth potential but also present more risk than most adults (no imagination needed here).

Examples of midcap U.S. stocks are Ross Stores (“Do these Bermuda shorts make me look skinny?”), Chipotle Mexican Grill (“Three cheesy encharitos to go, please!”), Aeropostale (a retailer of casual clothing, but as my children will confirm I’m waaaay too old to go there), and Kansas City Southern (look both ways before you cross the tracks). According to Morningstar, there were about 980 midcap U.S. companies in late 2009. The performance of midcap U.S. stock is captured by several different indexes: S&P Midcap 400 Index, Russell Midcap Index, Morningstar Mid Core Index, and others. Mutual funds and ETFs that mimic the various midcap indexes are widely available.

Small-cap U.S. companies are like small fish in the ocean: abundant, but at risk. If, however, they make it past puberty they stand a chance of becoming a midcap fish, or possibly even a big fish. That’s where the growth potential comes from. Investors love to invest in little fish that become big fish.

The obvious challenge is selecting the little companies that will survive. As of late 2009, there were about 5,100 small-cap stocks in the U.S. market (at least that many were included in the Morningstar database). Many of those companies won’t exist two years later. Therefore, the only sane way to invest in small-cap stock (or any stock for that matter) is by investing in a mutual fund that purchases hundreds or thousands of small companies (or midcap stock or large-cap stock). This approach represents the central tenet of diversification: spread risk across multiple investments. It is a principle that applies to mutual funds as well as portfolios that utilize multiple mutual funds—such as the 7Twelve portfolio.

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Examples of small-cap U.S. companies (as of late 2009) include 99¢ Only Stores (“Hey, why is this yo-yo \$1.50?”), ACME United Corporation (I believe they have a contract with Wiley Coyote), Caribou Coffee Company (“Ah, mousse latte, please”), and Great Wolf Resorts (“A warm welcome to red-heads”). As you can see, small-cap U.S. companies tend to be names we’re not exactly familiar with yet . . . and possibly never will be.

There are a number of U.S. small-cap stock indexes that attempt to capture the aggregate performance of small-cap U.S. companies. Examples are the Russell 2000 Index, S&P Smallcap 600 Index, or Dow Jones U.S. Smallcap Index. There are a number of mutual funds and ETFs that mimic these (and other) small-cap stock indexes.

We’ve now reviewed the three mutual funds that comprise the U.S. stock “ingredients” in the Twelve portfolio.

The annual returns for each U.S. stock “ingredient” over the past 10 years are listed in Table 1.1. Also shown is the 10-year annualized percentage return (which is not a simple average of the 10 annual returns, but rather a compounded average annualized return or, in technical terms, the geometric mean return), the 10-year standard deviation of return (a measure of the volatility in the annual returns, and therefore a measure of risk), and the growth of \$10,000 over the full 10-year period from January 1, 2000, to December 31, 2009.

A higher standard deviation of return indicates higher risk—more on that issue later. The standard deviation shown here is based on annual returns; whereas the standard deviation reported by Morningstar is based on monthly returns. As a result, they will be different. Either calculation is correct. The main thing is to stay consistent and not compare annual standard deviation of return against monthly standard deviation of return.

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Table 1.1 Annual Returns of the U.S. Stock Ingredients

Year	Large-cap U.S. Stock (%)	Midcap U.S. Stock (%)	Small-cap U.S. Stock (%)
2000	-9.70	17.38	21.88
2001	-11.86	-0.90	13.70
2002	-21.50	-14.51	-14.20
2003	28.16	35.26	37.19
2004	10.69	15.89	23.55
2005	4.86	12.51	6.18
2006	15.80	9.96	19.38
2007	5.12	7.20	-6.94
2008	-36.70	-36.39	-32.19
2009	26.32	37.52	30.93
10-Year Average Annualized Return	-1.00	6.10	7.76
10-Year Standard Deviation of Annual Returns	20.90	21.97	21.78
10-Year Growth of \$10,000	\$9,047	\$18,083	\$21,106

Next, we'll review non-U.S. stock, the second asset class category in the 7Twelve recipe.

Non-U.S. Stock

7 Core Asset Classes

U.S. Stock	Non-U.S. Stock	Real Estate	Resources	U.S. Bonds	Non-U.S. Bonds	Cash
Large Companies	Developed Companies	Real Estate	Natural Resources	Aggregate Bonds	International Bonds	U.S. Cash
Medium-sized Companies	Emerging Companies		Commodities	Inflation-Protected Bonds		
Small Companies						

Got a Nokia cell phone? How about a Sony flat-screen TV? Maybe you drive a Hyundai? Nokia is a Finnish corporation,

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Japan is home to Sony, and Hyundai is headquartered in South Korea.

There are two mutual funds utilized in the 7Twelve portfolio that invest specifically in non-U.S. stock. Investing in companies outside the United States is central to a well-diversified portfolio. (And if you live in Madrid, then investing in companies outside Spain is central to a well-diversified portfolio.) In short, investing in stock markets all over the world is the goal of a well-diversified portfolio. The 7Twelve portfolio devotes two slots (mutual funds) to non-U.S. stock, representing almost 17 percent of the total 7Twelve model.

Two specific mutual funds accomplish this goal of diversifying outside the U.S. The first mutual fund focuses on larger companies in non-U.S. countries such as Britain, Germany, France, Italy, Australia, Japan, Korea, Brazil, Sweden, Canada, Finland, and others. Well-known companies from developed non-U.S. countries include Nestle, GlaxoSmithKline, Mitsubishi, Toyota, British Petroleum, Novartis, Nokia, Credit Suisse, Honda, Samsung Electronics, France Telecom, America Movil, Deutsche Bank, and many others. According to the Morningstar database, there were about 400 large non-U.S. companies as of late 2009. The most popular market benchmark for gauging the performance on developed non-U.S. stocks is the Morgan Stanley Capital International Europe, Asia, and Far East Index (or EAFE Index).

The second mutual fund in the non-U.S. stock category invests in medium and small non-U.S. companies from a variety of countries. Examples of smaller non-U.S. stocks are Air France, Electrolux, Bank of Ireland, Norsk Hydro, Telecom Corporation of New Zealand, Peugeot, Royal Caribbean Cruises, and thousands of others. In fact, there were over 5,300

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medium and small non-U.S. companies in the Morningstar database as of late 2009.

The annual returns over the past 10 years for the two non-U.S. stock funds in the 7Twelve portfolio are listed in Table 1.2.

One of the virtues of investing in non-U.S. stock is that the performance of international stock mutual funds is different from the performance of U.S. stock mutual funds. In other words, non-U.S. stock adds diversity to a portfolio—and diversity is a vitally important attribute of a portfolio. However, as will be shown, the performance of non-U.S. stocks has become increasingly similar to the performance of U.S. stocks, and this requires the use of additional assets in a portfolio. This is the problem that the multi-asset 7Twelve portfolio solves.

The next ingredient in the 7Twelve recipe is real estate.

Table 1.2 Annual Returns of the Non-U.S. Stock Ingredients

Year	Non-U.S. Stock (%)	Emerging Non-U.S. Stock (%)
2000	-14.46	-27.45
2001	-21.71	-2.73
2002	-15.43	-7.29
2003	39.71	57.88
2004	18.94	26.31
2005	13.35	32.25
2006	25.79	29.20
2007	9.94	37.32
2008	-41.01	-52.46
2009	26.88	76.32
10-Year Average Annualized Return	1.00	9.88
10-Year Standard Deviation of Annual Returns	25.87	39.23
10-Year Growth of \$10,000	\$11,041	\$25,657

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Real Estate

U.S. Stock	Non-U.S. Stock	Real Estate	Resources	U.S. Bonds	Non-U.S. Bonds	Cash
<i>Large Companies</i>	<i>Developed Companies</i>	<i>Real Estate</i>	<i>Natural Resources</i>	<i>Aggregate Bonds</i>	<i>International Bonds</i>	<i>U.S. Cash</i>
<i>Medium-sized Companies</i>	<i>Emerging Companies</i>		<i>Commodities</i>	<i>Inflation-Protected Bonds</i>		
<i>Small Companies</i>						

“Investing in real estate, what’s with that . . . I own a house, isn’t that enough?” Nope, it’s not enough. There are two reasons why. First, owning a house is a direct investment in real estate (which is great), but it’s not a diversified real estate investment. It’s only one house. Diversification is central to everything we do as investors.

Second, most real estate mutual funds invest in companies that are broadly related to real estate as an industry. The funds are not simply buying a bunch of houses. A real estate-based mutual fund invests in the stock of what are referred to as “real estate investment trusts,” or REITs. Examples of companies (i.e., stocks) that a REIT fund invests in include Public Storage, Host Hotels and Resorts, Duke Realty Corporation, AvalonBay Communities, LaSalle Hotel Properties, Simon Property Group, and many others.

Some real estate mutual funds also invest in non-U.S. REITs, such as British Land Company, Mitsui Fudosan Company, or Brookfield Asset Management in Canada. A well-known barometer of the performance of real estate investment trusts is the Dow Jones U.S. Real Estate Index.

As you can see, investing in a REIT fund is actually a very different type of investment than simply purchasing a home. In fact, real estate investment trust mutual funds can be thought of as a diversifying investment because real

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Table 1.3 Annual Returns of Real Estate

Year	Real Estate (%)
2000	26.46
2001	12.45
2002	3.85
2003	35.77
2004	30.87
2005	11.99
2006	35.05
2007	-16.51
2008	-36.91
2009	30.11
10-Year Average Annualized Return	10.52
10-Year Standard Deviation of Annual Returns	24.14
10-Year Growth of \$10,000	\$27,198

estate funds behave differently than traditional stock mutual funds.

The annual performance of real estate (via a real estate investment trust mutual fund) is shown in Table 1.3.

Resources

U.S. Stock	Non-U.S. Stock	Real Estate	Resources	U.S. Bonds	Non-U.S. Bonds	Cash
<i>Large Companies</i>	<i>Developed Companies</i>	<i>Real Estate</i>	<i>Natural Resources</i>	<i>Aggregate Bonds</i>	<i>International Bonds</i>	<i>U.S. Cash</i>
<i>Medium-sized Companies</i>	<i>Emerging Companies</i>		<i>Commodities</i>	<i>Inflation-Protected Bonds</i>		
<i>Small Companies</i>						

The asset class of “resources” requires two separate mutual funds, one that invests in natural resources companies (companies that mine, refine, process, and transport commodities)

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and another fund that invests in actual commodities (cattle, precious and industrial metals, wheat, corn, cotton, and so on).

Examples of natural resource companies are Schlumberger (a French oil and gas exploration company), Chevron, Overseas Shipholding Group, Sealed Air Corporation, Packaging Corporation of America, Barrick Gold Corporation, Newmont Mining, ConocoPhillips, Southern Union Company, Alcoa, Weyerhaeuser, and many others.

Investing in actual commodities is not like purchasing stock in a company. It involves the purchase of futures contracts for commodities such as heating oil, crude oil, soybeans, corn, wheat, aluminum, cattle, coffee, sugar, cotton, gold, natural gas, zinc, silver, nickel, lean hogs, and others. Hey, everybody should own lean hogs in their portfolio! “Lean” hogs . . . is that a cruel joke?

Investing in commodities is more complicated than simply investing in stock of a corporation, which is why investing in commodities should be accomplished by purchasing a commodities-based mutual fund (or exchange-traded fund). The historical performance of investing in commodities makes it a very attractive ingredient in a well diversified portfolio. There are several major indexes that track commodities. The most well known is the S&P Goldman Sachs Commodity Index. Both of these categories are also referred to as portfolio diversifiers because they behave differently than traditional stock mutual funds.

We have now reviewed eight of the 12 subassets (mutual funds) in the 7Twelve portfolio. Five of the eight funds are categorized as “equity” funds (equity is another name for stock). Among those five funds, three focus on U.S. stocks and the other two invest in non-U.S. stocks. The remaining three funds are categorized as “diversifying” assets (one fund that invests in the “Real Estate” asset class and two funds that invest in the “Resources” asset class).

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It's not uncommon to hear people refer to real estate mutual funds, natural resources mutual funds, and commodities mutual funds as "alternative" asset classes. It's actually an odd expression because real estate, natural resources, and commodities should not be thought of as alternatives to traditional stock mutual funds. Rather, they should be included in a diversified portfolio in conjunction with traditional stock mutual funds. In fact, "alternative assets" such as real estate, natural resources, and commodities tend to complement and enhance stock funds because of their low correlation to the performance pattern of traditional stock funds. I will discuss the issue of "correlation" in Chapter 5.

The annual returns of the two "resources" ingredients in the 7Twelve portfolio are listed in Table 1.4

We now turn our attention to the four fixed income components of the 7Twelve portfolio. Each of the four fixed income components is weighted at 8.33 percent of the

Table 1.4 Annual Returns of the Resources Ingredients

Year	Resources (%)	Commodities (%)
2000	15.24	24.43
2001	-16.00	-8.68
2002	-13.49	24.56
2003	33.37	25.84
2004	24.38	37.15
2005	35.96	30.87
2006	16.40	16.02
2007	33.45	31.50
2008	-42.88	-31.73
2009	37.11	16.18
10-Year Average Annualized Return	8.67	14.49
10-Year Standard Deviation of Annual Returns	27.38	21.17
10-Year Growth of \$10,000	\$22,975	\$38,683

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overall portfolio. The first fixed income asset class is U.S. Bonds. The term “fixed income” refers to bonds and cash, whereas the term “equity” refers to stocks. Cash is a term that refers to money market accounts, money market mutual funds, or a certificate of deposit.

U.S. Bonds

U.S. Stock	Non-U.S. Stock	Real Estate	Resources	U.S. Bonds	Non-U.S. Bonds	Cash
<i>Large Companies</i>	<i>Developed Companies</i>	<i>Real Estate</i>	<i>Natural Resources</i>	<i>Aggregate Bonds</i>	<i>International Bonds</i>	<i>U.S. Cash</i>
<i>Medium-sized Companies</i>	<i>Emerging Companies</i>		<i>Commodities</i>	<i>Inflation-Protected Bonds</i>		
<i>Small Companies</i>						

Bonds are different than stock. Stock in a company never expires (at least in theory) and stock represents ownership in the company. If you buy stock in Southwest Airlines, you are an owner—albeit a very small owner. Bonds, on the other hand, have a termination date. At that date, the bond expires and the person holding the bond receives \$1,000. In the years prior to its expiration, bonds pay interest to the holder of the bond. A person who purchases a Southwest Airlines bond does not have any ownership interest in Southwest. Rather, they are essentially a lender to Southwest Airlines. That’s my bonds 101 discussion.

The reason bonds are included in a portfolio is because they almost always have positive returns *and* the return pattern of bonds is quite different than the return patterns of stock. Remember, when building a portfolio, the goal is to combine investment assets that have very different return patterns.

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Combining investments with different return patterns is how diversified portfolios are created. Think salsa here.

Investing in U.S. bonds can be achieved by selecting a bond mutual fund, specifically one that mimics a well-known bond index such as the Barclays Capital Aggregate Bond Index. This particular index invests in hundreds of different bonds. Diversification is important when investing in bonds, just as it is when investing in stocks. That's why bond mutual funds invest in hundreds of different bonds and stock mutual funds invest in hundreds (or even thousands) of different stocks.

The enemy of bonds is inflation. When prices increase (the inflation thing), the fixed amount of interest paid to bondholders becomes worth less. This problem is dealt with by the second U.S. bond asset: inflation-protected bonds. This type of bond is officially known as Treasury Inflation Protected Bonds, or TIPS. It is a relatively new class of U.S. bonds, having come into existence in the late 1990s.

Here's what the government website TreasuryDirect (www.treasurydirect.gov) has to say about TIPS: "Treasury Inflation-Protected Securities, or TIPS, provide protection against inflation. The principal of a TIPS increases with inflation and decreases with deflation, as measured by the Consumer Price Index. When a TIPS matures, you are paid the adjusted principal or original principal, whichever is greater."

That's all good. The bottom line is that we want some bonds in the portfolio that can defend themselves against inflation. Purchasing a TIPS mutual fund accomplishes this goal. A well-known TIPS benchmark is the Barclays Capital U.S. Treasury Inflation-Protected Securities Index . . . Just kind of rolls off the tongue doesn't it?

Shown in Table 1.5 are the annual returns of the two U.S. bond funds included in the 7Twelve portfolio.

A Recipe for Success

Table 1.5 Annual Returns of the U.S. Bond Ingredients

Year	U.S. Bonds (%)	TIPS (%)
2000	11.49	12.95
2001	8.31	7.68
2002	10.12	16.33
2003	3.98	8.18
2004	4.21	8.29
2005	2.31	2.52
2006	4.21	0.29
2007	6.84	11.93
2008	8.41	-0.53
2009	3.57	8.96
10-Year Average Annualized Return	6.30	7.53
10-Year Standard Deviation of Annual Returns	3.12	5.49
10-Year Growth of \$10,000	\$18,430	\$20,674

Non-U.S. Bonds

U.S. Stock	Non-U.S. Stock	Real Estate	Resources	U.S. Bonds	Non-U.S. Bonds	Cash
<i>Large Companies</i>	<i>Developed Companies</i>	<i>Real Estate</i>	<i>Natural Resources</i>	<i>Aggregate Bonds</i>	<i>International Bonds</i>	<i>U.S. Cash</i>
<i>Medium-sized Companies</i>	<i>Emerging Companies</i>		<i>Commodities</i>	<i>Inflation-Protected Bonds</i>		
<i>Small Companies</i>						

Next in the fixed income arsenal is non-U.S. bonds. Investing in bonds outside the United States is just as important as investing in bonds inside the U.S. Global fixed income diversification is achieved by adding an international bond fund to the 7Twelve portfolio. International bond mutual funds invest in bonds from a wide variety of non-U.S. countries, such as the United Kingdom, Japan, Germany, Greece, Sweden, Canada, Spain, Austria, South Africa, Mexico, Poland, Taiwan,

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Table 1.6 Annual Returns of Non-U.S. Bonds

Year	International Bonds (%)
2000	-3.13
2001	-3.41
2002	21.80
2003	18.78
2004	11.41
2005	-8.18
2006	7.55
2007	10.06
2008	4.22
2009	5.43
10-Year Average Annualized Return	6.06
10-Year Standard Deviation of Annual Returns	3.64
10-Year Growth of \$10,000	\$18,011

and Gilroy. Caught ya! Gilroy is in California and holds the esteemed title of Garlic Capital of the World.

The annual returns of non-U.S. bonds are listed in Table 1.6.

Cash

U.S. Stock	Non-U.S. Stock	Real Estate	Resources	U.S. Bonds	Non-U.S. Bonds	Cash
<i>Large Companies</i>	<i>Developed Companies</i>	<i>Real Estate</i>	<i>Natural Resources</i>	<i>Aggregate Bonds</i>	<i>International Bonds</i>	<i>U.S. Cash</i>
<i>Medium-sized Companies</i>	<i>Emerging Companies</i>		<i>Commodities</i>	<i>Inflation-Protected Bonds</i>		
<i>Small Companies</i>						

The final and fourth component of the fixed income group is cash. Good old U.S. Treasury bills. Cash isn't exciting, but it always provides a positive "nominal" return (nominal means that we ignore taxes and inflation). The practical way to add cash to a portfolio is to purchase a money market mutual fund, which provides a return very similar to Treasury

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Table 1.7 Annual Returns of Cash

Year	Cash (%)
2000	6.29
2001	4.16
2002	1.65
2003	0.90
2004	1.11
2005	3.01
2006	4.88
2007	5.14
2008	2.77
2009	0.53
10-Year Average Annualized Return	3.03
10-Year Standard Deviation of Annual Returns	2.01
10-Year Growth of \$10,000	\$13,474

bills (or T-bills). Cash is a safe haven, and every portfolio needs several of those. Cash is a poor choice as a sole investment for the long run, due to lower returns, but is a wonderful portfolio component because it represents a safe haven at all times. After experiencing large losses in stocks in 2008, it should be self evident that every portfolio should have at least one safe haven asset. The annual returns of cash are shown in Table 1.7.

The Complete Recipe

The 12 mutual funds in the 7Twelve portfolio are themselves diversified investment products. Many of the mutual funds contain hundreds of different stocks or bonds. Because the 7Twelve portfolio brings together so many diverse mutual funds, it contains more than 4,000 holdings (as shown in Table 1.8).

Importantly, the separate mutual funds all focus on different asset classes. As a result, redundancy among the thousands of underlying holdings in the 7Twelve portfolio has been minimized. This is vitally important because redundancy is of no

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Table 1.8 Total Number of Holdings in the 7Twelve Portfolio

Mutual Fund Category	Number of Holdings
Large-cap U.S. Stock	501
Midcap U.S. Stock	400
Small-cap U.S. Stock	1,025
Non-U.S. Developed Stock	851
Non-U.S. Emerging Stock	778
Real Estate	99
Natural Resources	125
Commodities	27
U.S. Bonds	248
Inflation-protected Bonds	29
Non-U.S. Bonds	102
Cash	—
Total Holdings	\$4,000+

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Depth of diversity is achieved within each mutual fund and *breadth* of diversity is achieved by investing in 12 different mutual funds that span across seven core asset classes.

value in a portfolio. The 7Twelve portfolio provides diversification breadth and depth. *Depth* of diversity is achieved within each mutual fund and *breadth* of diversity is achieved by investing in 12 different mutual funds that span seven core asset classes.

How has the 7Twelve portfolio performed *as a portfolio*? Table 1.9 shows the annual returns of all 12 equally weighted funds from 2000 to 2009 (see the far right column). The performance of the 7Twelve portfolio in Table 1.9 assumes that all 12 ingredients were “rebalanced” at the end of each year (see Chapter 6 for more about rebalancing). The performance of the 7Twelve portfolio reported on my website (www.7TwelvePortfolio.com) assumes monthly rebalancing,

Table 1.9 Annual Returns of the 7Twelve Portfolio

Year	Large-cap U.S. Stock (%)		Midcap U.S. Stock (%)		Small-cap U.S. Stock (%)		Non-U.S. Stock (%)		Emerging Non-U.S. Stock (%)		Real Estate (%)		Resources (%)		Commodities (%)		U.S. Bonds (%)		TIPS (%)		International Bonds (%)		Cash (%)		7Twelve Portfolio (%)	
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
2000	-9.70	17.38	21.88	14.46	-27.45	26.46	15.24	24.43	11.49	12.95	-3.13	6.29	6.78													
2001	-11.86	-0.90	13.70	-21.71	-2.73	12.45	-16.00	-8.68	8.31	7.68	-3.41	4.16	-1.58													
2002	-21.50	-14.51	-14.20	-15.43	-7.29	3.85	-13.49	24.56	10.12	16.33	21.80	1.65	-0.68													
2003	28.16	35.26	37.19	39.71	57.88	35.77	33.37	25.84	3.98	8.18	18.78	0.90	27.08													
2004	10.69	15.89	23.55	18.94	26.31	30.87	24.38	37.15	4.21	8.29	11.41	1.11	17.73													
2005	4.86	12.51	6.18	13.35	32.25	11.99	35.96	30.87	2.31	2.52	-8.18	3.01	12.30													
2006	15.80	9.96	19.38	25.79	29.20	35.05	16.40	16.02	4.21	0.29	7.55	4.88	15.38													
2007	5.12	7.20	-6.94	9.94	37.32	16.51	33.45	31.50	6.84	11.93	10.06	5.14	11.25													
2008	-36.70	-36.39	-32.19	-41.01	-52.46	-36.9	-42.88	-31.73	8.41	-0.53	4.22	2.77	-24.62													
2009	26.32	37.52	30.93	26.88	76.32	30.11	37.11	16.18	3.57	8.96	5.43	0.53	24.99													
10-Year Average Annualized Return	-1.00	6.10	7.76	1.00	9.88	10.52	8.67	14.49	6.30	7.53	6.06	3.03	7.81													
10-Year Standard Deviation of Annual Returns	20.90	21.97	21.78	25.87	39.23	24.14	27.38	21.17	3.12	5.49	9.64	2.01	15.11													
10-Year Growth of \$10,000	\$9,047	\$18,083	\$21,106	\$11,041	\$25,657	\$27,198	\$22,975	\$38,683	\$18,430	\$20,674	\$18,011	\$13,474	\$21,212													

7Twelve

so you'll notice slight differences in the historical figures. I provide 7Twelve portfolio performance updates each month hence the need to assume monthly rebalancing on the website.

However, there is also downloadable software (an Excel template) on my website that allows you to compare other funds and/or portfolios against the 7Twelve portfolio. The template assumes annual rebalancing so that it coincides with the performance reported in this book. By the way, annual rebalancing tends to produce slightly better performance than monthly rebalancing.

The 7Twelve portfolio had a 10-year annualized return of 7.81 percent and a 10-year standard deviation of annual returns of 15.11 percent. For comparison, the large-cap U.S. stock ingredient (the S&P 500 Index) had a 10-year annualized return of -1.00 percent and a standard deviation of return of 20.90 percent. The 7Twelve portfolio had much higher return with less risk. A \$10,000 investment in the S&P 500 Index on January 1, 2000, was worth \$9,047 by December 31, 2009. Alternatively, \$10,000 invested in the 7Twelve portfolio was worth \$21,212 by the end of 2009.

During the tough years of 2000 to 2002, when most of the stock funds had sizeable negative returns, the 7Twelve portfolio performed wonderfully. In the subsequent rebound years of 2003–2007, the 7Twelve portfolio delivered returns that were comparable to or better than the S&P 500 (the “Large-cap U.S. Stock” ingredient).

In 2008, even broad diversification didn't sidestep the mayhem of the markets. Some may suggest that because of what happened in 2008, diversification doesn't work. That is incorrect for at least two reasons. First, the performance of a broadly diversified portfolio (the 7Twelve) from 2000–2007 and 2009 shows that diversification does work well in minimizing downside without missing upside.

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Second, if a person doesn't diversify, what is his or her alternative? The only alternative would be to have perfect foresight and choose the asset that will perform best going forward. Last time I checked, the magicians have left the castle. Perfect foresight is not a viable portfolio strategy. Diversification is the only viable approach. The year 2008 did not change that. With the ingredients and the performance of the 7Twelve portfolio outlined, Chapter 2 reviews the guidelines of the recipe that determine how the 7Twelve portfolio is assembled and managed.

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