

## Chapter 2

# Managing Safety, Liquidity, and Yield

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### *In This Chapter*

- ▶ Understanding risk
  - ▶ Making sure you have enough cash
  - ▶ Finding the discipline to succeed
  - ▶ Polishing your crystal ball
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“**S**afety First.” You might see that slogan in a chemistry lab or an automotive factory, but it’s also appropriate above *your* desk. A public entity’s primary investment objective is to earn market rates of return while preserving and protecting capital. Speculation is inappropriate under all circumstances.

If you follow the rules — specifically those spelled out by your investment policy — you’re not terribly likely to have a problem with *default* (having the government not pay you back at the time of maturity). That’s not the kind of risk that you’ll face, for the most part.



The biggest risk that public entities face is a change in the interest rates. Both rising interest rates and falling interest rates involve risk, and your job is to balance the portfolio to protect against both. The philosophy falls into the category of the never-put-all-your-eggs-in-one-basket thinking.

## Understanding Risk

Brilliant minds that have a grasp of fundamental and technical analysis eat, sleep, and drink every indicator — especially what the interest rates are going to do. They make predictions of both up and down, and then they hedge their predictions.

You can size up market interest rates without pinpointing the exact time they're going to turn. If they've been going up, are way up compared to a couple years ago, the Fed hasn't raised them in months, and the economy is starting to slow, you're not going to want to take on more risk by having your entire portfolio in short-term investments. You'll want to lock in the high rates for as long as you can.

But try as you might, you're not Cassandra or Carnac the Magnificent. You can't predict the future with 100 percent accuracy.



If you want to be safe, diversify your maturities. If interest rates fall, you have some long-term investments that will keep paying you a nice rate and are more liquid because they're in a capital gain. If interest rates rise, you can reinvest your short-term investment at a higher interest rate when they come due. In other words, if you want to be safe, have all your bases covered.

Never forget that every investment has risks, whether you know of them or not. You need to make sure that you're aware of what former Defense Secretary Donald Rumsfeld once called "the unknown unknowns."

Consider the story of one very successful investor. He invested in the stock market using options and all sorts of sophisticated trading software. He used to work on the options trading floor, and he knew how to manage his risk better than practically anyone. What was amazing about this investor was that he made almost a 100 percent return on his investments every year, even though he was wrong 65 percent of the time.

Think that doesn't compute? How can you double your money while making the wrong choices more than half the time? He did it because he knew how to manage his risk. He would enter only trades that he knew could yield 300 percent if he was right but lose only 50 percent if he was wrong.



If you're managing public funds, you'll be investing in markets other than volatile stocks, of course, but the point of the example is the importance of being well aware of your risk so that you can manage it effectively.

Here's a list of risks you'll face with the typical fixed-income investment. When examining a portfolio from a risk-averse standpoint, going through the list and rating the risks is helpful — numbering them 1 for low risks and 10 for high.

- ✓ Interest rate risk
- ✓ Reinvestment risk
- ✓ Event risk
- ✓ Call or prepayment risk
- ✓ Liquidity risk
- ✓ Credit or default risk
- ✓ Yield curve risk
- ✓ Inflation risk
- ✓ Currency risk
- ✓ Hedge risk

## Staying Liquid

*Liquidity* is having the cash you need when you need it (refer to Chapter 1). How much liquidity do you need and when do you need it? Just enough, not too much, and not too little. If you have too little liquidity, you could be forced to sell investments in an untimely manner.



*Cash flow analysis is the key to determining what you have to invest and how to invest.*

Senior Deputy State Treasurer  
State of Nevada

Before you look at what and where to invest, you have to understand your cash flow. First, make sure that the money is

there when you need it. Also make sure that you don't have way more than you need. In many portfolios, the problem isn't having enough liquid cash but having too much. Think of it like the grandmother who has living expenses of \$2,000 a month but has \$100,000 in her checking account, just in case.

An investment policy states that you need to keep your investment safe, liquid, and get a reasonable return, so you need to be the "prudent person" when choosing investments.

What an investment policy does *not* do is give you an investment plan, or strategy. It tells you that you need to be safe and liquid, *but it doesn't say how*. It lays down the rules of the game, *but it doesn't lay out the strategy*.



Developing an investment strategy can be daunting, especially when it's the first one you develop. You may feel better working closely with a professional to develop a plan and a strategy for your entity, or find a good plan and customize it to meet your needs.

Among the many things the plan should tell you are what to do when interest rates start to decline, and what to do when interest rates start to rise. An investment plan should also tell you how to stagger maturities, what duration to shoot for, and whether you'll be using a barbell strategy (see Chapter 3) or laddering (discussed in Chapters 1 and 3).

## What Goes Up . . .

At the time of this writing, interest rates were going up, up, and up, and a lot of portfolios were set up as if that rise would go on forever.

But before they started to rise, interest rates were flat for a year, and before that, they had dropped 13 times. Then, before that they were flat, and before that, they rose six times. See the pattern? The economy is cyclical: growth, flat, recession, growth, flat, recession. Raise rates, leave them alone, drop rates, raise rates, leave them alone, drop rates. . . .

While predicting the direction that long-term market rates will take is difficult, economists have many indicators to help them predict the direction of short-term rates. The Fed, the yield curve, the stock market, the value of the dollar, corporate bond yields, and what economists are saying can help you understand the direction.

On the other hand, if you asked an *expert* — someone whose job is to predict where interest rates are heading a year or more from now — that person could give you a very confident answer and back it up with a lot of data . . . and be completely wrong.

## The cost of missed opportunities

Here's a hypothetical (but pretty typical) example called ABC County. The county had a general fund of \$60 million, but no cash-flow analysis had ever been done to determine its liquidity needs. Some 90 percent of its fund was invested in short-term investments — the longest maturity was under six months. The county had invested this way for as long as anyone could remember. Its investment policy stated that investment maturities as long as five years were okay, but no one wanted to show an unrealized loss if interest rates rose.

The biggest risk the county took is called *reinvestment risk*, or having to reinvest the money at a lower interest rate when the current investments come due.

In this example, the liquidity needs are \$30 million — in other words, the county needed \$30 million in cash to handle its operations at all times. This

left an additional \$30 million that could help improve the yield of the entire fund.

For the past 10 years the county put its money in six-month CDs figuring that the money was safe and the interest rates were the highest possible. To illustrate reinvestment risk, consider historical six-month CD rates. In June of 2000, a six-month CD rate was 6.91 percent, compared to a much lower bond rate of 5.5 percent. Over a six-month period, the difference on the investment is \$211,500, so it looks like the smarter decision was the six-month CD.

Then interest rates fell, so much so that within two years that \$211,500 good decision would have been replaced by a half-million-dollar bad decision. Over the entire 10-year term, missed opportunities would cost the county just under \$6 million.

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## 20 Public Fund Investing For Dummies

(continued)

<b>Short Term High Yield Investments vs Six Year U.S. Treasury 2000 to 2006</b>			
Reserve Fund Balance		\$30,000,000.00	
Hypothetical US Treasury Yield		5.500%	
<b>Six month Certificates of Deposit Historical Rates</b>			
	<b>Historical 6 Month CD Rates</b>	<b>Starting Balance</b>	<b>6 Month Balance</b>
<i>Jun-00</i>	6.91%	\$ 30,000,000.00	\$ 31,036,500.00
<i>Dec-00</i>	6.30%	\$ 31,036,500.00	\$ 32,014,149.75
<i>Jun-01</i>	3.74%	\$ 32,014,149.75	\$ 32,612,814.35
<i>Dec-01</i>	1.90%	\$ 32,612,814.35	\$ 32,922,636.09
<i>Jun-02</i>	1.92%	\$ 32,922,636.09	\$ 33,238,693.39
<i>Dec-02</i>	1.36%	\$ 33,238,693.39	\$ 33,464,716.51
<i>Jun-03</i>	1.02%	\$ 33,464,716.51	\$ 33,635,386.56
<i>Dec-03</i>	1.17%	\$ 33,635,386.56	\$ 33,832,153.57
<i>Jun-04</i>	1.76%	\$ 33,832,153.57	\$ 34,129,876.53
<i>Dec-04</i>	2.66%	\$ 34,129,876.53	\$ 34,583,803.88
<i>Jun-05</i>	3.56%	\$ 34,583,803.88	\$ 35,199,395.59
<i>Dec-05</i>	4.01%	\$ 35,199,395.59	\$ 35,905,143.47
<i>Jun-06</i>	5.54%	\$ 35,905,143.47	\$ 36,899,715.95
		<b>\$ 36,899,715.95</b>	
<b>Hypothetical Intermediate Bond</b>			
	<b>Six Year Yield</b>	<b>Starting Balance</b>	<b>6 Month Balance</b>
<i>Jun-00</i>	5.50%	\$ 30,000,000.00	\$ 31,825,000.000
<i>Dec-00</i>	5.50%	\$ 30,825,000.00	\$ 31,672,687.500
<i>Jun-01</i>	5.50%	\$ 31,672,687.500	\$ 32,543,686.406
<i>Dec-01</i>	5.50%	\$ 32,543,686.406	\$ 33,438,637.782
<i>Jun-02</i>	5.50%	\$ 33,438,637.782	\$ 34,358,200.321
<i>Dec-02</i>	5.50%	\$ 34,358,200.321	\$ 35,303,050.830
<i>Jun-03</i>	5.50%	\$ 35,303,050.830	\$ 36,273,884.728
<i>Dec-03</i>	5.50%	\$ 36,273,884.728	\$ 37,271,416.558
<i>Jun-04</i>	5.50%	\$ 37,271,416.558	\$ 38,296,380.513
<i>Dec-04</i>	5.50%	\$ 38,296,380.513	\$ 39,349,530.978
<i>Jun-05</i>	5.50%	\$ 39,349,530.978	\$ 40,431,643.079
<i>Dec-05</i>	5.50%	\$ 40,431,643.079	\$ 41,543,513.264
<i>Jun-06</i>	5.50%	\$ 41,543,513.264	\$ 42,685,958.879
		<b>\$ 42,685,959.879</b>	
<b>Lost Revenue Opportunity</b>			
Total Hypothetical Cost		(5,786,243.93)	-19.29%
Average Yearly Cost		(964,373.99)	-3.21%
Average Monthly Cost		(80,364.50)	-0.27%

Hypothetical illustration and charts are for educational purposes only. The illustration is not intended as offering specific investment advice. Investing in securities involves risk, including loss of principal. Please consult with a professional regarding your individual circumstances.