# CHAPTER

# CASH FLOW AND YOUR CASH POSITION

1.1	LIFE IN THE NONPROFIT FINANCE OFFICE	(b) Calculate K 2 (c) Evaluate Ye	ey Ratios 14 bur Ratios in Light of	
1.2	TARGET LIQUIDITY AS THE PRIMARY FINANCIAL OBJECTIVE	Your Startir 4 1.4 HOW DO PRO	rg Points 20 FICIENT CASH	
	<ul><li>(a) What Is Liquidity?</li><li>(b) Why Is Achieving Target Liquidity the Preferred Operational Primary</li></ul>	5 MANAGEMENT MANAGEMEN ORGANIZATIO	AND INVESTMENT ENABLE YOUR IN TO ACHIEVE ITS	
	Financial Objective?	6 LIQUID!TY TA	RGET? 21	
	for and Achieve Target Liquidity?	10 (b) Investment	Management 21	
1.3	SETTING YOUR LIQUIDITY TARGET	1.5 SUMMARY	23	
	(a) Starting Points	12		

Your organization's primary financial objective is to ensure that financial resources are available when needed (timing), as needed (amount), and at reasonable cost (cost-effectiveness), and that once mobilized, these resources are protected from impairment and spern according to mission and donor purposes. The goal of this book is to enable you and your organization to achieve this primary financial objective. The reality of many nonprofit organizations is quite different: recurrent cash crunches representing a mismatch in timing or amount, or worse—perhaps an unsolvable cash crisis that leads to high-cost fundraising, asset sale, or borrowing episodes. For others, fraud or mismanagement lead to misspending of funds, and the organization falls short of doing all it could in reaching its mission or complying with donors' intent.

Surveys of chief executive officers and executive directors (CEOs/EDs) indicate that financial management is one of the areas that these managers find most challenging.<sup>1</sup> Many managers, including those who are held responsible for the financial management of the organizations—whom we shall refer to as chief financial officers (CFOs) even though their actual titles vary widely—lack the necessary time, training, and aptitudes for properly managing the finance function. This book should prove helpful for the latter two issues. Furthermore, after "develop, communicate, and execute strategic plans," the three "musts"

for effective finance leaders in the business sector for the twenty-first century are (1) inspire other groups to get behind overall financial goals, (2) educate colleagues on financial implications of business decisions, and (3) improve core function efficiency to assume expanded responsibilities.<sup>2</sup> Similar objectives apply to nonprofit financial leaders, and you will find the information presented here to be valuable for all three purposes.

This book will guide you on many facets of cash and investment management in order for your organization to achieve and maintain financial strength. We believe this is accomplished only by financial management proficiency. Proficient financial management includes using the best available methods and tools to achieve the primary financial objective. Our road map toward financial management proficiency includes practical help with:

- Defining the appropriate financial target for your organization
- Cash planning
- Tapping sources of cash to improve your cash flow
- Setting liquidity policies, including those for cash reserves, operating reserves, and strategic reserves
- Gathering cash efficiently
- Mobilizing and controlling cash
- Disbursing cash efficiently while averting fraud
- Managing your bank relationship
- Borrowing for short-term needs
- Investing for the short-term
- Investing for the medium-term
- Investing for endowments, annuity accounts, and retirement accounts
- Harnessing information technology (IT) to better accomplish cash and investment management

We start our journey in this chapter by setting the context for nonprofit financial management. Then we profile the primary financial objective of the nonprofit: achieving a liquidity target. Next we list the metrics and financial ratios that may be used to evaluate the organization's liquidity and indicate how to set your organization's target liquidity. Finally we show how improved cash management and investment management facilitate your achievement of targeted liquidity.

# **1.1 LIFE IN THE NONPROFIT FINANCE OFFICE**

We see two common maladies in the financial practices of nonprofits. Fortunately, these operating modes are easily improved.

Operating Mode #1: "I'll Fly by the Seat of My Pants." Translation: Why bother setting a targeted cash position or targeted liquidity level? Most nonprofits operate in this operating mode. These organizations use either a break-even financial target (revenues equal to expenses each year, or a "balanced budget"),

#### 1.1 Life in the Nonprofit Finance Office 3

or what is somewhat better, a small profit ("net surplus") target. The former nonprofits believe they are scrupulously carrying out their mandate—"after all, we're a nonprofit organization"—and should therefore be congratulated. The latter know that growth in programs and services and funding new facilities or improved future salaries and benefits require the organization to earn revenues in excess of expenses. However, an organization can have a cash crunch or cash crisis when pursuing either break-even or a small net profit, and may not properly manage its investments or borrowing if not pursuing a liquidity target. We shall have more to say about this shortly.

Operating Mode #2: "Your Guess Is as Good as Mine." Translation: Why bother forecasting the organization's cash flow and cash position? Managers in most organizations really don't get it when it comes to doing these projections. Some of them argue: "But we project the remainder of the year as far as staying within the budget—isn't that good enough?" That's a great practice, but no, it really isn't sufficient. Your revenues and expenses are done on an accrual basis, meaning they may not reflect when cash is coming in or going out. Put another way, your operating budget is not the same as a cash budget. We will illustrate this point by using an actual organization's operating results for two recent years, as captured by its year-end Statement of Activity report. You can think of the Statement of Activity as an "income statement." Although slightly different from your operating budget, the Statement of Activity shows your organization's revenues and expenses (whether included in your budget or not) for the period just ended. It does include the results of some nonoperating activities—such as unrealized investment gains and losses that you may not have included in your budget. For our purposes, though, it will give us a good idea of why changes in your cash position can vary greatly from your operating results and especially from your reported change in net assets. Here are two recent years' actual data from the Leukemia and Lymphoma Society; we show the amount by which revenues exceed expenses ("change in net assets") as well as the cash actually provided (used) by the organization's operations that year. Notice in the last row the difference we calculated in these amounts for the two years.

	Year 1	Year 2
Change in net assets	\$ 6,136,000	\$ 8,481,000
Net cash provided by operating activities	\$10,636,000	\$12,046,000
<i>Difference (amount of additional cash)</i>	\$ 4,500,000	\$ 3,565,000

In this case, the Society brought in between \$3.5 and \$4.5 million in additional cash from its operations, over and above what its "income statement" reported. For the Society this is great news, in that the cash position is higher than what one would have expected from looking at revenues and expenses; in other years, or for other organizations, though, the difference could be negative—and the organization could be thrust into a cash crunch or cash crisis.

No doubt some readers will wonder "But what if my organization is accounting for things on a cash basis — wouldn't that eliminate the need to forecast cash?" Again, the answer is emphatically "No!" The two activities that drive a wedge between changes in your operating results and your cash position changes are investing activities and financing activities. Let's compare the Society's change in net assets with the change in its cash position for the same two years:

	Year 1	Year 2
Change in net assets	\$ 6,136,000	\$8,481,000
Net (decrease) increase in cash and cash equivalents	\$22,066,000	(\$8,991,000)
Difference (amount of additional cash)	\$15,930,000	\$-17,472,000

The differences between the reported "net revenue" and the actual change in the Society's cash position are very large in both years. In year 2, had the Society just assumed that its cash position would change in the same amount as its operating results, it would have had a \$17 million surprise. Worse yet, what if management had assumed that cash would increase more than net revenues, as it had in year 1? Unfortunately, we are constantly told by nonprofit managers and staffers that they do not construct a cash forecast. The single best way to ensure that your organization sees the importance of a cash forecast is to adopt the appropriate primary financial objective: a targeted liquidity level.

# **1.2 TARGET LIQUIDITY AS THE PRIMARY FINANCIAL OBJECTIVE**

Let's recap: We are striving "to ensure that financial resources are available when needed (timing), as needed (amount), and at reasonable cost (cost-effectiveness), and that once mobilized, these resources are protected from impairment and spent according to mission and donor purposes." The best way to ensure that we accomplish this goal is to restate the organization's primary financial objective as "achievement of a target liquidity level." We will expand on liquidity and what that means later, but for now we make this operational by restating our primary financial objective this way: "Manage cash flow to ensure that the organization achieves its target cash position." "Keeping your eye on the ball" means you will have two focuses: cash flow and cash position. Well-run businesses recognize that cash is the lifeblood of the business and the engine of value for shareholders; we recognize that cash and cash flow are even more vital for nonprofits, in that some of the financing sources available to businesses are unavailable or available in smaller amounts to nonprofits. Nonprofits do not have the ability to issue stock to raise capital, and short-term borrowing and long-term bonds are restricted by organization policy and/or lender credit standards. Correspondingly, these lending sources may not lend to nonprofits or may lend smaller amounts, and possibly charge higher interest rates. This is less true for nonprofits

#### 1.2 Target Liquidity as the Primary Financial Objective 5

that are in the education or healthcare fields, although private elementary and secondary schools often have difficulty in borrowing. There are two key points here: (1) Internal generation of cash is preeminent; and (2) once your cash position is impaired, it is often quite difficult to regain your footing.

(a) WHAT IS LIQUIDITY? Liquidity, broadly defined, includes solvency, liquidity as traditionally defined, and financial flexibility. Liquidity, solvency, and financial flexibility are related concepts but are easily confused.

(*i*) *Narrow Definition of Liquidity.* Liquidity, as traditionally defined, is what we were defining earlier when we spoke of having enough financial resources to pay obligations without incurring excessive cost. It entails the resources we have stored up (cash and short-term investments), the resources we have available from the bank (credit line amounts not already drawn down), and incoming cash resources (cash revenues in excess of cash expenses in the forthcoming months). Notice, then, that it encompasses the stock of liquid resources as well as the incoming cash flow. It considers how long it takes to convert an asset into cash or how close a liability is to being paid as well as the cost at which added funds may be obtained.

(*ii*) Solvency. By contrast, solvency is the degree to which our near-term assets exceed our near-term liabilities—as measured on the balance sheet or the statement of financial position. It focuses solely on the stock, or stored-up amount, of "current assets:" cash, uncollected credit sales or uncollected legally enforceable pledges that we expect within one year, grant or contract receipts we expect within one year, inventories, and prepaid expenses. The total of these is then compared to the stock of near-term or current liabilities: bills such as invoices for supplies that we over within one year but have not yet written a check for. Nowhere is the speed of asset conversion to cash or nearness of payables due dates measured in the computation of solvency. A common measure of solvency is the current ratio, which simply divides current liabilities into current assets. Another common solvency measure is net working capital, which is the difference between current assets and current liabilities.

Both current ratio and net working capital are poor ratios for indicating how liquid an organization is: If an organization has obsolete and unsalable inventories and uncollectible pledges or other receivables, most of which are financed by long-term financing (past years' net revenues, let's say), it would report a high current ratio and large positive net working capital but very little liquidity. In general, solvency measures are deficient measures of the organization's cash resources and cash demands, both because of the failure to reflect how soon assets or liabilities add to or subtract from our cash position and also because they view the organization as about to be liquidated (we will sell off current assets, pay off current liabilities) rather than as it really is, a going concern (both current assets and current liabilities will be replaced by newly arising current

assets and liabilities, possibly of larger amounts than those we have today). Note again, the flow of cash is not captured by solvency measures. To get at that, one must know how soon the various current assets will turn to cash and how soon the various current liabilities must be paid. This critical difference between solvency and liquidity means you or your banker might under- or overestimate the liquidity of your organization if only solvency measures are considered. It is important to calculate and monitor liquidity measures and not rely solely on solvency measures. We shall return to specific measures later in this chapter.

(iii) Financial Flexibility. Finally, we need to understand financial flexibility. One way to define financial flexibility is "the ability of the firm to augment its future cash flows to cover any unforeseen needs or to take advantage of any unforeseen opportunities."3 Thinking also about an organization's financial plans for the future, we suggest that financial flexibility includes *strategic liquidity*—the ability to tap liquid funds, including those made available by foundations, grantors, or arranged borrowing, to fund strategic initiatives such as program expansion, geographical expansion, new hires, mergers and acquisitions, social enterprises, and collaborative ventures. In Tact, one measure of financial flexibility—sustainable growth rate—implicitly incorporates strategic liquidity by addressing whether an organization's financial policies are consistent with its growth plans.<sup>4</sup> Finally, a "financially strong organization"— one with a high degree of liquidity and a low degree of debt financing—would tend to have greater financial flexibility, all other things being equal. That strength is further enhanced by an organization that (1) could augment its revenue because it has a very good reputation among present and potential donors, grant or contract sources, and (if a commercial nonprofit such as a college or hospital) present and potential customers or clients; and (2) could reduce its expenses because it has mostly contract workers instead of permanent full-time employees or has other discretionary expenses that it could reduce at short notice and still maintain the same level of service provision.

(*iv*) *Broad Definition of Liquidity.* The relationship between these different liquidity of solvency concepts can be confusing, so we offer Exhibit 1.1 to show the relationships. Liquidity broadly defined encompasses financial flexibility, narrow liquidity (liquidity as traditionally defined), solvency and financial flexibility. Narrow liquidity, in turn, includes solvency. Your organization should determine the appropriate target for liquidity, as traditionally defined, but also include in its planning model the financial flexibility concept. In this way, its financial function will best support mission achievement, the reason why your organization exists as a nonprofit entity.

(b) WHY IS ACHIEVING TARGET LIQUIDITY THE PREFERRED OPERATIONAL PRIMARY FINANCIAL OBJECTIVE? Setting and attaining your target liquidity level should be your primary financial objective for at least seven reasons.

#### 1.2 Target Liquidity as the Primary Financial Objective 7



First, it is too complex to try to juggle multiple financial objectives simultaneously. We understand the importance of achieving a net surplus—revenues greater than expenses—for many organizations, for example. In a nonprofit organization, however, profits are not a measure of success, and there may be periods during which the organization will incur expenses greater than revenues. Furthermore, in an organization that is properly accounting for depreciation—and setting aside cash to maintain or replace deteriorating assets—and not growing, revenues may not need to exceed expenses for the organization to maintain its financial health. At bottom, the organization's need to generate a surplus serves the organization's need to achieve a certain level of liquidity, not vice versa. Correspondingly, we recommend that the financial manager focuses on the liquidity position and then secondarily on the net revenue target since that may constitute one of the means to enable the organization to build toward its liquidity target.

We also understand the desire to reduce or minimize financial risk—another of the financial objectives we hear articulated by nonprofit CFOs. Let's say that your organization has three primary financial objectives: Achieve its target liquidity, earn \$50,000 in net revenue, and minimize financial risk. It is far easier to measure and monitor target liquidity and consider the effects of net revenue and financial risk on tomorrow's liquidity position than to try to gauge every programmatic alternative's effect on all three objectives simultaneously. It is also easier to communicate to program managers the need to cut expenses in order to maintain the organization's financial strength than to say something like: "We should pare

expenses because that will have a 10 percent effect on financial strength, a 20 percent effect on net revenue, and a 7 percent effect on financial risk."

Second, targeting liquidity frees the organization to run surpluses or deficits in some years in support of the mission and the organization's programs, as long as the organization does not veer outside its targeted liquidity range. For example, consider an organization that has just altered its policy and is now targeting \$100,000 to \$350,000 in liquidity, but is running above that range and projects that the next fiscal year will end with \$450,000 in liquidity. Its board may approve a budget with a \$100,000 deficit—or even larger. Relatively few nonprofit boards purposefully run an operating deficit, partly because they are targeting the wrong objective—financial break-even or perhaps a net surplus. This slows the growth of some nonprofits and causes others to fall short of meeting large one-time needs in their service populations. Other organizations are very "cash poor" and desperately need to run very large surpluses for several years to address their lack of liquidity. A mindless "financial break-even" or \$X surplus primary financial objective unnecessarily handicaps organizations.

Third, liquidity targeting supersedes cost minimization as the primary financial objective. Those organizations that indicate cost minimization is their primary financial objective run several risks. They may not invest in technology, because that is seldom the least costly way of accomplishing something. For example, online banking may cause the example, online banking may cause the example of fraud detection, the closer-to-real-time valance information that becomes available 24/7/365, the ability to transfer funds or pay off purchase card balances quickly, and the rapid detection of cash forecast misses that combine to make this an effective financial management tool. Organizations may underinvest in training as well, causing losses in organizational effectiveness, greater personnel turnover, and less effective provision of the nonprofit's services by these employees. "Penny-wise and pound-foolish cactics such as underinvesting in fundraising—one of the more common maladies of donation-dependent nonprofits-also arise from a cost minimization approach. True, there's no sense overpaying for supplies, products, and services—but let's not focus on cost minimization as our primary financial objective. That said, there are times in which a cash crunch or cash crisis will force a cost minimization and cost deferral mode on the nonprofit.

Fourth, the most commonly espoused primary financial objectives—earning a surplus or breaking even financially—are ambiguous at best and misleading at worst. They are not cash-based, unless the organization operates on a cash basis during the year and has an accountant convert them to an accrual basis of accounting at year-end. Even if the organization operates on a cash basis, not keeping track of receivables and payables, it can land in a cash crunch or cash crisis. It may incur obligations that are not reflected in its financial statements and then not have cash on hand to pay those obligations when they come due. Accrued wages, salaries, interest, and taxes may come due and payable, as may amounts owed to clients (deferred revenues), suppliers (accounts payable), or other organizations

#### 1.2 Target Liquidity as the Primary Financial Objective 9

(grants payable). An organization would have to develop and use a comprehensive and accurate cash forecasting system to avoid such an occurrence. Even then, an operating surplus or operating break-even mind-set may lead to a cash shortfall. At times this happens because a large amount of cash comes in that is temporarily or permanently restricted, but not properly segregated and spent on current operating expenses. This happens most often when certain operating items are left out of the cash forecast or when nonoperating items are significant. Nonoperating items are items that fall under either investing cash flows or financing cash flows categories. For example, an organization may purchase a van or bus but it has not yet received pledges or grant monies to pay for the vehicle. Or it may have a balloon payment on a note or loan that comes due after 10 years, but because the organization for this event. Organizations targeting liquidity are aware of all drivers of cash flow, including accrual-based accounting entries, investing inflows and outflows, and financing inflows and outflows.

Our fifth reason is a positive one: Targeting liquidity keeps the focus on the cash position and cash flows—and the effects of cash flows on the cash position. The chances of being thrust into a cash crunch or cash crisis are much lower, and if either would occur, it would most likely have been anticipated. When you see a cash crunch coming, you may be able to arrange for additional grants, donations, or a bank loan to cover the shortfall.

Sixth, targeting liquidity as the primary financial objective enforces a necessary discipline on the organization's board, managers, and employees. This discipline includes the need to replenish the liquidity position if it is reduced for an urgent need. This discipline is mus a valuable proactive and proficiency-enhancing safeguard for the organization. In the event that the organization builds liquidity above its target range, having the target as the primary financial objective forces the board and management team to determine how and when to burn off the excess.

Seventh and finally, this objective of liquidity targeting leads to the right managerial actions. To generate cash flow to maintain or build the liquidity position, an organization is incented to increase revenues (perhaps fundraising, grants, and contracts) and decrease expenses, while keeping an eye on the cash effects of these activities rather than the net revenue effects. The organization will naturally want to increase revenues and decrease expenses in order to maximize its mission attainment and still reach its cash target. Its cash target is a range and is managed intertemporally, or across time. The organization may move up and down within its liquidity range without major concern. It is thus able to operate with maximum flexibility in its mission outreach, all the while conserving financial strength within some range deemed appropriate.

In summary, achieving an approximate liquidity target is the most appropriate primary financial objective. This primary financial objective best supports mission attainment. The operational primary financial objective linked to this

approximate liquidity target objective is: Manage your cash position and your cash flow. This restatement puts "approximate liquidity target" into operational terms. Reviewing yesterday's financial results and statements, making today's decisions, and planning for tomorrow's initiatives are all best done while focusing on cash flow and the resultant cash position.

(c) WHY DO SO FEW NONPROFITS STRIVE FOR AND ACHIEVE TARGET LIQUIDITY? A growing number of nonprofits strive for cash flow and liquidity objectives. There are several reasons why other organizations still target financial break-even, a net surplus, or some other primary financial objective. The good news is that more and more nonprofits *are* striving for and beginning to achieve a target liquidity level.

First, we note that many healthcare and educational organizations are really "businesses in disguise." These "commercial nonprofits" price their services or products much like a for-profit business would. And, yes, other nonprofits cloak their business orientation behind their nonprofit status-many of the nonprofit credit counseling organizations were exposed by the IRS because of their abusive practices:

Over the last few years, the IRS has seen an increasing number of credit counseling organizations become mere sellers of debt-management plans. They appear motivated primarily by profit, and offer little or no counseling or education. In many cases the credit counseling organizations also appear to serve the private interests of related for-profit businesses, officers, and directors. ... As a result, the IRS has revoked, terminated or proposed revoking the exemptions of credit counseling organizations representing 41 percent of the revenue in the industry, based on the latest available IRS filing data. The IRS also halted the growth of abusive credit counseling organizations. Of 110 applications reviewed, only 3 met the requirements for tax-exempt status; 95 were not approved and the remaining 12 are pending.<sup>5</sup>

Commercially oriented nonprofits, especially hospitals and other healthcare organizations that are considering a future conversion to for-profit status, may favor a primary financial objective of net revenue maximization (also called profit maximization). Liquidity targeting may then serve as a secondary objective.

Second, numerous nonprofits have run with the "received wisdom" of past generations that, since they are legally nonprofit, they should not make a profit. What to do then? Striving for financial break-even became the default primary financial objective. Organizations such as Yale University made front-page news because they did not save up for maintenance and renovation of their crumbling buildings. Cash flow concerns and liquidity concerns were swept under the carpet and just considered to be part of the nonprofit landscape. Many nonprofits, established with ideals and wonderful missions but little financial understanding, went belly-up.

## 1.2 Target Liquidity as the Primary Financial Objective 11

Third, on a positive note, we see more organizations that *are* becoming aware of the importance of cash flow and the cash position, leading a number of them to strive for target liquidity.

Illustrating from one of the field studies we conducted in the early 1990s, we found that a top-performing human services agency, Peoria Rescue Ministries, managed overtly toward a cash position target. After studying its cash position and cash flow patterns over a period of several years, management determined the amount of liquidity it would need to hold in cash and short-term investments after its peak donation season (ending about at Christmas). Management determined that this "stockpile" would last it through the dry late summer season, and afterward the donation stream would enable rebuilding the liquidity position.

In a more broadly based survey of 29 faith-based organizations holding membership in the Evangelical Fellowship of Mission Agencies, we asked member organizations' CFOs what the primary financial objective was. We found that 35.7 percent stated this as "break even financially," which is a traditional response that seems to be tied to the notion that the identity as a nonprofit dictates this sort of an objective. Positively, we found that 21.4 percent of the CFOs articulated "maintain a targeted level of cash reserves and financial flexibility" as the primary financial objective, and an additional 14.3 percent selected "maximize cash flow." Summarizing, we note that 35.7 percent (21.4 + 14.3) are focusing, now, on cash flow and cash position—or "liquidity management."<sup>6</sup>

The growing recognition that many nonprofits are undercapitalized is also seen in the behavior of private foundations, as they increasingly focus on grantee organization capacity. A prime example is the Kellogg Foundation initiative launched midyear 2006, which provided \$9.3 million to enable Fieldstone Alliance and the Nonprofit Finance Fund to jointly consult, train, and otherwise build organizational and financial capacity in the 800-plus Kellogg grantee organizations.

In past nonprofit financial management, the bean counters have predominated, but true treasurers are coming to the fore. Let's explain this by looking at the treasury function versus the controllership function.

The treasury function includes cash management, credit management, financial input to inventory management, arranging short-term borrowing, making short-term investments, arranging long-term borrowing and mortgage borrowing, pension fund management, financial aspects of benefit administration, banking relationship management, and the financial aspects of fundraising evaluation. The controllership function, however, is concerned with accounting, taxes, financial reporting, adhering to regulations, budgets, and audits. It may also include mechanical aspects of payables and receivables. In our experience, the controllership function, because it must be completed to satisfy your grant agencies, donors, the IRS, and your audit firm, takes precedence over the treasury function in most nonprofits. We commonly hear that nonprofits spend a tremendous amount of time on their financial compliance and reporting. As many nonprofits have

limited financial staff, something has to give—and that something is proficient management of the treasury function.

Fourth, it has been difficult to set the appropriate target liquidity level. There is some disagreement as to what is "enough liquidity" versus "too much liquidity." Three months to six months of expenses constitute a partial answer to how much liquidity to hold, but at best this simply buffers your organization against cash inflow and cash outflow mismatches and the seasonality of your organization's funds flows. Typically organizations need to hold more funds than that in order to buffer against emergencies and to pre-fund large investment amounts, such as capital expenditures or program expansion. This is especially so when the organization does not have a credit line at a financial institution or has drawn down most or all of the line.

Fifth, the best time to set policy and get a handle on target liquidity is at start-up. Nonprofits can learn from businesses, and the businesses nonprofits are most comparable to are small businesses. The primary reason for the failure of a small business is that it is undercapitalized. This means that the founders of the organization did not fully anticipate just how much money it would take to launch the organization successfully. We see the same thing with nonprofits. It also happens that, even if the organization was properly capitalized at start-up, liquidity erodes and is not replenished.

# **1.3 SETTING YOUR LIQUIDITY TARGET**

(a) **STARTING POINTS.** Setting your organization's target liquidity is not a simple process. There is some hard work to do before your management team can first agree and your board can then agree on what the appropriate target liquidity is.

First, study the failure rates in your industry. What organizations have failed and had to be acquired by other organizations, or went bankrupt and had to be shut down? Why did these organizations fail? What could have been done to prevent them from failing? Did they start out undercapitalized? Did they fail to set an appropriate liquidity target, once the organization had gotten started up? Did they draw down funds from this liquidity level and fail to replenish them? Or was it due to the loss of a key funding source or some new competition?

Second, study bond ratings of nonprofits similar to yours. A.M. Best Company, Inc., Dominion Bond Rating Service Ltd., Fitch, Inc., Moody's Investors Service, and the Standard & Poor's Division of the McGraw Hill Companies Inc. are all bond rating organizations that are nationally recognized in the United States. One or more of these rating agencies will evaluate the financial position and creditworthiness of large healthcare and educational organizations. Within healthcare, hospitals, nursing homes, and comprehensive care organizations are rated. Within education, public universities, private colleges, and some large elementary and secondary private schools are rated. Some large human service organizations are also rated. More important than the actual rating assigned is the reasoning behind that rating. For example, if a hospital received a triple-B

## 1.3 Setting Your Liquidity Target 13

rating, what financial attributes of that hospital led to that rating being assigned? Specifically, how was liquidity measured by the rating agency, and how did it score the level of liquidity that was measured? If you go to the Web site of any of these rating organizations, search for its "ratings criteria." Within the ratings criteria, search for liquidity. Try to determine how important liquidity is for the rating organization and the exact way in which liquidity is measured.

Third, ask your banker or ask bank calling officers about liquidity and how much liquidity to hold when they try to sell you on their services. Ask them about organizations that they are aware of that have failed and the reasons for those failures. Church lending practices are a great example here. When a bank considers a building loan proposal, it will offer better terms or a larger loan amount when a church has a larger dollar amount of cash and short-term investments. Or a bank may allow a higher level of debt service (principal plus interest) as a percentage of normal monthly giving if the church is holding a higher level of liquidity.

Fourth, do some networking to check around for practices within your industry. Determine, for your industry, the highest amount, the lowest amount, and the median amount of each of these values:

- Cash and cash equivalents
- Short-term investments
- Amount of cash that is unrestricted
- Size of credit line, if any
- Average usage of credit line, if any (not just the year-end amount, though)
- From the previous two nems, calculate the unused portion of the credit line (total size of credit line minus average usage of credit line)

Fifth, study your organization's seasonality and cyclicality of cash flow. Has there been any financial crisis in the past? What are the causes of any financial crisis your organization may have experienced? What corrections have been taken or could be taken to prevent future a recurrence? What information can you glean from this data that would help you to set your cash position?

Sixth, assess your organization's vulnerability to a cash crunch or cash crisis. Does most of your revenue come from a single source? Is the marketplace becoming crowded with similar organizations? Is donor fatigue an issue with your donor base? Are expenses such as energy costs and benefit costs rising rapidly, while your revenues increase only slowly? Any of these scenarios suggest holding a higher level of liquidity. You will also want to project your operating cash flow, investing cash flow, and financing cash flow, as we show later.

Seventh, total up your "standbys." That is, what are some of the sources of funds that you could access quickly in an emergency? These might include the unused portion of your credit line, accounts receivable that you could factor (sell to a third party, receiving an advance), gifts from board members, or even your own personal funds. List all such sources and the amount that you could most

likely receive from them within, say, a two-month time frame. The greater the amount and the more reliable your standbys, the less liquidity you may have to hold on an ongoing basis.

(b) CALCULATE KEY RATIOS. Your job of comparing your solvency, liquidity, and financial flexibility to previous years as well as to peer organizations in your industry will be much easier once you calculate some key ratios. Be careful when doing peer comparisons: Other organizations may use a different approach to valuing assets or estimating future obligations, given the latitude offered by generally accepted accounting principles (GAAP). We offer some ratios in each category. You may wish to calculate two or three from each category both for your organization and for a similar organization, then place the numbers in a chart or table to facilitate your management and board discussions. For more on these and similar ratios, as well as calculation and interpretation examples, see Chapter 7 and the appendixes to that chapter in our companion book, *Financial Management for Nonprofit Organizations* (John Wiley & Sons, 2007).

(*i*) Solvency Ratios. We present four solvency ratios to assist you in assessing your organization's solvency. Calculating and analyzing more than one provides you with a composite measure of solvency. One ratio in isolation should never be relied on to provide an adequate perspective on solvency.

# CASH RATIO.

The cash ratio is calculated as:

# Cash and cash equivalents / Current liabilities

All data is taken from the balance sheet (or statement of financial position). Use unrestricted and temporarily restricted cash and cash equivalents in any case in which a portion of the organization's cash and equivalents is permanently restricted. The more cash the organization has relative to near-term bills coming due, the more solvent the organization is. Low cash ratios signal high risk of not being able to make upcoming payments. Recognize that this perspective is incomplete, as some bills are not recorded on the balance sheet but paid out when invoices are received (if due and payable when received) or payroll dates roll around.

Cash Reserve Ratio.

The cash reserve ratio is calculated as:

Cash and cash equivalents / Total expenses

The cash amount is taken from the balance sheet (or statement of financial position) and total expenses are from the same year's statement of activity. Use unrestricted and temporarily restricted cash and cash equivalents in any case

#### 1.3 Setting Your Liquidity Target 15

in which a portion of the organization's cash and equivalents is permanently restricted. The ratio value shows how long the organization could maintain its spending if no revenues came in and it had to rely on its cash to pay the bills. The more cash the organization has relative to total annual expenses, the more solvent the organization is. Low cash reserve ratios signal high risk of not being able to make ongoing payments. This ratio may give overly optimistic signals of solvency when expenses are clustered in one or a few months rather than evenly spread out. The cash held may not be able to cover these high-expense months if revenues are not also coming in at higher-than-normal rates during these months.

## NET LIQUID BALANCE.

The net liquid balance (NLB) is calculated by starting with cash and equivalents plus short-term investments and then subtracting short-term arranged borrowing (such as bank loans).

# TARGET LIQUIDITY LEVEL.



We believe that the primary financial objective of a noncommercial nonprofit, expressed in its simplest form, is to achieve a target liquidity level. The target liquidity level is calculated by taking cash and short-term investments, adding the total amount of your credit line, then subtracting the amount of the credit line currently used (or "drawn down"). Check the notes accompanying the financial statements for the total amount of the credit line.

# LIQUID FUNDS INDICATOR.

The liquid funds indicator is calculated as:

	([Net assets - Permanently restricted net assets
Liquid funds indicator -	$-$ Land, buildings, and equipment] $\times$ 12)
	Total expenses

The numerator gives us yet another look at the resources from which we can pay our expenses. Note that the denominator is the same as that of the cash reserve ratio.

# WORKING CAPITAL RATIO.

Charity Navigator (www.charitynavigator.org) publishes comparative ratio values of the working capital ratio for several types of nonprofits. The working capital ratio is calculated by taking these items in the numerator:

Numerator: (Cash and equivalents + Savings accounts + Pledges receivable

+ Grants receivable) - (Accounts payable + Grants payable

+ Accrued expenses)

And then dividing this numerator by total expenses, with affiliate payments (if any) added in the denominator:

Denominator: Total expenses, including payments to affiliates

The numerator can be thought of as "net liquid assets," similar to the NLB but accounting for more than just financial current assets and financial current liabilities. The ratio value indicates, as with the cash reserve ratio, how long the organization could maintain its spending if no new revenues came in. Once again, as with the other solvency ratios, higher values show greater solvency and numbers of one or less signal potentially serious solvency problems.

(*ii*) *Liquidity Ratios.* Think about liquidity as having three basic ingredients: time, amount, and cost.<sup>7</sup> The more quickly an asset such as a pledge receivable may be converted into cash, the more liquid it is. The longer it takes for a liability such as an account payable to be disbursed, the more liquid the organization is as a result. The amount of resources the organization has to cover outflows, when greater, signals higher liquidity. If an asset may be converted to cash quickly at minimal cost, it is considered liquid.

Liquidity measures take into account solvency but also view the flow of resources and provide more accurate readings based on the time it takes current assets or current liabilities to add to or orain cash, respectively.

We propose eight different liquidity measures from which you may select to best gauge your organization's liquidity. Calculating and analyzing more than one ratio provides you with a composite measure of liquidity. One ratio in isolation should never be relied on to provide an adequate perspective on liquidity.

## LAMBDA.

Lambda is a measure that simultaneously takes into account your "liquid reserve" (cash, short-term investments, and unused credit line), next-period operating cash flow (forecasted), and the uncertainty of your organization's operating cash flows (usually estimated using historical data). We believe that lambda is the single best measure of liquidity because it includes actual and potential cash, includes aspects of solvency in the liquid reserve, and accounts for the riskiness of the organization's operating cash flows. In fact, lambda actually incorporates some aspects of solvency, narrow liquidity, and financial flexibility, qualifying it as a "broad liquidity" measure. We will show how this measure is calculated, but in a modified form, in our later presentation of target liquidity level lambda. In-depth coverage of lambda is available elsewhere.<sup>8</sup>

# HISTORICAL LAMBDA.

When looking back in time, operating cash flow is no longer a forecast but is an actual, historical value. Furthermore, one may use several years of historical operating cash flows to calculate the uncertainty of operating cash flows, by either measuring the standard deviation of those flows or estimating that number by taking the range of operating cash flows and dividing by  $6.^9$ 

# TARGET LIQUIDITY LEVEL LAMBDA.

The target liquidity level lambda takes the insights we gain from lambda and couples them with the primary financial target, target liquidity level, to provide a valuable measure of your organization's liquidity. Here is the formula for target liquidity level lambda.

Target liquidity level lambda (TLLL) =  $\frac{\text{Target liquidity level + Projected OCF}}{\text{Uncertainty of OCF}}$ 

Where:

Target Liquidity Level = (Cash and cash equivalents + short-term investments + total amount of credit line – short-term loans)

Projected OCF (operating cash flow) is the operating cash flow amount you predict for the next year

Uncertainty of OCF is the standard deviation of the organization's historical operating cash flows for at least the past three years

Notice that two estimates are required here to calculate TLLL:<sup>10</sup>

- 1. Someone must forecast your organization's OCF. You may wish to look at last year's statement of cash flows to see what the OCF amount was and perhaps plug that in as a naïve forecast. Or perhaps reduce that amount by some arbitrary amount (say, 25 percent) for a more conservative estimate. A third option is to take the average of your organization's past three years of OCFs. A fourth option, if your organization has been growing, is to project a comewhat higher level of OCF. (But be careful: Often growth causes higher investment levels in receivables and perhaps in inventories or prepaid expenses, so OCF will not grow as much as revenues and may actually decline somewhat.) Careful study of the relationship between past years' changes in net assets and OCF is very helpful here.
- 2. The uncertainty of OCF reflects the financial vulnerability your organization faces. It only makes sense if your organization has large fluctuations in its cash revenues and/or cash expenses, to need a higher level of liquidity. Placing risk of your operating cash flows in the denominator, TLLL indicates through the resulting lower calculated value (quotient) that you have less liquidity. There are two ways to estimate this uncertainty: Calculate the standard deviation of the past 7 to 10 years of OCFs, perhaps using the STDEV function built into Microsoft Excel<sup>™</sup>; or take the highest OCF in the past 7 to 10 years, subtract from it the lowest OCF in that same time frame, then divide that amount by 6. The latter is an approximation of the standard deviation of your organization's OCFs, based on

the idea that there are six standard deviations of numerical values in an entire range (or distribution) of numbers.<sup>11</sup>

Calculating TLLL is extremely helpful to your analysis for three reasons:

- 1. It demonstrates to your policy-making team that steady, dependable cash flows require holding less liquidity and that highly risky cash flows may be offset by having more cash and equivalents, more short-term (unrestricted) investments, a higher unborrowed credit line, the ability to borrow quickly for working capital on an as-needed basis (rare for nonprofits), or a positive and high inflow of funds over the upcoming period. (But watch for seasonality—if yours is a donative organization, much of that is likely to materialize between Thanksgiving and Christmas, when a very high percentage of cash donations are made.)
- 2. If your calculated number turns out too low for comfort (see #3 below)—meaning it is below your financial policy for target liquidity, as discussed in Chapter 2—you can plug in different numbers for credit line amounts or short-term investment amounts and then see the impact. Doing this helps you to know how much is enough for liquidity-filling investing or borrowing actions.
- **3.** Used with a standard normal table (or the Excel NORMDIST function), the TLLL tells you the probability of running short of cash over the forecast period. A particular value for TLLL is associated with a 5 percent chance of running out of cash, a different value for TLL matches to a 1 percent chance, and so on. No other liquidity measure provides decision makers with this type of information.

Our next three measures are forecasts of the three major components of your organization's statement of cash flows. The rationale for projecting these is that, just as this period's cash flow is the sum total of operating, investing, and financing cash flows, so too next year's and the following year's net cash flow will be the combined result of these three distinct cash flow engines.

PROJECTED OCF IN THE FORMAT OF THE STATEMENT OF CASH FLOWS.

Larger operating cash flows coming in to the organization's cash till may cover a multitude of low-solvency sins. Make sure the forecast is reliable; too many nonprofits have run into trouble because their revenue, especially funds raised, forecasts are too rosy.

PROJECTED INVESTING CASH FLOW IN THE FORMAT OF THE STATEMENT OF CASH FLOWS. Larger projected investing outflows necessitate higher solvency positions and/or larger incoming operating cash flows for the same period. A measure that you could calculate here is the capital expenditure ratio:

Capital expenditure ratio = OCF / Capital expenditures

This ratio separates out from investing cash flows the line item representing additional investment in property, plant, and equipment. Put it into the formula as a positive number, assuming the organization is making additional capital expenditures during the year you are evaluating. If the ratio value is greater than 1.0, the organization has enough cash to cover all capital expenditures and has money left over to meet debt obligations.

PROJECTED FINANCING CASH FLOW IN THE FORMAT OF THE STATEMENT OF CASH FLOWS. Unlike a business, you need not worry about two typical business "financing" section outflows, cash dividends and share repurchases. However, look ahead at principal repayments on bank loans, other notes, and bonds. These will necessitate planning ahead; otherwise, you could be facing a cash crunch with little ability to tide the organization over until revenues pick up again.

## CASH CONVERSION PERIOD.

This measure captures the amount of time that elapses from when you pay for your goods or supplies to the time when you get spendable funds from the sale of your final product or service. This measure fits healthcare organizations the best, followed by educational institutions and then other comprofits. You want to be out of pocket for a shorter time, necessitating less cash to be tied up in your operations. Money tied up in operations must be financed through short-term borrowing, or reduces your investable balances, reducing your interest income. However, resist the temptation to stretch payables—to place money in your pocket by taking it out of your suppliers' pockets—unless of course they agree ahead of time to new terms through a negotiation process. We show the calculation of the cash conversion period in Appendix 2B.

# CURRENT LIQUIDITY INDEX.

The current liquidity index (CLI) reflects on your organization's ability to cover its fixed, financing-related obligations. Higher ratio values are better as they reflect a greater ability to cover those obligations. Notice in the denominator that both bank loans and principal payments due within the next year for long-term debt (such as term loans and bonds) are brought into the picture. Both represent arranged outside financing, as opposed to spontaneous short-term financing arising from accrued expenses or accounts payable.

 $CLI = \frac{(Cash and equivalents + Short-term investments + Projected OCF)}{(Short-term notes payable + Current portion of long-term debt)}$ 

# (iii) Financial Flexibility Ratios.

### PROJECTED LAMBDA.

This technique was developed by William Beyer, who applied it in his forecasting work at Portland Cement. Essentially the idea is to see how lambda changes as

the operating cash flow forecast, operating cash flow uncertainty, and amount of unused credit line are changed in value. One can do worst-case, most likely case, and best-case analyses with this method.<sup>12</sup>

## SUSTAINABLE GROWTH RATE.

The idea here is to see how rapidly your organization can grow given its present "profitability," asset intensity, and use of debt. Full coverage is beyond our scope, but the nonprofit model of sustainable growth rate developed by Marc Jegers may be accessed in Chapter 9 of our companion book, *Financial Management for Nonprofit Organizations: Policies and Practices* (John Wiley & Sons, 2007.).

## SHOCK TESTING.

You could calculate the value-at-risk (VaR) for your investments, which shows the predicted worst-case loss at, say, a 5 percent "confidence interval," on the investment portfolio within the next year.<sup>13</sup> The VaR measure allows one to consistently monitor market risk over time, and see how the portfolio's diversification affects the risk being borne.

# STRATEGIC LIQUIDITY.

Gordon Donaldson developed a framework for strategic liquidity in his classic 1963 *Harvard Business Review* article.<sup>14</sup> Donaldson conceptualized the key risk factors that would affect an organization's financial position a year or more into the future. Since the key distinction between operating liquidity and strategic liquidity is the timeframe (operating measures are mostly focused on intrayear or one-year ahead horizons), you will need to incorporate multi-year forecasts to determine whether your liquidity will change dramatically in the long-term. Ideally, you will want to customize Donaldson's model so that you may determine the amount of strategic hquidity that your organization needs.

(c) EVALUATE YOUR RATIOS IN LIGHT OF YOUR STARTING POINTS. Evaluating your ratio values in isolation could be very misleading. Here are three pointers:

- **1.** Always evaluate a particular ratio's values in the context of what the other ratios are telling you.
- **2.** Make sure to include more than one year of ratio values before drawing any conclusions.
- **3.** Of greatest importance here, evaluate the ratio values in part B above ("Calculate key ratios") in light of the information that you discovered in the starting points analysis in part A ("Starting points"). For example, if each of the starting points indicators in part A suggests that you should have a larger level of liquidity, then you would want to have higher values for the solvency, liquidity, and financial flexibility indicators in part B.

1.4 How Do Proficient Cash Management and Investment Management 21

# 1.4 HOW DO PROFICIENT CASH MANAGEMENT AND INVESTMENT MANAGEMENT ENABLE YOUR ORGANIZATION TO ACHIEVE ITS LIQUIDITY TARGET?

(a) CASH MANAGEMENT. The chances of your organization hitting its liquidity target and maintaining that liquidity target are much higher if it has optimal policies and procedures in several treasury management areas. These areas are cash collections and concentration, cash disbursements, banking relationship management, information technology, short-term borrowing, and fraud/misappropriation deterrence.

The effect of cash collections helps because you receive the money you are owed on time without paying too much to do so. The more quickly you can bring in cash, the less financial stress your organization will face. And if you can get monies out of small accounts spread all over the globe and pool them in one central location that will give you the funds for your disbursements or to increase your investments or pay down your borrowings. Fur another way, having your liquidity target monies all in one account in one location will keep these reserves usable. Or you could maintain a smaller liquidity target as a result of concentration. Disbursements also help: For example, don't pay invoices before they are due unless you receive a cash discount for doing so. That keeps the monies invested or keeps your short-term credit line balance lower.

Banking relationship management in turn, includes pooling/mobilizing funds, availability schedule issues, funding your disbursement account, investing any surplus on perhaps an overnight basis, and paying down your credit line.

Information technology should facilitate having accurate real-time or close to real-time information on funds balances in your depository and concentration accounts.

Short-term borrowing measures include having a standby credit line and paying a minimal interest rate on amounts borrowed. Related to the latter, your organization should strive to minimize its net interest income; the technique to enable you do this is available elsewhere.<sup>15</sup>

Deterring fraud and misappropriation of funds is an objective that covers multiple treasury management functions. The primary one is disbursements, but fraud also occurs in collections (in any retail environment, employees may pilfer funds from the cash register; in a church setting, funds may be siphoned from the offering plate). Concentration is also a vulnerable area, as any time large amounts of funds are moved there is always the possibility that an employee will misdirect the funds to his or her own account, possibly abroad. Information technology and your banking system are key components to fraud prevention. Much of the more advanced fraud prevention methodology is part of your information technology. Your banker is a great ally in preventing fraud as well. Positive pay systems, which involve sending an information file of checks issued to your bank, which the bank will then matches to checks when they are presented, is the best way to prevent or reduce check fraud.

Thus, cash collections and concentration, cash disbursements, your banking system, information technology, short-term borrowing, and fraud prevention techniques enable your organization to better achieve its liquidity target, your primary financial objective.

(b) INVESTMENT MANAGEMENT. The effective management of short-term, medium-term, and long-term investments also enables the organization to better achieve its liquidity target. Consider the purposes for which these investments are held as a way of clarifying why they would enable you to be more proficient in your financial management.

Short-term investments are actually part of your liquidity target. They provide you with a pool of funds to tap in the event of an emergency need or a mismatch between cash receipts and cash disbursements. One way of thinking about your short-term investments is to view them as cash reserves that you know you will not need immediately and on which you wish to earn interest. And because monies invested in short-term investments are monies unavailable for program accomplishment, you want to manage them effectively to earn interest while keeping those monies safe.

Medium-term and long-term investments serve a multitude of purposes. They may be used to fund pensions, to self-insure your organization against risks it faces, as a strategic reserve (perhaps to prefund capital expenditures or maintenance expenditures), or for endowment purposes. A great example of a strategic reserve is that held by the Salvation Army. This organization holds over \$1 billion in a strategic reserve in the event it may be needed quickly or to provide monies for necessary capital expenditures for maintenance costs.

We recognize that you may run into resistance by donors, grant agencies, and possibly even your board members if you hold more than some minimal level of operating reserves. An effective way to help your donors and others understand your strategic reserve is to hold the monies in your strategic reserve in the form of a quasi-endowment. Although money in a quasi-endowment must be held in what are called unrestricted funds, it signals to your donors and grant agencies that this money is not able to be spent for any particular need that may arise.

Your organization may also decide to have an endowment. This money is permanently restricted. Generally, the intent here is to generate a stream of income from the endowment that will be used to supplement other revenue sources. A second advantage, however, is that this money is also there in case your organization ever gets into deep financial trouble. Resist the temptation to "cut down the trees" when you face only a temporary shortfall of funds, however. The board should set a spending policy that is consistent with inflation and the maintenance of purchasing power on the endowment principal. In this way your endowment will help you to generate income to help fund your operations, while assuring long-term stability and survival for your nonprofit organization.

1.5 Summary 23

Risk management is another area related to cash and investment management. It deserves separate attention. Yes, it does include fraud prevention, but it goes beyond this to consider all risks faced by the organization and how they will be managed. Think broadly here: Anything that could impair your liquidity anytime in the future is something that you should think about in terms of risk management. Let's say that salaries for trained counselors were to double in the next 10 years. Possibly your revenues with double as well, but if not, you may need to tap some of your liquidity in order to survive this change. The thought process to engage in now is to ask, "Is there anything we could do ahead of time proactively in order to keep from reducing our liquidity if this event in fact occurs?"

# 1.5 SUMMARY

This chapter has provided the context for proficient treasury management in the nonprofit organization. We looked inside the nonprofit finance office and found two common maladies in there: Either the organization has not set a target liquidity level, or it is not engaging in cash forecasting and so cannot effectively manage that cash position. In either case, the organization is financially handicapped. More important than whether your organization runs a surplus or breaks even financially, has it established and is n monitoring and managing a liquidity target? To do this, the organization's management team and board must determine an appropriate cash position and also manage its cash flows carefully. A number of reasons were provided why target liquidity is the appropriate operational financial objective for a nonprofit. We then looked at why many organizations do not set a liquidity target or do not manage toward that target. Guidance was then provided regarding how to go about setting the liquidity target, including background information that serves as a starting point and relevant financial ratios. We find three ratios  $\sim$  the net liquid balance, lambda, and the cash conversion period-to be especially valuable measures. After presenting more detail on liquidity management in Chapter 2, in Appendix 2C we present a hypothetical case study on setting the liquidity target. We concluded our chapter by looking at how proficient cash management, investment management, and risk management assist your organization in meeting its liquidity target. Chapter 2 provides assistance in improving your organization's liquidity management and projecting its cash position.

Notes

Kirsten A. Grønbjerg and Richard M. Clerkin, *Indiana Nonprofits: Financial and Human Resource Challenges* (Bloomington, IN: Indiana University School of Public and Environmental Affairs, August 2004). Copies of this report are available on the Indiana Nonprofit Sector Web site (www.indiana.edu/~nonprof).

- Based on a survey of 439 business financial executives and published in "Nurturing the Creative Spirit: The 2005 T&RM/ Citigroup Financial Leadership Survey of Executives," *Treasury & Risk Management* 9 (October 2005): 71–75.
- David R. Campbell, James M. Johnson, and Leonard M. Savoie, "Cash Flow, Liquidity, and Financial Flexibility," *Financial Executive* 52, no.8 (1984): 14–17. Also see the presentation on financial flexibility in Terry S. Maness and John T. Zietlow, *Short-Term Financial Management*, 3rd ed. (Cincinnati: South-Western, 2005), 31–32, 41–43.
- 4. This is developed for businesses in Maness and Zietlow, Short-Term Financial Management, pp. 41–43, and for nonprofits in Chapter 9 of John Zietlow, Jo Ann Hankin, and Alan Seidner, Financial Management for Nonprofit Organizations: Policies and Practices (Hoboken, NJ: John Wiley & Sons, 2007). The latter presentation is based on the adaptation of sustainable growth modeling to nonprofits by Marc Jegers.
- IRS, "Executive Summary: Credit Counseling Compliance Project," May 15, 2006. Located online at: www.irs.gov/pub/irs-tege/cc\_executive\_summary.pdf. Accessed: 6/27/06.
- 6. The remainder of the responses were as follows: 7.1 percent selected "Minimize costs," 7.1 percent selected "Maximize net revenue," 7.1 percent selected "Maximize net donations," 7.1 percent selected "Make a small surplus," and no one (0.0 percent) selected "Avoid financial risk."
- 7. Maness and Zietlow, Short-Term Financial Management, p. 31.
- 8. Id., Chapter 2. Lambda was developed by Kenneth Cogger and Gary Emery; further information and interpretation of this measure are provided in the referenced chapter.
- 9. This range approach to estimating standard deviation assumes a normal distribution, or the familiar bell-shaped curve, for your organization's operating cash flows. Since your cash flows are most likely not normally distributed, this estimate must be viewed as a rough approximation.
- 10. This presentation is from our companion book, *Financial Management for Nonprofit Organizations: Policies and Practices*. In Chapter 7 you will find a numerical example illustrating the calculation of this ratio.
- 11. Again, this range approach to estimating standard deviation assumes a normal distribution, or the familiar bell-shaped curve, for your organization's operating cash flows. Since your cash flows are most likely not normally distributed, this estimate must be viewed as a rough approximation.
- 12. Willliam E. Beyer, "Liquidity Measurement in Corporate Forecasting," *Journal of Cash Management* 8, no. 6 (1988): 14–16.
- 13. For more on the VaR measure, see Karen Luprypa, "Short-Term Volatility Does Matter," *Canadian Investment Review* (Summer 2002), p. 17.
- 14. Gordon Donaldson, "Strategy for Financial Emergencies," *Harvard Business Review* (November/December 1969): 67–79.
- 15. Maness and Zietlow, Short-Term Financial Management, Chapter 13.