

Chapter 2

Planning with Personal Financial Statements

■ Chapter Overview

Among the first steps in developing a financial plan for an individual or a family is assessing one's current financial position. This process helps to pinpoint where the cash money comes from and where it goes to. This chapter introduces three personal financial statements that may be used as tools in this assessment: the cash flow statement, the budget, and the balance sheet.

The personal cash flow statement tracks cash inflows and outflows. The chapter discusses the major sources of cash inflows, such as salary, interest, and dividends. The chapter also discusses the expenses, both large and small, that make up cash outflows. Because maximizing net cash flows enhances wealth, the chapter addresses factors that affect cash inflows and cash outflows. Cash inflows are affected by stage in career path, type of job, and number of income earners in the household, and cash outflows are affected by size of family, age, and personal consumption behavior. Spending, or cash outflows, is also impacted to some extent by your financial mindset. There is a psychological aspect of personal finance that, once understood, can help control unnecessary spending.

An extension of the personal cash flow statement is the personal budget. A budget is simply a cash flow statement based on forecasted cash flows for a future period. Developing a budget helps to determine whether future cash inflows will be sufficient to cover cash outflows. Typically, a month-by-month budget prepared for one year will provide the most useful information since many cash flows do not occur each month (i.e., auto insurance, investment income, etc.). A budget can help determine the excess cash that will be available for investment, as well as help anticipate future cash shortages. Periodically, the budget should be compared with the cash flow statement to determine the accuracy of the budget. An accurate budget is more likely to detect future cash flow shortages so that they may be prepared for in advance, which may require deferring or accelerating payments/income to another month. Also, an accurate budget presents a clearer picture of progress made toward economic goals.

A personal balance sheet is an overall snapshot of one's wealth at a specific point in time. It is a summary of what an individual owns (assets), what an individual owes (liabilities), and the

difference between the two (net worth). Assets may be classified as liquid assets, household assets, or investments. Liabilities represent debt and can be divided into current debt and long-term debt. Creating a personal balance sheet each year helps determine changes in net worth (wealth) over time. Level of liquidity, amount of debt, and ability to save can be monitored through a personal balance sheet. Economic conditions can affect your balance sheet, as favorable conditions can increase your cash inflows through income but unfavorable conditions can decrease your cash flows through loss of a job, reduction in hours, etc.

■ Chapter Objectives

The objectives of this chapter are to:

- Explain how to create your personal cash flow statement
- Identify the factors that affect your cash flows
- Forecast your cash flows
- Explain how to create your personal balance sheet
- Explain how your personal financial statements fit within your financial plan

■ Teaching Tips

1. For most people, all financial planning is “in their heads.” Many will tell you that they have a budget and know what they spend each month. Seeing the numbers on paper often presents a much different picture. This is particularly true of out-of-pocket, day-to-day spending. Have students track their out-of-pocket spending for a period of two weeks or a month. Tell them to keep a small pad or piece of paper with them and to write down everything they spend. Ask them to summarize their spending into categories such as snacks, lottery, cigarettes, etc. Once they have done this for the assigned period, help the students to annualize their spending (\$1 a day spent on the lottery becomes \$365; \$3 a day for snacks becomes \$1,095). Discuss with students the idea of opportunity costs—that is, what else they might have done with that money. One thousand dollars a year invested at 6% grows to over \$40,000 in 20 years, just by giving up snacks.

2. Have students record their monthly budgets “off the top of their heads.” Collect the budgets and return them after the students have calculated their real net cash flow and budgets, so that they can see the differences. Also, have students estimate their net worth before they actually prepare their personal balance sheets. Students usually overestimate their net worth, which is dramatically affected by student loans. Today, most students borrow money for education, and this will drive their liabilities higher than their assets, creating a negative net worth. Stress that this is not necessarily a “red flag” but emphasize that over time, one’s net worth should grow in a positive manner.
3. Remind students that household assets don’t just include the car, the house, and the furnishings. Musical instruments, fine jewelry, collectibles, antiques, and tools, among other things, may have a greater value than they realize. However, the accumulation of tangible assets often decreases the ability to grow financial assets. Also, remind students that the information they collect on the value of their assets will help them to determine the sufficiency of their insurance coverage in a later chapter. Make sure the students understand that assets should be recorded at their current market value and not what they paid for the asset. In some cases market values may be higher than the purchase price. However, in most cases the current market value will be lower than the purchase price.
4. As students collect information on their monthly payments for their personal cash flow statements, they should also collect information on the current balances of their debts for the liabilities section of their personal balance sheet.
5. Have students research their chosen career for starting salaries for a given position in a given city. Next, they should identify whether they will be living alone, own a car, etc. Using this as a starting point, have them assemble a monthly budget for a full year—including estimated taxes, utilities, insurance, food, entertainment, etc. Students who have previously prepared a budget as another exercise may have some insight as to different types of expenses. However, it would be best to let them derive the different categories without a special format. Provide feedback after completion. This is a good starting point, even though, in general, they will not include many expenses and will estimate that much of their income will be unspent.
6. Team/online exercise—have students complete a questionnaire related to spending habits (i.e., how much to save, how much to spend for a car, vacations, and eating out, etc.). Point out how differently individuals allocate spending and saving and how important it is to discuss these differences *before* making a commitment in a relationship. Other questions, such as anticipated work hours in a week, number of children, stay-at-home spouse, will point out the significant differences that two people can have. These differences all have financial ramifications, and finances are a leading cause for the breakup of relationships.

7. Students commonly end up with a negative net worth on their respective balance sheets. This may be due in part to student loans. Remind them that education is considered the best reason to borrow and this money will be returned many times over in the future. Provide online sites for students to calculate their monthly student loan payments. The negative net worth after graduating should become a positive over time, and progress toward this increase in net worth is a measure of reaching financial goals.
8. In this chapter, the financial vocabulary of assets, liabilities, and net worth may be new to some; however, many business students may find these terms quite familiar. A good team exercise would be to distribute a list of assets, liabilities, and net worth and have the students label each as such. Another exercise would be to label expenses and income. An explanation of why rent and utilities are not liabilities also generates discussion.
9. Prepare a list of assets and liabilities with values (i.e., auto—\$3,200, student loan—\$21,500). Have students work in teams to structure a balance sheet out of these numbers and derive a net worth.
10. Discussion of how outsiders use one's financial statements to make loan decisions could be useful. Many students wish to start their own businesses or buy a house or car after graduation. Lenders will request financial statements to evaluate the creditworthiness of the borrower. Taking out loans in college could ultimately lead to a denial of credit later.

■ Answers to End-of-Chapter Review Questions

1. The personal cash flow statement and the personal balance sheet.
2. Cash inflows are monies coming in, usually from wages. Cash may also come from other sources like interest, dividends, or gifts. Cash outflows are monies paid out for expenses such as rent, groceries, or gasoline.

$$\text{Net cash flows} = \text{Cash inflows} - \text{Cash outflows}$$

3. To increase your wealth, you maximize your cash flows by maximizing your cash inflows and/or minimizing the cash outflows. Jeremy can look for ways to increase his income by working overtime or getting a second job. Or, he can look for ways to reduce his cash outflows by cutting back on spending.
4. Cash inflows are most directly affected by income. Factors in determining your income are the stage in your career path, your job skills, and the type of job you hold. The number of income earners in the household will also affect your cash inflows.

5. Everyone's cash outflows will differ depending on family status, family size, age, and personal consumption behavior. However, common outflows include housing expenses such as rent, mortgage payments, utility bills, and insurance. Other common outflows are car payments and groceries.
6. A budget is a forecast of cash inflows and cash outflows. A budget is developed to determine whether your anticipated cash inflows are sufficient to meet your cash outflows. When a period's budget indicates a cash shortage, you can plan to either use savings or borrow needed cash for the period. When a period's budget indicates a cash surplus, you can determine the amount of excess cash that you will have available to invest in additional assets.
7. You can assess the accuracy of your budget by comparing your actual cash inflows and cash outflows with your budgeted amounts. Finding forecasting errors can allow you to adjust your spending to stay within your budgeted outflows. Alternatively, you may choose not to adjust your spending but to make your budget more realistic.
8. Unexpected expenses should be budgeted for periodically. You should assume that you are likely to incur some unexpected expenses over the course of several months, such as health care expenses or car repairs. You will find that you typically have unexpected expenses every year. Knowing that fact you should build an emergency reserve or rainy day fund that is liquid enough for you to cover your unexpected expenses.
9. Begin with a monthly budget and extend it out over the year. Once you have created the annual budget, adjust it to reflect anticipated large changes in your cash flows.
10. You could try to identify components of the budget that you can change to provide more cash for savings. For example, you could either attempt to increase your income or to reduce one or more expenses.
11. People who do not establish a budget may just deal with cash deficiencies when they occur. They often rely on family members or friends when they run short of funds, which may ultimately destroy relationships in the long run.
12. The personal balance sheet summarizes your assets (what you own), your liabilities (what you owe), and your net worth (assets minus liabilities).

13. Liquid assets are financial assets that can be easily sold without a loss in value. Examples include cash, savings account, and checking account. Household assets include items normally owned by a household. Examples include a home, car, and furniture. Investments are financial assets held with the intent of receiving a return. Examples include stocks, bonds, mutual funds, and real estate.
14. Bonds are IOUs issued by borrowers to raise funds. They represent the debt of the issuer. You earn interest while you hold the bond for a specific period. Stocks represent partial ownership in a company. Your return from stocks comes either from dividends or from selling the stock for more than you paid for it. Mutual funds sell shares to individuals and invest the proceeds in an overall portfolio of investment instruments. They are professionally managed and require minimal investments. Return comes from an overall increase in the value of the portfolio.
15. Real estate may provide a return as rental property rented out to others or as land purchased in hopes that its value will increase over time.
16. Liabilities are debt (what you owe). Current liabilities are debt that you will pay off within a year. Long-term liabilities are debt that will take longer than a year to pay off.
17. Your personal balance sheet lists the market value of the things you own (assets) and also your current debts (liabilities). Your assets minus your liabilities is equal to your net worth.
18. Your net worth increases when the value of your assets increases more than your liabilities increase. The purchase of additional assets will not always increase your net worth if you gave up other assets (cash, for example) of equal value to acquire them or if you incurred a liability of equal value to acquire them.
19. You may monitor your level of liquidity ($\text{liquidity ratio} = \text{liquid assets} / \text{current liabilities}$), your debt level ($\text{debt-to-asset ratio} = \text{total liabilities} / \text{total assets}$), and your savings rate ($\text{savings rate} = \text{savings during the period} / \text{disposable income during the period}$).

20. The liquidity ratio measures your liquid assets against your current liabilities. It is an indication of the sufficiency of your funds over the short term. The debt-to-asset ratio divides your total liabilities by your total assets. A high debt ratio indicates an excessive amount of debt. Your savings rate is determined by dividing your savings during the period by your disposable income during the period. The savings rate indicates the proportion of disposable income that you save.
21. Justin's net worth increased since his asset values increased and his liabilities decreased. Increases in asset values and decreases in liabilities will both increase net worth assuming no other changes.
22. The values of assets decline during a weak economy because consumer demand is low under these conditions and this tends to result in lower prices. The demand for homes declines when demand is low, causing sellers of homes to reduce their prices in order to entice potential buyers. The value of stocks or other investments in corporations is low when the corporations have weak performance. Corporations tend to experience weaker performance in a weak economy because consumer demand for products is low, and their sales are lower.
23. A weak economy can cause individuals' net worth to decline because the value of their assets such as a home and stocks may decline during periods of unfavorable economic conditions. In addition, people may be laid off from their jobs, or their hours of work may be reduced. As a result, they will have less income to acquire assets and pay off debts, and they may have to use their savings to cover cash shortages.
24. Using credit cards can create the illusion of zero cost and ultimately result in higher levels of spending.
25. Asset values should always be market values so Heather needs to adjust the value of the car down to its current market value.
26. Your cash inflows are primarily impacted by the stage of your career path and your chosen profession. Some careers pay more than others and you typically earn more in every career as you gain experience and earn promotions.

■ Answers to Financial Planning Problems

1. $\$2,170 + \$900 - \$650 = \$2,420$. Disposable income is what we have available to spend after-tax. For this reason our budgeting and spending is driven by disposable income.
2. Subtract all expenses from Angela's disposable income:

$$\$2,420 - \$2,120 = \$300$$

3. Her cash outflows will exceed her cash inflows by \$75 for that month. She might take the amount out of savings, or she could set aside \$37.50 for the next two months in order to have it.
4. $(12 \times \$300) - \$375 = \$3,225$
5. Angela will increase her savings by $12 \times \$50 = \600 from \$3,225 to \$3,825.
6. $\$350/\$2,420 = 14.5\%$
7. Liquidity ratio = liquid assets/current liabilities = $\$20/\$2,000 = 0.01$. This indicates that Jarrod has 1 cent for every dollar of current liabilities. Jarrod is in trouble.
8. Debt-to-asset ratio = total liabilities/total assets = $\$2,000/(\$20 + \$100 + \$150) = 740.7\%$. A debt-to-asset ratio of about 741% indicates an overwhelming debt level. If Jarrod does not earn additional funds, he will be unable to pay off his credit card debt before he graduates.

[illegible]

Household assets: Home + cars + furniture = \$85,000 + \$22,000 + \$14,000
 = \$121,000

Investments: Stocks + bonds + mutual funds + land = \$10,000 + \$15,000 + \$7,000 + \$19,000
= \$51,000

10. Current liabilities: Credit card balance + furniture note = \$165 + \$1,200 = \$1,365

Long-term liabilities: Mortgage + car loan + student loans = \$43,500 + \$2,750 + \$15,000
= \$61,250

$$\begin{aligned}\text{Net Worth} &= \text{total assets} - \text{total liabilities} \\ &= (\$6,350 + \$121,000 + \$51,000) - (\$1,365 + \$61,250) \\ &= \$178,350 - \$62,615 \\ &= \$115,735\end{aligned}$$

11. Jasmine's net worth will fall by \$5,000. However, as long as she has sufficient liquidity for unexpected events and a steady job she should take the vacation. Financial planning is not solely about increasing net worth but also includes prudent saving for financial goals such as Jasmine's vacation.
12. Liquidity ratio = liquid assets/current liabilities = $\$6,350/\$1,365 = 4.7$

Debt-to-asset ratio = total liabilities/total assets = \$62,615/\$178,350 = 35.1%

The liquidity ratio is greater than 1; for every dollar of current liabilities, they have \$4.7 of liquid assets. The debt-to-asset ratio indicates that the level of debt may be higher than is desirable, which may lead to debt repayment problems.

Ethical Dilemma

13. a. Most of the class should conclude that Mia and Jason are not being ethical in withholding this very significant information. Even though Uncle Chris may not ask, financial relationships need to be based on openness and honesty.
The problems that could arise are obvious. Mia and Jason could find themselves overextended and unable to make payments to Uncle Chris and/or meet other financial obligations.
- b. Borrowing from family can undermine self-reliance and create tensions among family members. It may also result in family members making sacrifices because of your inability to maintain a budget.

■ Answers to Questions in The Sampsons—A Continuing Case

1. The Sampson's Personal Cash Flow Statement

Cash Inflows	\$4,000
Cash Outflows	
Mortgage payment (includes home insurance and real estate taxes)	\$ 900
Cable TV	60
Electricity and water	80
Telephone	70
Groceries	500
Health care insurance and expenses	160
Clothing	180
Car expenses (insurance, maintenance, and gas)	300
School expenses	100
Recreation	1,000
Credit card	<u>20</u>

Total cash outflows	\$3,370
Net Cash Flows	\$ 630

2. The Sampsons need to reduce their cash outflows so that they can achieve their desired net cash flows. Their expected net cash flows are \$630, while their desired savings level is \$800. Therefore, they are \$170 short of their savings goal. The Sampsons have various options to reduce their cash outflows, but recreational expenses are probably the most realistic target.
- 3.

Assets	
<u>Liquid Assets</u>	
Cash	\$ 300
Checking account	1,700
Savings account	<u>0</u>
Total liquid assets	\$ 2,000
<u>Household Assets</u>	
Home	\$100,000
Cars	9,000
Furniture	<u>3,000</u>
Total household assets	\$112,000
<u>Investment Assets</u>	
Stocks	0
Bonds	0
Mutual funds	<u>0</u>
Total investment assets	0
Total assets	\$114,000
Liabilities and Net Worth	
<u>Current Liabilities</u>	
Loans	\$0
Credit card balance	<u>2,000</u>
Total current liabilities	\$ 2,000
<u>Long-Term Liabilities</u>	
Mortgage	\$ 90,000

Car loan	<u>0</u>
Total long-term liabilities	\$ 90,000
Total liabilities	\$ 92,000
Net Worth	\$ 22,000

4. The Sampsons' net worth is \$22,000. The personal cash flow statement shows that the Sampsons will be saving money each month, so that they can build savings (an asset). As their assets increase without any increase in their liabilities, their net worth increases. Once part of the savings is used to purchase a new car for Sharon, the net worth would still increase because the car represents an asset.