

Excellence in Financial Management

Course 4: Managing Cash Flow

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This course provides an introduction to cash flow management. This course is recommended for 2 hours of Continuing Professional Education. In order to receive credit, you will need to pass a multiple choice exam which is administered over the internet at www.exinfm.com/training

Cash Flow Cycles

Introduction

Cash is the most liquid of assets and it represents the lifeblood for growth and investment. In order to generate cash, we must efficiently and effectively manage the activities that provide cash. These activities include billing customers as quickly as possible, disbursing payments only when they come due, collecting cash on overdue accounts, and investing idle cash. Therefore, managing cash flow involves several objectives:

- Accelerating cash inflows wherever possible.
- Delaying cash outflows until they come due.
- Investing surplus cash to earn a rate of return.
- Borrowing cash at the best possible terms.
- Maintaining an optimal level of cash that is neither excessive nor deficient.

This course will attempt to outline how these objectives can be met. We will try to answer the following questions:

- How much cash do we need to run our business?
 - How much cash is locked-up in other current assets?
 - How long does it take to collect our cash from customers?
 - How much cash should we hold?
 - How do we cover cash deficits?
 - How do we identify problems with cash flow?
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Two Cycles: Disbursements and Receipts

As we indicated, cash flow management consists of several activities: Collecting accounts receivable, processing vendor payments, etc. We need to understand the time involved with each of these activities before we can properly plan our cash flows. Since cash consists of disbursements and receipts, we can think of cash flow in terms of two cycles.

Disbursement Cycle: The total time between when an obligation occurs and when the payment clears the bank.

Example 1 - Disbursement Cycle Time

<u>Specific Activity</u>	<u>Day</u>
Obligation to Supplier	0
Process Invoice from Supplier	10
Run Payables and cut checks	25
Payment clears the bank	35

Total Cycle Time for Disbursement = 35 days

The overall objective within the Disbursement Cycle is to increase the cycle time; i.e. delay making payments until they are due. We can delay payments by:

1. Mailing checks from locations not close to customers. This will increase the mail time or mail float within the disbursement cycle.
2. Disbursing checks from a remote bank. This will increase the time required for the payment to clear the bank; i.e. clearance float.
3. Purchasing with credit cards so that the time required for making payment is much longer. By using a credit card, you will receive a bill at the end of the month payable in 30 days. This creates more processing time or processing float.

Therefore, when we manage cash flow cycles, we try to control three types of float times:

1. Mail Float: Time spent in the mail.
2. Clearance Float: Time spent trying to clear the bank.
3. Processing Float: Time required to process cash flow transactions.

By increasing the float times within disbursements, we have the use of cash for several more days. This is a source of spontaneous financing and we can measure our cash savings.

Example 2 - Calculate Savings from Remote Bank

Total average payroll is \$ 280,000 once every two weeks. By using a remote bank for payroll, you gain two more days of float. How much cash is saved by using a remote bank if cash earns 12%?

\$ 280,000 x (.12 / 360) x 2 days	\$ 187 savings each payroll
52 weeks per year / 2 week payroll	x 26 payroll periods
Total Annual Savings	\$ 4,862

Receipt Cycle: The total time between when products or services are delivered and when payment from the customer clears the bank.

Example 3 - Calculate Receipt Cycle Time

<u>Specific Activity</u>	<u>Day</u>
Begin Services to Customer	0
Issue Invoice to Customer	30
Receive Payment	62
Payment clears the bank	66

Total Cycle Time for Receipts = 66 days

The overall objective within the Receipts Cycle is to decrease the cycle; i.e. shorten the time necessary to collect and have use of cash. We can shorten the receipt cycle by:

- Invoicing customers as quickly as possible.
- Taking immediate action when a customer becomes delinquent.
- Rewarding customers for making early payment by offering a discount.
- Imposing a finance charge on customers that are seriously delinquent.
- Evaluating the financial soundness of customers before extending credit.
- Accepting credit cards for payment.
- Issuing monthly statements to remind customers of amounts owed.
- Placing collection centers near customers and/or having banks control deposits.

A lockbox system is an example of placing control with the bank. Under a lockbox system, customers send payments to a lockbox which is cleared daily by the bank. This can reduce processing time for deposits and reduce clearance float. Before adopting a lockbox system, you should weigh the costs versus the benefits (see example 4).

Example 4 - Cost Benefit of Lockbox Service

It currently takes 6 days to receive and deposit payments from customers. A lockbox will cut this time down to 4 days. Average daily collections are estimated at \$ 150,000. Idle funds earn 5% and the total annual costs for a lockbox will be \$ 22,000. Should you adopt a lockbox?

Additional Cash Flows are \$ 150,000 x 2 days	\$ 300,000
Return on Cash	x .05
Total Annual Benefit of Lockbox	\$ 15,000
Total Annual Costs of Lockbox	\$ 22,000
Net Benefit (Costs)	\$ (7,000)

Based on costs vs. benefits, a lockbox service will not provide cash savings. However, you still may want to consider the internal control benefits of the lockbox.

Measuring Cycle Times

In order to monitor progress in managing cash, it is useful to understand how much cash is locked-up; i.e. not available to us. We can get an idea of cycle times by looking at average days in inventory, average days in receivables, and average days in payables. These three components cover the two basic cash flow cycles, disbursements and receipts.

a: Average Days in Inventory = Average Inventory Balance / Average Daily Cost of Goods Sold

b: Average Days in Receivables = Average Receivable Balance / Average Daily Credit Sales

c: Average Days in Payables = Average Payables Balance / Average Daily Purchases on Account

The overall cash flow cycle time is calculated as: $a + b - c$; i.e. inventory and receivables tie up cash receipts less payables for disbursements. This calculation is illustrated in Example 5.

Example 5 - Calculate Cash Flow Cycle Time

Average Monthly Activity for selected financial accounts is as follows:

Credit Sales	\$ 950,000	Accounts Receivable	\$ 1,300,000
Purchases	\$ 525,000	Inventory	\$ 550,000
Cost of Goods Sold	\$ 700,000	Accounts Payable	\$ 200,000

Average Days in Accounts Receivable = $1,300,000 / (950,000 / 30) = 41$

Average Days in Inventory = $550,000 / (700,000 / 30) = 24$

Average Days in Accounts Payable = $200,000 / (525,000 / 30) = 11$

Total Cash Flow Cycle Time = $41 + 24 - 11$ or 54 days.

You also can plot cash flow cycle times by looking at the activity times within each cycle.

Example 6:

Inventory		Accounts Receivable		Accounts Payable	
Activity	Days	Activity	Days	Activity	Days
Process Requisition	1	Capture Sales Order	2	Receive Invoice	4
Process P. Order	3	Fill out customer order	6	Approve Invoice	4
Production Time	12	Deliver Order	2	Process Invoice	3
Inspect / Move	1	Invoice Customer	2	Prepare & Mail Check	3
		Receive Payment	36	Check Clears Bank	6
		Payment Clears Bank	5		
Total Days	17		53		20

Total Cash Flow Cycle Time = $17 + 53 - 20 = 50$ days

Once we have determined cash flow cycle times, we can move to the next step in cash flow management, planning.

Cash Flow Planning

One of the objectives of cash flow management is to hold the right amount of cash. If we hold too much cash, we lose the opportunity to earn a return on idle cash. If we hold too little cash, we run the risk of not making timely payments to suppliers, banks, and other parties. We want to have an optimal cash balance that is neither excessive nor deficient. The optimal cash balance is determined by looking at the four reasons for holding cash:

1. Transaction Amounts: We have to hold enough cash to cover our outstanding payments or transactions. In addition to transaction amounts, we should add any compensating balances required under loan agreements. Therefore, the amount of cash on hand must be transaction amounts + compensating balances.
2. Precautionary Amounts: We need to maintain cash for unexpected disbursements. This is the precautionary amount of cash.
3. Speculative Amounts: If we are anticipating making an investment, we will hold a speculative amount to take advantage of opportunities in the marketplace.
4. Financial Amounts: In order to acquire assets, retire debt, or meet some major event, we will accumulate and hold a financial amount of cash.

Key Point → The minimal cash balance is usually equal to the total transaction amount (includes compensating balances) + total precautionary amount.

Cash Flow Forecasting

One of the best ways to determine the optimal cash balance is to fully understand cash flow patterns. This requires that we plot cash flows and prepare a forecast. A cash flow forecast gives us a detail projection of future cash inflows and outflows. This will help us avoid cash deficiencies as well as excessive cash balances. A cash flow forecast also answers several questions, such as how long can we invest idle cash, when will it be necessary to borrow cash, and when can we purchase new capital assets? A typical cash flow forecast will include: Cash on Hand, Expected Receipts, and Expected Disbursements. Each major receipt and disbursement should be listed as a separate line item. Example 7 illustrates a basic cash flow forecast.

Example 7 — Monthly Cash Flow Forecast

	January
Beginning Cash on Hand	\$ 60
Operating Receipts:	
Accounts Receivable	1,200
Other Receipts	- 0 -
Operating Disbursements:	
Payroll	(850)
Taxes	(35)
Utilities	(80)
Insurance	(110)
Supplies	(60)
Services	(350)
Other	(40)
Net Operating Cash Flow	\$ (325)
Investment Receipts:	
Investment Income	- 0 -
Sale of Marketable Securities	- 0 -
Sale of Assets	- 0 -
Investment Disbursements:	
Invest in Marketable Securities	- 0 -
Invest in Capital Assets	- 0 -
Financing Receipts:	
Proceeds from Loans	- 0 -
Proceeds from Asset Borrowings	- 0 -
Financing Disbursements:	
Repay Loans & Debt	- 0 -
Net Change in Cash	\$ (325)
Total Available Cash	(265)
Minimum Cash Balance	40
Surplus (Deficit)	(305)
Activate Line of Credit	325
Ending Cash Balance	<u>\$ 60</u>

The overall objective is to prepare a cash flow forecast that is accurate enough to determine cash sufficiency. As a general rule, it is more difficult to predict cash receipts than cash disbursements. When making estimates about receipts and disbursements, consider using expected values, especially if you are uncertain about final amounts. Example 8 illustrates the calculation of expected values for cash receipts from three service contracts.

Example 8 --- Calculate the Expected Value of Receipts

Customer	Sales Contract	Probability of Getting Contract	Expected Value
Ashcroft	\$ 10,000	20%	\$ 2,000
Carson	\$ 15,000	50%	\$ 7,500
Franklin	\$ 8,000	80%	\$ 6,400
Total Expected Value			<u>\$15,900</u>

One way to predict customer receipts is to simply plot your collection patterns. Example 9 summarizes collection patterns based on past sales collections.

Example 9 --- Plot Historical Collection %'s

Sales Month	0 - 30 Days	31-60 Days	61-90 Days	91-120 Days	Over 121 Days	Total %
January	15%	38%	40%	6%	1%	100%
February	14%	42%	39%	4%	1%	100%
March	14%	41%	39%	5%	1%	100%
April	12%	46%	36%	5%	1%	100%

Finally, consider the following points when preparing cash flow forecasts:

- Prepare cash forecasts for shorter periods of time (weekly or daily) if cash flows are tight.
- Use available data as much as possible to prepare cash flow forecasts.
- If necessary, prepare two forecasts: Early Warning Forecast for longer periods of time (six months) and Targeted Forecast for shorter periods of time (weekly).
- Be advised that cash flow forecasting is extremely difficult in periods of rapid growth.

Special Bank Accounts

One method for maintaining an optimal cash balance is to use Zero Balance Accounts, Sweep Accounts, and Investment Accounts. These accounts will automatically invest surplus cash while still serving as your main transaction account. Disbursements are cleared through a special account which has just enough cash to cover all transactions. The Bank makes a "sweep" of the account and takes any surplus cash and places it into a money market account. Money market accounts are one of the most popular accounts for investing surplus cash. Brokerage houses also offer investment accounts which sometimes earn slightly higher rates than money market accounts. When deciding which types of accounts to use, consider the following guidelines:

- If your average daily surplus cash exceeds \$ 500,000, setup a direct overnight investment program with a brokerage house.
- If your average daily surplus cash exceeds \$ 50,000, but is well below \$ 500,000, setup a sweep account with your bank.
- If your average daily surplus cash is below \$ 50,000, consider using a regular investment account with a brokerage house.

Chapter

3

Short-Term Financing

Part of managing cash flows is to understand how to finance operating cash flows. We previously discussed how to predict cash deficits with forecasting. We now have to understand how to finance our cash flow deficits. Whenever we use short-term financing to cover cash deficits, we must consider costs, risks, restrictions imposed upon the organization, financing flexibility, our current financial situation, and other factors. Some of the questions we need to ask include:

- How long will we need financing?
- How much cash do we need?
- How will we use the borrowed funds?
- When and how will we repay the borrowed funds?

The first and most practical source of financing is spontaneous financing or trade credit. By lengthening the disbursement cycle, we obtain additional cash. Once we have exhausted spontaneous sources of financing, we then use conventional sources of financing, such as bank loans, lines of credit, and asset based borrowing.

Bank Financing

One of your key partners in business should be your bank. Therefore, it is essential that you establish a good working relationship with a bank officer. This relationship is the basis for how you will obtain bank financing. For example, a line of credit is one way to address recurring cash deficits. You can also arrange a revolving loan. Under these arrangements, you borrow as deficits occur up to a maximum amount. Unless you have excellent credit, you will be required to put up collateral (such as receivables, inventory, etc.). The bank may also require a commitment fee or compensating balance (percentage of loan). Some key points about bank financing are:

- Make arrangements to borrow when you least need it. This is the best way to obtain favorable terms and conditions for short-term financing.
- Borrow more than you think you will need. Many organizations under-estimate the amount of borrowing required for short-term financing.
- The moment you think you will need short term financing, begin preparing immediately. Bank financing takes time to arrange and execute.
- Borrow to meet your strategic plans, not to avoid possible bankruptcy. Banks are much more receptive to financing when it fits with some type of long-term plan.
- Make sure you maintain the best possible relationship with the bank. Send regular reports and information to the bank officer.

Example 10 --- Calculate Effective Rate for Line of Credit

You have established a \$ 250,000 line of credit. The bank requires a 5% compensating balance on outstanding borrowings and 3% on any unused balance. The bank will charge 16%. You recently borrowed \$ 100,000. What is your effective interest rate?

Borrowed Funds \$ 100,000 x .05 =	\$ 5,000
Unused Funds \$ 150,000 x .03 =	4,500
Total Compensating Balance	\$ 9,500

$$(\$ 100,000 \times .16) / (\$ 100,000 - \$ 9,500) = 17.7\% \text{ effective rate}$$

Receivable Financing

In addition to bank financing, you can borrow against your assets from a financing company. Accounts Receivable is a liquid asset that provides a form of financing. In order to borrow against your accounts receivable, you must meet the following criteria:

1. Receivables are related to the sale of merchandise and not services.
2. Receivable customers are financially sound and there is a high probability of payment.
3. Receivable customers obtain title to merchandise when it is shipped.
4. Your overall receivable balance is at least \$ 50,000 with sales that are substantially higher than your receivable balance.

There are two forms of receivable financing, factoring and assignments.

Factoring: Under this form of financing, you sell your receivables to the financing company. You receive the face value of the receivable less a commission charge. The financing company assumes responsibility for collecting the receivable. Factoring gives you immediate cash and freedom from collecting from customers. However, it is costly and it sometimes confuses customers since they now make payment to a financing company.

Assignment: Under this arrangement, you transfer or assign your receivables over to the financing company. However, you still retain ownership of the receivables. The financing company advances 60% to 80% of the receivable balance. You continue to collect the receivables and the financing company charges you interest and service fees on the borrowed funds.

Inventory Financing

Inventory financing is similar to receivable financing. Inventory financing has the following requirements:

1. Inventory must be highly marketable.
2. Inventory is non-perishable and not subject to obsolescence.
3. Inventory prices are relatively stable.

There are three forms of inventory financing:

Floating or Blanket Liens: The financing company will place a lien on your inventory; i.e. they obtain a security interest in your inventory in exchange for lending you cash. You continue to manage and control the inventory.

Warehouse Receipts: The financing company obtains an interest in a certain segment or part of your inventory. You will have to separate the inventory that you use for financing from the inventory not used for financing. This may require physical separation as well as separate accounting.

Trust Receipts: The financing company lends you money for a specific item in your inventory until you are able to sell it. When you receive cash for the inventory sale, you pay the financing company. For example, car dealerships often buy automobiles by financing the purchase. When the car is sold, they payoff the financing company.

Example 11 illustrates the costs of financing inventory under a warehouse receipt arrangement.

Example 11 --- Calculate Costs of Financing Inventory

You have arranged for financing against \$ 200,000 of your inventory. You will need financing for four months. The warehouse receipt loan costs 18% with 80% advanced against the inventory value. Additionally, you will have to separate your inventory and maintain separate records. This will cost about \$ 6,000 over the four-month period.

Interest Costs = .18 x .80 x \$ 200,000 x (4 / 12) =	\$ 9,600
Internal Costs	6,000
Total Costs for 4 months	<u>\$15,600</u>

Unsecured Financing

For large corporations with financially sound operations, cash can be obtained on the credit worthiness of the corporation; i.e. unsecured financing. Smaller organizations can sometimes obtain unsecured financing, but costs are often much higher than secured financing. For large corporations in the United States, commercial paper is perhaps the most popular form of unsecured financing. Commercial paper is sold at a discount in the form of a promissory note. The promissory notes are short-term, usually less than 270 days. Example 12 illustrates the costs of commercial paper.

Example 12 --- Calculate Costs of Commercial Paper

Bowie Corporation will issue \$ 500,000 of 90 day, 16% commercial paper. The funds will be used for 70 days. Unused funds can be invested at 12%. The broker will charge 1.5% for the issuance of commercial paper. What is the total costs of this financing arrangement?

Interest Expense = \$ 500,000 x .16 x (90 / 360) =	\$ 20,000
Brokers Fee = \$ 500,000 x .015 =	7,500
Less Return on Unused Funds = \$ 500,000 x .12 x (20 / 360)	(3,333)
Total Costs of Commercial Paper	<u>\$ 24,167</u>

This concludes the overall process of cash flow management: Cash Flow Cycles, Cash Flow Forecasting, and Short Term Financing. We will now finish-up by touching on some finer points in cash flow management.

Some Finer Points in Cash Flow Management

We will now focus on some specific practices that are part of cash flow management. For example, how do we manage the collection of cash and how can we reduce certain types of cash outflows?

Collection Practices

As we previously discussed, the receipts cycle requires a diligent collection process. We need to balance this need for quick cash collections with the needs of our customers. For example, customers who are important to our business should be treated carefully as opposed to customers who mean little or nothing to our future. Therefore, collection efforts must be customer specific in order to be effective.

Specific collection techniques include letters, telephone calls, faxes, emails, and legal action. Two examples of collection letters are illustrated below:

Example 13 - Collection Letter after 90 days

Our records indicate that a balance of \$ 4,650.30 is over 90 days past due. We have sent monthly statements and reminders several times, but we have yet to receive payment or any explanation as to why payment should not be made.

Please review this matter immediately. I will call you in the next five days to arrange payment.

Example 14 - Final Collection Letter (Certified Mail)

Despite numerous requests and phone calls, we have not received payment for the attached invoices totaling \$ 4,650.30.

Unless we receive full payment on or before September 15th, we will take whatever action is necessary to collect the balance.

The overall collection process should be pro-active and preventative. For example, wherever possible try to collect payment immediately as products or services are delivered. This eliminates the need for invoicing and follow-up collection. Require deposits from customers that have a history of late payments. Use credit applications to weed-out bad customers. Include a clause in the credit application that states all collection costs are reimbursed by the customer on delinquent accounts. Finally, if you receive payment in the form of a bad check, retain the check as evidence that you have a valid claim.

Disbursement Practices

How you manage various disbursements and current assets can have a big impact on cash flows. There are several problem areas to watch-out for, such as payroll, purchasing, inventories, and insurance.

Payroll: Payroll is a large cash outflow and requires special attention. One obvious trend in payroll is to implement a flexible workforce since the flow of work fluctuates. Outsourcing and temporary workers are often part of a flexible workforce. Retain a full-time workforce for core activities. You can also increase payroll float times by simply distributing payroll checks after 2:00 p.m. Banks will not clear payroll checks until the following week.

Purchasing: Flexible purchasing can help cash flow. Consider renting certain items as opposed to purchasing. Ask yourself do we really need this item and how often will we use it? If practical, order items out-of-season when prices are low. Finally, consider using credit cards to make purchases since this will give you more time for making payment.

Inventory: Inventories have several hidden costs that can drain cash flow. These costs include storage, insurance, spoilage, handling, taxes, and financing. Get rid of inventory that is not moving. Obsolete inventory should be removed immediately. Find new ways of disposing of inventory. For example, it is better to sell inventory at costs than not at all. Your overall objective is to maintain inventory levels at a profitable level.

Insurance: Make sure you do not over insure your business. Purchase insurance in group packages to obtain the lowest premiums. Start by covering your largest risks first. Structure as high a deductible as you can afford. Avoid duplication and excessive insurance. Shift certain costs, such as health insurance to the employee through higher payroll deductions. Insurance should be used to cover risks that are material, but occur infrequently.

Warning Signs

One important element in cash flow management is to fully understand the warning signs of cash flow distress. Some early warning signs include:

- Cash balances are low compared to historical balances.
- Inventory is not moving.
- Vendor payments are made late.
- Banks are requesting financial statements.

- Major purchases have to be postponed.
- Management has become very risk adverse; i.e. overly cautious about spending money.

One way to monitor cash flow is to track liquidity ratios and compare these ratios to historical ratios and/or industry averages. Some examples include:

Current Ratio = Current Assets / Current Liabilities

Acid Test = Cash + Accounts Receivable + Marketable Securities / Current Liabilities

Cash Flow to Debt Ratio = Cash Flow / Total Debt

Cash Flow to Income Ratio = Operating Cash Flow / Net Income

Another warning sign is an unfavorable Z Score. The Z Score is about 90% accurate in predicting bankruptcy in the first year and about 80% accurate the second year. The Z Score combines five ratios and compares the result to a scoring scale. A weight is assigned to each ratio. The Z Score is calculated as follows:

$$Z = 1.2 (A) + 1.4 (B) + 3.3 (C) + .6 (D) + .999 (E)$$

A: working capital / total assets

B: retained earnings / total assets

C: earnings before interest taxes / total assets

D: market value of equities / book value of debt

E: sales / total assets

The scoring scale for the Z Score is:

If the Z Score is 1.8 or less, there is a very high probability of bankruptcy.

If the Z Score is 1.81 to 2.99, we are not sure about bankruptcy.

If the Z Score is 3.0 or higher, bankruptcy is unlikely.

Example 15 - Calculate the Z Score

Assume we have account balances of:

Total Assets = \$ 1,000, Retained Earnings = \$ 400, Sales = \$ 1,500,
Earnings Before Interest & Taxes (EBIT) = \$ 50, Working Capital = \$ 100,
Market Value of Stock = \$ 600, Book Value of Debt = \$ 700

$$1.2 \times (\$100 / \$1,000) = .120$$

$$3.3 \times (\$ 50 / \$ 1,000) = .165$$

$$.999 \times (\$1,500 / \$1,000) = 1.499$$

$$1.4 \times (\$400 / \$1,000) = .560$$

$$.6 \times (\$600 / \$700) = .514$$

$$Z \text{ Score} = 2.86 (.120 + .560 + .165 + .514 + 1.499)$$

Summary

Managing cash flow is a major balancing act between making sure all obligations are paid on time, doing everything you can to collect cash as quickly as possible, and not holding excessive cash balances. An understanding of cash flow cycles is an important first step in managing cash flows. Once you understand the cycles, you want to lengthen the disbursement cycle and shorten the receipt cycle. Controlling float times is a common way of adjusting cash flow cycle times.

In order to understand the magnitude and timing of cash flows, you need to plot cash flows. This leads to the use of cash flow forecasts. Cash flow forecasts help optimize the amount of cash that should be held. Cash flow forecasts also help identify when short-term financing will be required.

Finally, be aware that cash flows are influenced by many factors, ranging from payroll to inventories. A static workforce and runaway inventories can be detrimental to cash flows. You need to be aware of the warning signs of cash flow distress, such as late vendor payments and delayed purchases.

Final Exam

Select the best answer for each question. Exams are graded and administered over the internet at www.exinfm.com/training.

1. When it comes to managing the disbursement cycle, the objective is to:
 - a. Shorten the disbursement cycle.
 - b. Lengthen the disbursement cycle
 - c. Equalize disbursements with receipts.
 - d. Borrow for all disbursements.
2. One way of decreasing the collection time for cash receipts is to:
 - a. Accept cash payments only.
 - b. Issue vendor payments immediately.
 - c. Invoice customers quickly.
 - d. Treat all customers the same.

3. We can estimate total cash flow cycle times by calculating three ratios: (a) Average Days in Accounts Receivable, (b) Average Days in Inventory and (c) Average Days in Accounts Payable. Using these three ratios, the formula for calculating the total cash flow cycle time would be:
 - a. $(a) - (b) - (c)$
 - b. $(a) + (b) + (c)$
 - c. $(a) \times (b) \times (c)$
 - d. $(a) + (b) - (c)$
4. The amount of cash that should be held is a function of four amounts: Transaction Amount (includes compensating balances), Precautionary Amount, Speculative Amount, and Financial Amount. As a general rule, the minimal amount of cash that should be held is:
 - a. Transaction Amount
 - b. Speculative Amount
 - c. Transaction Amount + Precautionary Amount
 - d. Speculative Amount + Financial Amount
5. Assume the following: Beginning Cash on Hand is \$ 4,000, projected cash inflows are \$ 28,000 and projected cash outflows are \$ 39,000. You want to have an ending cash balance of \$ 2,000. What is your total projected cash deficit?
 - a. \$ 11,000
 - b. \$ 4,000
 - c. \$ 7,000
 - d. \$ 9,000
6. Spontaneous financing or trade credit is simply a way of obtaining more cash by:
 - a. Establishing a Line of Credit
 - b. Lengthening the Disbursement Cycle
 - c. Borrowing against your assets
 - d. Selling your receivables

7. Two common ways of borrowing against accounts receivable are:
 - a. Factoring and Assignment
 - b. Trust Receipts and Blanket Liens
 - c. Leasing and Buy Backs
 - d. Warranties and Options
8. In order to arrange financing against your inventory, your inventory must be:
 - a. Slow moving
 - b. Certified by the IRS
 - c. Highly Marketable
 - d. Obsolete
9. Your company has two major customers, Ajax and Miller. Ajax owes you \$ 10,000 and Miller owes you \$ 20,000 for the current month. Collection probabilities show that Ajax pays 70% of the time in the current month and 30% of the time the following month. Collection probabilities show that Miller pays 40% of the time in the current month and 60% of the time in the following month. Using expected values, what is the total amount of cash receipts for the current month?
 - a. \$ 10,000
 - b. \$ 15,000
 - c. \$ 7,000
 - d. \$ 3,000
10. One of the early warning signs of cash flow distress is:
 - a. High inventory turnover
 - b. Early distribution of payroll checks
 - c. Late vendor payments
 - d. Excessive cash balances