

# Managing Current Assets

University of Phoenix Online  
Finance 476  
Week 1 Lecture Notes



Welcome to Finance 476 and our first lecture together. Please read the material in *Fundamentals of Financial Management* by Brigham and Houston on pages 691 through 780 before reading this lecture to assist in your understanding of the material.



# Cash Conversion Cycle

- Inventory Conversion
- Receivables Collection Period
- Payables Deferral Period

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The first topic of importance is the cash conversion cycle.

First, an order is received from a customer. Once the order is accepted and entered into the sales fulfillment system, it is considered “booked.” Once booked, a computer program called an MRP system will check the current inventory to see if the item is in stock. If the item is in stock, the computer will produce shipping papers for the item that consists of a pick list (to tell the warehouse workers where the item is, the part number, who ordered it, and where to send it), a packing list (to be included with the goods) and a bill of lading (to be signed by the truck driver taking the goods a proof of shipment and later signed by the customer as proof of delivery).

Most orders contain shipping instructions from the customer which are noted on the shipping papers and the appropriate trucking company is contacted in accordance with the customers wishes. These instructions could include “best way” shipping instructions, where the customer is trusting the selling entity to pick the shipping method and carrier. Shipping terms could include FOB Point of Shipment or FOB Jobsite among others, used to indicate when the title is transferred. Revenue from a sale can not be recognized before title transfer.

Once the goods are shipped and title is transferred, the sale is completed according to Generally Accepted Accounting Principles, and the revenue can be recognized. The accounting department will then offset the journal entry to reduce inventory by one unit with the creation of an account receivable, which is a current asset. The payment period begins from the time the title is transferred, not necessarily the same as the time when the goods are received by the customer. Thus, inventory is converted to an account receivable. Now the receivable must be collected in as short a time as possible.

# Inventory Conversion Period

- Inventory Level
- Sales
- Balance between lost sales and too many assets.
- Use of inventory control program (Material Resource Planning, MRP)

$$ICP = \frac{Inventory}{(Sales / 360)}$$

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Inventory conversion on a macro sense is computed by dividing the net inventory by the net sales per day. Net inventory is the gross inventory value minus shrinkage or obsolete inventory. Sales are the dollar value of sales. Many companies use a 360 day year to simplify calculations.

It is very important in setting an inventory level to maintain a balance between having enough in stock to satisfy customers and keeping costs low. Inventory costs money in that interest must be paid on the money used to finance the creation, storage and maintenance of inventory. This cost can reach 15% to 20% of the net inventory value.

On the other hand, running out of stock is not a good way to keep customers. When setting the inventory policy, one must consider not only the effect on customers but also the policy of competing firms. If you do not have an item and no one else does either, the situation vis a vis the customer is not desirable but may be OK from a long term perspective. On the other hand, if your customer is relying on your inventory to ship his goods and you are costing him money by not having the goods on hand, you may lose the customer. This is especially true when handling OEM (Other Equipment Manufacturer) accounts. OEM accounts are accounts where the customer uses your widget as a small part of his product production. For example, Ford was a big OEM customer to Firestone before the recent tire quality fiasco. If Firestone ran out of tires that Ford needed, you can bet Ford would go down the street to Goodyear to get tires before it couldn't ship product because no tires were available. Any money gained by Firestone from the lower inventory would have been lost in the effect of reduced sales on EBIT.

## Receivables Collection Period

- Days Sales Outstanding (DSO)  $DSO = \frac{\text{Receivables}}{(\text{Sales} / 360)}$
- Manage using **Aged Trial Balance Report**
- Set credit policy balance
- Don't become a bank

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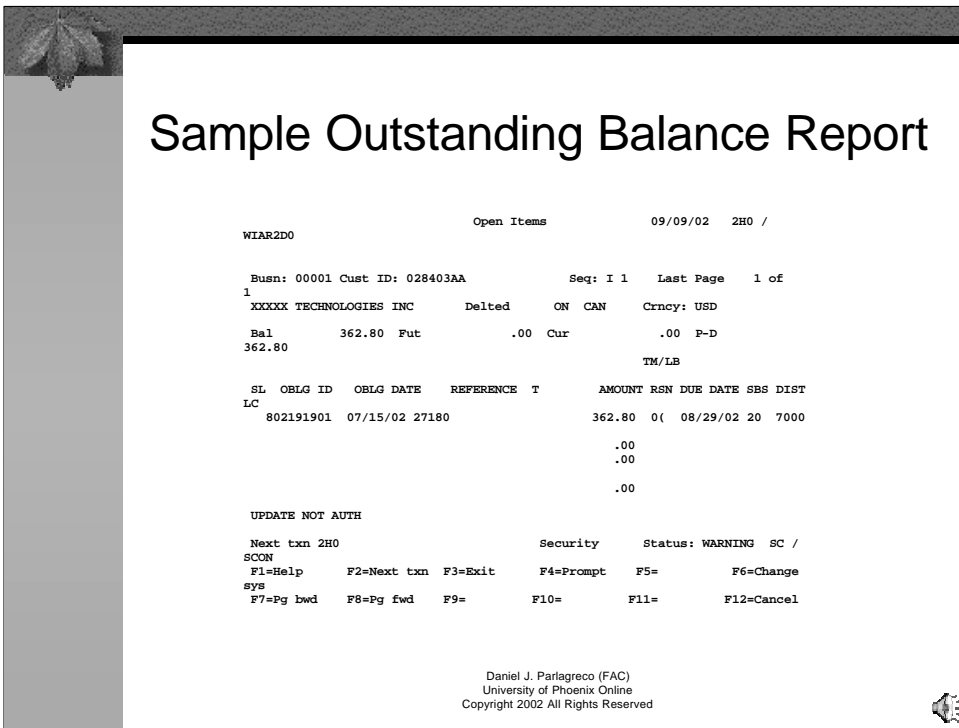


Once inventory is minimized, its time to focus on collection of outstanding debt. Receivables are debts owed by customers.

One measure of the level of receivables is called the Days Sales Outstanding (DSO). DSO is computed by taking the net receivables divided by the sales per day. Net receivables are receivables after provisions for bad debt. Fewer DSO is better.

To manage individual accounts, often a credit and collections department will produce an Aged Trial Balance Report. The Aged Trial Balance Report consists of each customer name in some type of logical order along with the credit limit of that customer and an analysis of outstanding debt by age. The report might show the amount owed but not yet due (current) next to the sum of the amounts that are 30, 60, 90 and more than 90 days overdue. GAAP requires that a provision for bad debt be built based on the age profile of the accounts in general. It is always desirable to avoid having accounts go into classes over 90 days due. The older the account, the less likely you will be able to convert it into a cash balance.

While companies don't generally want to become banks, they often do. Many firms that are in tight cash flow situations will use creditor firms to finance their current assets. We will revisit this later in this lecture.



**Sample Outstanding Balance Report**

```

WIAR2D0                               Open Items                               09/09/02  2H0 /

Busn: 00001 Cust ID: 028403AA         Seq: I 1   Last Page   1 of
1
XXXXX TECHNOLOGIES INC                Delted    ON  CAN   Crncy: USD
Bal      362.80  Fut      .00  Cur      .00  P-D
362.80
TM/LB

SL  OBLG ID  OBLG DATE  REFERENCE  T      AMOUNT  RSN  DUE DATE  SBS  DIST
LC
802191901  07/15/02  27180      362.80  0(  08/29/02  20  7000
      .00
      .00
      .00

UPDATE NOT AUTH

Next txn 2H0                               Security   Status: WARNING  SC /
SCON
F1=Help   F2=Next txn  F3=Exit   F4=Prompt  F5=       F6=Change
sys
F7=Pg bwd F8=Pg fwd   F9=       F10=       F11=       F12=Cancel
  
```

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Here is an example of an outstanding balance account (with the names changed to protect the guilty).

Notice that XYZ, Inc. owes this company money from shipments that are many days overdue. A typical implementation of this type of system should show more recent amounts due and lower overdue balances. This may be for multiple reasons. Sometimes the customer may dispute that an amount is due. Perhaps he has no record of the receipt of goods and therefore can not voucher your invoice for payment in his computer system. In this case, he would ask for a POD or “Proof of Delivery” which would consist of the signed bill of lading that the trucker maintains in his files. You would only find this out after the payment became late and you called the customer to ask why he didn’t pay. You would then have to call the trucker with the PRO number (shipping ID number) and have him fax you a copy of the POD. This copy would then be sent to your customer who would then voucher the invoice for payment. This all takes a great deal of time and can easily force some payments into the 90 day column.

Another common reason for late payment is failure to invoice properly. In this computer age, many of the invoices are generated and sent to the customer from a remote location, and many customers will not process the invoice for payment (called vouchering as noted above) without an invoice that matches their PO (Purchase Order) exactly. This kind of problem can take weeks to solve.

A final reason for nonpayment may be an outright account dispute. We call these accounts CAIDS (Customer Accounts In Dispute) and they are closely watched and benchmarked as an important indicator of customer satisfaction. CAIDS can arise due to poor product quality, failure to ship the proper part, lack of responsiveness in warranty consideration and evaluation, or just overall poor customer service. These

## Payables Deferral Period

- Delay payment of vendors for “free” financing
- Let vendors be your bank
- Hidden Costs
- Risks of “Slow Payer” status

$$PDP = \frac{\textit{Payables}}{(\textit{COGS} / 360)}$$

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The payables deferral period is that time between when the goods are in your possession and when you have to stroke a check for the goods. This period is computed by taking the total accounts payable and dividing by your daily cost of goods sold. The PDP should be kept as long as possible, remembering that a long PDP may carry costs due to the ire of your suppliers.

In addition, long PDP policies may put you at risk of being branded a “slow payer” by firms in general based on the payment history reported to firms like Dunn and Bradstreet. When making credit granting decisions, the risk of each account is evaluated by looking at the D&B report. If the D&B report shows consistent slow pay behavior or large numbers of lawsuits, you may find you have no option with respect to taking trade credit. We put such customers on “credit hold” or “cash in advance only” status. Customers on credit hold can receive no further shipments from us without first paying their accounts in full. For truly difficult customers, we sometimes resort to “cash in advance” status. This means the customer must pay for their goods prior to them being shipped as their credit history is so bad that having their business is not worth the risk of not being paid. After all, a sale that results in nonpayment of the resulting receivable generates a 100% loss in the period of write-down.

## Cash Conversion Cycle

$$ICP + RCP - PDP = CCC$$

- ICP is Inventory Conversion Period (days)
- RCP is Receivables Collection Period (days)
- PDP is Payables Deferral Period (days)
- CCC is Cash Conversion Cycle (days)

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By adding the ICP to the RCP and deducting the PDP, you get the CCC in days. This is the number of days it takes, on average to convert inventory into cash. The lower this number is, the better your current asset management system is working.

## Shorter CCC Is Desirable

- Shorter CCC means less outside financing required
- This reduces costs, as money is not a free asset
- This reduces risk, as debt adds risk to a business
- Higher Profits and Lower Risk should equal higher stock prices.



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The advantages of lower cash conversion cycles are obvious. Shorter CCC's mean less need for financing and more cash flow from operations. This reduces costs, as less financing means less interest expenses and more cash means more interest income. Beyond this, lower CCC's also mean more efficient use of long term assets like machines, warehouse space, forklifts and labor. This both increases profitability and reduces risk. Higher profits and lower risk should improve stock market performance.



## Reasons to Hold Cash

- Take discounts
- Invest whenever you need to
- Maintain Credit Rating
- Emergency Liquidity Needs

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Why would any firm desire a cash balance on its books? One reason is the ability to use the cash to take discounts or take advantage of unexpected investment opportunities. An example of this would be keeping a \$10,000.00 cash position in a \$100,000.00 portfolio. If a hot IPO comes up you would be in a position to buy it. Without the cash balance, you may never get the chance.

In addition, cash is used to pay immediate debts, which means it keeps the firm liquid. Firms that do not pay their bills go bankrupt, which is bad for investors. Therefore, an adequate cash balance is necessary to maintain the financial health and credit rating of the firm.

## Not Too Much, Not Too Little

### ■ Too much cash=Problems

- Lost income
- Lower Returns
- Waste of Shareholder Funds
- Low Risk, Stodgy Image

### ■ Too Little Cash=Problems

- Can't take discounts
- Can't invest
- Risk of insolvency
- Higher cost due to reliance on debt

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The tricky part of this whole cash management business is to keep enough cash on hand to maximize opportunities and reduce risks without having so much on hand that you are missing out on investments in favor of cash. Further, if you keep too much cash on hand you may be vulnerable to takeover by a hostile firm looking to get its hands on your cash.

As a result, cash has to be balanced and budgeted to avoid too much or too little being on hand.



## Preparing a Cash Budget

- Start with Sales
  - Reduce Sales to Cash based on Historical Trends
  - Record Purchases as Per-Cent of Sales
- Compute Cash Inflows and Outflows
- Add/Deduct from Starting Balance
- Compute Cash Shortfall (loans required)

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To prepare a cash budget, you first need a sales forecast. Forecasting is a tough job and should be done by the sales force and marketing department along with top management. Once the level of sales is forecasted, you can then easily do the rest of the forecast using a spreadsheet and a “percent of sales” method. Sales require purchases which require cash to pay for. These purchases, including labor, rent, equipment leases, and other outflows are recorded and summed. This is your cash outflow for the month based on your sales projection.

The cash inflow is not necessarily equal to the sales figure. Since sales are made on credit, they result in creation of a current asset called an account payable, which is then converted into cash. This takes time and the pattern of conversion should be programmed into the spreadsheet taking into account the credit policy and past experience of the firm. Once this is done, the cash inflows have been computed.

The net cash flow per period is the difference between the cash inflow and the cash outflow.

If this difference is negative, it indicates that cash has been consumed in the period. This does not mean that EBIT will be negative, only that more cash went out than came in. This is not a problem in the short term, but rather requires that the cash be obtained from banks or other sources of financing to tide the firm over until it becomes cash flow positive in the future. In addition, a small cash balance is often maintained as a target based on the day-to-day needs of the firm.

## Sample Cash Budget (XYZ, Inc.)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Gross Sales</b>	200	400	400	400	200	200	100	100	200	200	200	200
<b>Collections</b>												
During Sales Month	39.2	78.4	78.4	78.4	39.2	39.2	19.6	19.6	39.2	39.2	39.2	39.2
One Month After	140	140	280	280	280	140	140	70	70	140	140	140
Two Months After	20	20	20	40	40	40	20	20	10	10	20	20
<b>Total</b>	<b>199.2</b>	<b>238.4</b>	<b>378.4</b>	<b>398.4</b>	<b>359.2</b>	<b>219.2</b>	<b>179.6</b>	<b>109.6</b>	<b>119.2</b>	<b>189.2</b>	<b>199.2</b>	<b>199.2</b>
<b>Purchases</b>												
COG to be sold next month	280	280	280	140	140	70	70	140	140	140	140	0
Payments from Prior Month	140	280	280	280	140	140	70	70	140	140	140	140
Wages	20	40	40	40	20	20	20	20	20	20	20	20
Leases	5	5	5	5	5	5	5	5	5	5	5	5
Other Expenses	3	3	3	3	3	3	3	3	3	3	3	3
Taxes			10			10				10		
<b>Net Cash Flow</b>	<b>31.2</b>	<b>-89.6</b>	<b>40.4</b>	<b>70.4</b>	<b>191.2</b>	<b>41.2</b>	<b>81.6</b>	<b>11.6</b>	<b>-58.8</b>	<b>21.2</b>	<b>31.2</b>	<b>21.2</b>
<b>Liquidity Required</b>												
Starting Cash												
Balance if no borrowing	15	46.2	-43.4	-3	67.4	258.6	299.8	381.4	393	334.2	355.4	386.6
Cash Generated or Used in Month	31.2	-89.6	40.4	70.4	191.2	41.2	81.6	11.6	-58.8	21.2	31.2	21.2
Cumulative Cash	46.2	-43.4	-3	67.4	258.6	299.8	381.4	393	334.2	355.4	386.6	407.8
Target Cash	15	15	15	15	15	15	15	15	15	15	15	15
<b>Cumulative Cash Surplus or loans outstanding</b>	<b>31.2</b>	<b>-58.4</b>	<b>-18</b>	<b>52.4</b>	<b>243.6</b>	<b>284.8</b>	<b>366.4</b>	<b>378</b>	<b>319.2</b>	<b>340.4</b>	<b>371.6</b>	<b>392.8</b>

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Here is a sample cash budget for XYZ corporation. Note that the cash inflows on top are related to prior months sales as are the cash outflows. How they are related are based on the firms history. In addition to the cost of goods sold, there are labor costs that may vary with sales above a certain level and stay constant if sales below a certain level are achieved. This is because key personnel can not be laid off on a whim or they may not be around to hire in the next month. Therefore, labor is both a fixed and variable cost.

Now other cash flows may or may not be even. Taxes due may be paid quarterly but other expenses may go up and down depending on unique situations during a month. Lease payments are usually constant month to month and can be easily forecast.

The cash inflow and outflow are netted to result in a net cash generation per period.

This is compared to the target balance and enough cash is borrowed to cover any shortfall.

Cash generated in excess of the required amount is invested in the business or used to pay off outstanding short term loans from earlier periods of negative cash flow.

The cumulative cash position of a business must be positive over the long term. If it is not, the business will go bankrupt (as the dot-com types discovered in 2000).



## Cash Management Techniques

- Synchronization (matching)
- Speed up Receipts
  - Lockboxes
  - Credit Policy
- Manage Float

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Cash management requires matching the financing method to the asset type owed. If money is borrowed for cash to finance higher receivables, then short term securities should be used.

Other management techniques include use of lockboxes to speed up clearing of checks and use of more or less liberal credit policies to spur sales or collections depending on the firms strategy.

Float, or the time between writing of checks and payment of the funds by the bank can sometimes be used to finance operations, though this type of financing is less important than in the past with the faster processing times enabled by computerized clearing systems used by banks.

# Inventory

- Minimize
- Control Systems
  - JIT
  - Two-Bin
  - MRP
- Production Schedule



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A number of different technologies exist to establish the balance between too much and too little inventory. They range from simple systems like the two-bin and JIT systems described in the text to computerized material resource planning schemes that use elaborate computer programs to track inventory levels on a continuous basis. Some of these systems have developed to the point where inventory is updated immediately at the point of sale (e.g. the cash register) and demand is communicated directly to the supplier to ensure stock levels are replenished on a consistent basis.

In smaller companies, however, inventory management still boils down to a judgment call: do I or do I not stock this item.

It is clear that if stock levels are adjusted on a continuous basis, manufacturing schemes have to be flexible enough to meet ever-varying demand. A balance is required between the need to continuously stock items and the need to minimize set-up costs on the factory floor. The ideal inventory reorder quantity from a sales perspective and from an asset management perspective is a single unit. Costs for setup and short production runs, however, can make the actual economic order quantity much higher than a single unit. Knowledge of the specific manufacturing process must be factored into the equation before an inventory control system can be implemented.



# Manage Receivables

- How Receivables are Created
- Monitor and measure
  - DSO
  - Aging Schedule

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Accounts receivable are created when a sale is made on credit. Most companies rely on trade credit for short term financing of their material purchases. This means companies need a credit and collections department both to make credit granting decisions (who to give credit to and how much to authorize) and to monitor and measure the cumulative results of these decisions.

One valuable way to monitor the effect of credit policy on the company is to measure the days sales outstanding. DSO is a measure of how receivables compare to sales. This can be affected, therefore, by both non-collection of debt or sudden changes in sales levels.

The best way to manage accounts directly is through the aging schedule. This is a record by account of what is owed and when it was due. The longer a receivable sits uncollected, the less likely it is that it will result in receipt of cash. Trouble accounts can be identified by examining this balance report and calls made to the payables department of the customer. Excuses for non-payment can be very creative and if a customer is determined he can stretch his accounts payable for many months. These excuses and techniques include: incorrect invoicing, complaints about the quality of goods, asking for proof of delivery, not answering phone calls for long periods of time, and outright refusal to pay for no good reason. Obviously, these “slow pay” customers are sources of a great deal of stress and expense for the company and should be avoided. Counter strategies that you can take include holding future shipments, having the legal department write letters to their management, lawsuits, and putting their accounts on a cash-in-advance basis for future orders.



## Elements of Credit Policy

- Period or term
- Discount Policy
  - Net 30, 2/10, net 30, net 60, etc...
- Credit Standards
  - Who and how much
- Collections
  - Aggressiveness in enforcement

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Credit policy consists of decisions about how much credit to grant (loose or conservative standards), how long to grant it for (term), whether to offer trade discounts for early payment or not, how much to offer, and how aggressive to be in collection efforts.

All of these decisions affect the perception of the company to its customers. We all have been a day or two late with one or another payment at some point; how the company to which we owed the payment reacted contributed greatly to our perception of that company and our willingness to continue doing business with that company. As a result, top management including sales and financial people should be involved in setting credit policy.



## Current Asset Financing Policy

### ■ Conservative

- Maturity matching (self liquidating)
- Not exact

### ■ Aggressive

- Use long-term debt
- Risky

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On the flip side of the credit issue is the decision on how to finance the need for current assets. One concept that is popular is the idea of matching the source of financing to the activity being financed. This is like the idea that you don't use your home equity line of credit to go on a vacation because you are financing a short term goal with a long term debt. Better is to finance that vacation with a credit card (if you must finance it at all) and pay it off as soon as possible.

A more aggressive approach is to use cheaper long term debt for financing of current assets. While this lowers the cost of the financing, it is risky in that it leads to long term commitments that may not be appropriate later in the life of the firm. (Like the vacation above, you don't want to pay for something consumed today thirty years from now, its psychologically difficult to do so).



# Sources of Credit/financing

## ■ Short Term

- Accruals
- Trade Credit (AP)
- Bank Loans
- Commercial Paper

## ■ Long Term

- Bonds
- Long Term Bank Loans
- Equity

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This slide shows some sources of financing for current assets.

On the short term side:

Accruals are moneys owed but not yet paid. For example, employees may be paid at the end of the month for work they did during the month. Thus, the services are received in advance of the cash being paid, making this a short term source of financing.

Trade credit is the same as an account payable. You can stretch your payables, but be careful not to go too far and damage your credit rating.

Bank loans are just that; short term loans from your local bank.

Commercial paper can be used by large firms and refers to notes sold to brokerages. The notes are for short durations (1 to 90 days) and are not supported by collateral but by the reputation and good faith promises of the firm issuing them.

Long term items listed include bonds, bank loans and equity. These should not be used in general for financing of current assets.



# Trade Credit Policy

- Stretching Payables
- Taking Discounts
- Slow Payers = Undesirable Customers
- Risks and Ethical Issues

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Trade credit policy can be used to extend the amount of credit taken from suppliers. This is the flip side of managing accounts receivable. In this case, you are the debtor and your goal is to minimize your costs. You can do this by determining in advance when you will take trade discounts and how you will do so. You want to minimize the perception that you are a difficult customer, as this will generate costs to the production process that could affect sales. In addition to that, there are ethical issues to consider if you enter into a purchase contract with no intent of honoring your commitment.



## Selecting a Bank

- Risk Profile
- Advise/Financial Skill
- Loyalty
- Specialization
- Size
- Other Services

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Selection of a bank for a company is similar to selecting one for your personal business. You first assess what you need and then look for someone who you are comfortable with as a supplier of those needs at the lowest possible cost.

Here we illustrate some of the considerations you might have in selecting a bank, but the specific criteria will vary from firm to firm.



# Conclusion

- Credit Policy Critical
- Consider Effect on Sales
- Finance Considering Risk
- Ethical Issues and Reputation in Market

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This brings us to the end of the Week 1 lecture. We have seen how important credit policy is to sales and to the health of the firm. We have discussed how financial perception of risk and return has to be considered in the broader context of the development of the firm's strategy. Finally, we have shown that credit policy and policies regarding trade credit have to be developed with consideration to ethical standards and how the firm wishes to be known in the market.

## **Discussion Questions:**

### **DQ1**

Firm XYZ, Inc. has developed a cash budget as shown in the lecture. What would the effect be on the financing requirement if sales were halved in the first six months and doubled in the last six months of the planning period?

### **DQ2**

In order to finance their current assets, XYZ management is discussing the possibility of taking trade discounts but paying in 20 days instead of 10 days. This policy would be implemented by you, the credit manager. What would be your concerns and how would you raise them in the boardroom?

### **DQ3**

What are some of the ways to reduce the cash conversion cycle? How would you implement a plan to cut 10% off of XYZ, Inc.'s CCC?