

Introduction to Financing

Prepared by Dr. Sara Abdallah

Lecture 10





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Short Term Financing And Raising Capital

Lecture 10

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Key concepts and Skills

Understand:

- The operating and cash cycles and understand why they are important
- The different types of short-term financial policy
- The essentials of short-term financial planning

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Key concepts and skills

Understand:

- The venture capital market and its role in financing new businesses
- How securities are sold to the public, and the role of investment bankers
- Initial public offerings, and the costs of going public

NWC Review

$$\text{NWC} + \text{Fixed assets} = \text{L/T Debt} + \text{Equity}$$

$$\text{NWC} = (\text{Cash} + \text{Other current assets}) - \text{Current Liabilities}$$

$$\begin{aligned} \text{Cash} = & \text{L/T Debt} + \text{Equity} + \text{Current} \\ & \text{Liabilities} - \text{Current Assets other} \\ & \text{than cash} - \text{Fixed assets} \end{aligned}$$

Sources and Uses of Cash

Sources of Cash

- Increase long-term debt
- Increase equity
- Increase current liabilities
- Decrease current assets
- Decrease fixed assets

Uses of Cash

- Decrease long-term debt
- Decrease equity
- Decrease current liabilities
- Increase current assets
- Increase fixed assets

The Operating Cycle

- Time required to receive inventory, sell it, and collect on the receivables generated from the sale of the inventory
- Operating cycle = inventory period + accounts receivable period
 - Inventory period = time inventory sits on the shelf
 - Accounts receivable period = time it takes to collect on receivables

Operating Cycle Equations

- Operating cycle = Inventory period + Accounts receivable period
- Inventory period = $365 / \text{Inventory turnover}$
 - Inventory turnover = $\text{COGS}^1 / \text{Average Inventory}$
- Accounts receivable period = $365 / \text{Receivables turnover}$
 - = Average Collection Period
 - Accounts receivable turnover = $\text{Credit sales} / \text{Average accounts receivable}$

¹COGS = Cost of Goods Sold

The Cash Cycle

- The time between payment for inventory and receipt from the sale of inventory
- Cash cycle = operating cycle – accounts payable period
 - Accounts payable period = time between receipt of inventory and payment for it
- The cash cycle measures how long we need to finance inventory and receivables

Cash Cycle Equations

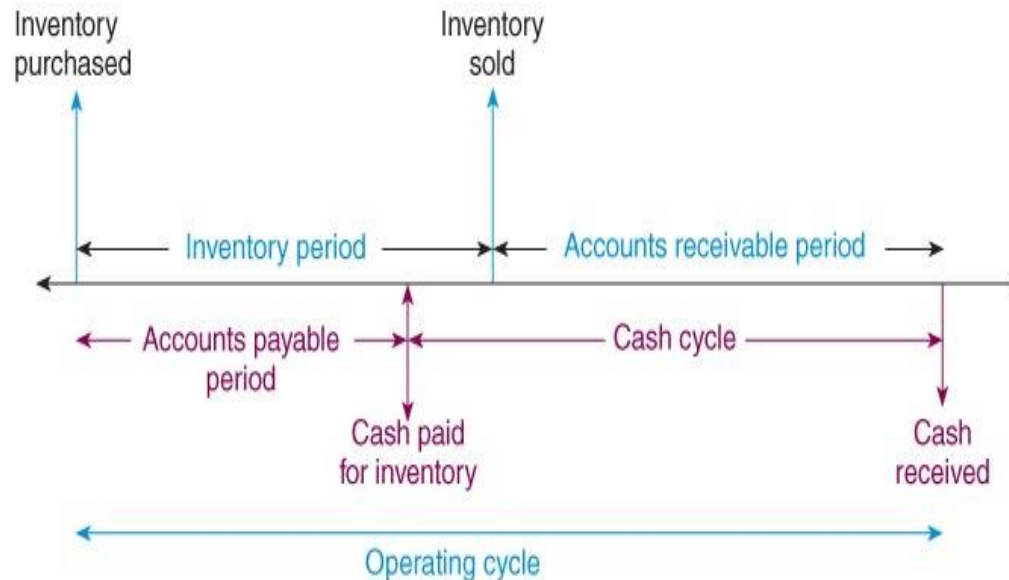
- Cash cycle = Operating Cycle – Accounts payable period
- Accounts payable period = $365/\text{Payables turnover}$
- Payables turnover = $\text{COGS}^1 / \text{Average account payable}$

¹COGS = Cost of Goods Sold

The Operating & Cash Cycles

FIGURE 16.1

Cash flow time line and the short-term operating activities of a typical manufacturing firm



The operating cycle is the time period from inventory purchase until the receipt of cash. The cash cycle is the time period from when cash is paid out to when cash is received.

Corporate Management & S/T Financial Planning

TABLE 16.1

Managers who deal with short-term financial problems

Title of Manager	Duties Related to Short-Term Financial Management	Assets/Liabilities Influenced
Cash manager	Collection, concentration, disbursement; short-term investments; short-term borrowing; banking relations	Cash, marketable securities, short-term loans
Credit manager	Monitoring and control of accounts receivable; credit policy decisions	Accounts receivable
Marketing manager	Credit policy decisions	Accounts receivable
Purchasing manager	Decisions on purchases, suppliers; may negotiate payment terms	Inventory, accounts payable
Production manager	Setting of production schedules and materials requirements	Inventory, accounts payable
Payables manager	Decisions on payment policies and on whether to take discounts	Accounts payable
Controller	Accounting information on cash flows; reconciliation of accounts payable; application of payments to accounts receivable	Accounts receivable, accounts payable

Source: Ned C. Hill and William L. Sartoris, *Short-Term Financial Management*, 2nd ed. (New York: Macmillan, 1992), p. 15.

Example Data

<i>Item</i>	<i>Beginning</i>	<i>Ending</i>	<i>Average</i>
Inventory	\$2,000,000	\$3,000,000	\$2,500,000
Accounts Receivable	\$1,600,000	\$2,000,000	\$1,800,000
Accounts Payable	\$750,000	\$1,000,000	\$875,000
Net Sales	\$11,500,000		
Cost of Goods Sold	\$8,200,000		

Operating Cycle = Inventory Period + Accounts Receivables Period

Inventory Period = 365/Inventory Turnover

Accounts Receivables Period = 365/Receivables Turnover

= Average Collection Period

Cash Cycle = Operating Cycle – Accounts Payable Period

Accounts Payable Period = 365/Payables Turnover

Example: Operating Cycle

- Inventory period
 - Average inventory = $(200,000 + 300,000) / 2 = 250,000$
 - Inventory turnover = $820,000 / 250,000 = 3.28 \times$
 - Inventory period = $365 / 3.28 = 111$ days
- Receivables period
 - Average receivables = $(160,000 + 200,000) / 2 = 180,000$
 - Receivables turnover = $1,150,000 / 180,000 = 6.39 \times$
 - Receivables period = $365 / 6.39 = 57$ days
- Operating cycle = $111 + 57 = 168$ days

Example: Cash Cycle

- Accounts Payable Period = $365 / \text{payables turnover}$
 - Payables turnover = $\text{COGS} / \text{Average AP}$
 - $\text{PT} = 820,000 / 87,500 = 9.4 \times$
 - Accounts payables period = $365 / 9.4 = 39 \text{ days}$
- Cash cycle = $168 - 39 = 129 \text{ days}$
- ➡ Inventory and receivables must be financed for 129 days

Short-Term Financial Policy

Flexible Policy

- Large amounts of cash and marketable securities
- Large amounts of inventory
- Liberal credit policies (large accounts receivable)
- Relatively low levels of short-term liabilities

➡ High liquidity

Restrictive Policy

- Low cash and marketable security balances
- Low inventory levels
- Little or no credit sales (low accounts receivable)
- Relatively high levels of short-term liabilities

➡ Low liquidity

Flexible Financial Policy

Advantages

- No difficulty meeting short-term obligations
- Cash available for emergencies
- Lower storage costs

Disadvantages

- Liquid securities = lower return
- Financing S/T assets with L/T debt risky

Restrictive Financial Policy

Advantages

- Higher returns on long term assets
- Lower carrying costs
- S/T liabilities can be decreased more easily in case of economic downturn

Disadvantages

- Less liquidity for emergencies
- Higher storage costs

Carrying versus Shortage Costs

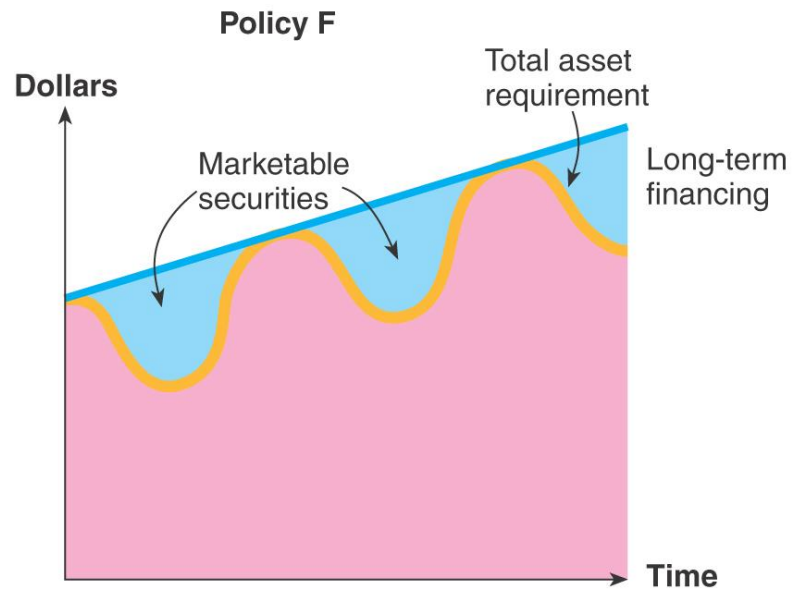
- Carrying costs
 - Opportunity cost of owning current assets versus long-term assets that pay higher returns
 - Cost of storing larger amounts of inventory
- Shortage costs
 - Order costs – the cost of ordering additional inventory or transferring cash
 - Stock-out costs – the cost of lost sales due to lack of inventory, including lost customers

Temporary vs. Permanent Assets

- Permanent current assets
 - The level of current assets the company retains regardless of any seasonality in sales
- Temporary current assets
 - Additional current assets added when sales are expected to increase on a seasonal basis

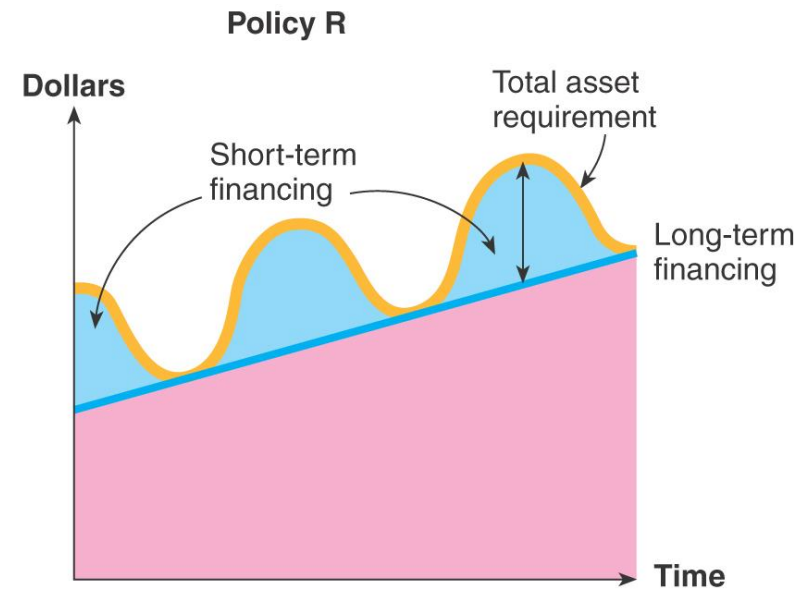
Alternative Asset Financing Policies

Flexible



Policy F always implies a short-term cash surplus and a large investment in cash and marketable securities.

Restrictive

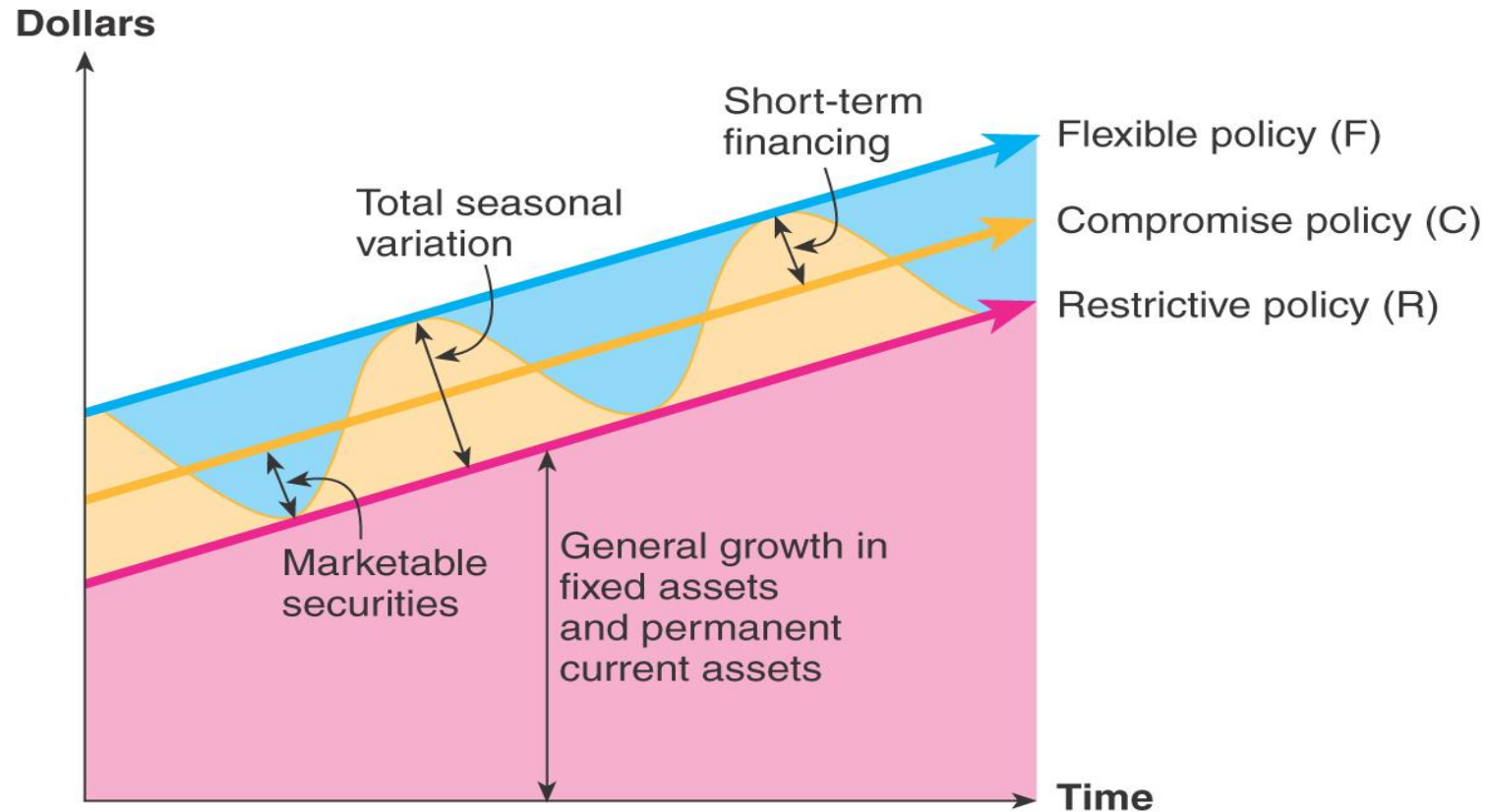


Policy R uses long-term financing for permanent asset requirements only and short-term borrowing for seasonal variations.

Choosing the Best Policy

- Consider:
 - Cash reserves
 - Maturity hedging
 - Relative interest rates
- Compromise policy = borrow short-term to meet peak needs, and maintain a cash reserve for emergencies

A Compromise Financing Policy



With a compromise policy, the firm keeps a reserve of liquidity that it uses to initially finance seasonal variations in current asset needs. Short-term borrowing is used when the reserve is exhausted.

Cash Budget

- Primary tool in short-run financial planning
 - Identify short-term needs and opportunities
 - Identify when short-term financing may be required
- How it works
 - Identify sales and cash collections
 - Identify various cash outflows
 - Subtract outflows from inflows and determine investing and financing needs



Cash Budget Example Fun Toys

- Expected sales by quarter (millions)
 - Q1: \$200; Q2: \$300; Q3: \$250; Q4: \$400
- Beginning accounts receivable = \$120
- Collections = Beginning receivables + $\frac{1}{2}$ x Sales
- Accounts payable = 60% of sales
- Wages, taxes, and other expenses = 20% of sales
- Interest and dividends = \$20 million per quarter
- Major expansion planned for quarter 2 costing \$100 million
- Beginning cash balance = \$20 million with minimum cash balance of \$10 million

Fun Toys

Cash Collections & Cash Disbursements

Cash Collections	Q1	Q2	Q3	Q4
Beginning Receivables	\$120	\$100	\$150	\$125
Sales (m)	200	300	250	400
Cash collections	220	250	275	325
Ending Receivables	100	150	125	200

Cash Disbursements	Q1	Q2	Q3	Q4
Payment of Accounts (60% of sales)	\$120	\$180	\$150	\$240
Wages, taxes, other expenses	40	60	50	80
Capital expenditures	0	100	0	0
Long-term financing expenses (Interest and dividends)	20	20	20	20
Total Cash Disbursements	\$180	\$360	\$220	\$340

Fun Toys

Net Cash Flow and Cash Balance

Net Cash Flow	Q1	Q2	Q3	Q4
Total Cash Collections	\$220	\$250	\$275	\$325
Total Cash Disbursements	180	360	220	340
Net Cash Flow	\$40	(\$110)	\$55	(\$15)

Cash Balance	Q1	Q2	Q3	Q4
Beginning Cash Balance	\$20	\$60	(\$50)	\$5
Net Cash Flow	40	(110)	55	(15)
Ending Cash Balance	\$60	(\$50)	\$5	(\$10)
Minimum Cash Balance	(10)	(10)	(10)	(10)
Cumulative Surplus (deficit)	\$50	(\$60)	(\$5)	(\$20)

Comments on Fun Toys Cash Budget:

- Beginning in Q2, Fun Toys will have a cash deficit which must be covered

- Sales are forecasts and could be much better or worse

Short-Term Borrowing

Unsecured Loans

- Line of credit
 - Prearranged agreement with a bank that allows the firm to borrow up to a certain amount on a short-term basis
 - May require a “Cleanup period”
- Committed
 - Formal legal arrangement that may require a commitment fee and generally has a floating interest rate

Short-Term Borrowing

Unsecured Loans

- Non-committed
 - Informal agreement with a bank that is similar to credit card debt for individuals
- Revolving credit
 - Non-committed agreement with a longer time between evaluations

Short-Term Borrowing

Secured Loans

- **Accounts Receivable Financing**
 - Assigning receivables
 - Lender has A/R as security but borrower still responsible for collection
 - Factoring receivables
 - A/R discounted and sold to a factor
 - Collection = factor's problem

Short-Term Borrowing

Secured Loans

- Inventory Loans
 - Blanket inventory lien
 - Lender has lien against all inventories
 - Trust receipt
 - Borrower holds specific inventory in “trust” for the lender
 - Auto dealer “floor plans”
 - Field warehouse financing
 - Public warehouse acts as control agent to supervise inventory for lender

Fun Toys

Short-Term Financial Plan

S/T Financial Plan	Q1	Q2	Q3	Q4
Beginning Cash Balance	\$20	\$60	\$10	\$10
Net Cash Flow	40	(110)	55	(15)
Net short term borrowing	0	60	0	15.4
Interest on S/T borrowing	0	0	(3)	(0.4)
S/T Borrowing repaid	0	0	(52)	0
Ending Cash Balance	\$60	\$10	\$10	\$10
Minimum Cash Balance	(10)	(10)	(10)	(10)
Cumulative Surplus (deficit)	\$50	\$0	\$0	\$0
Beginning Short-term borrowing	0	0	60	8
Change in short-term borrowing	0	60	(52)	15.4
Ending short-term borrowing	\$0	\$60	\$8	\$23.4

- Deficit covered with S/T borrowing at 20% APR calculated quarterly

Quick Quiz - 1

1. What are the differences between flexible and restrictive short-term financial policies?
2. What factors do we need to consider when choosing a financial policy?
3. What factors go into determining a cash budget and why is it valuable?

Quick Quiz - 2

4. Suppose your average inventory is \$10,000, your average receivables balance is \$9,000, and your average payables balance is \$4,000. Net sales are \$100,000 and cost of goods sold is \$50,000. What are the operating cycle and cash cycle?

Quick Quiz –Solution

Inventory turnover = $50,000 / 10,000 = 5 \text{ x}$

Inventory period = $365 / 5 = 73 \text{ days}$

Receivables turnover = $100,000 / 9,000 = 11.11\text{x}$

Average collection period = $365 / 11.11 = 33 \text{ days}$

Payables turnover = $50,000 / 4,000 = 12.5 \text{ x}$

Payables period = $365 / 12.5 = 29 \text{ days}$

Operating Cycle = $73 + 33 = 106 \text{ days}$

Cash Cycle
= $106 \text{ days} - 29 \text{ days}$
= 77 days

Venture Capital “Private Equity”

- Private financing for new, high risk businesses in exchange for stock
 - Individual investors
 - Venture capital firms
- Usually involves active participation by VC
- Ultimate goal: take company public; the VC will benefit from the capital raised in the IPO
- Hard to find
- Expensive

Venture Capital Stage Financing

- Funding provided in several stages
- Contingent upon specified goals at each stage
- First stage
 - “Ground floor” or “Seed money”
 - Fund prototype and manufacturing plan
- Second Stage
 - “Mezzanine” financing
 - Begin manufacturing, marketing & distribution

Choosing a Venture Capitalist

- Financial strength
- Compatible management style
- Obtain and check references
- Contacts
- Exit strategy

Selling Securities to the Public

1. Management obtains permission from the Board of Directors
2. Firm files a registration statement with the SEC
3. SEC examines the registration during a 20-day waiting period
4. Securities may not be sold during the waiting period

Selling Securities to the Public

5. A preliminary prospectus, called a *red herring*, is distributed during the waiting period
 - If problems, the company amends the registration, and the waiting period starts over
6. Price per share determined on the effective date of the registration and the selling effort begins

Issue Methods

- Public Issue

- Registration with SEC required
- General cash offer = offered to general public
- Rights offer = offered only to current shareholders
- IPO = Initial Public Offering = Unseasoned new issue
- SEO = Seasoned Equity Offering

- Private Issue

- Sold to fewer than 35 investors
- SEC registration not required

Methods of Issuing New Securities

Method	Type	Definition
Public	Traditional negotiated cash offer	Firm commitment cash offer Company negotiates an agreement with an investment banker to underwrite and distribute the new stocks. A specified number of shares are bought by underwriters and sold at a higher price.
		Best efforts cash offer Company has investment bankers sell as many of the new shares as possible at the agreed-upon price. There is no guarantee concerning how much cash will be raised. Some best efforts offerings do not use an underwriter.
	Privileged subscription	Direct rights offer Company offers the new stock directly to its existing shareholders.
		Standby rights offer Like the direct rights offer, this contains a privileged subscription arrangement with existing shareholders. The net proceeds are guaranteed by the underwriters.
	Nontraditional cash offer	Shelf cash offer Qualifying companies can authorize all the shares they expect to sell over a two-year period and sell them when needed.
		Competitive firm cash offer Company can elect to award the underwriting contract through a public auction instead of negotiation.
Private	Direct placement	Securities are sold directly to the purchaser, who, at least until recently, generally could not resell the securities for at least two years.

Underwriters

- Underwriting services:
 - Formulate method to issue securities
 - Price the securities
 - Sell the securities
 - Price stabilization by lead underwriter in the aftermarket
- Syndicate = group of investment bankers that market the securities and share the risk associated with selling the issue
- Spread = difference between what the syndicate pays the company and what the security sells for in the market



Tombstone

- Investment banks in syndicate divided into *brackets*
- Firms listed alphabetically within each bracket
- “Pecking order”
 - Higher bracket = greater prestige
- Underwriting success built on reputation

This announcement is neither an offer to sell nor a solicitation of an offer to buy any of these securities. The offering is made only by the Prospectus.

New Issue

11,500,000 Shares



World Wrestling Federation Entertainment, Inc.

Class A Common Stock

Price \$17.00 Per Share

Copies of the Prospectus may be obtained in any State in which this announcement is circulated from only such of the Underwriters, including the undersigned, as may lawfully offer these securities in such State.

U.S. Offering

9,200,000 Shares

This portion of the underwriting is being offered in the United States and Canada.

Bear, Stearns & Co. Inc.
Credit Suisse First Boston
Merrill Lynch & Co.
Wit Capital Corporation

Allen & Company Incorporated	Banc of America Securities LLC	Deutsche Banc Alex. Brown
Donaldson, Lufkin & Jenrette	A.G. Edwards & Sons, Inc.	Hambrecht & Quist
Prudential Securities	SG Cowen	Wassertein Perella Securities, Inc.
Axiom Capital Management, Inc.	Blackford Securities Corp.	J.C. Bradford & Co.
Joseph Charles & Assoc., Inc.	Chatsworth Securities LLC	Gabelli & Company, Inc.
Gaines, Berland Inc.	Jefferies & Company, Inc.	Josephthal & Co. Inc.
Raymond James & Associates, Inc.		Sanders Morris Mundy
Tucker Anthony Cleary Gull		Wachovia Securities, Inc.

International Offering

2,300,000 Shares

This portion of the underwriting is being offered outside of the United States and Canada.

Bear, Stearns International Limited
Credit Suisse First Boston
Merrill Lynch International

FIGURE 15.1

An example of a tombstone advertisement

Firm Commitment Underwriting

- Issuer sells entire issue to underwriting syndicate
- Syndicate resells issue to the public
- Underwriter makes money on the spread between the price paid to the issuer and the price received from investors when the stock is sold
- Syndicate bears the risk of not being able to sell the entire issue for more than the cost
- Most common type of underwriting in the United States



Best Efforts Underwriting

- Underwriter makes “best effort” to sell the securities at an agreed-upon offering price
- Issuing company bears the risk of the issue not being sold
- Offer may be pulled if not enough interest at the offer price
 - Company does not get the capital and they have still incurred substantial flotation costs
- Not as common as it used to be

Dutch or Uniform Price Auction

Buyers:

- Bid a price and number of shares

Seller:

- Work down the list of bidders
- Determine the highest price at which they can sell the desired number of shares
- All successful bidders pay the same price per share.
- Encourages aggressive bidding

Dutch or Uniform Price Auction Example

The company wants to sell 1,500 shares of stock.

Bidder	Quantity	Bid
A	500	\$20
B	400	18
C	250	16
D	350	15
E	200	12

The firm will sell 1,500 shares at \$15 per share.

Bidders A, B, C, and D will get shares.

Bidder	Quantity	Bid	Σ Qty
A	500	\$20	500
B	400	18	900
C	250	16	1,150
D	350	15	1,500
E	200	12	1,700



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Thank You

