

# CFO's Total Working Capital Management

## Working Capital Management Principles in Practice Today

Ken Parkinson  
Treasury Information Services  
& New York University

# Workshop Topics

- ◆ Conceptual overview
- ◆ Review and update of working capital functions
- ◆ Core issues and problem areas

# Let's Start With This!

- ◆ Please read through the description.
  - Discuss with your table “mates.”
  - Where's the Cash? (In the separate materials)
- ◆ General discussion to follow...

# Where's the Cash?

1. Overall conclusion?
2. Inventory?
3. Receivables and Credit?
4. Payables?
5. Cash Management?

# Conceptual Overview



# What is Working Capital Management?

- ◆ Short-term financial management
  - Current portion of balance sheet
  - Mostly focused on cash flow since cash reflects what happens with WCM
- ◆ Managing liquidity
  - Converting non-cash assets to cash
  - Controlling timing of liability payments
- ◆ Little lead time for decisions or actions

# CFO's Focus

## ◆ Internal functional areas involved

- Treasury
- Accounting – AR and AP
- Credit
- Inventory management
- Purchasing
- Line/operations

## ◆ External “Players”

- Trading partners
- Bankers
- Broker-dealers
- Auditors
- Analysts
- Regulators

# Working Capital Focus

<p><b><u>INFLOWS</u></b></p> <ul style="list-style-type: none"> <li>• Collections</li> <li>• Trade Credit</li> <li>• Discounted AR</li> <li>• Inventory Sales</li> <li>• Investment Inc.</li> <li>• Loan Draws</li> </ul>	<p>R E C E I P T S</p>	<p>C A S H</p>	<p>P A Y M E N T S</p>	<p><b><u>OUTFLOWS</u></b></p> <ul style="list-style-type: none"> <li>• Disbursements</li> <li>• Payroll Pmts.</li> <li>• Taxes</li> <li>• Loan Pmts.</li> <li>• Dividends</li> <li>• Investments</li> </ul>
<p><b><u>DRAGS</u></b></p> <ul style="list-style-type: none"> <li>• Uncollected Receivables</li> <li>• Obsolete Inventory</li> <li>• Low Investment Rates</li> <li>• Tight Credit</li> </ul>				<p><b><u>PULLS</u></b></p> <ul style="list-style-type: none"> <li>• Early Payments</li> <li>• Shortened Credit Limits</li> <li>• Limited Credit Lines</li> <li>• Low Liquidity</li> </ul>

# Factors Influencing WCM

## ◆ Internal factors

- Company size, organizational structure
- Sophistication of WCM, financial function
- Net borrowing and investing position

## ◆ External factors

- Banking services
- Interest rates
- Technology
- Economic performance

# What You Need to Know

- ◆ Basic understanding of how each area works and interacts with other areas
  - Role and importance to company
- ◆ How areas affect each other
  - Cash providers or users
  - Dominance (control) vs. sharing
  - Service and timing decisions
  - Performance measurement

# Review & Updates



# WCM Diagnostic Review

- ◆ Review of WCM “System”
  - Functional review
- ◆ Best practices
  - Automation – electronic payments and receipts
  - Centralization – of key functions, such as cash collection, concentration, and disbursements
  - Better productivity – benchmark review

# WCM Diagnostics

Cash management	<ul style="list-style-type: none"><li>◆ Level of excess bank balances</li><li>◆ % fees paid (non-credit services)</li><li>◆ Level of bank costs</li></ul>
Investing	<ul style="list-style-type: none"><li>◆ Average maturity of investments</li><li>◆ Comparative return</li><li>◆ Adherence to policy</li></ul>

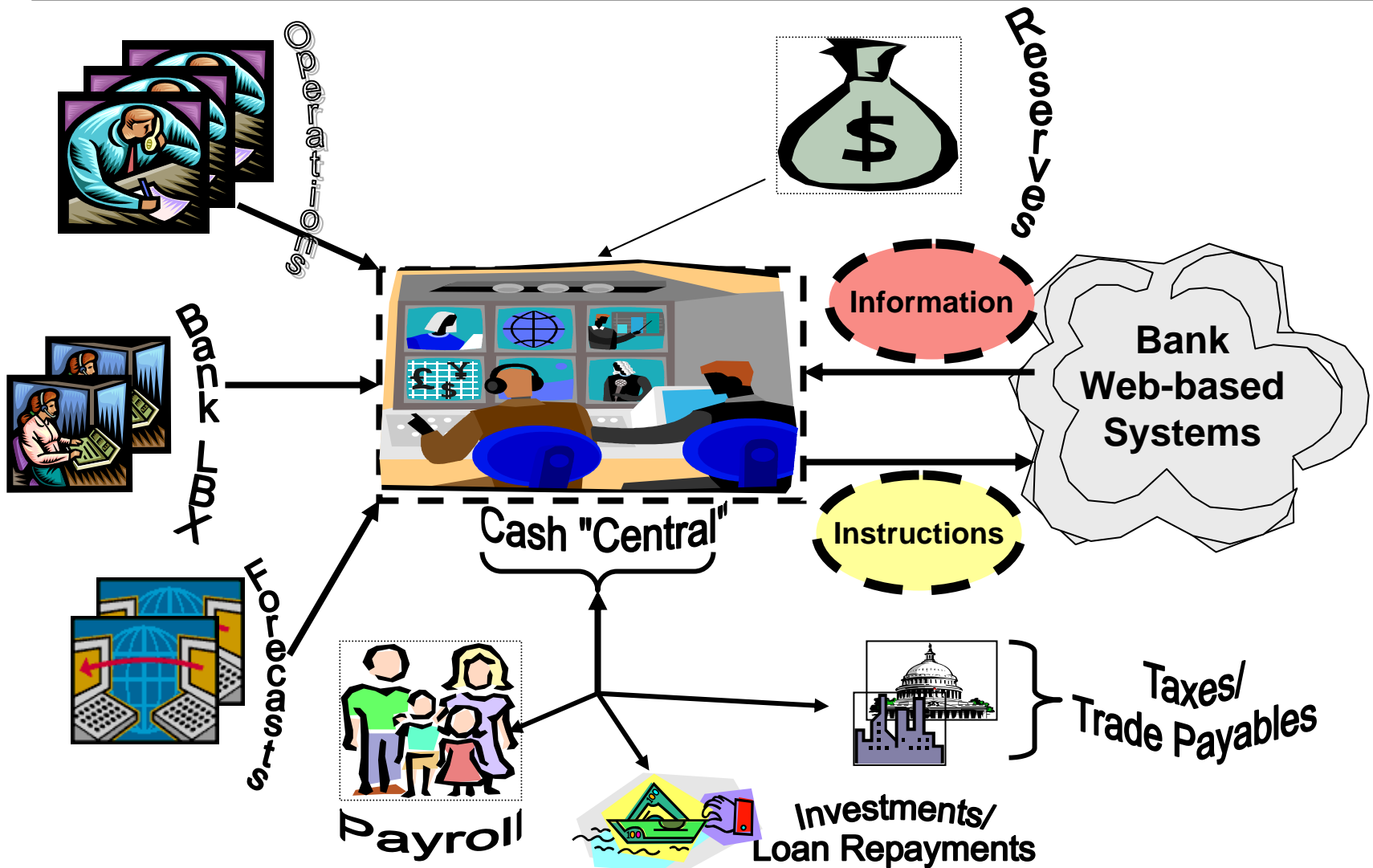
# WCM Diagnostics

A/R & Credit	<ul style="list-style-type: none"><li>◆ Efficiency of system<ul style="list-style-type: none"><li>● % deposited via lockbox, OTC, electronically</li><li>● % cash applied “cleanly”</li></ul></li><li>◆ Bad debt write-offs</li></ul>
Inventory	<ul style="list-style-type: none"><li>◆ Efficiency of supply chain management<ul style="list-style-type: none"><li>● Supplier “report card”</li><li>● % of inventory &gt; 1 yr. old</li></ul></li></ul>

# WCM Diagnostics

A/P, et al.	<ul style="list-style-type: none"><li>◆ Efficiency of A/P system<ul style="list-style-type: none"><li>● % of payments made electronically</li><li>● Uses of direct deposit</li></ul></li></ul>
Borrowing	<ul style="list-style-type: none"><li>◆ No. of credit line banks</li><li>◆ % of credit lines used, maximum outstanding vs. total lines available</li><li>◆ Effective/comparative costs</li></ul>

# Organizing Cash Flows: Cash Central



# Managing Bank Relations

- ◆ More than just meeting with banks
- ◆ Managing bank costs: understanding account analyses
- ◆ Selecting banks for services (RFPs?)
- ◆ Evaluating bank service performance

# Payment Systems and Payments

## ◆ Paper-based

- Reduced check volumes
- Check conversion and truncation – ARC and Check 21

## ◆ Electronic

- “Plastic” types of payments
- E-checks
- Stored-value cards

# Payments Today

From \ To	Consumers	Merchants	Smaller Business	Larger Business	Government
Consumers	Cash/ Checks	Cash/ Check/ Plastic	Cash/ Check/ Plastic	Cash/ACH/ Check/ Plastic	Check/ Plastic
Merchants	Cash/ Checks	Cash/ Check/ Plastic	Check	Check	Check
Smaller Business	Cash/ Checks	Cash/ Check/ Plastic	Check	Check/ACH	Check
Larger Business	Check/ ACH	Cash/ Check/ Plastic	Check/ ACH	Check/ACH/ Wire/EDI	Check
Government	Check/ ACH	Check/ Plastic/ ACH	Check/ Plastic/ ACH	ACH/ Wire/EDI	ACH/ Wire/ EDI

# New Lockbox Technologies

- ◆ Checks converted to electronic form
  - Accounts Receivable Check (ARC) format used
  - Checks truncated at lockbox bank
  - Initial target: Consumer checks, then ...
- ◆ Lockbox imaging
  - Faster transmission of payment information
  - Elimination of keying in data

# Streamlining Cash Flows?



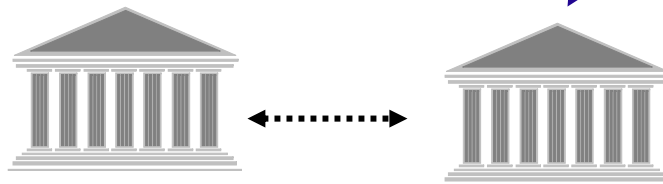
**Lockbox banks**

ACH  
debit  
transfers



**Int. conc. banks**

Wire  
(Fedwire)  
transfers



**Disbursing banks**



**Final conc. bank**

# Credit and Receivables

- ◆ Managing trading partner relations
  - Credit scoring
  - Checking out suppliers
- ◆ Efficient transaction processing
  - Handling new methods of payment
  - Applying cash quickly and accurately
- ◆ Looking for financial opportunities
  - Expanded credit limits
  - Increased electronic payments

# Credit Scoring Model

Factor	World Wide Widgets		Midwest Telecom Services		Western Cattle Barons		California Beach Boys		"0" score	"10" score
Years in business	15		9		3		1.5		<3	10+
Altman Z Score	2.5		3.5		1.5		2.8		<2	>3
D&B Comm Cred	75		85		45		25		<30	80+
Cash flow (net +)	1000		1500		775		675		<700	1250+
Company DSO	40		60		50		75		>50	30+
D&B Paydex	88		86		68		49		<50	80+
Trade Gp DSO	43		40		39		67		>65	35+
Derog info (liens)	0		0		0		2		>1	0
Economic conds	90		80		70		50		40	100
Politicalconds	75		90		65		55		50	100
<b>TOTAL SCORE</b>	-		-		-		-		<45	70+

# What's Wrong with DSOs?

## ◆ Sales bias

- Weird results if sales are erratic
- Seasonality has similar effect

## ◆ How to reflect aging?

- Alternate methods of computing
- Better approach? Focus on collection time by age group

# Aging Schedule

(\$ millions)	Jan	Feb	Mar	Apr
<b>Sales</b>	530	450	560	680
<b>Total A/R</b>	600	560	650	720
<b>Current</b>	55.0%	51.8%	55.4%	38.9%
<b>1-30 PD</b>	15.0%	21.4%	24.6%	34.7%
<b>31-60 PD</b>	13.3%	10.7%	9.2%	15.3%
<b>61-90 PD</b>	11.7%	8.9%	6.2%	6.9%
<b>&gt;90 PD</b>	5.0%	7.1%	4.6%	4.2%

# Days Sales Outstanding (DSO)

- ◆ DSO ratios computed using 90-day average daily sales figure and monthly receivables
- ◆ From aging schedule,

(\$ millions)	Jan	Feb	Mar	Apr
<b>Sales</b>	530	450	560	680
<b>Total A/R</b>			<b>650</b>	<b>720</b>

- ◆ Calculated DSOs:

- March DSO =  $(650) / ((530 + 450 + 560) / 90) = 38.0$

- April DSO =  $(720) / ((450 + 560 + 680) / 90) = 38.3$

# Average Collection Days

Aging Group	March			April		
	Coll. Days	Weight	Wtd. Days	Coll. Days	Weight	Wtd. Days
Current	20	55.4%	11.1	29	38.9%	11.3
31-60	48	24.6%	11.8	55	34.7%	19.1
61-90	80	9.2%	7.4	88	15.3%	13.5
91-120	110	6.2%	6.8	115	6.9%	7.9
121+	130	4.6%	6.0	145	4.2%	6.1
<b>Avg. Collection Days</b>			<b>43.0</b>			<b>57.9</b>

# DSOs: What Do They Show?

<----- Past Due----->

Month	Cr Sales	Total AR	Curr	1-30	31-60	61-90	91-120	120+
J	450	740	444	111	74	59	30	22
F	490	670	402	101	67	54	27	20
M	620	680	408	102	68	54	27	20
A	510	710	426	107	71	57	28	21
M	590	690	414	104	69	55	28	21
J	700	750	450	113	75	60	30	23
J	700	700	420	105	70	56	28	21
A	700	650	390	98	65	52	26	20
S	700	620	372	93	62	50	25	19
O	700	650	390	98	65	52	26	20
N	560	650	390	98	65	52	26	20
D	680	625	375	94	63	50	25	19

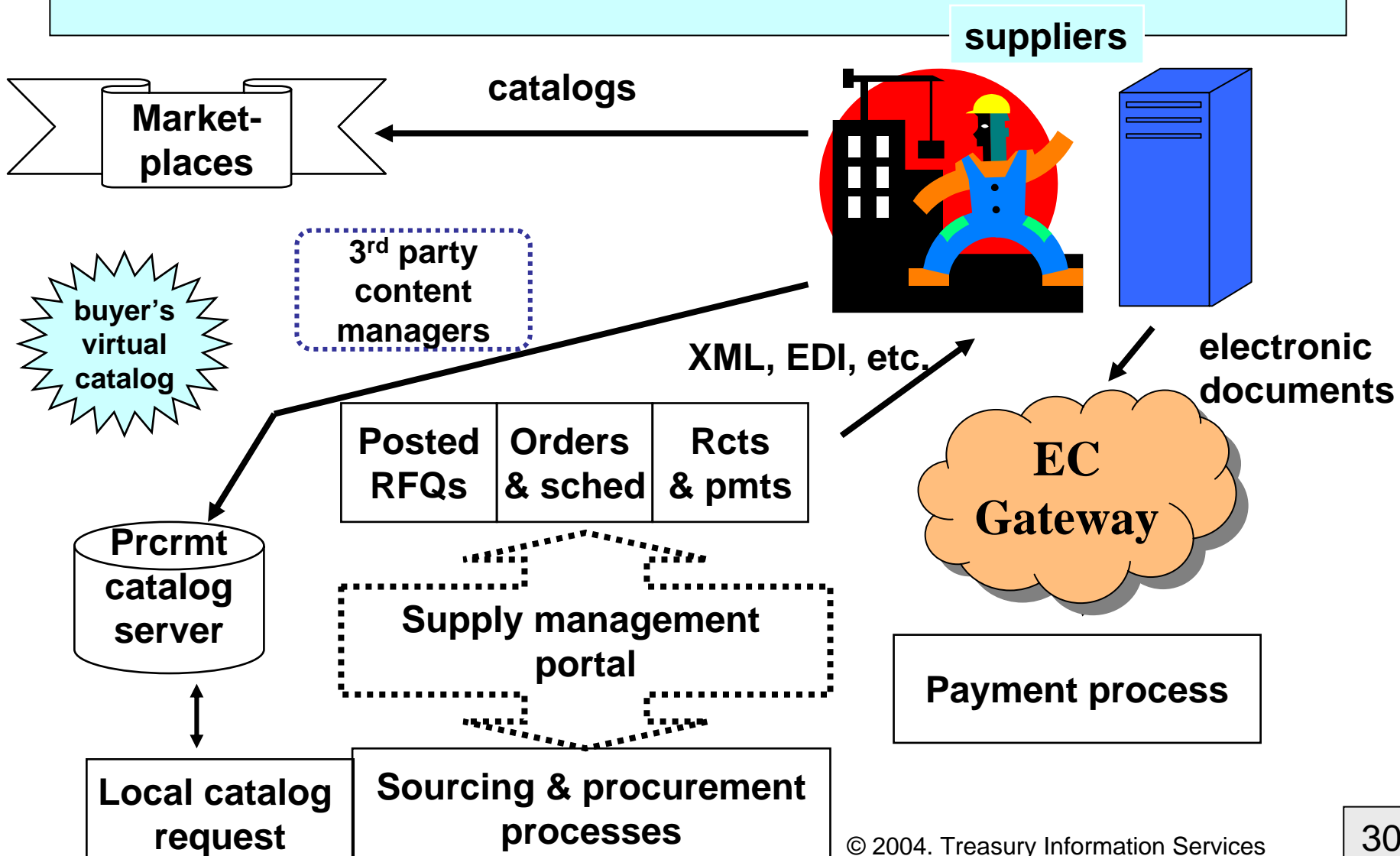
DSOs

1-mo avg	3-mo avg	ACP
49.33	N/A	42.00
41.02	N/A	42.00
32.90	39.23	42.00
41.76	39.44	42.00
35.08	36.10	42.00
32.14	37.50	42.00
30.00	31.66	42.00
27.86	27.86	42.00
26.57	26.57	42.00
27.86	27.86	42.00
34.82	29.85	42.00
27.57	28.99	42.00

# Supply Chain Management

- ◆ “Holistic” view of purchasing
- ◆ Managing the supply chain involves:
  - Obtain the best bids
  - Acquire substitutions for costly items
  - Eliminate obsolete items in inventory
  - Improve the procurement cycle
  - Maintain solid trading partner relations
  - Evaluate new technologies

# The E-Procurement Cycle



# Payables and Disbursements

- ◆ Avoiding inefficient payables systems
- ◆ Inefficient system results
  - Payments too early
  - Failure to take discounts
- ◆ Influencing factors
  - Centralized vs. local
  - Vendor make-up
  - Trade credit and opportunity cost
  - Inventory policies
  - E-commerce and EDI effects

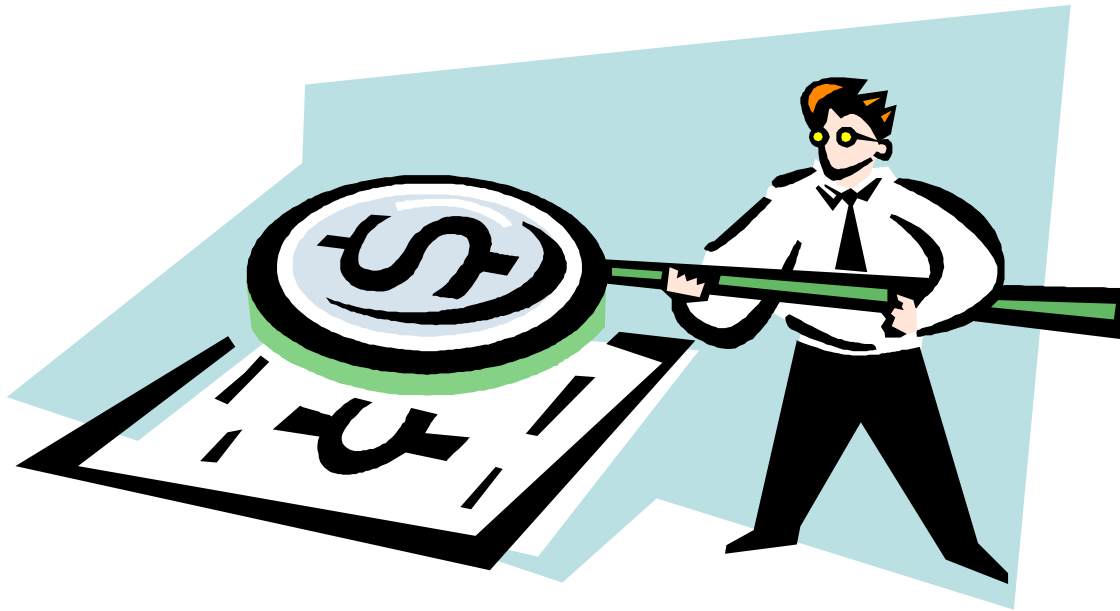
# Evaluating Trade Discounts

- ◆ Implicit Rate (IR) =  
$$\frac{[(\text{discount}) / (1 - \text{discount})] \times (365)}{[(\text{net days} - \text{discount days})]}$$
- ◆ For example, for terms of 1% 10 net 30:  
$$\text{IR} = (.01/.99) \times (365/(30-10)) = 18.43\%$$
- ◆ Take the discount unless company's alternate cost of funds > 18.43%.
- ◆ Comments
  - What if you pay >30 days? IR decreases.
  - What if you “convert” to equivalent days? Assuming a 7% company rate, you'd have to pay in 63 days.

# Finding Hidden Cash

1. Possible payables stretching “opportunities”?
2. A/P department’s performance?
3. Handling discounts?
4. Other payables savings suggestions?

# Managing Short-Term Liquidity



# ST Investment Strategies

## ◆ Passive

- Roll-over traps
- “Passive aggressive”
- Passive matching

## ◆ Active

- Matching
- Mismatching
- Laddering

# ST Investment Policy/Guidelines

- ◆ Purpose
- ◆ Objectives
- ◆ Eligible instruments
- ◆ Credit quality
- ◆ Position limits and maturities
- ◆ Management “vendors”

# Reviewing Investment Policy

- ◆ What do you think?
- ◆ Any impediments or problems?
- ◆ What would you change?
- ◆ How does it compare to yours?

# Relative Safety? Rank 1-10

Rank	Investments
	Repo (Fed. Gov. Security)
	Bank CD (rated A-1, P-1)
	Auction rate preferred stock (rated at low-end of investment grade)
	Sweep account (Bank is AAA)
	CP (A-1, P-1, matures in 60 days)
	CP (A-2, P-1, matures in 30 days)
	CP-unrated (junk, matures in 45 days)
	T-Bill (90-day)
	T-Bill (180-day)
	Grand Cayman, Euro\$ Time Deposit (matures in 15 days)

# What Do Investors Choose?

<b>Investors</b>	<b>Choice(s)</b>
Company having a passive strategy and a very unreliable short-term cash forecast	
Company having a matching strategy and a fairly reliable forecast for 90 days	
Company looking for the highest rate, regardless of any risks	
Company looking for the highest rate with low default risk but seeking market rate of return	

# Borrowing Strategies

- ◆ Passive strategies
  - Roll-overs
  - Again, a trap
  - Spread out borrowing
- ◆ Active strategies
  - Matching strategies
  - Rate-sensitive strategies
  - Level-sensitive strategies

# What Do Borrowers Choose?

<b>Borrowers</b>	<b>Choice</b>
Small, privately owned corporation with annual sales of \$50 million that is borrowing for the first time	
Canadian/U.S. affiliate of a U.K.-based parent (AA-rated), with annual sales of more than \$1 billion in the U.S. (profitable subsidiary for >5 years)	
Large domestic (annual sales of \$750 million) corporation that has recently (within the past six months) emerged from bankruptcy protection and reorganization under new management and hasn't borrowed since reorganizing.	
Large energy company (oil, etc.) with large inter-country flows of products and need for financing such shipments.	
Large corporation facing financial distress and expecting to seek Chapter 11 protection	

# Managing Multiple Portfolios

- ◆ Having an investment portfolio and a debt portfolio may be unavoidable
- ◆ Typical situation: investment return  $<$  borrowing rate
  - Monitor net difference over time
  - Need to set target for differences
  - Possible “bonus” situations (short-lived)

# Risk Management Considerations

- ◆ Use of synthetic securities -- derivatives
  - How do derivatives get their value?
- ◆ Most common form of derivative: option
  - Do-nothing choice
- ◆ Complex derivatives
  - Avoiding them
  - Using common sense

# Effects of Forecasting

- ◆ Low reliability = more guesswork
- ◆ Results
  - Short maturities
  - High liquidity
  - Constant rollovers
  - Unnecessary borrowing and investing
  - Higher exposure to rate changes
- ◆ Higher WCM costs

# Effective Approaches

- ◆ Averaging techniques
  - Good for short-term
- ◆ History
  - Don't ignore it
- ◆ Simple models
  - For predictable items (Pareto's Law?)
- ◆ “Informed” projections
  - Best guesses from experience

# Integrating the Functions

## ◆ ERP systems

- Can WCM components be accessed?
- Does ERP system really support WCM?

## ◆ Focus on supply chain management

- E-procurement and e-commerce contributing to integration
- Supply chain should include payment

# Forecasting System

- ◆ Short-term

- Day-to-day flows for 1-6 weeks

- ◆ Medium-term

- Rolling monthly flows for 12 months

- ◆ Long-term

- Projected annual financials for 1-5 years

# Analyzing Cash Forecasts

## CASH FORECAST (\$ BILLIONS)

	<i>March</i>			<i>April</i>			<i>May</i>		
	<u>Fcst</u>	<u>Act</u>	<u>Var</u>	<u>Fcst</u>	<u>Act</u>	<u>Var</u>	<u>Fcst</u>	<u>Act</u>	<u>Var</u>
<b>Collections</b>	250	200	50	210	280	-70	325	305	20
<b>Payables</b>	175	195	-20	220	220	0	250	300	50
<b>Payroll</b>	100	95	5	95	92	-3	95	140	45
	<i>June</i>			<i>July</i>			<i>August</i>		
	<u>Fcst</u>	<u>Act</u>	<u>Var</u>	<u>Fcst</u>	<u>Act</u>	<u>Var</u>	<u>Fcst</u>	<u>Act</u>	<u>Var</u>
<b>Collections</b>	300	450	-150	450	350	100	400	435	-35
<b>Payables</b>	275	295	20	200	225	-25	300	320	20
<b>Payroll</b>	105	95	10	95	165	-70	100	100	10
	<i>September-November</i>			<i>December-February</i>					
	<u>Fcst</u>	<u>Act</u>	<u>Var</u>	<u>Fcst</u>	<u>Act</u>	<u>Var</u>			
<b>Collections</b>	1250	1400	-150	1400	1250	150			
<b>Payables</b>	775	995	-200	775	895	-120			
<b>Payroll</b>	265	295	30	330	360	30			

### What Do You See?

- Collections
- Payables
- Payroll

# Measuring WC Performance



# Measuring WCM Performance

- ◆ Productivity units of measurement
  - Costs per unit of revenue, per FTE
  - Timing involved
- ◆ Comparison with target
  - Benchmarking vs. history, goal, others
  - Best practice utilization
- ◆ Sources
  - AFP/Hackett Group
  - Special studies

# WCM Benchmarks

- ◆ Cash [management]
  - Costs and bank fees as % of revenue\*
  - Days sales in cash (bank balances)
- ◆ ST Investments
  - AFP Investment benchmark for working capital portfolio
  - Comparison vs. t-bills or other security

*\*Source: AFP/Hackett Group*

# WCM Benchmarks

## ◆ Receivables

- A/R cost per remittance\*
- Days sales outstanding (DSO ratio) or average collection period

## ◆ Inventory

- Procurement cost as % of total purchasing cost\*
- Days Sales in Inventory (DSI ratio)

*\*Source: AFP/Hackett Group*

# WCM Benchmarks

## ◆ Payables\*

- A/P cost per remittance\*
- Days payable outstanding (DPO ratio)

## ◆ ST Borrowing

- Comparison with money market rate
- Comparison with internal goal, history, other firms

*\*Source: AFP/Hackett Group*

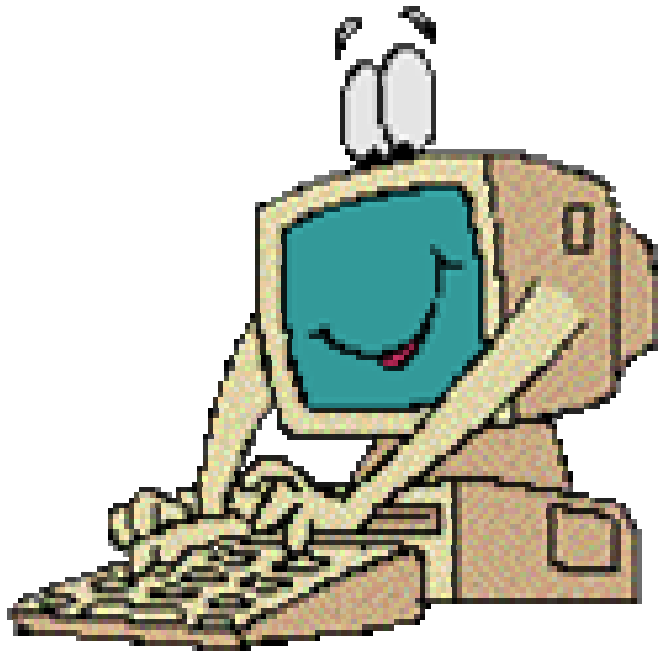
# What Lies Ahead?



# What Lies Ahead for WCM?

- ◆ More technology (and impact)
  - Less drags on payment systems
  - Faster “cycle” for WCM
  - Enabling integration of WC elements
- ◆ Further business consolidation
  - Changes in approaches
  - Ability to deal with risks
- ◆ Slow growth of e-commerce
  - Impact?

# The Next WC Manager?



*Thanks!  
Any  
Questions?*