THK JAIN COLLEGE (MORNING)
Subject : Financial Management
Semester VI
Prepared by Parichita Basu

-

TOPIC :WORKING CAPITAL MANAGEMENT - II

WHAT ARE THE TYPES OF WORKING CAPITAL POLICIES?

There are certain policies that must be followed while calculating and managing working capital. The most commonly followed working capital policies are:

1. Aggressive Policy

This policy, as the name suggests, is a high-risk one. Owing to the risk factors, returns are also higher. To follow this, a business must minimise its current assets or the amount of debt its owed to.

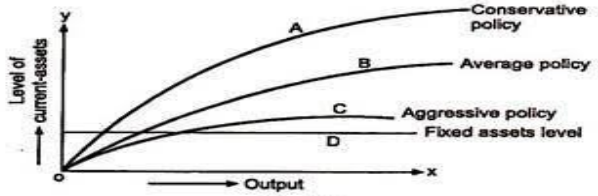


Fig. 1.3

Curve 'D' — Fixed assets level
Alternative curve 'C' — Aggressive policy
Alternative curve 'A' — Conservative policy
Alternative curve 'B' — Average policy

Here, there are no debtors- payments are collected in time and are eventually invested in business. Creditors' payments are delayed to the maximum. Doing so, sometimes might land up with possibilities to sell out company assets to clear debts.

This type of working capital policy is mostly followed by companies looking for brisk growth.

2. Conservative policy

Businesses with low-risk appetite are mostly inclined towards such a policy. In this policy, credit limits are pre-set to a specific amount. Also, such policies refrain doing business on credit with any debtor who defaults.

Policies relating the levels of current assets at a glance:

Description \ Policies	Conservative	Moderate	Aggressive
Amount of current assets	Higher	Balance	Lower
Ratio of current assets to sales	Higher	Balance	Lower
Ratio of current assets to fixed assets	Higher	Balance	Lower
Impact of the policies on firm's: ↓	Conservative policy	Moderate approach	Aggressive approach
Liquidity	High	Moderate	Low
Risk of illiquidity	Low	Moderate	High
Profitability (ROCE)	Low	Moderate	High

Generally, a conservative working capital policy is followed to keep the company assets and liabilities in sync with each other, with the assets value on the higher side, in case of sudden exigencies.

3. Matching policy

This one is a hybrid between a working capital management policy and a working capital financing policy.

Businesses generally follow this policy when they want their working capital to be less; thereby utilizing or investing the money elsewhere.

Here, the current assets of the balance sheet are matched with the current liabilities and

less cash is kept in hand. This in turn, enables the rest of the finance to be used for expanding business, increasing production scale, etc.

A company is considering its investment in working capital for next year. Estimated fixed assets are ₹8,00,000 and current liabilities ₹5,50,000. Its sales and EBIT depends on investment in current assets (more particularly in stock and receivables). Following policies are under consideration:

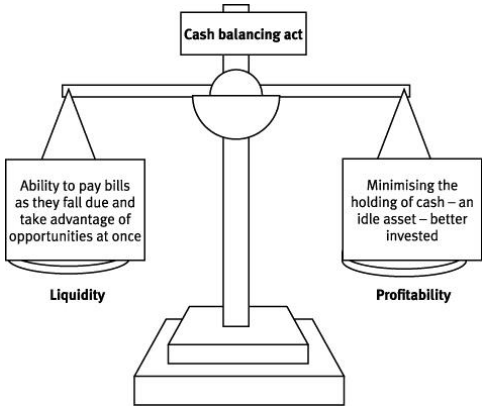
Policy	Conservative	Moderate	Aggressive
Current assets (₹)	11,50,000	9,50,000	6,50,000
Sales (₹)	30,00,000	28,00,000	25,00,000
EBIT (₹)	3,00,000	2,75,000	2,50,000

Calculate the following and give your observations:

a) Net working capital
b) Measure of profitability (both on turnover and on capital invested)
c) Measure of liquidity (both based on turnover and relative assets)

Policy	Conservative	Moderate	Aggressive
Fixed assets (₹) .....(A)	8,00,000	8,00,000	8,00,000
Current assets (₹) .....(B)	11,50,000	9,50,000	6,50,000
Current liabilities (₹) .....(C)	5,50,000	5,50,000	5,50,000
Capital Employed (₹) ..... (D = A + B – C)	14,00,000	12,00,000	9,00,000
Sales (₹) .....(E)	30,00,000	28,00,000	25,00,000
EBIT (₹) ..... (F)	3,00,000	2,85,000	2,75,000
Answers:			
(a) Net working capital [B – C] (G) (in ₹)	6,00,000	4,00,000	1,00,000
(b) Measure of profitability:			
On turnover [F × 100/E] (H)	10%	10.17%	11%
On capital invested [F × 100/D] (I)	21.42%	23.75%	30.56%
(c) Measure of liquidity:			
Based on turnover [B/E] (J)	0.38	0.34	0.26
Based on relative asset [B/A] (K)	1.44	1.19	0.81
Comments:			
Liquidity in terms of working capital [see G]	*Highest*	*Moderate*	*Lowest*
Liquidity in terms of turnover and relative assets [see J & K]	*Highest*	*Moderate*	*Lowest*
Profitability both in terms of turnover and capital [see H & I]	*Lowest*	*Moderate*	*Highest*
Risk (from liquidity aspect) [see J & K]	*Low*	*Balanced*	*High*
Return (from profitability aspect) [see H & I]	*High*	*Balanced*	*Low*
Remarks: increase in liquidity, reduces risk as well as return and vice versa.			

LIQUIDITY VS PROFITABILITY



Profitability refers to profits which the company has made during the year which is calculated as **difference between** revenue and expense done by the company, whereas **liquidity** refers to availability of cash with the company at any point of time.

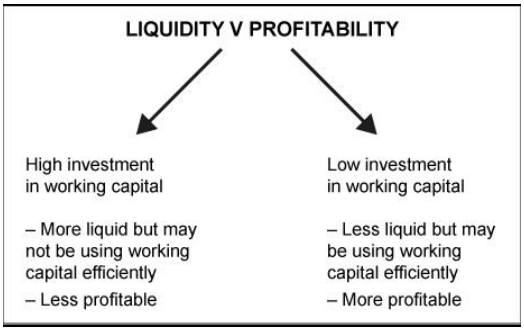
The **liquidity** of a firm is measured primarily by current ratio **and** net **working capital** whereas the **profitability** is measured by return on

assets **and** return on equity. The **liquidity** focuses on short term assets which generate low **profit and** contain low risk.

Working capital affects both the **liquidity** as well as **profitability** of a business. As the amount of **working capital** increases, the **liquidity** of the business increases. ... For example, an increase in the inventory of the business increases its **liquidity** but since the stock is kept idle, the **profitability** falls.

Working capital is the difference between a company's current assets and current liabilities. ... For a company, **liquidity** essentially measures its ability to pay off its liabilities when they are due, or how easily and effectively a company can access the money it needs to cover its debts.

The **trade**-**off** between profitability and risk is the key to **working capital management**. Too little **working capital** increases profit but reduces liquidity, as current assets are more expensive than fixed assets. For instance if a **management** feels that worker training is a cost they will apportion less **funds** for it.



LIQUIDITY PROFITABILTY TRADE OFF

Liquidity - Having enough money in form of cash,to meet your financial obligations. Alternatively,the ease with assets can be converted in to cash. ... If you are on the line and move towards one,you automatically move away from the other.In other words, there is a **trade** – **off** between **liquidity** and **profitability**.

A company has projected its total investment to be ₹50,00,000 consisting of fixed assets ₹30,00,000 and current assets ₹20,00,000. It has equity shares of ₹25,00,000 and considering borrowing for the balance. The cost of long-term borrowing is 15% while for short-term borrowing the rate is 10%.

The company expects 20% return on its investment and is considering three proposals for short-term loan – either (a) ₹6,00,000 or (b) ₹10,00,000 or (c) ₹18,00,000; the balance will be financed by long-term borrowing.

Analyse the proposals in terms of profitability (ROE) and liquidity (STL/Total Investment), assuming income tax rate applicable to be 30%.

Solution

Statement showing Profitability and Liquidity of different financing strategies:

		Case - (A)	Case - (B)	Case - (C)
Fixed assets	a	30,00,000	30,00,000	30,00,000
Current assets	b	20,00,000	20,00,000	20,00,000
Total Investment	c	50,00,000	50,00,000	50,00,000
Source of fund:				
Equity shares	d	25,00,000	25,00,000	25,00,000
Short-term Loan (STL)	e	6,00,000	10,00,000	18,00,000
Long-term loan (LTL) (c – d – e)	f	19,00,000	15,00,000	7,00,000
		50,00,000	50,00,000	50,00,000

		Case - (A)	Case - (B)	Case - (C)
EBIT (20% on c)	g	10,00,000	10,00,000	10,00,000
Less: Interest on LTL (15% of f)	h	2,85,000	2,25,000	1,05,000
Less: Interest on STL (10% of e)	i	60,000	1,00,000	1,80,000
EBT (g – h – i)	j	6,55,000	6,75,000	7,15,000
Less: Tax (30% of j)	k	1,96,500	2,02,500	2,14,500
PAT (j – k)	l	4,58,500	4,72,500	5,00,500
Profitability:				
Return on Equity (ROE) [l × 100/d]		18.34%	18.90%	20.02%
Liquidity:				
STL to Total Investment [e × 100/c]		12.00%	20.00%	36.00%

Comments:

- As we move from strategy A to strategy C, that is, STL increases and the risk of liquidity also increases. This is reflected by the increased ratio of STL to Total Investment.
- Short-term loans are comparatively cheaper, so profit should be increased.
- Profitability (reflected by ROE) of strategy C is higher than that of strategy B and A.
- Thus, the more aggressive is the financing strategy, the greater will be the risk as well as the return.

The profitability of the assets and cost of capital of a firm are given as follows:

Return on Current assets – 2% and on Fixed assets – 12%

Implicit cost of Current liabilities – 4% and cost of long-term funds – 9%.

The current Balance Sheet of the firm shows the following position:

Liabilities	₹	Assets	₹
Long-term funds	50,00,000	Fixed Assets	40,00,000
Current liabilities	10,00,000	Current Assets	20,00,000
	60,00,000		60,00,000

a) Calculate the net profitability of the firm at present asset and finance structure.

b) The firm is considering to reduce its net working capital to ₹6,00,000 by (i) either shifting ₹4,00,000 of current assets to fixed assets or (ii) shifting ₹4,00,000 of its long-term funds to current liabilities. Which of these alternatives would you prefer and why?

c) If both the alternatives are affected simultaneously, what will be the impact on net profitability?

Statement showing profitability and liquidity under different options:

		Present (a) ₹	Proposed (b)(i) ₹	Proposed (b)(ii) ₹	Proposed (c) ₹
Investments:					
Fixed assets (rate of return 12%)		40,00,000	44,00,000	40,00,000	44,00,000
Current assets (rate of return 2%)		20,00,000	16,00,000	20,00,000	16,00,000
Total (X)		60,00,000	60,00,000	60,00,000	60,00,000
Financing:					
Long-term (cost 9%)		50,00,000	50,00,000	46,00,000	46,00,000
Short-term (cost 4%)		10,00,000	10,00,000	14,00,000	14,00,000
Total (Y)		60,00,000	60,00,000	60,00,000	60,00,000
Return on investment:					
12% on fixed assets		4,80,000	5,28,000	4,80,000	5,28,000
2% on current assets		40,000	32,000	40,000	32,000
Total return (A)		5,20,000	5,60,000	5,20,000	5,60,000
Cost of financing:					
9% on long-term		4,50,000	4,50,000	4,14,000	4,14,000
4% on short-term		40,000	40,000	56,000	56,000
Total cost of financing (B)		4,90,000	4,90,000	4,70,000	4,70,000
Net profitability (A – B) ... (C)		30,000	70,000	50,000	90,000
Net profitability on investment	C/X	0.005	0.012	0.008	0.015
Current ratio (CA/CL) [to check liquidity]		2.000	1.600	1.429	1.143

Answers:

a) Net profitability at present is ₹30,000

b) In option (b)(i), profitability is higher but at the same time liquidity is also higher as compared to option (b)(ii). So, option (b)(i) is preferable.

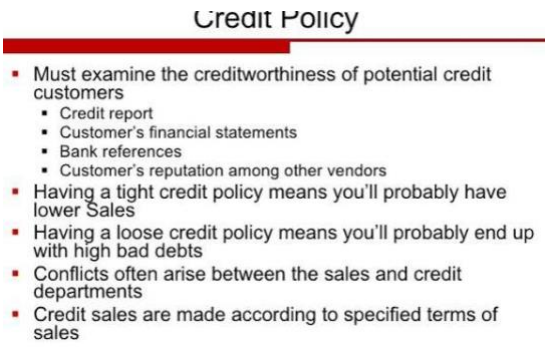
Note: where profitability remains same, option with higher liquidity (current ratio) is to be preferred.

c) Option (c) is better in terms of profitability; however, its liquidity is comparatively lower. Now, whether a particular option is to be accepted or rejected depends much on the capability and internal efficiency of the management.

EVALUATION OF CREDIT POLICY

Definition: **Credit Policy**

A firm's **credit policy** is the set of principles on the basis of which it determines who it will lend money to or gives **credit** (the ability to pay for goods or services at a later date). **Credit** Analysis. **Credit** Risk.



A good **credit policy** is as **important** to a company as its sales and customer service teams. ... **Credit policy** is in place to help mitigate the risk, formalize procedures for determining acceptable risk, and set up procedures for dealing with the **credit** relationship.

To facilitate financial assistance and basic services for the community's poor Customer Care, **Credit** Control, Debt Collection and Indigent **Policy** and provide incentives for prompt payment as well as ensuring limited risk levels by means of effective management tools.

- Benefits associated with credit policy: A relaxed or liberal policy usually increases the sales and increase in sales will increase contribution (Sales less Variable cost) to the firm. Thus, contribution increases in case of relaxed or liberal credit standard and credit policy, increase in credit period and in most of the cases when cash discount is increased for payment within the specified period.
- Costs associated with credit policy: Cost may be in the form of any one of or all the following:
  - Cost of additional capital – In case of a liberal policy or increase in the credit period receivables will increase leading to increase in investment in working capital. Such increase will definitely increase the cost of funding the additional capital. So, cost of additional capital is the amount locked in receivables multiplied by the desired rate of return.

    This can be done in either of the following methods:

    a) $\text{Cost of receivables} = \text{Total Cost} \times \frac{\text{Credit Period}}{\text{Total Period}} \times \text{Rate of return}$

    b) $\text{Cost of receivables} = \text{Variable Cost} \times \frac{\text{Credit Period}}{\text{Total Period}} \times \text{Rate of return}$

    c) $\text{Cost of receivables} = \text{Total Sales} \times \frac{\text{Credit Period}}{\text{Total Period}} \times \text{Rate of return}$

Method (a) is better as it considers the money invested in debtors (at full cost). So, if sufficient information is available, we should use this method. In method (b) fixed cost is excluded as these are not specifically/

additionally incurred for change in the policy. Method (c) considers the opportunity loss as the amount including profit is locked in debtors, which can otherwise be invested. Depending on the availability of information, we can use any of the methods.

- Cost of default – With increase in debtors there is a possibility of increase in the amount of loss due to bad debt.
- Cost of administering – Increase in debtors needs higher level of monitoring, supervision, collection effort, etc., if there is no idle capacity in the credit administration section. So, cost of administration may also increase if receivables are increased.
- Cost of collection – With increase in debtors (due to increase in collection period or due to a proposal of cash discount for early recovery of dues), firm's collection cost in the form of cash discount will increase. Further collection cost may be in the form of delinquency cost. Delinquency cost has to be incurred when customers have not paid their dues even within the maximum time period allowed to pay their dues; it includes legal as well as monitoring costs for the overdue amounts.

Before laying down a credit policy, the above aspects need to be evaluated in terms of their contribution to the net profitability of the firm. Usually, such an analysis of net profitability is done on incremental basis, that is, incremental net profitability is to be determined as 'incremental benefit in terms of contribution' as reduced by 'incremental total costs associated'. Thus, net incremental profit = ΔContribution – ΔCosts.

Summary of evaluation procedure of change in credit period:

- Find the sales for each of the policies.
- Find variable cost, fixed cost and the total cost of sales for each of the policies.
- Calculate contribution for each of the policies [Contribution = Sales – Variable cost].
- Calculate average investment in receivable for each policy.
- Average Investment in receivables = Total cost of sales × Credit period in days/365.
- Calculate cost of investment in receivables by applying the required rate of return.
- Find also the administration costs, collection costs and bad debt for each policy.
- Now, Net Profitability = Contribution – All costs including cost of investment. (do not deduct variable cost as it has already been deducted while determining contribution). [This can also be done on incremental basis]

A company, presently selling its product in cash, is considering a proposal to sell the products at 1.5 months credit and expecting the sales to rise by ₹16,00,000 p.a. However, the cost of sales will also increase by ₹13,40,000 and cost of collection will increase by ₹30,000. It is also expected that it may lead to a bad debt of ₹18,000. If cost of capital is 15%, should the proposal be implemented?

Statement showing net profitability:

Policies		Proposed
Credit period (months)	A	1.5
Additional Sales (₹)	B	16,00,000
Additional cost (₹)	C	13,40,000
Additional Investment in Receivables (₹)**	D = C × A/12	1,67,500
Additional Contribution (₹)	E = B – C	2,60,000
Additional Cost of receivables (₹)	F = D × RoI	25,125
Additional Bad Debt (₹)	G	18,000
Additional Collection costs (₹)	H	30,000
Additional Net gain (₹)	E – F – G – H	1,86,875

** *In absence of present sales, additional investment is calculated on the additional cost on the assumption that existing sales will be in cash.*

Remarks: Additional net gain is positive in case of proposed policy. So the company should implement proposed credit policy.

X Ltd. is currently selling ₹20,00,000 and its average collection period is 30 days. It is considering its credit policy, the details of which are given as follows:

Proposed Credit Policy	Revised Credit Period	Change in Sales (₹)	Bad Debt (% of Sales)
A	20 days	(20,000)	0.5%
B	45 days	70,000	1%
C	60 days	80,000	2%
D	72 days	1,00,000	4%

The present selling price is ₹2 per unit with average cost per unit is ₹1.50 including ₹0.30 as fixed cost. Selling price and unit variable cost will remain constant p.u., while total fixed cost will increase by ₹10,000 if sales level increases beyond 10,40,000 units. Current bad debt is 0.8% and the required rate of return is 20%. Assume 360 days a year, evaluate the credit policies and offer your recommendations.

Statement showing net profitability:

Policies		Present	Policy-A	Policy-B	Policy-C	Policy-D
Credit period (days)	A	30	20	45	60	72
Sales (₹)	B	20,00,000	19,80,000	20,70,000	20,80,000	21,00,000
Variable Cost (₹)	C = B × 60%	12,00,000	11,88,000	12,42,000	12,48,000	12,60,000
Fixed Cost (₹) [10,00,000 × 0.30]	D	3,00,000	3,00,000	3,00,000	3,00,000	3,10,000
Total Cost (₹)	E = C + D	15,00,000	14,88,000	15,42,000	15,48,000	15,70,000
Investment in Receivables (₹)	F = E × A/360	1,25,000	82,667	1,92,750	2,58,000	3,14,000
Contribution (₹)	G = B – C	8,00,000	7,92,000	8,28,000	8,32,000	8,40,000
Cost of receivables (₹)	H = F × RoI	25,000	16,533	38,550	51,600	62,800
Bad Debt (₹) – B × bad debt %	I	16,000	9,900	20,700	41,600	84,000
Increment in:						
Contribution (₹)	A		–8,000	28,000	32,000	40,000
Cost of receivables (₹)	B		–8,467	13,550	26,600	37,800
Bad Debt (₹)	C		–6,100	4,700	25,600	68,000
Fixed Cost (₹)	D					10,000
Net gain (₹)	e = a – b – c – d		6,567	***9,750***	–20,200	–75,800

Remarks: Incremental net gain is positive and higher in case of proposed policy-B (i.e., when credit period is extended to 45 days). So the company should follow 45 days credit policy.