		Ratio	Formula	Measures / Notes
Liquidity Ratios	1	**Current Ratio**	= Current Assets * / Current Liabilities Current Assets = Cash + Cash Equivalents + Short term owned Securities + Net RCV + Inventory Cash Equivalents + = Available for Sale OR Held to maturity OR Trading Securities From the name of ratio : should be currents	Short Term Liquidity Ratio 2:1 ►► Normal 
	2	**Quick Cash Ratio** Acid test ratio	= Cash + Cash Equivalents + Short term owned Securities + Net RCV / Current Liabilities Derivative of Current ratio	Shorter Term Liquidity within few days
	3	**Cash To Current Liabilities Ratio**	= Cash + Cash Equivalents + Short term owned Securities / Current Liabilities Derivative of Current ratio	measures the immediate amount of cash available to satisfy short term debt Shorter Term Liquidity within faster than few days Ratio ≥ 0.4 ►► healthy
	4	**Cash Flow Ratio**	= Annual Operating Cash Flow / Average Current Liabilities	How many times the Op.Cash Flow is more than Current Liabilities
	5	**Cash To Current Assets Ratio**	= Cash + Cash Equivalents + Short term owned Securities / Average Current Assets Rule of thumb : Curr.Assets should be average .	Current Assets Liquidity
Activity Ratios	6	**Inventory Turnover**	= Annualized C.O.S / Average Annual Inventory * = Average Inventory / 300 , 360 , 365 Average Annual Inventory * = (Inventory Beginning balance + Inventory Ending balance) / 2 Turnover calculation is = (Annual) ÷ (Average Annual)	measures the number of times a company sells its inventory during the year high ratio indicated that the product is selling well How many times a firm sells the average from inventory Larger ratio is better
	7	**Days Sales in Inventory**	= 300 , 360 , 365 / Inventory Turnover = Average Inventory / Average Daily C.O.S * Average Daily C.O.S * = Annual C.O.S / 365 Days calculation is = (average) ÷ (Average Daily)	Inventory Management I 
	8	**Receivable Turnover**	= Net Annual Credit Sales / Average Annual RCV Turnover calculation is = (Annual) ÷ (Average Annual)	How many times RCV turn in a year Larger ratio is better
	8	**Payable Turnover**	= Net Annual Credit Purchases / Average Annual Payables Turnover calculation is = (Annual) ÷ (Average Annual)	How many times Pybl turn in a year Better if RCV Turnover ratio is biger than Payable turnover ratio .
	9	**Days Sales in Receivable** Average Collection Period	= 300 , 360 , 365 / Receivable Turnover = Average Receivable / Average Daily Credit Sales * Average Daily Credit Sales * = Annual Credit Sales / 365 Days calculation is = (average) ÷ (Average Daily)	Efficiency of RCV collection

		Ratio		Formula	Measures / Notes
Activity Ratios	10	**Assets Turnover**	=	Sales / Assets	Efficiency of using All Assets to generate profits
		Fixed Assets Turnover	=	Sales / Net Fixed Assets	Efficiency of using Fixed Assets to generate profits
	14	**Days Purchases in Payable** Average Payment Period	=	Average Account Payable / Average Daily Purchases Days calculation is = (average) ÷ (Average Daily)	
	15	**Purchases**	=	C.O.S + (Ending Inventory - Beginning Inventory)	
	11	**Trend Overtime**	=	Provision for doubtful RCV / Gross Account RCV	
	12	**Operating Cycle**	=	Days Sales in Inventory + Days Sales in RCV	
	13	**Cash Cycle**	=	Operating Cycle - Days Purchases in Payable	
Leverage Ratios	16	**Financial Leverage Ratio F.L.R** Equity Multiplier	=	Average TTL Assets / Average "Common Equity" * TTL "Common Equity" * = TTL Equity - Preferred Stock - Any Minority Interest FLR = Average ÷ Average	Using debts to finance (Operations & Assets) A firm Ability to pay all debts
	17	**Financial Leverage Index F.L.I**	=	ROE * / ROA *	A firm success in using the FLR
	18	**Return on Equity ROE ***	=	Net Income - Preferred Dividends / Average TTL Equity Returns : Net Income , So Average	
	19	**Return on "Common Equity" ROCE** **Adjusted ROE by removing Preferred equity**	=	(Net Income after Interest & Tax) - Preferred Dividends / "Common Equity" *	
	20	**Return on Assets ROA ***	=	Net Income / Average Assets Returns : Net Income , So Average	
	21	**Degree of Financial Leverage Ratio DFL**	=	EBIT / Earning before Tax = % Δ Net Income / % Δ EBIT	Using Fixed Operating Costs to generate Op.Profits
	22	**Degree of Operating Leverage Ratio DOL**	=	Contribution Margin * / EBIT = % Δ EBIT / % Δ SALES Contribution Margin * = SALES - All Variable Costs	
	23	**Total Debt To Total Equity** Total Debt To Total Assets Total Debt Ratio	=	TTL Liabilities / TTL Assets	A firm Assets been financed by Creditors Measures A firm Liabilities on Short/Long Term
	24	**Total Debt To Equity Capital**	=	TTL Liabilities / TTL Equity	Measures A Firm Debts To Equity Liability . Larger ratio is not good , it means the Firm debts from creditors is more than from Equity

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		Ratio		Formula	Measures / Notes
Leverage Ratios	25	**Equity Capital To Total Debt**	=	TTL Equity / TTL Liabilities	
	26	**Long Term Debt To Equity Capital** Debt Equity Ratio	=	Long Term Liabilities / TTL Equity	The L.Term debts in Current liabilities TO Equity
	27	**Fixed Assets To Equity Capital**	=	Net FAS / TTL Equity	A firm Assets been financed by Equity Ratio < 1 ►► favourable liquidity
	28	**Net Tangible Assets to Long term Debt**	=	TTL Assets - (In-Tangible Assets) - TTL Liabilities / Long Term Debt	How a firm assets cover L.term debt
	29	**TTL Liabilities to Net Tangible Assets**	=	TTL Liabilities / TTL Assets - (In-Tangible Assets) - TTL Liabilities	How a firm assets cover L.term debt
	30	**Time Interest Earned**	=	EBIT / Interest Exp.	A firm ability to pay interests , Larger is good How many times the Earning cover interests
	31	**Earned to Fixed Charges** Fixed Charge Coverage Ratio	=	EBIT + Estimate Long Term Operating Leases * / Interest Exp. + Estimate Long Term Operating Leases	Indicator the firm ability to face fixed cost of assets financing
		Estimate Long Term Operating Leases *	=	1/3 Paid operating Lease	
	32	**Cash Flow to Fixed Charges**	=	EBIT + Estimate Long Term Operating Leases + Pre-tax Op. Cash Flow / Interest Exp. + Estimate Long Term Operating Leases	
Profitability Ratios	33	**Return On Invested Capital ROIC** Return On Assets	=	Net Income / Average Invested Capital Returns : Net Income , So Average	
	34	IF Invested Capital = Total Assets **Return On Invested Capital ROIC**	=	Net Income + Interest Exp.(1-Tax Rate) + Minority interest in Income / Average TTL. Assets Returns : Net Income , So Average	
	35	IF Invested Capital = (Debt+Equity) **Return On Invested Capital ROIC**	=	Net Income + Interest Exp.(1-Tax Rate) + Minority interest in Income / Average Long term Debt + Average Equity Returns : Net Income , So Average	
	36	IF Invested Capital = Common Shareholder Equity **Return On Invested Capital ROIC**	=	Net Income - Preferred Dividends / Average Common Shareholder Equity Returns : Net Income , So Average	
	37	**Profit Margin**	=	Net Income / Sales	Measures net profit achieved per each dollar of sales , It indicates to Achieved Sales after covering & pay all C.O.S & expenses , Larger Ratio is good.
	38	**Total Debt To Equity**	=	TTL Liabilities / Shareholders Equity	

Ratios Above :		We mean
1-	Total Debt	Total Liabilities
2-	Total Equity	Total Assets
3-	Equity Capital	Total Equity
4-	Long term Debt	Long term Liabilities
5-	denominator	المقام في الكسر العشرية
6-	numerator	البسط في الكسر العشرية
7-	Turn Overs	Activity Ratios نسب النشاط
8-	denominator = common equity	Net income in numerator - Preferred dividends

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The DuPont Company Equations

39 **Back to ROA , due to DuPont company here :**

Step A

Return on Assets ROA * = Net Income / ……Total Assets

Previously , TTL Assets was Average assets .

Step B

Return on Assets ROA * = (Net Income / Total Assets) X (Net Sales / Net Sales)

Net Sales ÷ Net Sales = 1 , so this is adjusting side to fix measure

Step C

Return on Assets ROA * = (Net Income / Net Sales) X (Net Sales / TTL Assets)

Here we adjust the look of the equation to get Equation of : Profit margin on sale X Assets turnover ratio

So , ….

Profit margin on sale = Net Income after interest & tax / Net Sales — Measures efficiency to generate Profits from sales OR efficiency of operations

Return on Sales

Net Income Ratio

Assets turnover ratio = Net Sales / TTL Assets — Measures efficiency of Assets usage

Then Finally

Return on Assets ROA * = **Profit margin on sale X Assets turnover ratio**

40 **Back to ROE , due to DuPont company here :**

Step A

Return on Equity ROE * = Net Income after interest & tax / Total Equity

Previously ,ROE = (N.income - pref.divd) ÷ (average comm.equity)

Then Back to financial leverage ratio

Financial Leverage Ratio F.L.R = TTL Assets / Total Equity

Equity Multiplier

Previously ,ROE = (average TTL Assets) ÷ (average comm.equity)

Step B

Return on Equity ROE * =

(Net Income after interest & tax / Total Equity) X (Net Sales / Net Sales) X (TTL Assets / TTL Assets)

Net Sales ÷ Net Sales = 1 , TTL Assets ÷ TTL Assets = 1 ,so this is adjusting side to fix measure

Step C

Return on Equity ROE * =

(Net Income after interest & tax / Net Sales) X (Net Sales / TTL Assets) X (TTL Assets / Total Equity)

Here adjust the look of equation to : Profit margin on sale X Assets turnover ratio X Equity Multiplier

So , ….

Profit margin on sale = **Net Income after interest & tax** / Net Sales — Measures efficiency to generate Profits from sales OR efficiency of operations

Return on Sales

Net Income Ratio

Assets turnover ratio = Net Sales / TTL Assets — Measures efficiency of Assets usage

Equity Multiplier F.L.R = TTL Assets / **Total Equity**

Then Finally

Return on Equity ROE * = **Profit margin on sale X Assets turnover ratio X Equity Multiplier**

Profitability Ratios

	Ratio	Formula	Measures / Notes
41	**Back to ROCE , due to DuPont company here :**		
Step A	**Return on "Common Equity" ROCE** =	(Net Income after Interest & Tax) - Preferred Dividends / "Common Equity"	
	Adjusted ROE by removing Preferred equity		
Step B	**Return on "Common Equity" ROCE *** =		
	(Net Income after Interest & Tax) - Preferred Dividends / "Common Equity" X	Sales / Sales X	TTL Assets / TTL Assets
	Net Sales ÷ Net Sales = 1 , TTL Assets ÷ TTL Assets = 1 ,so this is adjusting side to fix measure		
Step C	**Return on "Common Equity" ROCE *** =		
	(Net Income after Interest & Tax) - Preferred Dividends / Sales X	Sales / TTL Assets X	TTL Assets / **"Common Equity"**
	Here adjust the look of equation to : Profit margin on sale available to common stockholders(adjusted) X Assets turnover ratio X Equity Multiplier (using commom equity)		
	So , ...		
	Profit margin on sale available to comm stockholders(adjusted) =	**(Net Income after Interest & Tax) - Preferred Dividends** / Sales	
	Return on Sales / Net Income Ratio		
	Assets turnover ratio =	Sales / TTL Assets	
	Equity Multiplier F.L.R =	TTL Assets / **"Common Equity"**	
	Then Finally		
	Return on "Common Equity" ROCE * =		
	Profit margin on sale available to common stockholders(adjusted) X Assets turnover ratio X Equity Multiplier (using commom equity)		
42	**Equity Growth Rate** =	Net Income - Preferred Dividends - Dividends payout / Average Common Shareholder Equity	
		Returns : Net Income , So Average	
43	**Sustainable Equity Growth Rate** =	Return on common Equity X (1 - Dividends payout Ratio)	
	=	ROCE X (1 - Dividends payout Ratio)	
	As , ...		
	ROCE =	(Net Income after Interest & Tax) - Preferred Dividends / Average "Common Equity"	
	Dividends payout Ratio =	Cash dividends per common share / Earning per share	Measures the percentage of distributable earning that actualy distributed
44	**Return on shareholders investments** =	Cash dividends per common share + Market Value of re-invested Earnings / Share price	
	Market Value of re-invested Earnings =	**Earning per share** - Dividends per share	
45	**Return on Investments/Assets** =	Net Profit / TTL Assets	A Firm Efficiency of managing & using All available cash (If a debt cash or shareholders cash) to generate returns
	Return on Assets ROA *		
	TTL Investment =	**Working Capital** + Total long term Assets	
	=	Total Equity + Long Term Debts	
	Working Capital =	Current Assets - Current Liabilities	