# FINANCIAL RATIO ANALYSIS AND BUDGET PREPARATION 

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## OVERVIEW

## * Level 2 * REQUIRED

C)

Part I - An overall review of HKTV Group‘s financial performance - 25’
"Ratios not covered in Level 1"
"Apply Average Figures"
D)

Part II - Formulate a business plan for HKTV ...
(a) Trend Analysis - 10’
(b)
(c) Business plan - $25^{\prime}$

- Marketing expense budget

Part 1:

## FINANCIAL RATIOS AND TREND ANALYSIS

## Recap－Financial Ratio Analysis

－Company website：http：／／www．hktv．com．hk／eng／global／home．htm
－Annual Report
－Financial Statements

## Contents

Operational Highlights
Financial Highlights
Major Milestones and Events
Chairman＇s Statement
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## Income Statement 絡合損益表（Profit and Loss）

| INCOME |
| :--- | :--- | :--- | :--- | :--- |

## EXPENSE

## Statement of Financial Position 綜合貹務状况表

（Balance Sheet 綜合資產負債表）


## Ratio Analysis－Illustration

## ABM Limited

## Consolidated Income Statement 綜合損益表

For the Year Ended December 31

Turnover 銷貨
Cost of sales 銷貨成本
Gross profit 毛利
Selling and distribution 分銷費用
Administrative expenses 行政開支 Operating Profit 營運盈利

| 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: |
| \＄ | 450，000 | \＄ | 300，000 |
|  | 380，000 |  | 250，000 |
|  | 70，000 |  | 50，000 |
|  | 7，000 |  | 6，000 |
|  | 30，000 |  | 20，000 |
|  | 33，000 |  | 24，000 |

Other expenses and losses：
Finance costs 財務成本
Profit before tax 稅前盈利
Income tax expense 稅金
Profit for the year 全年盈利

|  | 1,500 |  |  |
| ---: | ---: | ---: | ---: |
|  | 31,500 |  | 1,500 |
|  | 5,000 |  |  |
|  |  |  | 22,500 |
|  |  |  | 3,000 |

Additional information－Share market price：
－as at 31 December 2016：\＄6．5；
－as at 31 December 2017：$\$ 5$ ．

## Ratio Analysis－Illustration

## ABM Limited

## Consolidated Balance Sheet 綜合資產負債表

December 31

| ASSETS 資產 |
| :--- |
| NON－CURRENT ASSETS 非流動資產 |

Property，plant and equipment（net）
房產，廠房及設備（淨值）
Total non－current assets
$\frac{\$ 39,000}{39,000} \frac{\$ 28,500}{28,500} \xrightarrow{20,000}$

CURRENT ASSETS 流動資產


## Ratio Analysis - Illustration



## Ratio Analysis

Ratio analysis expresses the relationship among selected items of financial statement data．

Five Financial Ratio Classifications


Liquidity 變現能力

Solvency 偗僓能力
Investment Appraisal 投資評估

| 1．Profitability fatios 盛利能力 |  | Remark |
| :---: | :---: | :---: |
| （i）Mark up 加成 |  | X |
| （ii）Gross profit 毛利率 |  | Level 1 |
| （iii）Net profit 凈利率 |  | Level 1 |
| （iv）Return on capital employed（ROCE）運用資金報酬率 |  | Level 1 |
| （v）Return on assets（ROA）資產回報率 |  | ENEW |
| 3．Liguidity Ratios 變現能力 | Remark |  |
| （i）Current ratio 流動比率 | Level 1 |  |
| （ii）Acid－test／Quick ratio 速動比率 | Level 1 ENEWG |  |
| （iii）Cash ratio 現金比率 |  |  |
| 4．Solvency Ratios 賽債能力 |  | Remark |
| （i）Gearing ratio 槓桿比率 |  | Level 1 |
| （ii）Debt to equity ratio 債務股本比率 |  |  |
| （iii）Time interest earned 利息保障倍數 |  | Emew |
| 5．Investment Appraisal Ratios 投頨嗅值 |  | Remark |
| （i）Earning per Share（EPS）每股盈利 |  | Level 1 |
| （ii）Price earning ratio（P／E ratio）市盈率 |  |  |

## （For Level 2 participants）

| 2．Management Efficjency |
| :--- | :---: |
| Ratios 管理效率 | Remark

## Profitability Ratios 盛利能力

## Gross Profit 毛利

Gross Profit Margin 毛利率 $=$ Sales 銷貨

|  | $2017(\%)$ | $\underline{2016(\%)}$ |
| :--- | :--- | :--- |
| Gross Profit Margin <br> 毛利率 | $\mathbf{\$ 7 0 , 0 0 0}$ <br> $\mathbf{\$ 4 5 0 , 0 0 0}$ | $15.56 \%$ | | $\mathbf{\$ 5 0 , 0 0 0}$ |
| :--- |

Measures the percentage of each dollar of sales that results in gross profit．

The company has less amount to cover operating and non－operating expenses than last year．

## Profitability Ratios 盈利能力

Net Profit Margin＝Net Profit before tax 稅前淨利淨利率

Sales 銷貨

|  | $\underline{2017(\%)}$ | $\underline{2016(\%)}$ |
| :--- | :---: | :---: |
| Net Profit Margin <br> 凈利率 | $\frac{\$ 31,500}{\$ 450,000}=7.00 \%$ | $\frac{\mathbf{\$ 2 2 , 5 0 0}}{\mathbf{\$ 3 0 0 , 0 0 0}}=7.50 \%$ |

Measures the percentage of each dollar of sales that results in net income．

Although the company achieved a lower gross profit margin in 2017， its net profit margin was in line with that of 2016．This meant that the company was more efficient in minimizing its operating expenses in 2017.

## Profitability Ratios 盈利能力

Return on Capital
Employed＝運用資金報酬率

Profit before interest and tax 利息及稅前淨利 （Operating Profit營運盈利）

Capital Employed 運用資金
（Equity 股本＋Non－current Liabilities 非流動負債）

|  | $\underline{2017(\%)}$ | 2016（\％） |
| :--- | :---: | :---: |
| ROCE | $\underline{\$ 33,000}=41.25 \%$ | $\frac{\mathbf{\$ 2 4 , 0 0 0}}{}=\mathbf{4 0 . 3 4 \%}$ |
| 運用資金報酬率 | $\mathbf{\$ 6 8 , 0 0 0 + \mathbf { \$ 1 2 , 0 0 0 }}$ | $\mathbf{\$ 4 1 , 5 0 0 + \mathbf { \$ 1 8 , 0 0 0 }}$ |

Rate of return based on the book value of long term capital investment made in the business．

Much more income is earned in 2017 base on the book value of long term capital investment made in the business．

## Profitability Ratios 盛利能力

## Return on Average Assets＝Profit after tax 稅後淨利 （ROA）資產回報 Average total assets 平均總資產

$$
\text { 2016: } \frac{\$ 19,500}{(\$ 125,000+\$ 144,500) \div 2}=14.47 \%
$$

ROA measures the rate of return based on the book value of assets．
The ROA figure gives investors an idea of how effectively the company is converting（轉化）the resources／asset（資產）it has to invest into net income．

## Profitability Ratios 盛利能力

## Return on Average Assets <br> Profit after tax 稅後淨利 <br> （ROA）資產回報 Average total assets 平均總資產

$$
\text { 2017: } \frac{\$ 26,500}{(\$ 144,500+\$ 190,000) \div 2}=15.84 \%
$$

|  | $\underline{\underline{2017}}$ | $\underline{\underline{2016}}$ |
| :--- | :---: | :---: |
| Return on Average Asset <br> （ROA）資產回報 | $15.84 \%$ | $14.47 \%$ |

Higher the ROA number means the company is earning more money on less investment．

## Management Efficiency Ratios 管理效率

Average Inventory
Average Inventory 平均存貨

存貨周轉期限
Cost of Good Sold 銷貨成本

$$
\text { 2016: } \frac{(\$ 20,000+\$ 30,000) \div 2}{\$ 250,000}
$$

Measures the average number of days the company holds its inventory before selling it．

## Management Efficiency Ratios 管理效率

Average Inventory
Average Inventory 平均存貨
Turnover Period＝Average inventory $\times 365$ days
存貨周轉期限 Cost of Good Sold 銷貨成本

$$
\text { 2017: } \frac{(\$ 30,000+\$ 50,000) \div 2}{\$ 380,000} \times 365 \text { days }=38.42 \text { days }
$$

|  |  | $\underline{2017}$ | $\underline{2016}$ |
| :--- | :--- | :---: | :---: |
| Average Inventory Turnover Period <br> 存貨周轉期限 | $\boxed{38.42 \text { days }}$ | 36.50 days |  |

The average selling time of 38.42 days in 2017 is longer as compared with that in 2016.

## Management Efficiency Ratios 管理效率

Average Trade

## Average Trade Payables

平均應付貨款Payables Repayment＝ x 365 days
Period 賖購期限

Credit Purchases 賒購
［Cost of Goods Sold 銷貨成本
－Opening Inventories 期初存貨
＋Closing Inventories 期末存貨

$$
\text { 2016: } \frac{(\$ 60,000+\$ 70,000) \div 2}{(\$ 250,000-\$ 20,000+\$ \mathbf{3 0 , 0 0 0})} \times 365 \text { days }=91.25 \text { days }
$$

Indicates the average length of time in days within which a company must pay for its credit purchases（賖購）．

This means that payables are settled on average every 91.25 days．

## Management Efficiency Ratios 管理效率

Average Trade
Payables Repayment＝
Period 賖購期限

Average Trade Payables平均應付貨款 x 365 days
Credit Purchases 賖購

$$
\text { 2017: } \frac{(\$ 70,000+\$ 80,000) \div 2}{(\$ 380,000-\$ 30,000+\$ 50,000)} \times 365 \text { days }=68.44 \text { days }
$$

|  | $\underline{\underline{2017}}$ | $\underline{2016}$ |
| :--- | :---: | :---: |
| Trade Payables Repayment Period <br> 賖購期限 | 68.44 days | 91.25 days |

The company settles its payables for credit purchases（賖購）on average every 68.44 days in 2017，which means the company have to settle the payables 22.81 days earlier on average．

## Liquidity Ratios 變現能力

## Current Ratio Current Assets 流動資產 <br> 流動比率 $=$ Current Liabilities 流動負債

|  | $\underline{2017}$ | $\underline{2016}$ |
| :--- | :---: | :---: |
| Current Ratio <br> 流動比率 | $\frac{\$ 151,000}{\$ 110,000}=1.37: 1$ | $\frac{\mathbf{\$ 1 1 6 , 0 0 0}}{\$ 85,000}=1.36: 1$ |

An exceptionally high current ratio indicates good liquidity，it may be a symptom of sufficient working capital（營運資金）．

The company does not have short term debt－paying problem．

## Liquidity Ratios 變現能力

Current Assets 流動資產－Inventories 存貨 Quick Ratio－Prepayments 預付款速動比率 $=$ Current Liabilities 流動負債

|  | 2017 | 2016 |
| :---: | :---: | :---: |
| Current Ratio速動比率 | （\＄151，000－\＄50，000－\＄0） | （\＄116，000－\＄30，000－\＄0） |
|  | $\begin{aligned} & \$ 110,000 \\ = & 0.92: 1 \end{aligned}$ | $\begin{aligned} & \$ 85,000 \\ = & 1.01: 1 \end{aligned}$ |

The acid－test／quick ratio measures immediate liquidity．
The company may have immediate debt－paying liquidity problem．

## Liquidity Ratios 變現能力

# Cash Ratio Cash and Cash Equivalents 現金 <br> 現金比率 $=$ Current Liabilities 流動負債 

$\square$

It is the most conservative of all the liquidity measurements．

## Liquidity Ratios 變現能力

## Cash Ratio Cash and Cash Equivalents 現金 <br> 現金比率 $=$ Current Liabilities 流動負債

2017：$\frac{\$ 1,000}{\$ 110,000}=0.01: 1$

|  | $\underline{2017}$ | $\underline{2016}$ |
| :--- | ---: | :---: |
| Cash Ratio 現金比率 | $0.01: 1$ | $0.01: 1$ |

There is insufficient cash on hand to pay off short－term debt in both 2016 and 2017.

## Solvency Ratios 償債能力

Non－current Liabilities 非流動負債 Gearing Ratio＝＋Preferences Share Capital 優先股本䫅桿比率－Non－current Liabilities 非流動負債 ＋Shareholders＇Fund 股東資本

|  | 2017 | 2016 |
| :---: | :---: | :---: |
| Gearing Ratio | \＄12，000＋\＄0 | \＄18，000＋\＄0 |
| 樍桿比率 | $\begin{aligned} & \$ 12,000+\$ 68,000 \\ & =15.00 \% \end{aligned}$ | $\begin{aligned} & \$ 18,000+\$ 41,500 \\ & =30.25 \% \end{aligned}$ |

HIGH in this ratio indicates the company may have difficulties in repaying debts from its equity funds，and obtain further loans from Banks or other lenders．

Decline in Gearing ratio indicates the company is less debt－financing．

## Solvency Ratios 償債能力

$\begin{gathered}\text { Debt to Equity Ratio } \\ \text { 債務股本比率 }\end{gathered}=\frac{\text { Total Liabilities 總負債 }}{\text { Shareholders＇Fund 股東資本 }}$
2016：$\frac{\$ 103,000}{\$ 41,500}=248.19 \%$

Debt to equity ratio（債務股本比率）indicates how much debt a company is using to finance its assets relative to the amount of value represented in shareholders＇equity．

Debt to equity ratio（債務股本比率）of $100 \%$ would mean that investors and creditors have an equal stake in the business assets．

## Solvency Ratios 償債能力

$\begin{gathered}\text { Debt to Equity Ratio } \\ \text { 債務股本比率 }\end{gathered}=\frac{\text { Total Liabilities 總負債 }}{\text { Shareholders＇Fund 股東資本 }}$
2017：$\frac{\$ 122,000}{\$ 68,000}=179.41 \%$

|  | $\boxed{2017}$ | $\underline{2016}$ |
| :---: | :---: | :---: |
| Debt to equity Ratio債務股本比率 | $179.41 \%$ | $248.19 \%$ |

Decline in Debt to equity ratio indicates the company is less debt－ financing in 2017.

## Solvency Ratios 償債能力

## Time Interest Profit Before Interest and Tax 息前及稅前淨利 Earned 利息保障倍＝Interest Expense 利息費用

2016：$\frac{\$ 24,000}{\$ 1,500}=16$ times

Time interest earned（利息保障倍數）provides an indication of the company＇s ability to meet interest payments as they come due．

## Solvency Ratios 償債能力

Time Interest Profit Before Interest and Tax 息前及稅前淨利 Earned 利息保障倍＝Interest Expense 利息費用
2017：$\frac{\$ 33,000}{\$ 1,500}=22$ times

|  | $\underline{2017}$ | $\underline{2016}$ |
| :--- | :---: | :---: | :---: |
| Time Interest Earned 利息保障倍數 | 22 times | 16 times |

The company＇s interest expense in 2017 is well covered at 22 times， compared with that in 2016 of $\mathbf{1 6}$ times．

## Investiment Appraisel 投険䛠佔

## Net Profit after tax 稅後淨利

Earning per Share－Preferences Dividend 優先股息每股盈利

No．of Ordinary Shares issued 已發行的普通股數量

|  | 2017 | 2016 |
| :---: | :---: | :---: |
| Earnings Per Share | \＄26，500－\＄0 | \＄19，500－\＄0 |
| 每股盈利 | $\begin{aligned} & \hline \$ 22,000 / \$ 2 \\ & =\$ 2.41 / \text { share } \end{aligned}$ | $\begin{aligned} & \hline \$ 22,000 / \$ 2 \\ & =\$ 1.77 / \text { share } \end{aligned}$ |

Earnings Per Share（每股盈利）measures the amount of money each shareholder would receive，if all profits were distributed at the end of the year．
EPS increased in 2017．The higher the EPS，the higher the potential return on holding the shares of the company．

## 

# Price－Earning Ratio Current Price Per Ordinary Share <br> （P／E Ratio）市盈率＝Earning Per Share（EPS） 

2016：$\frac{\$ 6.5}{\$ 1.77}=3.67$ times

Price earnings ratio（P／E 市盈率）is an indicator of investors＇ confidence in the prospects of a company．

## 

Price－Earning Ratio Current Price Per Ordinary Share<br>（P／E Ratio）市盈率＝Earning Per Share（EPS）

2017：$\frac{\$ 5}{\$ 2.41}=2.07$ times

|  | $\underline{\underline{2017}}$ | $\underline{\underline{2016}}$ |
| :---: | :---: | :---: |
| P／E Ratio 市盈率 | $\boxed{2.07}$ times | 3.67 times |

P／E ratio（市盈率）decreased from 2016 to 2017.
This indicates that investors have a lower degree of confidence in the company＇s prospects．

## Importance of Relative Financial Ratios

－In order to make sense of a ratio，we must compare it with some appropriate benchmarks（合適基準）
－Examine a firm＇s performance relative to：
－Aggregate economy（經濟情況）／Its industry（行業）／Its major competitors（競爭對手）within the industry
－Its own past performance（過往表現）


Trend Analysis
Key Equation
Percent change
$=($ Current year amount - Base year amount $) \div$ Base year amount

Part 2:

## BUDGET PREPARATION

## Budget Preparation

A budget is a detailed quantitative plan for acquiring and using financial and other resources over a specified forthcoming time period.


BU GET

1. The act of preparing a budget is called budgeting.
2. The use of budgets to control an organization's activities is known as budgetary control.

## Marketing Expense Budget 䇾銷預算

An estimated projection of costs required to promote a business＇products or services．
－Media and Production 媒體及製作：TV，newspaper， radio，direct mail

- Merchandising 採購：signage，displays
- Selling costs 分銷費用：sales incentives
- Research expenses 研究開支：market research


## Sample Marketing Expenses Budget営銷預算䈭例

Objectives of this marketing budget may include：
－Increase average daily orders（日平均訂單）by ？？\％over the previous year
－Increase average traction value（平均成交額）by ？？\％over the previous year
－Increase the current customer purchase rate（顧客採購次數）from ？？ to ？？purchases per month
－Increase the customer base（客戶群體）by ？？\％above the current level of ？？active accounts
－．．．．．．

|  |  | \＄’000 | \％of Budget | Total |
| :---: | :---: | :---: | :---: | :---: |
| Media 媒體 | Television 電視（2 channels） | 3，500 | 35．00\％ | $\begin{array}{r} \$ 5,800,000 \\ (58.00 \%) \end{array}$ |
|  | Newspapers 報紙 （1／4 page per issue） | 1，100 | 11．00\％ |  |
|  | Direct mail 郵遞直銷 （10，000 copies by post） | 1，200 | 12．00\％ |  |
| Production 製作 | Television 電視 <br> （10＊2＇30＇advertisements） | 1，000 | 10．00\％ | $\begin{array}{r} \hline \$ 2,180,000 \\ (21.80 \%) \end{array}$ |
|  | Newspapers 報紙 （type and photos） | 180 | 1．80\％ |  |
|  | Direct mail 郵遞直銷 （type and printing） | 1，000 | 10．00\％ |  |
| Merchandising 採購 | 5\％off Coupon 優惠券 | 1，200 | 12．00\％ | $\begin{array}{r} \hline \$ 1,500,000 \\ (15.00 \%) \end{array}$ |
|  | Internet media 網上媒體 | 50 | 0．50\％ |  |
|  | Store signage 展示牌 （20 signs per store） | 250 | 2．50\％ |  |
| Selling Costs分銷費用 | Sales incentive programme銷售獎勵方案計劃 | 200 | 2．00\％ | $\begin{array}{r} \$ 200,000 \\ (2.00 \%) \end{array}$ |
| Research Expenses研究開支 | Market research 市場研究 | 320 | 3．20\％ | $\begin{array}{r} \hline 320,000 \\ (320 \%) \end{array}$ |

## Sample Marketing Expenses Budget

営銷預算範例| Total marketing estimate 總營銷預算 | $\$ 10,000,000$ |
| :--- | :---: |
| Total sales estimate 總銷售預算 | $\mathbf{\$ 2 4 0 , 0 0 0 , 0 0 0}$ |
|  \％of Budget <br> Marketing budget as a percentage of Sales <br> budget 營銷預算與銷售預算之百份比 $4.17 \%$ |  |

## Sample Marketing Expenses Budget

營銷預算範例|  | 2018 |  |  |  | 2019 |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |  |
|  | \＄ 000 | \＄＇000 | \＄ 000 | \＄＇000 | \＄＇000 | \＄ 000 | \＄ 000 | \＄＇000 | \＄ 000 |
| Television 電視（2 channels） |  |  |  |  |  |  |  |  | 3，500 |
| Newspapers 報紙（1／4 page per issue） |  |  |  |  |  |  |  |  | 1，100 |
| Direct mail 動遞直銷（ 10,000 copies by post） |  |  |  |  |  |  |  |  | 1，200 |
|  |  |  |  |  |  |  |  |  | 5，800 |
| Production 製作 |  |  |  |  |  |  |  |  |  |
| Television 電視（ $10 * 2 \cdot 30 \times$ advertisements） |  |  |  |  |  |  |  |  | 1，000 |
| Newspapers 報紙（type and photos） |  |  |  |  |  |  |  |  | 180 |
| Direct mail 1 郵彪直銷（type and printing） |  |  |  |  |  |  |  |  | 1，000 |
|  |  |  |  |  |  |  |  |  | 2，180 |
| Merchandisisig 採倳 |  |  |  |  |  |  |  |  |  |
| $5 \%$ off Coupon 優惠券 |  |  |  |  |  |  |  |  | 1，200 |
| Internet media 網上媒體 |  |  |  |  |  |  |  |  | 50 |
| Store signage 展示牌（20 signs per store） |  |  |  |  |  |  |  |  | 250 |
|  |  |  |  |  |  |  |  |  | 1，500 |
| Selling costs 分銷賈用 |  |  |  |  |  |  |  |  |  |
| Sales incentive programme 銷售奬動方案計劃 |  |  |  |  |  |  |  |  | 200 |
|  |  |  |  |  |  |  |  |  | 200 |
| Research Expenses 研究開支 |  |  |  |  |  |  |  |  |  |
| Marketresearch 市場研究 |  |  |  |  |  |  |  |  | 320 |
|  |  |  |  |  |  |  |  |  | 320 |
| Total marketing estimate 總營銷預算 |  |  |  |  |  |  |  |  | 10，000 |

## Sample Marketing Expenses Budget營銧預算範例

Marketing Budget Summary by Category



# THANKS FOR <br> LISTENING 



