Essbase Calculation Script Case Study

"Creating Financial Ratio Analysis"

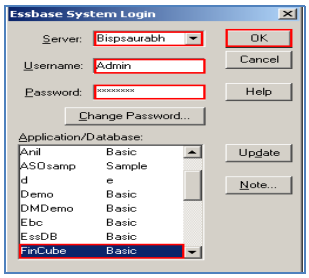
The document contents some of the basic example for Essbase calculation script. The document assists Essbase beginners and learners to understand the Essbase calculation concepts with some basic Financial Ratio Analysis examples. We have prepared 5000+ examples of each category to master in Essbase calculation. Join our professional training program **"Mastering in Essbase Calc Script"** to learn from the Experts.

History:

Version	Description Change	Author	Publish Date
0.1	Initial Draft	Saurabh Parashar	27th-Nov-2011
0.1	1st Review	Amit Sharma	27th-Nov-2011

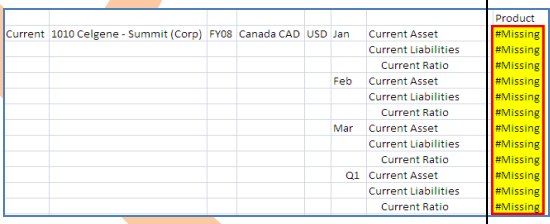
Table of Contents

Example#1 Current Ratio Prepare test sheet for calculation –



We need to open MS-Excel to prepare test sheet and follow certain steps as written follows –
Add-Ins→Essbase→Connect

We get Essbase System Login window here and we are supposed to fill Server, Username and Password then select Application/Database where we wish to do calculation. We are choosing FinCube Application and Basic Database in our example. Now press OK after selecting desired Application and Database.



We find #MISSING in our Essbase cube showing in subsequent Excel sheet in yellow color. It means no calculations have been performed so far i.e. value does not exist in any cell.

Purpose of calculation –

We are computing **Current ratio** in Script window to indicate the ability to meet currently maturing obligations. // is a single line comment Essbase does not read anything after // and **SET AGGMISSIG OFF** is a calculation command which does not allow aggregated child missing value to parent. **CALC ALL** calculates and aggregates entire database based on database. All level 0 members consolidate to higher level.

Script

```
//ESS_LOCALE English_UnitedStates.Latin1@Binary
SET AGGMISSG OFF;

/*Consolidation*/
CALC ALL;

/*Calculating Current Ratio*/
"Current Ratio"="Current Asset"/"Current Liabilities";
```

Req ID – 1.1

Steps to execute calculation, Validate and check output is correct – These are steps to execute calculation which comprise validating and checking of calculation script.

1)Validate calculation script – Tool bar is provided in calculation script editor where we can find **check syntax** button as mentioned in red box. All calculation script syntactical error checking is done here by clicking on **check syntax** button.

We are fine with our calculation script eventually not getting an error message. What we are finding in Calculation Script Editor is a success message - **Syntax check was successful**.

Example#2 to Example#19 restricted to registered students only.

Example#20 Coverage of Fixed Charges (dec.) Prepare test sheet for calculation –

							Product
Current	1010 Celgene - Summit (Corp)	FY08	Canada CAD	USD	Jan	Profit pre tax	#MISSING
						Interest Charges	#MISSING
						Lease Charges	#MISSING
						Coverage of Fixed Charges	#MISSING
					Feb	Profit pre tax	#MISSING
						Interest Charges	#MISSING
						Lease Charges	#MISSING
						Coverage of Fixed Charges	#MISSING
					Mar	Profit pre tax	#MISSING
						Interest Charges	#MISSING
						Lease Charges	#MISSING
						Coverage of Fixed Charges	#MISSING
					Q1	Profit pre tax	#MISSING
						Interest Charges	#MISSING
						Lease Charges	#MISSING
						Coverage of Fixed Charges	#MISSING

We find #MISSING in our Essbase cube showing in subsequent Excel sheet in yellow color. It means no calculations have been performed so far i.e. value does not exist in any cell.

Purpose of calculation –

Coverage of Fixed Charges (dec.) assess the company's ability to meet all of its fixed expenses which is being calculated for **Canada CAD** entity, **Jan** month and **Current** scenario in our subsequent example. **IF** statement is used with **dense** dimension. Here we are using **AND** operator. All blocks are brought into memory when IF logic is applied with such conditional logic, however, blocks are brought into memory only once, even though multiple conditions may be applied. **@ISMBR** calculation function evaluates single member or cell. Validate and execute calculation script.

Script

```
//ESS_LOCALE English_UnitedStates.Latin1@Binary

/*House Keeping Seeting off intelligence calc*/
SET AGGMISSG OFF;
SET UPDATECALC OFF;
SET CALCPARALLEL 2;

/*Consolidation*/
CALC ALL;

/*Calculating Coverage of Fixed Charges (dec.)*/
"Coverage of Fixed Charges (dec.)"(IF(@ISMBR("Canada CAD") AND (@ISMBR(Jan)))
    "Coverage of Fixed Charges (dec.)"=("Profit pre tax"+"Interest Charges"+"Lease Charges")/
      ("Interest Charges"+"Lease Charges");
ENDIF);
```

							Product
Current	1010 Celgene - Summit (Corp)	FY08	Canada CAD	USD	Jan	Profit pre tax	1000
						Interest Charges	1200
						Lease Charges	1300
						Coverage of Fixed Charges	1.4
					Feb	Profit pre tax	1000
						Interest Charges	1200
						Lease Charges	1300
						Coverage of Fixed Charges	3500
					Mar	Profit pre tax	1000
						Interest Charges	1200
						Lease Charges	1300
						Coverage of Fixed Charges	3500
					Q1	Profit pre tax	3000
						Interest Charges	3600
						Lease Charges	3900
						Coverage of Fixed Charges	10500

hen again **Essbase→Send** after this go to **Calculation Script Editor** and click on **Execute script** for re-execution of script in order to get Current Ratio. We find desired result now in accordance with calc script.

Example#21 Current Liabilities to equity (%) Prepare test sheet for calculation –

							Product
Current	1010 Celgene - Summit (Corp)	FY08	Canada CAD	USD	Jan	Current Liabilities	#Missing
						Shareholder?s Equity	#Missing
						Current Liabilities to equity (%)	#Missing
					Feb	Current Liabilities	#Missing
						Shareholder?s Equity	#Missing
						Current Liabilities to equity (%)	#Missing
					Mar	Current Liabilities	#Missing
						Shareholder?s Equity	#Missing
						Current Liabilities to equity (%)	#Missing
					Q1	Current Liabilities	#Missing
						Shareholder?s Equity	#Missing
						Current Liabilities to equity (%)	#Missing

We find #MISSING in our Essbase cube showing in subsequent Excel sheet in yellow color. It means no calculations have been performed so far i.e. value does not exist in any cell.

Purpose of calculation –

Current Liabilities to equity (%) assess the short-term financing portion versus that provided by owners which is being calculated for **Canada CAD** entity, **Jan** month and **Current** scenario in our subsequent example. **IF** statement is used with **dense** dimension. Here we are using **AND** operator. All blocks are brought into memory when IF logic is applied with such conditional logic, however, blocks are brought into memory only once, even though multiple conditions may be applied. **@ISMBR** calculation functi Req ID – 21.1 evaluates single member or cell. Validate and execute calculation script.

Script

```
//ESS_LOCALE English_UnitedStates.Latin1@Binary

/*House Keeping Seeting off intelligence calc*/
SET AGGMISSG OFF;
SET UPDATECALC OFF;
SET CALCPARALLEL 2;

/*Consolidation*/
CALC ALL;

/*Calculating Current Liabilities to equity (%)*/
"Current Liabilities to equity (%)"(IF(@ISMBR("Canada CAD") AND (@ISMBR(Jan)))
    "Current Liabilities to equity (%)"="Current Liabilities"/"Shareholder's Equity";
ENDIF);
```

							Product
Current	1010 Celgene - Summit (Corp)	FY08	Canada CAD	USD	Jan	Current Liabilities	100000
						Shareholder?s Equity	10000
						Current Liabilities to equity (%)	10
					Feb	Current Liabilities	200000
						Shareholder?s Equity	20000
						Current Liabilities to equity (%)	#Missing
					Mar	Current Liabilities	300000
						Shareholder?s Equity	30000
						Current Liabilities to equity (%)	#Missing
					Q1	Current Liabilities	600000
						Shareholder?s Equity	60000
						Current Liabilities to equity (%)	#Missing

Now select the cube and follow this simple step **Essbase→Lock** then again **Essbase→Send** after this go to **Calculation Script Editor** and click on **Execute script** for re-execution of script in order to get Current Ratio. We find desired result now in accordance with calc script.

Example#22 Price/Earnings Ratio(Dec.) Prepare test sheet for calculation –

							Product
Current	1010 Celgene - Summit (Corp)	FY08	Canada CAD	USD	Jan	Market price per Share	#Missing
						Earnings per share	#Missing
						Price/Earnings Ratio (Dec.)	#Missing
					Feb	Market price per Share	#Missing
						Earnings per share	#Missing
						Price/Earnings Ratio (Dec.)	#Missing
					Mar	Market price per Share	#Missing
						Earnings per share	#Missing
						Price/Earnings Ratio (Dec.)	#Missing
					Q1	Market price per Share	#Missing
						Earnings per share	#Missing
						Price/Earnings Ratio (Dec.)	#Missing

We find #MISSING in our Essbase cube showing in subsequent Excel sheet in yellow color. It means no calculations have been performed so far i.e. value does not exist in any cell.

Purpose of calculation –

Price/Earnings Ratio(Dec.) assess the amount investors are willing to pay for each dollar of earnings which is being calculated for **Canada CAD** entity and **Jan** month in our subsequent example. **FIX…ENDFIX** statement is used with **sparse** dimension. Validate and execute calculation script.

Script

```
//ESS_LOCALE English_UnitedStates.Latin1@Binary

/*House Keeping Seeting off intelligence calc*/
SET AGGMISSG OFF;
SET UPDATECALC OFF;
SET CALCPARALLEL 2;

/*Consolidation*/
CALC ALL;

/*Calculating Price/Earnings Ratio(Dec.)*/
FIX("Canada CAD",Jan)
    "Price/Earnings Ratio (Dec.)"="Market price per Share"/"Earnings per share";
ENDFIX;
```

Req ID – 22 22.1

							Product
Current	1010 Celgene - Summit (Corp)	FY08	Canada CAD	USD	Jan	Market price per Share	100000
						Earnings per share	1000
						Price/Earnings Ratio (Dec.)	100
					Feb	Market price per Share	200000
						Earnings per share	2000
						Price/Earnings Ratio (Dec.)	202000
					Mar	Market price per Share	300000
						Earnings per share	3000
						Price/Earnings Ratio (Dec.)	303000
					Q1	Market price per Share	600000
						Earnings per share	6000
						Price/Earnings Ratio (Dec.)	606000

Now select the cube and follow this simple step **Essbase→Lock** then again **Essbase→Send** after this go to **Calculation Script Editor** and click on **Execute script** for re-execution of script in order to get Current Ratio. We find desired result now in accordance with calc script.

Example#23 Dividend Payout Ratio(%) Prepare test sheet for calculation –

							Product
Current	1010 Celgene - Summit (Corp)	FY08	Canada CAD	USD	Jan	Annual dividends per Share	#Missing
						Annual Earnings per Share	#Missing
						Dividend Payout Ratio(%)	#Missing
					Feb	Annual dividends per Share	#Missing
						Annual Earnings per Share	#Missing
						Dividend Payout Ratio(%)	#Missing
					Mar	Annual dividends per Share	#Missing
						Annual Earnings per Share	#Missing
						Dividend Payout Ratio(%)	#Missing
					Q1	Annual dividends per Share	#Missing
						Annual Earnings per Share	#Missing
						Dividend Payout Ratio(%)	#Missing

We find #MISSING in our Essbase cube showing in subsequent Excel sheet in yellow color. It means no calculations have been performed so far i.e. value does not exist in any cell.

Purpose of calculation –

Dividend Payout Ratio(%) indicates the percentage of profit that is paid out as dividends which is being calculated for **Canada CAD** entity and **Jan** month in our subsequent example. Validate and execute calculation script.

Req ID – 23.1

Script

```
//ESS_LOCALE English_UnitedStates.Latin1@Binary

/*House Keeping Seeting off intelligence calc*/
SET AGGMISSG OFF;
SET UPDATECALC OFF;
SET CALCPARALLEL 2;

/*Consolidation*/
CALC ALL;

/*Calculating Dividend Payout Ratio(%)*/
FIX("Canada CAD",Jan)
    "Dividend Payout Ratio(%)"="Annual dividends per Share"/"Annual Earnings per Share";
ENDFIX;
```

							Product
Current	1010 Celgene - Summit (Corp)	FY08	Canada CAD	USD	Jan	Annual dividends per Share	100000
						Annual Earnings per Share	1000
						Dividend Payout Ratio(%)	100
					Feb	Annual dividends per Share	200000
						Annual Earnings per Share	2000
						Dividend Payout Ratio(%)	202000
					Mar	Annual dividends per Share	300000
						Annual Earnings per Share	3000
						Dividend Payout Ratio(%)	303000
					Q1	Annual dividends per Share	600000
						Annual Earnings per Share	6000
						Dividend Payout Ratio(%)	606000

Now select the cube and follow this simple step **Essbase→Lock** then again **Essbase→Send** after this go to **Calculation Script Editor** and click on **Execute script** for re-execution of script in order to get Current Ratio. We find desired result now in accordance with calc script.

Example#24 Dividend Yield on Common Stock (%) Prepare test sheet for calculation –

We find #MISSING in our Essbase cube showing in subsequent Excel sheet in yellow color. It means no calculations have been performed so far i.e. value does not exist in any cell.

							Product
Current	1010 Celgene - Summit (Corp)	FY08	Canada CAD	USD	Jan	Annual dividends per Share	#Missing
						Current Market price per share	#Missing
						Dividend Yield on Common Stock(%)	#Missing
					Feb	Annual dividends per Share	#Missing
						Current Market price per share	#Missing
						Dividend Yield on Common Stock(%)	#Missing
					Mar	Annual dividends per Share	#Missing
						Current Market price per share	#Missing
						Dividend Yield on Common Stock(%)	#Missing
					Q1	Annual dividends per Share	#Missing
						Current Market price per share	#Missing
						Dividend Yield on Common Stock(%)	#Missing

Purpose of calculation –

Dividend Yield on Common Stock (%) indicates the dividend rate of return to common shareholders at the current market price which is being calculated for **Canada CAD** entity and **Jan** month in our subsequent example. Validate and execute calculation script.

Script

```
//ESS_LOCALE English_UnitedStates.Latin1@Binary

/*House Keeping Seeting off intelligence calc*/
SET AGGMISSG OFF;
SET UPDATECALC OFF;
SET CALCPARALLEL 2;

/*Consolidation*/
CALC ALL;

/*Calculating Dividend Yield on Common Stock (%)*/
FIX("Canada CAD",Jan)
    "Dividend Yield on Common Stock(%)"="Annual dividends per Share"/"Current Market price per share";
ENDFIX;
```

							Product
Current	1010 Celgene - Summit (Corp)	FY08	Canada CAD	USD	Jan	Annual dividends per Share	100000
						Current Market price per share	1000
						Dividend Yield on Common Stock(%)	100
					Feb	Annual dividends per Share	200000
						Current Market price per share	2000
						Dividend Yield on Common Stock(%)	2000
					Mar	Annual dividends per Share	300000
						Current Market price per share	3000
						Dividend Yield on Common Stock(%)	3000
					Q1	Annual dividends per Share	600000
						Current Market price per share	6000
						Dividend Yield on Common Stock(%)	6000

Now select the cube and follow this simple step **Essbase→Lock** then again **Essbase→Send** after this go to **Calculation Script Editor** and click on **Execute script** for re-execution of script in order to get Current Ratio. We find desired result now in accordance with calc script.