

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.

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History:

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Example#1 Current Ratio Prepare test sheet for calculation -

ssbase Sys	tem Login		×
<u>S</u> erver:	Bispsaurabh	-	OK
<u>U</u> sername:	Admin		Cancel
Password:	*****		Help
	hange Passwo	ord	
Application/[Database:		
Anil	Basic	-	Update
ASOsamp	Sample		
d	e		Note
Demo	Basic		<u></u> o.co
DMDemo	Basic		
Ebc	Basic		
EssDB	Basic		
FinCube	Basic		

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.

Current	1010 Celgene - Summit (Corp)	FY08	Canada CAD	USD	Jan	Current Asset
						Current Liabilities
						Current Ratio
					Feb	Current Asset
						Current Liabilities
						Current Ratio
					Mar	Current Asset
						Current Liabilities
						Current Ratio
					Q1	Current Asset
						Current Liabilities
						Current Ratio

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_L	OCALE English_UnitedStates.Latin1@Binary
SET AGO	GMISSG OFF;
/*Conso	lidation*/ Req ID - 1.1
CALC AI	LL;
/*Calcul	ating Current Ratio*/
"Current	t Ratio"="Current Asset"/"Current Liabilities"
Stens to ex	ecute calculation. Validate and check output is corr

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

<u>1)Validate calculation script</u> – 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.

Celculation Script Editor X

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 -

<u>Coverage of Fixed Charges (dec.)</u> 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.



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 functions functional logic. Valuates single member or cell. Validate and execute calculation script.

Scri	pt							
//ESS	S_LOCALE English_Un	itedS	tates.Lat	in1@	Bina	ry		
/*Ho SET / SET	use Keeping Seeting o AGGMISSG OFF; UPDATECALC OFF;	off int	elligence	cal	*/			
SEL	CALCPARALLEL 2;							
/*Co	nsolidation*/							
CALC	J ALL;							
/*Ca	Iculating Current Liabi	ilities	to equity	(%)*/			
"Curi	rent Liabilities to equit 'Current Liabilities to 6	iy (% Pauito)"(IF(@IS ((%)"="(SMBI	ent l	anada CAD") AND (@ISM iabilities"/"Sharebolder's	BR(Jan)); Equity(":	'
ENDI	(F);	-quic	((%) =)		one c		Equity)	
								-
							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 to equity (%) Current Liabilities	#Missing 300000	
					Mar	Current Liabilities to equity (%) Current Liabilities Shareholder?s Equity	#Missing 300000 30000	
					Mar	Current Liabilities to equity (%) Current Liabilities Shareholder?s Equity Current Liabilities to equity (%)	#Missing 300000 30000 #Missing	
					Mar Q1	Current Liabilities to equity (%) Current Liabilities Shareholder?s Equity Current Liabilities to equity (%) Current Liabilities	#Missing 300000 30000 #Missing 600000	
					Mar Q1	Current Liabilities to equity (%) Current Liabilities Shareholder?s Equity Current Liabilities to equity (%) Current Liabilities Shareholder?s Equity	#Missing 300000 30000 #Missing 600000 60000	

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 -



Reg ID – 2

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 -

<u>Price/Earnings Ratio(Dec.)</u> 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.

30	ipe -				
//ES	S_LOCALE English_Ur	nitedStates.Lati	in1@Bin	ary	
/*н	ouse Keeping Seeting	off intelligence	calc*/		
SET	AGGMISSG OFF;				
. <mark>1</mark> зет	UPDATECALC OFF;				
TSET	CALCPARALLEL 2;				
/*C	onsolidation*/				
CAL	C ALL;				
/*C	alculating Price/Earnin	gs Ratio(Dec.)	*/		
FIX(("Canada CAD",Jan)				
	"Price/Earnings Ratio	(Dec.)"="Mark	et price	per Share"/"Earnings p	er share";
END	FIX;				
					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
			C	1 Market price per Share	600000
				Earnings per share	6000
				<u> </u>	
				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 Validate and execute calculation script

and **Jan** month in our subsequent example. Validate and execute calculation script.

Req ID <mark>–</mark> 23.1

Script								
//ESS_	LOCALE English_UnitedSt	ates.Latin1@B	inary					
/*Hous SET AC SET UF SET C/ /*Con: CALC	Se Keeping Setting off int SGMISSG OFF; PDATECALC OFF; ALCPARALLEL 2; solidation*/ ALL;	elligence calc*	7					
/*Calc FIX("C "D ENDFI	ulating Dividend Payout R anada CAD",Jan) vividend Payout Ratio(%)" X;	atio(%)*/ ="Annual divid	dends	per Sh	are"/"Annual Earnings pe	r Share";		
						Product	-	
urrent	1010 Celgene - Summit (Corn)	EV08 Canada CA		lan	Annual dividends per Share	Product		
Current	1010 Celgene - Summit (Corp)	FY08 Canada CA	.D USD	Jan	Annual dividends per Share	Product 100000		
Current	1010 Celgene - Summit (Corp)	FY08 Canada CA	D USD	Jan	Annual dividends per Share Annual Earnings per Share Dividend Payout Ratio(%)	Product 100000 1000 100		
urrent	1010 Celgene - Summit (Corp)	FY08 Canada CA	D USD	Jan Feb	Annual dividends per Share Annual Earnings per Share Dividend Payout Ratio(%) Annual dividends oer Share	Product 100000 1000 100 200000		
urrent	1010 Celgene - Summit (Corp)	FY08 Canada CA	D USD	Jan Feb	Annual dividends per Share Annual Earnings per Share Dividend Payout Ratio(%) Annual dividends per Share Annual Earnings per Share	Product 100000 1000 200000 20000		
Current	1010 Celgene - Summit (Corp)	FY08 Canada CA	D USD	Jan Feb	Annual dividends per Share Annual Earnings per Share Dividend Payout Ratio(%) Annual dividends per Share Annual Earnings per Share Dividend Payout Ratio(%)	Product 100000 1000 200000 20000 202000		
urrent	1010 Celgene - Summit (Corp)	FY08 Canada CA	DUSD	Jan Feb Mar	Annual dividends per Share Annual Earnings per Share Dividend Payout Ratio(%) Annual dividends per Share Annual Earnings per Share Dividend Payout Ratio(%) Annual dividends per Share	Product 100000 1000 200000 20000 202000 300000		
Current	1010 Celgene - Summit (Corp)	FY08 Canada CA	D USD	Jan Feb Mar	Annual dividends per Share Annual Earnings per Share Dividend Payout Ratio(%) Annual dividends per Share Annual Earnings per Share Dividend Payout Ratio(%) Annual dividends per Share Annual Earnings per Share	Product 100000 1000 200000 20000 202000 300000 30000		
urrent	1010 Celgene - Summit (Corp)	FY08 Canada CA	DUSD	Jan Feb Mar	Annual dividends per Share Annual Earnings per Share Dividend Payout Ratio(%) Annual dividends per Share Annual Earnings per Share Dividend Payout Ratio(%) Annual dividends per Share Dividend Payout Ratio(%)	Product 10000 1000 20000 2000 2000 300000 30000 30000		
Current	1010 Celgene - Summit (Corp)	FY08 Canada CA	D USD	Jan Feb Mar	Annual dividends per Share Annual Earnings per Share Dividend Payout Ratio(%) Annual dividends per Share Dividend Payout Ratio(%) Annual dividends per Share Dividend Payout Ratio(%) Annual dividends per Share	Product 100000 1000 20000 20000 202000 30000 30000 303000 600000		
Current	1010 Celgene - Summit (Corp)	FY08 Canada CA	D USD	Jan Feb Mar	Annual dividends per Share Annual Earnings per Share Dividend Payout Ratio(%) Annual dividends per Share Dividend Payout Ratio(%) Annual dividends per Share Dividend Payout Ratio(%) Annual Earnings per Share Dividend Payout Ratio(%) Annual dividends per Share Annual Earnings per Share	Product 100000 1000 200000 202000 30000 30000 303000 600000 60000		

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 Vield on Common Stock(%)	#Missing
tn·//	essbasexner	ts	word	ore	6 4	Annual dividends per Share 🛛 🔫	#Missing
						Current Market price per share	#Missing
						Dividend Yield on Common Stock(%)	#Missing

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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;							hare";	
								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** \rightarrow **Lock** then again **Essbase** \rightarrow **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.