

Using Multiple Currencies for Global Project Costing

Global project reporting can be simple if you know when and how to convert

Table of Contents

When do you need to use a multi-currency project?1

Conversion approach2

Time-phased costs2

Forecasting3

Additional considerations4

Conclusion4

Author4

Resources4

WHEN DO YOU NEED TO USE A MULTI-CURRENCY PROJECT?

Running an oil project in Venezuela? Constructing a cell site in Brazil? Using the euro with an alliance partner? These are typical global projects that may have multiple currency implications for the project manager.

While traveling recently (pre-euro) in the Netherlands, I had already accustomed myself to mentally exchanging Dutch guilders for U.S. dollars. This worked for a while, and allowed me to quickly estimate the price of a meal or a rental car. But then it came time to buy gas. As I looked at the gas station signs, the prices were reflected in Dutch guilders/liter. So now, my mental math failed (the calculator, too, since I didn't know the conversion rate for liters to gallons.) But, of course, it didn't really matter ... I simply selected the cheaper gas station, just as I would do at home.

This exemplifies what is probably the most fundamental rule in global cost management. Don't convert for the sake of converting. If you have a contractual requirement to run your project in U.S. dollars, then you can request that bids from your foreign subcontractors be in dollars.

Likewise, if you are comparing bids from two European companies, you can simply compare in euros without first converting. I can compare

gas prices without first converting them to dollars; after all, when I need gas in Amsterdam, does it really matter if gas there is more expensive than gas in Houston?

But if you are reading this article, you may, indeed, need to report your project in multiple currencies. Perhaps your contract requires that you report to the customer in dollars; however, you are running the project in your home euro currency, and you are expected to also report to management in euros. You may need to run a program in one currency and procure labor or materials in another currency. You may also need to forecast currency fluctuation risks on a program.

You may need to be sensitive to currency risks that your customers and/or contractors are assuming, even if you are not directly impacted. For example, after successful completion of the first two phases of a project I ran for a client in Mexico City, a third phase was committed. But during the third phase, the peso devalued against the dollar, which made the work more expensive to the client. While the contract was in U.S. dollars and we were insulated from the currency risk, we were eager to complete the work quickly to minimize the effect on the client. (e.g., through front-end loading of resources, fast-tracking).

CONVERSION APPROACH

So, when do you want to convert? And how do you convert? The rest of this paper is intended to answer these questions. Whether you need to do formal CPR reporting or a simple budget analysis, running a global project adds new dimensions to cost reporting. And whether you use a simple spreadsheet system or a more robust cost management system, you need to follow some rules in order to ensure a sound project.

If you use the euro, be aware there are special rules governing exchange with the currencies of its member states. The eleven members had their National Currency Unit (NCU) rates fixed as of January 1, 1999. Conversion between the NCU rates and the euro is governed by European Council Regulation 1103/97 Articles 4 and 5. This requires that intermediate results be stored to no fewer than six significant digits with rounding and truncation not permitted. Conversions must use division, not multiplication by the inverse. And exchanges between member countries must be expressed in euros before the conversion.

In fact, the need for six significant figures with no rounding/truncation of intermediate results is sound practice that should be applied to any currency conversion. However, as the articles themselves state, the conversion to third party currencies are not governed by the articles, and are subject to normal conversion practices, such as market conventions or contract requirements.

The following examples illustrate correct and incorrect conversion.

Suppose you want to convert 777 Austrian schillings to German deutschemarks. You are required to first convert to euros, using the following exchange rates: $ATS/13.7603 = \text{euros}$, $\text{euros} * 1.955830 = \text{deutschemarks}$.

Example 1: incorrectly rounds the intermediate results to 2 decimals:

Intermediate result
 $777 \text{ ATS} / 13.7603 =$
 56.466792 EUR

rounded*
 $56.47 \text{ EUR} * 1.955830 =$
 $110.445720 = 110.45 \text{ DEM}$

Notice that this calculation yielded an incorrect result. The correct result is 110.44, as shown in the following example.

Example 2: illustrates the correct conversion without rounding:

Intermediate result
 $777 \text{ ATS} / 13.7603 =$
 56.466792 EUR

not rounded
 $56.466792 \text{ EUR} * 1.955830 =$
 $110.439446 = 110.44 \text{ DEM}$

TIME-PHASED COSTS

Several methods can help produce time-phased budget reports.

In one method, you can store the rate table independently from the work package and hours spread. This allows you to keep multiple rate tables. For example, you can keep the base resource unit in hours and calculate dollars and euros independently. When you produce your budget report, you then select the rate table containing the currency in which you want to report.

WBS[?]		JUN99	JUL99	AUG99	SEP99	OCT99	NOV99	DEC99	JAN00	FEB00	MAR00	APR00	Cumulative
1.1 Design	DOLLARS BUDGET	47,776	41,630	10,131	9,191	8,950	4,202	7,615	11,883	14,611	17,264	11,324	184,576
	ACTUAL	65,745	36,388	28,207	8,737	13,193	0	0	0	0	0	0	152,270
WBS[?]		JUN99	JUL99	AUG99	SEP99	OCT99	NOV99	DEC99	JAN00	FEB00	MAR00	APR00	Cumulative
1.1 Design	EUROS BUDGET	40,454	35,250	8,578	7,782	7,578	3,558	6,448	10,062	12,372	14,618	9,588	156,288
	ACTUAL	55,669	30,811	23,884	7,398	11,171	0	0	0	0	0	0	128,933
WBS[?]		JUN99	JUL99	AUG99	SEP99	OCT99	NOV99	DEC99	JAN00	FEB00	MAR00	APR00	Cumulative
1.1 Design	DMARKS BUDGET	79,121	68,943	16,777	15,221	14,822	6,958	12,612	19,679	24,197	28,590	18,753	305,673
	ACTUAL	108,879	60,262	46,713	14,470	21,848	0	0	0	0	0	0	252,171
	EAC	108,879	60,262	46,713	14,470	21,848	13,015	12,622	16,626	18,772	20,797	14,200	348,203

Screenshot 1 shows rate tables you can choose to run a report.

WBS[2]		JUN99	JUL99	AUG99	SEP99	OCT99	NOV99	DEC99	JAN00	FEB00	MAR00	APR00	Cumulative
1.1 Design													
	DOLLARS BUDGET	47,776	41,630	10,131	9,191	8,950	4,202	7,615	11,883	14,611	17,264	11,324	184,576
	ACTUAL	65,745	36,388	28,207	8,737	13,193	0	0	0	0	0	0	152,270
	EARNED	25,114	36,765	14,328	2,852	43,895	0	0	0	0	0	0	122,954
	EURO BUDGET	40,454	35,250	8,578	7,782	7,578	3,558	6,448	10,062	12,372	14,618	9,588	156,288
	ACTUAL	55,669	30,811	23,884	7,398	11,171	0	0	0	0	0	0	128,933

Screenshot 2 shows exchange rates in a table you can use to calculate your results.

Another method would use an exchange rate to calculate a result in the desired currency (as seen in screenshot 2).

In the following example, the euro is used as a lead currency, and both an internal (e.g., deutschemark) and an external currency (U.S. dollar) reflect derived results. In the rate tables below, the euro to deutsche mark conversion contains a single rate, since the rate was fixed as of January 1, 1999. Because the rate for euro to dollar will continue to fluctuate, this table reflects a semi-annual rate change.

Rates		Rates	
Rate Table:		Rate Table:	
DEM		USD	
Description:		Description:	
Deutschmark		US Dollar	
Date	Rate	Date	Rate
01/01/1999	1.955830	01/01/1999	1.181000
		07/01/1999	1.093900
		01/01/2000	1.078200

Screenshot 3 shows rate tables with a fixed rate and a semi-annual changing rate.

Of course, you want to take care that you do not mix currencies in your totals. If the dollar is your lead currency, you want your totals to reflect that currency, not euros and dollars added together! In screenshot 4, 1.1 Design shows a budget of \$47,776 in June 1999 which equates to €40,454. However, the totals and earned value reflect only the lead currency.

How are your resources burdened? If you add overheads to your direct rates, then you must consider whether these burdens will also contain exchange rate calculations.

WBS[2]		JUN99
1.1 Design		
	DOLLARS BUDGET	47,776
	ACTUAL	65,745
	EARNED	25,114
	EURO BUDGET	40,454
	ACTUAL	55,669
WBS[2] Totals:	BUDGET	47,776
	ACTUAL	65,745
	EARNED	25,114

Screenshot 4 shows a project in dollars and euros, but a WBS in dollars only.

Result	Units	Rate Table
HOURS	HOURS	
EURODIRECT	EUROS	TECH
USDIRECT	DOLLARS	USD
DEMDIRECT	DEM	DEM
EUROOVERHE	EUROS	OVERHEAD
USOVERHEAD	DOLLARS	OVERHEAD
DEMOVERHEA	DEM	OVERHEAD

Screenshot 5 shows a table where results and their units are determined.

FORECASTING

The ability to easily forecast currency fluctuations is a necessity when running a global program. If your rate tables or rate files are independent of the program data, you can easily conduct “what-if” forecasts to determine the impact of currency risk on your program.

In table 6, we show three forecasts:

- **Budget** - the original planned budget, expressed in euros
- **EAC** - the estimate at complete forecast
- **Euro_up** - the EAC if the euro gains 10% vs. the dollar
- **Euro_dn** - the EAC if the euro declines 10% vs. the dollar

This report shows the budget forecast with the case of the euro 10 percent gaining or losing against the dollar.

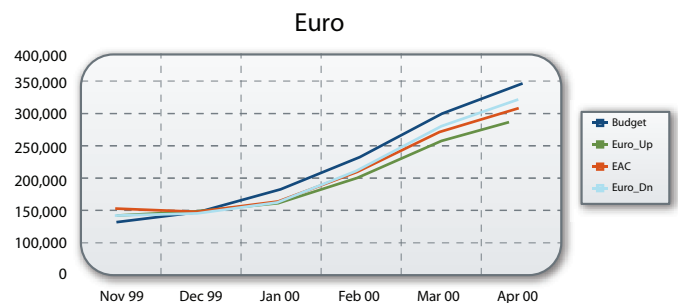


Table 6 shows three forecasts



Contact
Deltek

www.deltek.com
info@deltek.com
800.456.2009

Deltek is a global leader dedicated to delivering enterprise management software that meets the unique needs of project-focused organizations. With over two decades of experience, Deltek enables companies to maximize profitability and productivity, integrating all aspects of their businesses. More than 11,000 customers worldwide rely on Deltek to streamline operations, improve performance and win more business.

ADDITIONAL CONSIDERATIONS

How often do you need to accommodate rate changes? Daily? Monthly? If you are working with commitments and accruals, you may need to change rates more frequently than if you are working on a program whose actuals are captured monthly. The granularity should be meaningful enough to reflect the program accurately while not becoming burdensome.

CONCLUSION

There are benefits and some considerations when running time-phased budgeting and reporting on a global project with multiple currencies. One useful technique would be to conduct a simulation of your project in order to ensure you will be able to manage it not only as planned, but as it may change.

While running a global program can add a dimension of complexity, thoughtful planning can help you succeed.

AUTHOR

Betsy Smalley, PMP, has over 20 years experience in information technology and enterprise project management. She has advised both domestic and international clients in the areas of project and earned value management. Smalley is a member of the Houston chapter of PMI.

RESOURCES

1. Yahoo Currency converter
<http://quote.yahoo.com/m5?a=1&s=EUR&t=USD>
2. European Union
<http://europa.eu.int/euro>