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INFLATION IN ACCOUNTING

INFLAŢIA ÎN CONTABILITATE

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In general, inflation represents decrease of purchasing power of money. It is shown as increase in price level in production, consumption and investment area. In certain periods, nobody pays attention to inflation problem, but on the other hand matter is not unnoticed. We can say, that discussion about this matter are continuous, when price level increase significantly. I analyzed in this article methods that are used in accounting for adjusting the effects of inflation. In example I compare alternative accounting methods.

Key words: *Inflation, financial statements, measurement at historical costs, measurement at current cost, alternative inflation accounting methods.*

Considering inflation, we should mention that foreign authors frequently discuss about changes in price level. This term includes two categories of price changes:

- price changes in general price level,
- price changes in specific items of assets.

Slovak accounting standards does not treat with inflation problem in specific and complex way. But there are some exceptions. In case of receivable valued in inflationary currency, accounting entity reflects this fact by creating provision against receivable. Within the framework of international legal regulations International Financial Reporting Standards IAS/IFRS, in standard IAS 29 – Financial Reporting in Hyperinflationary Economies, state that financial statements prepared in hyperinflationary currency without elimination of inflation are not useful. Money loses purchasing power at such a rate that comparison of amounts from transactions and other events that have occurred at different times, even

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within the same accounting period, is misleading. Application of this standard is a matter of judgment.

One of accounting principles – **valuation in historical costs** ***(historical cost)*** – states that goods and services are valued at their original cost when transaction occurred. Financial statements in historical costs, called also as a financial statements under accounting method Historical Cost/Nominal Dollar (HC/ND), are influenced during periods of significant inflations negatively due to decrease in purchase power of money. Effect of inflation is that the same amount of money in the financial statements could have different purchase power in different periods. This is not good for measurement of financial results. On the other hand, reporting in historical costs is more objective, because recorded values are stated based on transactions between parties trading in their own economic interest.

There are more concepts of accounting, which are using price indices (based on category of price change) for creation of complex financial systems to eliminate effects of inflation. Mentioned accounting systems represent alternatives to traditional accounting system – reporting in historical costs (HC/ND) without adjustments considering changes in price level.

With regard to two types of changes in price level, there are two accounting systems described below:

1. Constant Dollar Accounting – **accounting of stable (constant) currency**, or *General Price – Level Adjusted Accounting* – accounting considering changes in general price level.
2. Current Cost Accounting – **accounting of current cost**, or *Current Value Accounting* – accounting of current prices –measures current values of assets, liabilities and equity. It measures rather changes in specific prices of particular assets than changes in general price level.

Mentioned distinguishing is important for understanding of alternatives of financial reporting.

Based on described facts we can classify main principles of financial reporting, including normally used method HC/ND, as follows:

Table 1: Matrix of alternative inflationary accounting methods

	Valuation	
	Valuation at historical cost	*Valuation at current cost*
Measurement at Nominal Dollar	**Historical Cost / Nominal Dollar (HC/ND)**	**Current Cost / Nominal Dollar (CC/ND)**
Measurement at Constant Dollar	**Historical Cost / Constant Dollar (HC/CD)**	**Current Cost / Constant Dollar (CC/CD)**

In above matrix are described two aspects: change in unit of measurement (Nominal or Constant Dollar) and change in basis of valuation (historical or current cost).

HISTORICAL COST/NOMINAL DOLLAR

As it was mentioned above, ***financial statements under method HC/ND*** are not adjusted for inflation. ***They did not reflect neither changes in general price level or changes in specific prices of particular assets*** by the time of selling, disposal, write off or donation.

HISTORICAL COST/CONSTANT DOLLAR

It is opposite to accounting method HC/ND. Financial statements under method HC/CD record inflation effects by restating of historical costs in terms of actual (current) purchase power of dollar. This method also measures real gains or losses of purchase power of net cash items held during the period of inflation. ***It reflects only changes in general price level and not in current changes in prices of goods and services purchased by the entity.*** It represents the most using method. Mentioned alternative is supported by following arguments:

- restating all accounts in constant dollars is recommended also by International Accounting Standards Committee (IASC) or International Accounting Standard Board (IASB) for using in hyperinflationary economics (IAS 29). In some countries after periods of high inflation (e.g. Brazil and Mexico), were used different variants of restating,

- effect of inflation on entities' accounting is usually more disturbing as effects of relative price changes which are covered by specific price index. This model uses general price index, i.e. model becomes more useful when inflation is higher.

CURRENT COST/NOMINAL DOLLAR

Financial statements under method CC/ND reflect change in specific prices of particular assets because the valuation is based on current prices and does not reflect changes in general purchase power of dollar.

CURRENT COST/CONSTANT DOLLAR

Financial statements under method CC/CD reflect effects of both methods, general inflation and changes in specific prices paid by company for goods and services. Financial statements under method CC/CD record individual items in their current prices and express current prices in constant dollars. Main purpose of financial statements of this method is to present current value of all recorded items to managers making decisions. Stated purpose is important because managers have to evaluate current situation and make decisions about the future. Current costs are relevant for most decisions. Although this method represents conceptually correct approach to reporting it has significant implementation problem. It is usually difficult to gain objectivity and accuracy in determining of current costs. Some managers and accountants believe that relevance of information in current prices qualifies to record data based on subjective estimates. However, financial statements under method CC/CD do not require to record current prices in accounting from time to time. In case of monetary items of financial statements their value is equal to value stated in financial statements under method HC/ND. It is necessary to calculate only gain (loss) of purchase power from monetary items. In case of non-monetary items, current price is determined in adjustment of financial statements items under method HC/ND using for example specific price index. Thereafter, real gain (loss) from non-monetary items is calculated. It is called also as *„real holding gain (loss) "*, i.e. „real gain (loss) from holding" assets and liabilities. In comparison with accounting method HC/CD, financial statements under method CC/CD record both gain (loss) of purchase power from monetary items and gain (loss) from non-monetary items.

As an illustration, I stated below comparison of condensed financial statements of American company using various alternative accounting methods.

Table 2: Balance Sheet comparison of alternative accounting methods

Condensed restated Balance Sheet as at 31.12.200X (ths. USD)			
Item	**HC**	**HC/CD**	**CC/CD**
Assets			
Cash	32 050	32 050	32 050
Receivables	32 400	32 400	32 400
Inventory	13 500	15 000	16 200
Property, Plant & equipment	60 000	75 000	78 000
Accumulated depreciation	(12 000)	(15 000)	(15 600)
Land	6 350	7 500	6 985
Assets total	**132 300**	**146 950**	**150 035**
Liabilities and Equity			
Long term liabilities	40 000	40 000	40 000
Equity			
Ordinary shares	80 000	100 000	100 000
Non – distributed profit	12 300	6 950	10 035
Liabilities and Equity total	**132 300**	**146 950**	**150 035**

Table 3: Income Statement comparison of alternative accounting methods

Condensed restated Income Statement for the year ended 31.12.200X (ths. USD)			
Item	**HC**	**HC/CD**	**CC/CD**
Sales	162 000	180 000	180 000
Cost of sales	(108 000)	(120 000)	(129 600)
Depreciation	(12 000)	(15 000)	15 330)
Other expenses	(27 000)	(30 000)	(30 000)
Profit	**15 000**	15 000	5 070
Loss of purchase power from monetary items		(5 050)	(5 050)
Real profit from non -monetary items			13 015
Restated profit		**9 950**	**13 035**

The company shows also statement of non-distributed profit, which explains differences in Balance Sheet and Income Statement.

Table 4: Comparison of Non – distributed profit statement under alternative accounting methods

Statement of non - distributed profit as at 31.12.200X (ths. USD)			
Item	**HC**	**HC/CD**	**CC/CD**
Profit	15 000	9 950	13 035
Dividends	(2 700)	(3 000)	(3 000)
Closing balance	**12 300**	**6 950**	**10 035**

From the comparison above results, that **effect of changes in general price level or in particular specific prices significantly modifies values of financial statements depending on used accounting method.**

Transformation of individual items‘values of financial statements differs depending on described accounting methods and consists of few steps described thereinafter.

HC/ND ACCOUNTING METHOD

This method records values of individual items of financial statements based on historical costs.

HC/CD ACCOUNTING METHOD

Basis of method is as follows:

1. *Dividing of balance sheet items on monetary and non-monetary items.*
2. *Recording of balance sheet monetary items at historical costs* – value of monetary items (e.g. cash in hand, cash on bank accounts and so on) is due to inflation not changed. *Therefore the value of these items in restated balance sheet is equal to historical costs.*
3. *Restatement of historical costs of balance sheet non-monetary items* – value of non-monetary items (e.g. inventories, land and so on) is due to inflation changed and therefore it is restated using general price index (consumer price index – CPI) in form:

$$CD\ restated\ value = HC\ value \times \frac{CPI\ at\ the\ end\ of\ accounting\ period}{CPI\ at\ date\ of\ transaction}$$

4. *Restatement of income statement items* – all items are considered to be non-monetary, therefore they are restated using the same concept as non-monetary items of balance sheet described in paragraph 3.
5. *Calculation of gain (loss) of purchase power from monetary items.* It represents restatement of opening balance of period using general price index (described in paragraph 3) and computation of closing balance. Gain (loss) of purchase power from monetary items is difference between closing balance recorded in accounting on the basis of historical costs and restated closing balance. *The gain (loss) of purchase power from monetary items is stated in income statement and it increase (decrease) calculated profit (loss) of current period.*

6. *Restatement of statement of non-distributed profit* – using general price index are recalculated items that decrease profit calculated in the income statement after deduction of gain (loss) of purchase power from monetary items.

CC/CD ACCOUNTING METHOD

Preparation of financial statements under method CC/CD consists of the following steps:

1. *Recording of monetary items at historical costs* (as using method HC/CD).
2. *Determination of current prices of non-monetary balance sheet items* through summary of current prices, specific price index, and expert's opinion and so on.
3. *Restatement of income statement items* – revenues are recorded at historical costs after restatement by general price index (as in method HC/ND) and expenses are recorded at current costs restated by general price index.
4. *Calculation of gain (loss) of purchase power from monetary items (described in method* HC/CD).
5. *Calculation of real gain (loss) from non-monetary items.* It is difference between value of non-monetary items recorded using method HC/CD and value of non-monetary items recorded using method CC/CD. Real gain (loss) from non-monetary items is also shown in income statement and it increase (decrease) profit (loss) of current accounting period
6. *Restatement of values in statement of non-distributed profit* – similarly as in accounting method HC/CD.

CONCLUSION

In financial statements met together historical costs valid in different periods, when cash had due to inflation different purchase power. It causes inflationary deformity in value of expenses, revenues, recognised value of assets, liabilities, equity and in value of calculated income from operations. Consequently, deformity influences ratios of financial analysis and could influence also financial decision and strategy resulting from financial analysis.

In regard of possible ways of price level restatement there are number of alternative „anti-inflationary“ methods of accounting that treats with inaccuracy due to inflation in accounting under principle of historical costs.

It is important to show data influenced by inflation in adjusted, restated financial statements. This is required especially from big companies due to proper evaluation of their financial performance.

Requirement of expression of inflation effects, although the increase is relatively low, is justified also by theory from the following reasons:

- in case of low annual inflation rate, cumulative effect for a number of years could be significant,
- effects of inflation remains also after its end-up,
- changes in prices of particular items of assets could be much higher than change of general price index and this difference could be for the company very important also in case of relatively low inflation rate.

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