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**METHODS OF EFFICIENTLY CALCULATING  
BUSINESS PROFIT FOR TAX PURPOSES - EXPERIENCE  
OF PARTICIPATION IN THE TAX REFORM PROCESS  
IN THE BRCKO DISTRICT OF BOSNIA  
AND HERZEGOVINA 2003\*\***

*The goal of this article is to assess the pro and cons of various reform proposals in the area of profit taxation from an economic perspective. In doing so, the authors try to highlight some misunderstandings in the current reform debate, reconcile the polar positions of proponents of (i) pure cash accounting and (ii) pure accrual accounting, identify viable options that combine the advantages of both methods and discuss the potential and limits of approaches to simplifying the method of calculating profit tax in practice. In this article the authors also present a new method of determining taxable profit based on the Heidelberg Simple Tax<sup>1</sup> Model. This new method has been applied in the Brcko District of Bosnia and Herzegovina since 2004.*

*Key words: tax reform, profit taxation, Heidelberg Simple Tax Model*

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<sup>1</sup> For this see Rose (2003a) and other contributions to be found at [www.einfachsteuer.de](http://www.einfachsteuer.de).

## 1. Introduction

Tax reform has been on the agenda for decades throughout the world and remains a hotly debated issue. In the reform debate the reform of profit taxation and in particular the relationship between the tax reform debate and methods of calculating profits have come under closer scrutiny in recent years. Perceived international tax competition has shifted attention to the issue of profit taxation, which in Europe has been regarded as even more pressing in recent years in the light of tax reform initiatives in East European countries like Estonia and Slovakia, to name but two of those countries that have radically reformed profit taxes by introducing a system of taxing all kinds of income, business profits included, at a uniform flat rate.

The idea of transforming existing profit taxes into a coherent system of efficient taxes has been suggested by economists since the late 1970s.<sup>2</sup> The criterion of equity or fairness, widely seen to be more related to the personal income tax, is also an issue for profit taxes when it comes to addressing the difficult question of how profit and income taxes can be integrated into a coherent system approach.

All serious reform proposals in the area of profit taxation have in common that they require a thorough reform of the tax base, and for that matter, a reform of the way profits are calculated. Basically, one can observe two opposite reform directions. At one end of a continuum of reform proposals there is the group of cash-flow taxes (cf. Meade 1978), which because of its cash-based method of calculating profit may be summarized under the heading of pure cash accounting. At the other end there is the pure form of accrual accounting whereby the latter refers to the increase in net worth in an assessment period. With the exceptions of pay-roll taxes, value-added tax for taxpayers with no obligation to keep books of account and some other taxes of minor importance, it is hard to find examples of the application of pure cash accounting in practice. What can be observed, however, is some hybrid form of cash and accrual accounting. It is common practice, for instance, to allow immediate write-off of certain investment goods which, with respect to those goods, is equivalent to pure cash accounting.<sup>3</sup> Moreover, in almost all tax systems across the globe this hybrid form of accounting applies for self-employed persons and small enterprises because it is widely accepted that for them to calculate profits on the basis of a full version of commercial balance sheets adjusted for tax provisions would be much too heavy a compliance burden.

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<sup>2</sup> See Meade (1978) and Hall/Rabushka (1995).

<sup>3</sup> Croatia is an example where, in the period from 2001 to the end of 2004, taxpayers had the option of immediate write-off of equipment in a broadly defined sense, e.g. including buildings and software. This option was available to both, companies applying accrual accounting as well as small businesses using cash accounting.

The perception of the main problems with respect to profit taxes has stimulated two reform directions. Some reformers prefer what one may call the 'IAS position', i.e. the idea of bringing profit tax calculation closer to the calculation of commercial profit according to International Accounting Standards (IAS), which needs to be prepared for commercial purposes anyway. Some demand the abolition of special tax provisions that currently (in almost all real-life tax systems) require the taxpayer to adjust the commercial results of profit calculation for tax purposes. In opposition to that, others prefer the cash flow tax position because they consider cash accounting to be simpler and more efficient.<sup>4</sup>

In this paper we argue that the assessment of various reform proposals are often based on misunderstandings about their economic effects. We try to reconcile the polar positions of proponents of (i) pure cash accounting and (ii) pure accrual accounting, identify viable options that combine the advantages of both methods and discuss the potential and limits of approaches to simplifying the method of calculating profit tax in practice. A new method of determining taxable profit is discussed. This new method has been applied in the Brcko District of Bosnia and Herzegovina since 2004 and has some features of the former Croatian system of income and profit taxation according to a concept of taxing lifetime income.<sup>5</sup>

The paper is structured as follows. In section 2, we look into criteria that allow policy-makers to make a sound decision in order to assess the pro and cons of various reform proposals from an economic perspective. Section 3 addresses different methods of calculating the economic profit of enterprises which may be used to calculate the base of a profit tax. Section 4 discusses a proposal for a simplified method of profit tax calculation that may serve as a compromise in current tax policy. In section 5 we summarize our main points.

## **2. How to find the 'right' tax base?**

What are the criteria that must be satisfied in the design of a modern profit tax? It is generally agreed that a good tax system should meet the following criteria: efficiency, administrative simplicity (which may be seen as a sub-criterion of efficiency) and equity or fairness.

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<sup>4</sup> Some interesting conference papers published in Gebhardt (2003) deal with these issues.

<sup>5</sup> See Rose (1990) and Rose (2005) for a comprehensive treatment of taxing yearly income according to a lifetime-income concept which in the literature is also known as a consumption-oriented way of taxing income. This comes from the basic feature of such systems, i. e. not to distort the decision of taxpayers to use their income for consumption today and – via saving – for consumption tomorrow. Keen/King (2002) discuss the former Croatian tax system that was in place between 1994 and 2001.

In an effort to make efficiency operational, let us assume the standpoint of a rational actor in a life-time setting with a perfect capital market.<sup>6</sup> A rational actor looks at the net present value of taxes paid over his lifetime (i.e. the lifetime tax burden) and does not confuse this concept with the single tax payment due in one particular year:

$$\bar{T} = \sum_{n=1}^N T_n (1+r)^{-n} \quad (1)$$

where  $\bar{T}$  is the lifetime tax burden,  $T_n$  is the tax payment at time  $n$ ,  $r$  the interest rate and  $N$  the end of the life-time cycle. Efficiency in this context means that economic behaviour – for example the decision to invest – is not affected by taxes compared to the lump-sum tax baseline. With respect to determining the profit tax base, this boils down to the normative prescription that the net present value of the tax burden should be independent of valuation methods and accounting rules. In other words, the tax burden must be an increasing function of the sum of discounted cash distributions ( $D_n$ ,  $n = 1, \dots, N$ )<sup>7</sup> which are given in the situation without any taxes:

$$\bar{T} = \tau \sum_{n=1}^N D_n (1+r)^{-n} = \tau \bar{D} \quad (2)$$

with  $\tau > 0$  the tax rate on dividends which could be paid out in the situation without any tax, and  $\bar{D}$  the market value of the investment object in the situation without taxes. If the sum of the present values of all tax payments is linked proportionally to  $\bar{D}$ , the tax will not alter the ranking of alternative profitable investment projects. Such a tax can therefore be described as neutral with respect to investment decisions.

It has long been argued that in this setting both efficiency and equity must be taken into consideration. In fact, Feldstein (1978) introduced the concept of horizontal equity in a life-time perspective.<sup>8</sup> The basic idea is that over a tax payer's life-time the net present value of taxes should be the relevant yardstick for assessing equity effects given two identical persons. With respect to methods of profit tax calculation, equity does not seem to be an important issue. The remainder of this paper will therefore focus on efficiency.

<sup>6</sup> For an example of this standard approach see Wenger (1999).

<sup>7</sup> In order to simplify the model we assume that  $D_n$  will be paid in all cases at the end of the year. Furthermore, all other kinds of withdrawals and inflows of equity capital during the year are neglected. Later we shall additionally regard paid taxes  $T_n$  as a second kind of equity outflow.

<sup>8</sup> For a the concept of burdening life-time income applying an appropriate tax on yearly income see for example McLure/Zodrow (1990) and Rose (2003b).

In addition to that, however, the liquidity constraints of small and medium-sized enterprises should be taken into consideration when defining the tax base. As a general rule, tax payments should be made from a liquidity surplus generated by market activities. This should be borne in mind when comparing different options.

### 3. Methods of calculating economic profits: some clarifications

#### 3.1. Cash accounting vs. accrual accounting

*Cash accounting* refers to the flow of cash-based items in an assessment period  $t \in \{1, \dots, N\}$ . Thus, calculating economic profit,  $Q_t^{CF}$ , is equivalent to calculating the cash surplus from market activities, i.e. the difference between the cash in,  $R_t$ , and the cash out,  $X_t$ :

$$Q_t^{CA} = R_t - X_t - rE_{t-1}^{CA} \quad (3)$$

$E_{t-1}^{CA}$  is the equity capital which is identical with the cash balance at the end of period  $t-1$  or at the beginning of period  $t$ . In order to assess the full picture, the opportunity costs of holding cash for business purposes are taken into consideration by deducting interest on equity capital at the market rate  $r$ . By defining taxable profit basically as the change in the stock of cash holdings from market activities one does not completely arrive at the required figure which would guarantee that all cost of employed capital are deducted. Cash holdings itself can be used for other investment opportunities which assuming perfect capital markets would yield a return  $r$ . Hence, to calculate a taxable profit which corresponds to pure economic profit it is necessary to deduct the opportunity cost of cash holdings which in the case of applying cash accounting are equivalent to the stock of equity capital employed in the enterprise during the tax period.<sup>9</sup>

At the same time this means that there is a balance sheet containing a single asset, namely cash holdings, and a single liability, equity capital. For the development of equity capital the following holds:

$$E_t^{CA} = E_{t-1}^{CA} + R_t - X_t - D_t \quad (4)$$

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<sup>9</sup> See Boadway/Bruce (1984), Wenger (1983) and, similarly, IFS (1991) who were the first to make the economic case for deducting imputed interest on the stock of equity capital.

Bringing  $(R_t - X_t)$  on the left-hand side in (4) and substituting it into (3) we obtain

$$Q_t^{CA} = E_t^{CA} + D_t - (1+r)E_{t-1}^{CA} \quad (5)$$

Taking (5) into consideration, the present value of all economic profits calculated by the pure cash accounting method is determined as follows:

$$\bar{Q}^{CA} = \sum_{n=1}^N \frac{E_n^{CA} - (1+r)E_{n-1}^{CA} + D_n}{(1+r)^n} \quad (6)$$

In the first investment year there is no equity capital at the beginning of the year. In the last investment year all surpluses arising from the liquidation of assets and debts together with the initial cash holding are distributed to the shareholders, so that at the end of year N no equity capital remains. As a result

$$E_0^{CA} = E_N^{CA} = 0 \quad (7)$$

and

$$\sum_{n=1}^N \frac{E_n^{CA} - (1+r)E_{n-1}^{CA}}{(1+r)^n} = 0 \quad (8)$$

If (8) is substituted into (6),

$$\bar{Q}^{CA} = \sum_{n=1}^N \frac{D_n}{(1+r)^n} = \bar{D} \quad (9)$$

The sum of the present values of all economic profits calculated in accordance with pure cash accounting is identical with the market value of the investment object.

*Accrual accounting* refers to the increase in net worth in an assessment period. One way of expressing this idea is calculating profit,  $Q_t$ , as the difference between equity capital at the end of tax period,  $E_t$ , and equity capital at the beginning of tax period,  $E_{t-1}$ , corrected for distributions ( $D_t$ ) to shareholders:

$$Q_t^{AA} = E_t^{AA} + D_t - (1+r)E_{t-1}^{AA} \quad (10)$$

whereby equity capital  $E^{AA}$  is calculated from a balance sheet (such as the one shown in Table 1). In this calculation the deduction of imputed interest, calculated

as the current market interest rate,  $r$ , multiplied by equity capital at the beginning of the year,  $E_{t-1}$ , is taken into consideration.<sup>10</sup>

Distributions to shareholders are the same as when profits are calculated in accordance with pure cash accounting. They depend solely upon the degree of liquidity that must be at the enterprise's disposal for the processing of its revenues and expenditures and therewith the degree of liquidity that the enterprise can afford to forego and that can therefore be distributed to shareholders.

Table 1.

COMMERCIAL BALANCE SHEET

<p><b>Fixed Assets</b></p> <ul style="list-style-type: none"> <li>▪ Property, plant and equipment</li> <li>▪ Intangible assets</li> <li>▪ Financial assets (shares in other companies, etc.)</li> </ul> <p><b>Operating Assets</b></p> <ul style="list-style-type: none"> <li>▪ Inventories</li> <li>▪ Trade account receivables</li> <li>▪ Loans (capital claims)</li> <li>▪ Cash and cash equivalents</li> </ul> <p><b>Prepayments made</b></p>	<p><b>Equity capital (E<sup>AA</sup>)</b></p> <p><b>Accrued liabilities</b> (reserve for outstanding losses, future payments of pensions, etc.)</p> <p><b>Payables</b></p> <ul style="list-style-type: none"> <li>▪ Trade account payables</li> <li>▪ Financial payables (capital liabilities)</li> <li>▪ Liabilities from the purchase of fixed assets</li> </ul> <p><b>Prepayments received</b></p>
<b>Total</b>	<b>Total</b>

The sum of the present values of all profits calculated by the accrual method is now

$$\bar{Q}^{AA} = \sum_{n=1}^N \frac{E_n^{AA} - (1+r)E_{n-1}^{AA} + D_n}{(1+r)^n} \tag{11}$$

Similar relationships to those in (7) and (8) lead directly to

$$\bar{Q}^{AA} = \sum_{n=1}^N \frac{D_n}{(1+r)^n} = \bar{D} \tag{12}$$

<sup>10</sup> Note that equity capital at the end of year,  $E_p$ , excludes dividends.

It has been shown that the special procedure for assessing the value of asset items and debts in the balance sheet and therewith the method for calculating economic profits has no influence on the fact that the sum of the present values of all profits is always equal to the market value of the investment object.

### ***3.2. Irrelevance of the accounting method used in calculating taxable profit***

The introduction of a tax in the amount of  $T_t$  on pure economic profit reduces the enterprise's distribution possibilities to  $D_t^T < D_t$ . Especially where profits are calculated by the accrual method there will be assessment periods in which a taxable profit is calculated, even though as a result of its previous decisions the enterprise does not dispose of the degree of liquidity required for the settlement of its tax liabilities. It is now assumed that both the enterprise and its shareholders enjoy free access to the capital market, on which capital can be raised at the current market rate  $r$  and invested. In the above case the enterprise can fully compensate for the liquidity drain resulting from taxation by raising credit or by a contribution made by shareholders ( $D_t < 0$ ). It is further assumed that with a profit tax rate of  $0 < \tau < 1$  the government is not pursuing a confiscatory tax policy. Finally it is also relevant for our analysis to assume that under the above conditions the value of the enterprise,  $D$ , will be maximized when the return on the last unit of investment equals the current market rate of interest  $r$ .<sup>11</sup> Tax investment theory has shown that the taxation of economic profit,  $Q^{CA}$  or  $Q^{AA}$ , does not result in a change of investment decisions if shareholders' returns in the amount of  $r$  on alternative investments on the capital market are not liable to taxation.<sup>12</sup> In accordance with the concept of lifetime-oriented income taxation this is guaranteed, as in order to ensure that all market incomes bear a single tax burden normal market capital incomes should not and cannot be subject to taxation.<sup>13</sup> The investor for his part will increase the amount he invests to the point where his return before tax – also referred to as his gross return – is equal to the market rate of interest  $r$ . As in each period the investor opts for the levels of  $R_t$  and  $X_t$  that he realized in the situation without profit tax, and liquidity drains due to taxation can be fully compensated, it follows with

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<sup>11</sup> See Sinn (1987).

<sup>12</sup> See Boadway/Bruce (1984) and Rose/Wisswesser (1998). In the early 1990s this idea was supported as Allowance for Corporate Equity (ACE) by the Institute for Fiscal Studies; see IFS (1991).

<sup>13</sup> See McLure/Zodrow (1990).

$$T_t = \tau Q_t; \quad T_t = T_t^{CA} \quad \text{or} \quad T_t = T_t^{AA} \quad \text{and} \quad Q_t = Q_t^{CA} \quad \text{or} \quad Q_t = Q_t^{AA} \quad (13)$$

that condition

$$\sum_{n=1}^N \frac{T_n + D_n^T}{(1+r)^n} = \sum_{n=1}^N \frac{D_n}{(1+r)^n} \quad (14)$$

is ensured. As in (6) and (11)  $D_n$  is to be substituted by  $T_n + D_n^T$ , consideration of (14) leads directly to

$$\bar{T} = \tau \bar{D} \quad (15)$$

regardless of the method used to calculate profit.<sup>14</sup>

In general, any desired result in terms of economic effects may be achieved either by accrual accounting or by cash accounting. This irrelevance proposition, simple as it is, is often neglected when it comes to the discussion of reform proposals.

In order to ensure the neutrality result (15) a tax law must guarantee that the enterprise can carry forward into the next assessment period the losses of previous years adjusted with the discount factor  $1+r$ , in order to be able to offset them with the profit generated in this period. Should a loss not be offset, it must be carried forward into the next assessment period after adjustment with the discount factor.

Whether profit is calculated by pure cash accounting or by the accrual method, if a loss that has been carried forward from a previous period,  $V_{t-1}$ , is to be taken into consideration, the profit tax for a period  $t$  is to be calculated in accordance with

$$T_t = \tau[E_t + T_t + D_t^T - (1+r)E_{t-1} - (1+r)V_{t-1}] \quad (16)$$

$$V_{t-1} = -Q_{t-1} + V_{t-2}; \quad Q_{t-1} < 0, V_{t-2} \geq 0 \quad (17)$$

In this case, in order to simplify the model without invalidating the neutrality result shown in (15), a possible difference has been ignored between the point in time at which the tax debt arose and the time of the tax payment. If a tax prepay-

<sup>14</sup> For a similar proof see Wenger (1999).

ment is made during the year, this must be adjusted with the discount factor for the period between the time of the prepayment and the end of the year before being offset against the tax liability for that year. If tax liabilities are not settled immediately at the end of the year but – as can scarcely be avoided in practice – some months later, not only must the tax amounts that are due be paid but also the interest thereon for this period.

If the profit is to be determined by the accrual method based on the balance sheet, it will, as we know, also appear in the income statement. The income statement, however, does not record revenues and expenses according to the principles of cash accounting, but rather increases and decreases in the values of individual assets as these are usually reported in a commercial balance sheet. In this case, for example, a company's expenditure for the purchase of a machine does not reduce its profit by the full amount, but only by the machine's loss in value as calculated by periodic depreciation of the acquisition costs. Moreover, the purchase of a security does not result in an expense that affects the company's profit, as the cash outflow corresponds to an addition to the securities portfolio in the same value. Furthermore, sales of goods will already impact profit as a form of capital appreciation, if the company has thus acquired a claim against the customer. Finally, the purchase of inventory does not result immediately in an expenditure affecting profit. A deduction can only be made for an outflow of assets as the inventory is used in the production process. We cannot at this point examine further differences between pure cash accounting and accrual accounting. The deciding factor is that the entrepreneur suffers a disadvantage in that he can no longer deduct his expenses for the purchase of assets immediately, yet he must report additions to his assets, such as claims for goods delivered, even when there has not yet been a cash payment.

In order to neutralize this disadvantage against pure cash accounting, an enterprise must be allowed to make a deduction for interest at the current market rate on the amount of equity capital reported in the balance sheet (see section 3.1). It should be noted that such a deduction is also desirable in the case of pure cash accounting, as we are here dealing with equity capital in the amount of the cash holdings necessary for business purposes.

The deduction of equity capital interest is essential in order to secure two vital objectives. On the one hand it ensures the investment neutrality of profit taxation in the market economy, the efficiency of which will not be jeopardized thereby. On the other hand, it renders the calculation of profit independent of the respective procedure for the valuation of balance sheet items. It is thus possible for the law to prescribe not only a choice between pure cash accounting and pure accrual accounting, but also the possibility of opting for a valuation procedure somewhere in between these two basic methods.

#### **4. A simplified method of calculating profits applied in the District of Brcko**

In this section we would like to discuss a specific method of calculating profits that reconciles cash and accrual accounting techniques by adopting the virtues of both and avoiding as far as possible their pitfalls. This simplified method of calculating profits has been in use in the Brcko District of Bosnia and Herzegovina since 2004.<sup>15</sup>

Both reports of experience gained by the tax administration of the District of Brcko and statements made by domestic companies at hearings on the introduction of the new income tax have repeatedly made it clear that due to the imperfections of the Bosnian capital market companies experience great difficulty in paying their taxes if their business activities have not generated the necessary stock of liquid funds. Such liquidity shortfalls were everyday occurrences in the past, as companies were obliged to calculate their profits on the basis of their commercial balance sheets, i.e. in accordance with the principles of pure accrual accounting. In this respect there could never have been any question of orienting the new concept of profit tax law on the commercial balance sheet. This would have failed to satisfy the condition of equation (14) and there would have been no guarantee of investment neutrality. If, on the other hand, profits were calculated by pure cash accounting, investment neutrality would remain practically inviolate. For the following reasons, however, it was not possible to include in the draft law this method of calculating profit, which from a liquidity standpoint is very advantageous for enterprises and largely neutral with regard to its impact on investment decisions. The introduction of pure cash accounting would have meant that in the first year companies would for the most part only have registered tax losses. This can be attributed to the fact that, in accordance with pure cash accounting, with the reporting of  $X_t$  deductions can be made immediately of all expenditures for the purchase of machines, plots of land and buildings. The tax authorities in the District of Brcko, however, are heavily dependent on the revenues they receive from the taxation of enterprise profits, so that the decrease in revenues that was to be expected after a switch to pure cash accounting was judged to be unacceptable. Moreover, the calculation of profits by pure cash accounting is not taken into consideration in internationally recognized methods designed to avoid double taxation in the case of cross-border company activities. There was a substantial risk, therefore, that a profit tax based on cash flow would find no acceptance within the framework of future double-taxation agreements between Bosnia-Herzegovina and other countries.

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<sup>15</sup> For a detailed account see Nguyen-Thanh / Rose (2004) and Nguyen-Thanh (2005)

The basic idea was now to arrive at a compromise between the state’s interest in retaining the revenues it derived from the taxation of corporate profits and the interest of enterprises in paying tax on profits only when their market activities generated a cash surplus of market revenues over market expenses. Moreover, such a compromise must lead to a method of calculating profit which would not prove a barrier to double-taxation agreements. The main feature of this compromise is that although it is based on the calculation of profit by cash accounting, it also includes the following elements of accrual accounting:

- Expenses and revenues relating to capital claims and liabilities are not reported, in so far as interest is not a relevant issue.
- Deductions may not be made for expenses for the acquisition of fixed assets (machines, real estate, etc.) during the period in which they impact cash flow. The deduction of expenses for depreciable fixed assets is realized by the reporting of yearly depreciation allowances throughout the operating life of the asset in question. Expenses for non-depreciable fixed assets may only be deducted when the asset concerned is sold or withdrawn.

Table 2.

SIMPLIFIED BALANCE SHEET

<p><b>Fixed real Assets</b></p> <ul style="list-style-type: none"> <li>▪ Property, plant and equipment</li> <li>▪ Intangible assets</li> </ul> <p><b>Operating Assets</b></p> <ul style="list-style-type: none"> <li>▪ Loans (capital claims)</li> <li>▪ Cash and cash equivalents</li> </ul>	<p><b>Equity capital (<math>E^{MAA}=E^{MCA}</math>)</b></p> <p><b>Accrued liabilities</b>                  (reserve for outstanding losses, future payments of pensions, etc.)</p> <p><b>Payables</b></p> <ul style="list-style-type: none"> <li>▪ Financial payables (capital liabilities)</li> <li>▪ Liabilities from the purchase of fixed assets</li> </ul>
<b>Total</b>	<b>Total</b>

If we compare the simplified balance sheet with the commercial balance sheet in Table 1, we can also now speak of a profit calculation for tax purposes in accordance with *modified accrual accounting*. The yearly amount of profit tax to be paid is then calculated as follows:

$$T_t^{MAA} = \tau [ E_t^{MAA} + T_t^{MAA} + D_t^{MAA} - (1+r)E_{t-1}^{MAA} - (1+r)V_{t-1}^{MAA} ] \quad (18)$$

or, respectively for *modified cash accounting*,

$$T_t^{MCA} = \tau[R_t^{MCA} - X_t^{MCA} - rE_{t-1}^{MAA} - (1+r)V_{t-1}^{MCA}] = T_1^{MAA}; V_{t-1}^{MAA} = V_{t-1}^{MCA} \quad (19)$$

Note that  $R_t^{MCA}$  does not include revenues from the repayment of a loan and that  $X_t^{MCA}$  does not contain expenses for the repayment of bank loans.  $X_t^{MCA}$ , on the other hand, now does not include the total expenses for the purchase of depreciable real assets, but only the yearly depreciation allowances prescribed by taxation law. As individual balance sheet items are now recorded book values according to tax rules, the resulting disadvantage for the investor must be compensated by the deduction of equity capital interest – as was shown in the previous section. The basis for this is equity capital,  $E_{t-1}^{MAA}$ , in accordance with the simplified balance sheet as shown in Table 2.

The above method of calculating profit is fully compatible from an international standpoint. Many countries use this procedure to tax the self-employed and small businesses. The deduction of equity capital interest, however, is exceptional. With effect from 2007 Belgium will become the first West European country to allow its companies to deduct equity capital interest.<sup>16</sup>

With its new general income tax law<sup>17</sup> the District of Brcko has also decided to prescribe a method of calculating enterprise profit in accordance with the principles of modified cash or accrual accounting. In the interest of preserving tax revenues no provision was made for the consideration of reserves for outstanding losses. The Heidelberg Simple Tax, a reform proposal in context of the German tax reform debate on the other hand, does allow these reserves to be taken into consideration.<sup>18</sup>

## 5. Conclusion

The calculation of enterprise profits for purposes of taxation has been a permanent object of moves to reform tax legislation in many countries. In many cases the prime objective was to secure revenues for the state, but very often there was a desire to offer enterprises some relief by reducing their respective tax base

<sup>16</sup> Cf. Gerrard (2006).

<sup>17</sup> The new income tax law of the Brcko District of Bosnia and Herzegovina in its 2003 version was based on a draft by Manfred Rose. The draft law was prepared for those responsible within the framework of a development cooperation project carried out by the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH, Eschborn.

<sup>18</sup> See Fn. 1

and thus creating a more favorable environment for new investment. In the end, however, this policy proved to be unsettling for enterprises faced with investment decisions. In most cases it was not taken into consideration that for making investment decisions enterprises require a stable framework that addresses their needs for liquidity and decision neutrality. If the deduction of equity capital interest is allowed in the taxation of their profits, enterprises operating in a market economy are offered an optimal tax environment. In this article we have shown that at the same time this deduction of interest is a guarantee that the procedure for the tax valuation of balance sheet items does not change the overall tax burden. It also becomes possible to prescribe a more liquidity-oriented method of calculating enterprise profit than the pure accrual accounting method. The method of modified cash or accrual accounting that we have presented satisfies both requirements of an optimal method of taxing enterprise profits in a market economy. The central authorities of the District of Brcko of Bosnia and Herzegovina were the first in the world to offer its enterprises such an internationally attractive and compatible method of calculating profits.

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METODE DJELOTVORNOG IZRAČUNA OPOREZIVE DOBITI  
– ISKUSTVO IZ SUDJELOVANJA U PROCESU POREZNE  
REFORME GODINE 2003 U DISTRIKTU BRČKO,  
BOSNA I HERCEGOVINA

Sažetak

Cilj je ovoga rada s ekonomskog gledišta ocijeniti argumente za i protiv raznih prijedloga reformi na području oporezivanja dobiti. U toj su namjeri autori pokušali osvijetliti neke nesporazume u tekućoj reformskoj raspravi, pomiriti suprotstavljene pozicije zagovarača (I) računovodstva na čistoj gotovinskoj osnovi i (II) računovodstva na čistoj obračunskoj osnovi, zatim identificirati održive opcije koje kombiniraju prednosti obiju metoda i raspravljaju mogućnosti i granice pristupa pojednostavljenju metode izračuna poreza na dobit u praksi. U ovome članku autori također predstavljaju novu metodu određivanja oporezive dobiti na osnovi heidelberškog modela jednostavnog poreza (Heidelberg Simple Tax Model). Ta se nova metoda primjenjuje u distriktu Brčko, Bosna i Hercegovina, od godine 2004.

Ključne riječi: porezna reforma, oporezivanje dobiti, heidelberški model jednostavnog poreza