Working Party on Financial Statistics

Distribution of wealth, correct treatment across institutional sectors

Meeting of the Working Party on Financial Statistics
5 November 2018
OECD Conference Centre

This document has been prepared by Vladimír Kermiet and Helena Houzvickova (Czech Statistical Office); it will be presented at the meeting of the Working Party on Financial Statistics on 5 November 2018, under item 3.b of the draft agenda.

JT03438458
Distribution of wealth, correct treatment across institutional sectors

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Abstract
National wealth is an important indicator that can be derived from the System of National Accounts. Particularly important is also the distribution of national wealth across institutional sectors. The national accounts of the Czech Republic consist of a full set of accounts, including balance sheets, and detailed information about wealth is thus available. Financial and non-financial assets are predominantly valued at market prices. However, valuation of equity (AF.5) is a particular challenge. Valuation of equity in the Czech Republic follows the recommendations of the Handbook on Financial Production, Flows and Stocks prepared by the UN and the ECB. It seems that the current practice overestimates net worth of corporations and undervalues net worth of owners of these corporations. This paper discusses the distinction between net worth and the value of equity, differences between business accounting and national accounts, and the compilation practices in the Czech Republic.
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1. Valuation of equity and other shares in the Czech National Accounts

1. The National Accounts of the Czech Republic consist of a full set of accounts including financial and non-financial assets. There are significant differences in the valuation of non-financial assets between the national accounts and business accounts. While businesses valued non-financial assets at acquisition cost, the national accounts value these assets at current prices. The definition of non-financial assets too is different, with national accounts including capitalization of R&D, small tools and military equipment etc. However, these additional assets currently do not have corresponding treatment on the liabilities side, leading to a significant overvaluation of enterprises’ net worth. We should ask whether this national-accounts treatment should be reflected in the enterprise’s equity.


3. Under ESA 2010 chapter 5, equity and investment fund shares or units are financial assets - residual claims on the assets of the institutional units that issued the shares or units. Equity and other shares may be listed, unlisted or other equities.

4. In the Czech Republic, compilation of the financial accounts is split between the central bank (CNB) and the statistical bureau (CZSO). The CZSO compiles annual financial accounts for the institutional sectors and quarterly financial accounts for government institutions. The CNB compiles quarterly financial accounts for the remaining sectors. The CZSO takes a number of financial accounts items from the CNB unchanged. These include e.g. currency and loans. Equity is valued upon a methodology mutually agreed, as follows:

   - Listed shares are valued at market prices, with the number of shares listed on the Prague Stock Exchange multiplied by their current quotation.
   - For unlisted shares a market-equivalent value must be estimated. The manual recommends the following methods:
     a) the values of quoted shares where appropriate;
     b) the value of own funds; or
     c) discounting forecast profits by applying an appropriate market price to earnings ratio to the smoothed recent earnings of the institutional unit.

5. The Czech national accounts applies the value of own funds method.

6. Other equity is equity that is not in the form of securities. They may be shares in quasicorporations (branches, trusts, and limited companies), public corporations, unregistered funds and notional resident units (including land and dwellings owned by non-residents).

7. Other equity (AF.519) is equity that is not in the form of securities. It can include equity in quasicorporations (such as branches, trusts, limited liability and other partnerships), public corporations, unincorporated funds and notional units (including notional resident units created to reflect non-resident ownership of real estate and natural resources). The ownership of international organisations not in the form of shares is classified as other equity.
8. Quasi-corporations’ other equity is valued according to their own funds, since their net worth is by convention equal to zero. For other units, the most appropriate valuation method from the methods used for unlisted shares should be taken.

9. Other equity in the Czech Republic is most often in the form of limited companies. Until now these entities were recorded in the national accounts using paid up registered capital. Until 2013 Czech companies required paid-up registered capital of at least CZK 200 000 (EUR 7 830). Starting January 1, 2014, however, the law allows limited companies to be registered with a nominal CZK 1. Hence a new valuation method was called for.

10. Since 2014, limited companies are recorded using the value of their own funds in their accounts. These are obtained from a multi-pronged census of the companies, including surveys by the CNB (including the Balance of payments), statistical survey by CZSO and the publicly accessible database BISNODE (an administrative source that takes its data from tax returns). It was first necessary to determine which organizational forms to survey. Next, appropriate data sources needed to be identified. In some cases, a companies’ data can be found in more than one source.

<table>
<thead>
<tr>
<th>Table 1. Difference between current and new approach to valuation of shares in limited companies, CZK million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered capita at the end 2016</td>
</tr>
<tr>
<td>Own funds at the end 2017</td>
</tr>
<tr>
<td>Difference</td>
</tr>
</tbody>
</table>

Source: Calculations of Czech National Bank.

11. The change in valuation method led to an increase in the value of other equity for non-financial enterprises of approximated 2 billion CZK. Nonetheless, the value remains in the range found in the business accounts, despite the national accounts using a different methodology. Even after the introduction of the new method, large adjustments are needed to companies’ net worth. This change will be introduced with the 2020 revision of the national accounts.

<table>
<thead>
<tr>
<th>Table 2. Total economy: Closing balance sheet for the year 2016, CZK million</th>
</tr>
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<tbody>
<tr>
<td>Code</td>
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<tr>
<td>------</td>
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<tr>
<td>S.1</td>
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</tbody>
</table>

DISTRIBUTION OF WEALTH, CORRECT TREATMENT ACROSS INSTITUTIONAL SECTORS
12. From data published from 2016 it is evident that a large portion of net worth (wealth) is allocated to the non-financial corporations. Even with the adjustments to other equity proposed by the CNB some 20% of net worth of the economy will reside with non-financial corporations.


13. With the introduction of ESA 2010, CZSO included, among other items, reinvested earnings and the capitalization of research and development in the gross national income. The main reason was to correctly report gross national income, which would otherwise have been over-reported. The requisite imputations also affect total net worth. See the illustrative example of wholly foreign owned corporations.

14. A number of corporations perform R&D, but there is no guide to the impact of these imputations on the system of accounts, in cases where the enterprise is part of a multinational and also meets the criteria of foreign direct investment.

15. Capitalisation itself increases GDP and creates a new non-financial asset. In order to avoid distorting GNI, profits of international corporations are in effect transferred to the foreign owners (or shareholders) pro rata to their ownership shares (as measured by disposable income). For this purpose, the SNA specifies item D.43 – reinvested earnings on direct foreign investments. In the financial accounts, it is under AF.5 – Equity and investment fund shares.

16. The definitions are unequivocal. ESA 2010 par. 4.64:
reinvested earnings on foreign direct investment (D.43) are equal to the operating surplus of the foreign direct investment enterprise

plus

any property incomes or current transfers receivable,

minus

any property incomes or current transfers payable, including actual remittances to foreign direct investors and any current taxes payable on the income, wealth, etc., of the foreign direct investment enterprise.

17. A problem may occur, however, where the imputed disposable income is not transferred to the FDI owner. It can usually occur when compilers use for calculation of D.43 only business accounts profit without any proper adjustment. This distorts GNI and over-values the national wealth.

18. The similar issue is when company decide sell results of R&D after some period. In that case, it is extraordinary profit which should be excluded from D.43 calculation and recorded as decreasing of equity.

19. This example assumes that the FDI enterprise has R&D expenditures and the output is utilised primarily by that enterprise. The non-financial asset should then, be captured in institutional sector of that enterprise. In this example, enterprise is 100% FDI.
### Box 1. Example of treatment of R&D results in the accounts

<table>
<thead>
<tr>
<th>National economy - most used approach</th>
<th>National economy - recommended approach by the CZSO</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Primary incomes</em></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>B2G 100</td>
<td>B2G 100</td>
</tr>
<tr>
<td>B5G 100</td>
<td>D.43 100</td>
</tr>
<tr>
<td></td>
<td>B5G 0</td>
</tr>
<tr>
<td><em>Capital Account</em></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>B8G 100</td>
<td>B8G 0</td>
</tr>
<tr>
<td>P5G 100</td>
<td>P5G 100</td>
</tr>
<tr>
<td>B.9 0</td>
<td>B.9 -100</td>
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<tr>
<td><em>Financial Account</em></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>AF5 100</td>
</tr>
<tr>
<td></td>
<td>B.9 -100</td>
</tr>
<tr>
<td><em>Balance Sheets (closing stocks)</em></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>AN11 100</td>
<td>AN11 100</td>
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<tr>
<td></td>
<td>AF5 100</td>
</tr>
<tr>
<td>Net worth 100</td>
<td>Net worth 0</td>
</tr>
</tbody>
</table>

### 3. Experimental adjustments by CZSO

20. Let’s return to the definition of equity above, i.e. total assets less liabilities equals net worth. The question here is how to arrive at the value of net worth. As a starting point in our consideration, we had raised a simple question what value is actually owned by a company itself, i.e. what value does not represent a potential claim of equity holders and cannot be attributed to these holders. Because the description of net worth in the manuals is far too vague, defined simply as a difference between assets and liabilities, we conclude that companies’ net worth (using business accounting) equals current year profits because,
at the point, it has not yet been decided whether those profits will be paid out as dividends or reinvested into the enterprise. In this case, the owners’ share in the enterprise is increased. Furthermore, we include in net worth any mandated reserve funds that cannot be paid out.

21. Current year profits, as adjusted for the system of national accounts, correspond to net disposable income. Hence, under SNA, equity should be calculated as assets minus liabilities less net disposable income and mandatory reserves.

22. On the basis of these ideas, we did an experimental calculation of equity using national accounts concepts for the financial and non-financial corporations sectors. Such an estimate meets ESA 2010 and SNA 2008 recommendations but does not reflect valuation methods used for Balance of Payments per Balance of Payments and International Investment Position Manual (BPM6). In order to keep the Czech National accounts and Balance of payments consistent, we continue to follow BPM6 valuations guidelines.

4. Future plans

23. The CZSO is currently preparing revised national accounts to be published in 2020. The revision will include changes in the presentation of equity and net worth. New memo item AF.51n (Equity and other shares - NA concept) will be created that will be shown in both the published and revalued versions. AF.51n will present the differences in our two institutions’ valuation concepts. Our discussions so far indicate that the CNB is willing to accept the recording as equity of standing timber owned by state enterprises (of approximately CZK 600 billion). There remain differences of opinion on including capitalization of research and development expenditures outside of companies’ accounts, on capitalization of small assets and possibly most importantly on revaluation of fixed assets. The memo item will be calculated as follows:

- assets
- less Liabilities
- less net disposable income and mandatory reserves
- less equity and other shares as valued by the Czech National Bank

24. This calculation will be used to estimate the revaluation of liabilities that will need to be distributed among owners on the assets side. Currently the CNB estimates shareholdings for each equity item on the basis of BISNODE shareholding data. Because BISNODE lists immediate owners, equity in the non-financial corporation sector is in turn owned by non-financial corporations. If we were to value asset shares in current prices, it would increase net worth and this would be a mismatch to the calculation show above. We assume this problem would not exist if we had available information about the beneficial owner. For this reason, subsequent work will focus on the assets of government institutions, households and non-residents.

25. We predict these calculations will decrease the net worth of enterprises by 90%. That would be allocated among final owners that are households, government and non-residents.

26. The relationship to non-residents appears to present the most serious problem because of its link to the Balance of payments, which is compiled in accordance with the BPM6. BPM6 specifies the use of book value for shares of unlisted entities and market
value for shares of listed entities. Introducing a new method would disrupt international comparisons such as country asymmetries and the net IIP to GDP ratio, which is one of the leading macroeconomic imbalance procedure indicators. This is just one of the reasons the new calculation will be presented as a memo item rather than as a part of the standard indicators reported to international institutions.

5. Conclusions

27. If we choose to make imputations in the non-financial accounts that affect the value of non-financial assets and if we revalue fixed assets to current value, we are in effect saying that individual corporations have a greater value than that shown in the business accounts. Should this higher asset value then not be reflected in the accounts of the beneficial owners of these corporations?

28. The National Accounts are not simply statistics about financial and non-financial accounts. They are an interconnected system of indicators, and there is no doubt that one of the most important and oft omitted indicators is net worth. If different approaches are used to compile given accounts, it is net worth that will be affected. We can trust that a perfect market will correctly value traded companies (of which there are 11 in the Czech Republic); correct valuation of the remaining companies is dependent upon the method we choose. If we fail to confront multiple statistical systems, their informational value will be low. The Czech National Accounts are a coherent system. This means that we are using the system to describe a (single factual) economic reality. In the published accounts there is no discrepancy between the financial and non-financial accounts. It’s been several years since we identified the valuation of equity as a challenge for the future. Because the proposed changes I’ve spoken about affect particularly non-residents, we need to debate these changes in an international forum.

6. Questions for discussion

29. How do we define net worth? Does increasing the value of a corporation’s fixed assets (real property) increase the value of the (beneficial) shareholders’ equity?

30. Consistency of the (proposed) changes among systems of national accounts. Have other statistical bureaux been recording capitalisation items - such as that of research and development, over and above that found in the business accounts - as equity?