BOPCOM-04/30

Seventeenth Meeting of the
IMF Committee on Balance of Payments Statistics
Pretoria, October 26–29, 2004

Valuation of Direct Investment Equity: DITEG Issue #1A

Prepared by the Statistics Department
International Monetary Fund

DIRECT INVESTMENT TECHNICAL EXPERT GROUP (DITEG)

OUTCOME PAPER (DITEG) # 1(A)

1. **Topic:** Valuation of direct investment equity

2. **Issues:** See DITEG Issue Papers # 1(A) by the US, ECB, and Australia

3. **Recommendations:**

(i) The group agreed that market valuation is the preferred concept for the measurement of direct investment equity, and that this concept needs to be maintained and stressed in the updated standards.

(ii) The group agreed that the international organizations (IMF and OECD) should provide more guidance and information on options for measuring market values, particularly for measuring the market value of equity in unlisted companies.

(iii) Several background papers were presented to the group, and these papers described numerous different methodologies for estimating the market values of direct investment equity:[1]

a. Actual prices at which recent transactions were conducted. These prices would almost always exist for listed companies (based on stock exchange quotations) and would sometimes exist for unlisted companies whose shares had recently traded.
b. Methods based on stock market indexes (see background documents provided by the United States and by Australia).
c. Methods that applied capitalization ratios (market value divided by book value) for listed companies to unlisted companies.
d. Methods that revalued just tangible assets of direct investment enterprises, including land and other property, plant, and equipment, and inventories (see background document provided by the United States).
e. Methods based on net asset values, including identified intangibles and goodwill, reflecting current period prices.[1]
f. Methods based on net asset values, but excluding goodwill, reflecting current period prices.
g. Methods based on the volume of own funds of the direct investment company, i.e. "Own Funds at Book Value" (see background documents provided by the ECB)[2]

[1] A description of these methods, including details on topics such as how to identify and value goodwill (item (iii)e), may be clarified in compilation guides or annexes to the standards rather than in the body of the updated standards themselves.

(iv) Some practical issues were raised about the continued existence of asymmetries due to differences in valuation methods and differences in accounting rules followed by different countries. It was believed that the extension of fair value accounting principles to additional balance sheet items by the organizations that establish accounting standards may narrow these differences over time.

4. Rejected Alternatives:

(i) The group also identified some methods that it considered to be unacceptable.

a. The group rejected the broad use of historic cost or acquisition price (same as in *BPM5*).
b. The group rejected accumulating balance of payments flows to estimate direct investment equity on an annual basis.

5. Questions for the IMF Committee on Balance of Payments (the Committee) and the OECD Workshop in International Investment Statistics (WIIS)

(i) Do the Committee and the WIIS agree that market valuation is the preferred concept for the measurement of direct investment equity, and that this concept needs to be maintained and stressed in the updated standards?

(ii) *Do the Committee and the WIIS agree that the use of historic cost/acquisition price, and the accumulation of flows over a long period of time, should not be acceptable methods for valuing direct investment equity? (See 4(i) above.)*

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[2] In addition to other components (paid-up capital, investment grants, shares premium accounts) the OFBV method incorporates cumulative reinvested earnings (including current-year results). It was reported that, in the future, in calculating OFBV, most assets of some companies will have to be written up or down at least once a year to reflect their fair or current values.

IMF Committee on Balance of Payments Statistics and OECD Workshop on International Investment Statistics

Direct Investment Technical Expert Group (DITEG)

ISSUE PAPER (DITEG) #1A

VALUATION OF DIRECT INVESTMENT EQUITY

Prepared by the International and Financial Accounts Branch
Australian Bureau of Statistics

May 2004

DIRECT INVESTMENT TECHNICAL EXPERT GROUP

ISSUES PAPER (DITEG) #1B: VALUATION OF DIRECT INVESTMENT EQUITY

From an Australian perspective there are no theoretical concerns with the principle of current market valuation in measuring direct investment equity flows and stocks. However, there is a need to more clearly specify that the principle of current market valuation is the standard. The Balance of Payments Manual (BPM), Compilation Guide and Textbook should then elaborate on the various practical methods to be used to approximate current market valuation, in order of preference. This would ensure that there is a single standard for valuation of direct investment equity, while recognising that different approaches would need to occur in practice. The main issue of concern to be resolved is whether the market valuation standard should be compromised because of practical compilation difficulties by accepting a dual standard (i.e. market price and book value) or the market valuation standard should be strengthened by providing clearer guidance to compilers on how best to approximate current market value.

I. Current Standards

2. The BPM5 and the OECD Benchmark Definition of Foreign Direct Investment both recommend that current market value be used for valuation of direct investment. The System of National Accounts 1993 also states that current market value should be used for direct investment equity. This is relatively straightforward to implement for transactions and for positions for listed companies where current share prices are available. It is more difficult to implement for valuation of positions generally, particularly in the case of unlisted companies.

3. Recognising this, a practical compromise is identified: using book value, with current market value approximated if historical cost or an interim revaluation is provided. The BPM5 Textbook goes further, recommending a net asset value approach (valued at current prices) where the current market value approach is not achievable.

II. Shortcomings with Current Treatment

4. The main shortcoming is that there is no single source that compilers can access that provides detailed guidance on the various methods to be used to approximate current market valuation, in order of preference. While the Compilation Guide (paragraphs 699 to 704) does provide some information on the preferred compilation methods, it is not comprehensive and more detailed guidance is required. A number of papers have previously been presented in various international fora that have focused on the differences that occur between varying practical approaches that attempt to approximate current market value but there does not appear to be a comprehensive assessment of the advantages and disadvantages associated with each method.

5. The adjustment process recommended in the practical compromises put forward generally require an understanding of the basis for reporting for each provider and robust

assumptions on which to convert the historical or interim valuation to current market value. If the assumptions are not robust, then the conversion process may be introducing more error than it is removing. The adjustment process also requires mechanisms and information with which to make the adjustments period after period. Not making the adjustment and accepting all data on face value can lead to increasing divergence from the current market value ideal as historical costs become more dated.

6. With current market value generally available for transactions (excepting cases of non-market transactions), the practical compromise for positions can cause discrepancies between consecutive measures of positions and the transactions between the two time periods. This can result in increasing gaps between a historical position (even if it has been brought forward using, for example, transactions under a perpetual inventory method) and a current measure of the position.

7. There needs to be an articulated process for making revisions to stocks when the need to do so is identified, for example, where a book value has been carried for some time and a new transaction makes it clear that the stock value is inaccurate.

8. As recognised in previous papers, the scope for differences allowed within the current practical compromise leads to difficulties in comparing counterparty data. Appropriate practical methods need to be identified, and the information requirements of the adjustment methods need to be kept in mind.

III. Practical Methods of Valuation

9. The supplementary table to this paper indicates that a significant number of countries were using the market value standard in 2001. The number is likely to be higher in 2004. This would indicate that, notwithstanding practical compilation difficulties, it would be possible for other countries to apply the current market value standard in the future.

10. Therefore, BPM should more clearly specify that the standard of valuation for transactions and stocks is current market price and then provide a comprehensive list of practical methods to be used to approximate current market valuation, in order of preference. For example, in the Australian context the following order of preference is used:

- Current market value, particularly for listed companies using the mid-point of the buy and sell for the close of the last trading day.
- Current market value of the global enterprise group, apportioned across economic territories using relevant indicators (e.g. sales revenue).
- Recent transaction price, where the transaction is considered to be a market transaction, and guidelines on the recency of the transaction are to be determined (e.g. within one year).
- Net asset value (using current market values), including identified intangibles and goodwill.
- Net asset value (using current market values), excluding identified intangibles and

goodwill.
Historic (or interim) cost.

11. In cases where different valuation methods are used for transactions and stocks, some guidance would also need to be provided in adjusting stock positions when current market value transactions occur. Similarly, methods that reduce counterparty country discrepancies should be elaborated. In the latter case, one option may be to use counterparty data to measure outward direct investment in equity on the assumption that inward direct investment can be more accurately measured by compilers. These methods could then be explained in more detail in the Compilation Guide and Textbook.

IV. Points for Discussion

12. DITEG members are invited to consider:

The need for the market value principle to be more clearly articulated as the standard.
The need to provide clearer guidance on the practical methods to be used to approximate current market valuation, in order of preference.

V. Supplementary Information

Table 40 of the report on the 2001 SIMSDI identifies the valuation method used by 61 reporting countries as follows:

			n
Inward position data	Market value	Equity Capital	21
		Other Capital	19
	Book value	Equity Capital	36
		Other Capital	36
Outward position data	Market value	Equity Capital	19
		Other Capital	18
	Book value	Equity Capital	34
		Other Capital	33

Further information on the exact nature of the book value used needs to be sourced from individual countries' metadata.

References

System of National Accounts, 1993.
Paragraphs 14.48-49.

Balance of Payment Manual, fifth edition, *(BPM5)*. IMF, 1993
Paragraphs 51, 107-108, 376-377 and 467.

Balance of Payments Compilation Guide, IMF, 1995
Paragraphs 699-704.

Balance of Payments Textbook, IMF, 1996
Paragraphs 534-540, and 716-720.

Benchmark Definition of Foreign Direct Investment (Benchmark Definition), third edition, OECD, 1996
Paragraphs 20-26.

IMF COMMITTEE ON BALANCE OF PAYMENTS STATISTICS AND OECD WORKSHOP ON INTERNATIONAL INVESTMENT STATISTICS

DIRECT INVESTMENT TECHNICAL EXPERT GROUP (DITEG)

ISSUE PAPER 1A

VALUATION OF DIRECT INVESTMENT EQUITY STOCKS

Prepared by the European Central Bank

April 2004

A. Introduction

1. In 2000 the ECB Working Group on Balance of Payments Statistics and External Reserves carried out some ad-hoc investigations which led to the conclusion that the wide variety of valuation criteria being applied by the European Union Member States to compile foreign direct investment (FDI) stock statistics accounted for a fairly significant volume of bilateral asymmetries.[3] Similar arguments are likely applicable world-wide too. Indeed, this situation may to a large extent explain the level of global imbalances in the area of FDI stock statistics.

2. The lack of clear guidance from international statistical standards and the practical difficulties to apply the main recommendations may explain the current state of play. Both the IMF Balance of Payments Manual (BPM5) and the OECD Benchmark Definition of Foreign Direct Investment (B-FDI) promote the use of market prices as the basis of valuation for both transactions and stocks. [4] International statistical standards for national accounts also prescribe the use of market prices for the valuation of assets when they exist. [5]

3. However, these standards also recognise that the market price measurement cannot always be implemented because of the absence of regular revaluations.[6] Therefore, in practice book values / balance sheets are generally utilised to determine the value of direct investment stocks. [7]

4. Unfortunately, in the absence of observable market prices no single concept of "book value" is stated in the manuals. Actually, both BPM5 and B-FDI recognise that this value might be assigned on the basis of (i) original (acquisition) cost; (ii) a more recent revaluation; or (iii) current value, in the latter case, not specifying how such a "current value" should be calculated.

5. This variety of methods leaves ample room for manoeuvre to compilers, thus paving the way for dissimilar valuation methods applied across countries. One of the most important factors originating such asymmetries lies on the accessibility of information for

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[3] See background document "*Valuation of direct investment equity stocks: outcome of the questionnaire and follow-up proposals*".

[4] BPM5, paragraphs 91 and 107; and BMD, paragraph 20.

[5] ESA95, 1.51, 1.53, 7.25, etc.; SNA93, 3.71

[6] BPM5, paragraph 108

[7] BMD, paragraph 21 and 22.

inward and outward FDI stocks. While in the case of inward FDI stocks, compilers normally have access to fairly detailed balance-sheet information from the resident direct investment companies, in the case of outward FDI stocks compilers most often collect only limited evidence provided by the resident direct investors.

6. Keeping for granted that the update of BPM5 as well as the new edition of the B-FDI should help reduce the level of global imbalances between inward and outward FDI, the promotion of asymmetry-free methodologies could be the guiding principle to examine the issues to be considered in this paper, in particular, the valuation criteria that should be applied to listed as well as to unlisted FDI companies.

B. Listed companies

7. As already mentioned, market prices have been established as the basic standard valuation criterion for all transactions and stocks. In the case of listed companies, this standard seems to ensure a symmetric measurement from the perspective of both direct investor and direct investment enterprise. Stock-exchange prices should be a valuation criterion equally accessible to compilers of inward and outward FDI.

8. On practical grounds, it should be borne in mind that compilers usually have to face more difficulties to access market quotation information in the case of outward FDI. However, it can hardly be argued that this may justify the existence of asymmetries.

9. Therefore, it is recommended that marked-to-market prices continue being the standard criterion for the valuation of FDI listed companies (for both inward and outward FDI).

C. Unlisted companies

10. Starting purely on conceptual grounds, it might be questionable what the price of an unlisted company may be at any moment in time in the absence of a market quotation. Most probably, the final price of an eventual sale will most likely depend on a number of surrounding and strategic circumstances which can hardly be objectively valued by b.o.p./i.i.p. compilers on a continuous basis.

11. Assuming the non-existence of a market price for this type of companies (leaving aside the specific period in which these companies may have been purchased/sold[8]), it seems necessary to

[8] Purchases and sales of these companies' shares do not commonly and frequently happen due to the very nature of such equity securities.

promote an alternative and objective valuation criterion, which should leave no room for asymmetries.

12. Approximations to a market valuation for these types of companies frequently much depend on the volume of information available to compilers and on the benchmark indexes selected to revalue past figures. For instance, US statistics are revalued on the basis of a current-cost method, which consists of revaluing tangible assets -inventory stocks, land, and plant and equipment- by means of special adjustment factors (for inventories), general price indexes (for land), and a perpetual inventory model (for plant and equipment)[9].

13. It is not surprising that the results of the diverse estimates performed by different b.o.p./i.i.p. compilers may turn out to be substantially different depending on whether they are seen from the perspective of the direct investor or from that of the direct investment company, i.e. for inward FDI or outward FDI. In the case of resident direct investment companies, compilers usually have access to a much wider range of information on detailed components of the companies' balance sheet. Conversely, information provided by resident direct investors is usually the only channel through which the compiler may have access to the balance sheet information of the (non-resident) direct investment company. Such information may prove insufficient to allow a final result consistent with that resulting from the analysis performed by the compiler where the direct investment companies resides. In short, such criteria may most likely end up in an increasing volume of global imbalances between inward and outward FDI.

14. Considering both the conceptual arguments as well as the practical difficulties mentioned so far, an alternative measure is proposed in this paper. With a view to obtaining an objective standard that could be equally applicable to both inward and outward FDI, the proposal is to use a single definition of "own funds at book value" (OFBV) for the valuation of FDI equity stocks of non-listed companies.

15. The components of such a single definition of OFBV would be as follows:[10]

i) Nominal (paid-up) capital excluding own shares

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9 See background document "*Valuing the Direct Investment Position in U.S. Economic Accounts*", presented in the October 2002 meeting of the IMF Bop Committee.

10 For a more technical description of the individual components of the definition of OFBV, see background document "*Valuation of FDI stocks remaining conceptual issues of the 'Own funds at book value' method*".

ii) All types of reserves including shares premium accounts and investment grants

iii) Non-distributed profits net of losses (including results for the current year).

16. The main advantage of this recommendation is that it leaves no room for interpretation or for dissimilar assessments by compilers of inward and outward FDI. The OFBV definition constitutes a single and objective measure to both parties. Additionally, no discretion is allowed on the way to measure statistics (or, in other words, on the way to approximate market values when such market prices do not exist).

17. Obviously, in the case of outward FDI more difficulties exist to have access to such information. However, in comparison with other methods the practicality of the solution proposed lies on the fact that the information required from the balance sheet of the direct investment company is restricted to a limited number of (liabilities) accounts representing the direct investment company's own funds.

18. This recommendation could be seen as a prudent approach, more in line with accounting principles than with general statistical standards. But still, the practical advantages of a solution which is also conceptually defendable may well outweigh any potential disadvantage. As mentioned above, the applicability of a market-value standard to non-listed companies poses substantial difficulties both on conceptual and, especially, on practical grounds.

19. Should this recommendation for the valuation of the official i.i.p. series be accepted, it is also recognised that, with a view to further preserving the analytical value of FDI statistics, users may also request to be provided with additional series, namely with a pure marked-to-market valuation for all types of direct investment companies.

20. Bearing in mind all the shortcomings previously mentioned (namely to which extent could any estimate reflect the true value of the company in the absence of any market quotation[11]), such a request from users could be considered in the framework of other foreseeable requests for more analytically meaningful FDI statistics, e.g. based on the geographical allocation of the Ultimate Beneficial Owner (rather than on that of the first-known counterpart), on the sector of activity of the last FDI enterprise along the chain of ownership (instead of that of the immediate counterpart), etc. All these valuable requests could be satisfied by means of satellite FDI accounts or memorandum items, in which any potential asymmetries would be less problematic.

11 Could any estimate ensure that, should the investor decide to sell the company, he would get such an "estimated" price?

21. In the specific case of the valuation of FDI in unlisted companies on a marked-to-market basis, in addition to the US "current-cost" methodology, one possible alternative could be the projection of a ratio market value/book value observed for listed companies to unlisted FDI enterprises. This would require collecting two different valuations for FDI in listed companies, namely market values and book values. [12] [13] In any case, any such projections would not be incorporated to the official i.i.p. figures but would rather be supplied as supplementary information.

D. Summary of the proposals

22. Member of the DITEG are invited to consider the following proposals:

(i) Any valuation proposals for the official i.i.p. FDI series should ensure symmetrical recording of inward and outward FDI stocks and leave no room for dissimilar interpretations.

(ii) The global standard valuation criterion should continue being "marked-to-market" prices, where relevant.

(iii) Due to the non-existence of market prices for unlisted companies, a symmetrical concept should be promoted as the only way to avoid global imbalances.

(iv) The proposal is to use a single definition of "book values" as the standard valuation criterion for unlisted FDI companies. The notion of "book values" - in opposition to "historical/acquisition price" or other accounting valuation methods - should be exclusively confined to a standardised definition of the direct investment company's "own funds at book value";

[12] It might not be necessary to collect both values from reporters through the inclusion of additional questions in the FDI surveys. Market prices may be collected from stock-exchange information and from the media alternatively (though the latter option may be very resource consuming). More information on country practices and solutions may be obtained from the *Final report of the Task Force on Foreign Direct Investment*.

[13] Obtaining detailed information crossed by country and by sector of activity on this basis might be more problematic due to the need to ensure that a sufficiently representative population of listed FDI companies exist for each counterpart country and each sector of activity.

(v) The applicability of the previous proposals implies that separate FDI stock statistics should be compiled for listed and unlisted companies. An additional split could be considered in the IIP standard components of the forthcoming version of the manual.

(vi) Finally, the production of additional information through satellite accounts/memorandum items for analytical purposes should be promoted so as to also provide users with (partially estimated) marked-to-market stocks for all types of direct investment companies. To this aim, the collection of FDI stocks in listed companies on the basis of both market values and book values could help supply valuable information that could also be used to estimate marked-to-market FDI stocks in unlisted companies.

E. Background documents[14]

- Task Force on Foreign Direct Investment "*Final report of the Task Force on Foreign Direct Investment (chapter 3)*", published on the ECB website (http://www.ecb.int/pub/pdf/foreigndirectinvestment200403en.pdf)

- European Central Bank "*Valuation of FDI stocks remaining conceptual issues of the 'Own funds at book value' method*", [July 2001], available on the BEA's DITEG-dedicated website.

- European Central Bank "*Valuation of direct investment equity stocks: outcome of the questionnaire and follow-up proposals*", [November 2000], available on the BEA's DITEG-dedicated website.

- US Bureau of Economic Analysis "*Valuing the Direct Investment Position in U.S. Economic Accounts*", presented in the October 2002 IMF Bop Committee meeting.

14 Background documents are available on the BEA's DITEG-dedicated website

IMF Committee on Balance of Payments Statistics and
OECD Workshop on International Investment Statistics

DIRECT INVESTMENT TECHNICAL EXPERT GROUP

Issue Paper 1A
Valuing Direct Investment Equity

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May 2004

Introduction

1. Under existing international standards including *BPM5* and the OECD *Benchmark Definition of Direct Investment*, direct investment equity positions should be estimated in current period prices rather than at book values or historical cost. These and other standards stress that current period prices are the preferred valuation method on conceptual grounds. However, existing international standards do not provide much guidance to compilers on the detailed methodology(ies) that might be used to revalue historical cost financial statements into prices of the current period.

2. Book values should be avoided in the i.i.p., because they have little meaning. Similar companies may possess substantially different book values if, for example, one company is newer than another and, therefore, its assets and liabilities are valued in prices of more recent periods. Similar companies may also possess different book values if one was recently fully acquired by another company and the other was not. This is because each asset and liability of the acquired company may be revalued to reflect its purchaser's estimate of the market value of that asset or liability at the time of acquisition, whereas, in the second case, no revaluations from prior historical cost would be made.

3. It is clear that substantial bilateral asymmetries may exist and will persist until international standard setters provide greater guidance on recommended methods for performing revaluations. However, it should be recognized that, even with detailed guidance, different compilers will assuredly develop somewhat different estimates of current period values, thereby resulting in bilateral asymmetries. [15] This is not a unique situation for compilers. In fact, there are many examples in international economic accounts where the following of the recommended international standards results in bilateral asymmetries.[2]

4. Thus, the problem to address is not necessarily that bilateral asymmetries may exist or endure, but

[15] Even the use of historical cost data will result in bilateral asymmetries in position estimates, because accounting principles are not uniform worldwide.

[2] Examples of cases where bilateral asymmetries result from use of current international standards are: For the i.i.p. - loans (market value on creditor side versus nominal values on the debtor side); in the financial account - the issuer basis for recording flows on portfolio investment securities (transactions between two foreign transactors will result in each of them recording flows with the issuer that the issuer does not record); in the current account - merchanting services.

rather that countries now may be developing substantially different estimates of direct investment positions solely or primarily because existing international statistical standards do not provide sufficient guidance on this important topic.

5. Direct investment equity positions typically involve illiquid ownership interests in companies that may possess many unique attributes – such as customer base, management, and ownership of intangible assets – whose values in the current period are difficult to determine. As a result, any method of converting book value to market value will be inexact, especially at detailed estimation levels (such as at a country-by-industry cell level), because the price that might be paid for equity in an unlisted company at any given moment in time cannot be known with certainty.

6. The pros and cons of selected alternative valuation methods are briefly discussed below.

Selected alternative valuation methods

a. Historical cost:

Pros – relatively easy to implement; will promote bilateral symmetry for individual investments in the case where different countries follow the same or similar sets of accounting rules.

Cons - Not consistent with market valuation principles that are preferred for valuing both flows and stocks.

b. Using stock price indexes to revalue owners' equity ("stock market value method")

Pros – consistent with market value principles that are preferred for valuing both flows and stocks; relatively easy to implement (but not as easy to implement as use of book values or historical cost); revalues an entire company rather than just tangible assets.

Cons - may result in volatile year-to-year changes in direct investment equity positions that are not indicative of true changes in the value of these investments; would result in bilateral discrepancies in the case where different countries follow similar accounting rules but different procedures for revaluing (for example, the choice of which stock market index to use may not always be very clear); would result in bilateral discrepancies if original (historical cost) data were collected by the host and investing countries based on inconsistent accounting rules.

c. Using a model that revalues tangible assets, including real estate, inventories, and net stocks of plant and equipment ("current cost method")

Pros – consistent with market value principles that are preferred for valuing both flows and stocks; consistent with methods that countries could use in calculating capital consumption adjustments to direct investment earnings; would result in relatively stable valuations that may more accurately represent sustainable, fundamental values of investments (whereas stock market prices may react to temporary supply-demand imbalances or other factors that are not applicable to valuations of direct investment positions).

Cons – use of this method requires substantial balance sheet information for both inward and outward direct investment enterprises, and most countries now collect only the former, and could be expected to have only the former in the near-term future; as now followed by the United States, only tangible assets are revalued with other assets remaining at book values.

Current U.S. practice

7. In U.S. statistics, historical cost is used to present direct investment equity positions at all subglobal levels. That is, investment in both listed and unlisted companies is shown at book value at subglobal levels, including individual countries and/or industries. These historical cost estimates are not presented in the BOP or i.i.p. accounts but instead are presented in supplemental tabulations of data.

8. At the global level, BEA revalues the historical cost data using both the stock market index method and the current cost method, and presents these estimates in the BOP and i.i.p. accounts. It incorporates a current-cost adjustment to direct investment income that is derived from the current cost method. (The stock market index and current cost methods are described in detail in the background document, "Valuing the Direct Investment Position in U.S. Economic Accounts.")

Recommendations

9. My recommendations are:

a. At the global level, I support existing international standards that recommend presenting direct investment positions in prices of the current period. BEA presents global-level estimates both on a current-cost and stock market value basis, but it emphasizes the current-cost method. (This is because the estimates prepared using the current-cost method are comparable with BEA's current-cost estimates of total U.S. reproducible tangible wealth and with the Federal Reserve Board's estimates of domestic net worth. Furthermore, BEA's calculation of direct investment income includes a current-cost adjustment to depreciation that is derived from the current-cost method.) However, because most countries do not currently collect data on direct investment abroad that would permit revaluing using the current cost approach, I recommend that the revaluation of historical cost direct investment equity based on stock market indexes also be acceptable practice.

b. Estimates of current period values are likely to less dependable at subglobal levels than at the global level, partly because estimation errors tend to offset to a larger extent at higher levels of aggregation. BEA presents direct investment equity positions on an historical cost basis at all subglobal levels, and I propose that this be acceptable practice.

c. International standard setters should provide more guidance in regard to the stock market indexes that countries are encouraged to use, in revaluing book values to market values. Specifically, use of individual country indexes for very small countries should be discouraged over use of broader indexes, because small country indexes could be dominated by the fortunes (or misfortunes) of a very few large companies that are not representative of direct investment affiliates generally.

d. International standard setters should also provide as much guidance as practical concerning other details of the revaluation methodology. (The previously cited background document, "Valuing the Direct Investment Position in U.S. Economic Accounts," provides detailed information that could be used in responding to this recommendation.)