ANNEX 5

Valuation of Unlisted Equity

1. Methods recommended by the *Benchmark Definition*

1.1. Overview

516. The underlying principle for the valuation of equity is the market value of that equity. Listing in an organised market provides a good basis for valuing listed equity. However it can be more difficult to determine a market value for unlisted equity and illiquid listed equity. In any case, if there has been a material change in an enterprise's financial position since the date to which the valuation applies (but before the reference date), an adjustment may need to be made. Examples of such material events include an unexpected decision in a lawsuit, credit downgrade or upgrade, major new invention or mineral find, or bankruptcy.

517. This manual recognises six methods for approximating market value for unlisted equity:

- Recent transaction price.
- Own funds at book value (OFBV).
- Net asset value (NAV).
  - ❖ Including goodwill and intangibles.
  - ❖ Excluding goodwill and intangibles.
- Market capitalization method.
- Present value.
- Apportioning global value.

518. The choice of method depends primarily on having information available to support the application of the method. In practice, one or more of these methods could be ruled out because of a lack of information available to support the application of the method. Among the methods that could be implemented, the primary consideration should be how well the method approximates market value. A further consideration is the stringency of the requirement for symmetric recording by debtors and creditors.

519. Each method is described in more detail below, giving information on what is needed to apply the method and caveats on its use.

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1.2. Recent transaction price

520. Unlisted equity may trade from time to time, and recent prices at which the equity exchanged hands may be used. The transaction price must represent an 'arm's length' price between an independent buyer and seller, where neither party is under compulsion or duress to engage in the transaction. More recent transactions are preferable, and it is desirable that the transaction should have occurred within the past year. If the most recent transaction is more than one year old, compilers may wish to consider an alternate method.

Usage: A recent, arm's length transaction price is required.

Caveats: Not often available due to the low frequency of trades in unlisted equity. When a transaction price has been used in the past to value the equity, but the information is becoming dated, a strategy is required to splice the valuation with a valuation calculated from another method.

1.3. Own funds at book value

521. Own funds at book value (OFBV) involves valuing an enterprise at the value appearing in its books following International Accounting Standards. OFBV is based on the books of the direct investment enterprise and can be seen on its balance sheet as shareholder's equity. The definition of OFBV contains paid-up capital, all types of reserves and net value of non distributed profits and losses (including result for the current year). International Accounting Standards require most assets to be revalued on, at least, an annual basis. A capitalisation ratio may be calculated and applied (with or without liquidity adjustments) if sufficient information is available.

Usage: This method may be used where books are kept on the basis of International Accounting Standards, and access is available to the books of the direct investment enterprise.

Caveats: International Accounting Standards prohibit the recognition of certain intangible assets (*e.g.* brands, mastheads, publishing titles, customer lists). Goodwill can only be bought; it cannot be internally generated. Assets in some asset classes (loans, assets held to maturity and non-trading liabilities) may be valued at nominal or historic cost. These will all cause distortion from the market valuation. Calculation of capitalisation ratios requires a reasonably broad stock market with high trading volume, but application of a well-based capitalisation ratio may dampen the impact of the other caveats.

1.4. Net asset value (NAV), including goodwill and identified intangibles

522. Net asset value (NAV) is total assets at current/market value less total liabilities (excluding equity) at market value. Under this valuation method, all financial and non-financial assets and liabilities of the enterprise, including intangible assets, are stated in terms of current period prices. The valuations should be based on very recent appraisals – certainly they must be within the prior year. Appraisals may be conducted by knowledgeable management or directors of the firm, and/or provided by independent appraisers. A capitalisation ratio may be calculated and applied (with or without liquidity adjustments) if sufficient information is available (see market capitalisation method).

Usage: At a minimum, this method requires an asset and liability valuation to be undertaken by the enterprise.

Caveats: NAV provided by an enterprise may exclude some classes of assets (*e.g.*, intangibles), while other assets may be valued using a method that is a distortion from the current market value (*e.g.*, historic cost or nominal value). To the extent that valuations are poor or assets are excluded from the NAV, this method can be a poor approximation of market value and other methods may be more appropriate. Calculation of capitalisation ratios requires a reasonably broad stock market with high trading volume.

1.5. Net asset value (NAV), excluding goodwill and identified intangibles

523. Under this valuation method, all financial and non-financial assets and liabilities of the enterprise, excluding intangible assets, are stated in terms of current period prices. The valuations should be based on very recent appraisals – certainly they must be within the prior year. Appraisals may be conducted by knowledgeable management or directors of the firm, and/or provided by independent appraisers.

524. Note that the difference between this method, and the one immediately above, is that this method excludes, whereas the earlier discussed method includes, goodwill and identified intangibles. However, it is often very difficult to estimate the value of these assets. Compilers who can develop relatively accurate estimates of unquoted equity that include goodwill and identified intangibles are encouraged to do so. Doing so promotes consistency between the estimates for quoted shares (these shares trade at prices that reflect the value of intangible assets) and the estimates for unquoted shares.

Usage: Compilers who cannot accurately provide estimates that include goodwill and identified intangibles may use this method.

Caveat: Goodwill and intangible assets may account for much or most of the current value of many direct investment enterprises. This valuation might not be representative of market value.

1.6. Market capitalisation method

525. This method proposes the use of a capitalisation ratio as the ratio of the stock exchange market capitalisation to “own funds at book value” calculated for the same set of listed companies. In constructing the capitalisation ratio under this method, stock market data for an individual country may be used when the stock market in that country is broad and trading volume is relatively high, and broad regional indexes should be used when these circumstances do not exist. The estimate of market values of direct investment equity in unlisted companies is calculated by multiplying own funds at book value (owners’ equity) of unlisted direct investment enterprises by the capitalization ratio [that is, by the stock exchange market capitalisation (numerator) to the own funds at book value of listed companies (denominator)]. Capitalisation ratios developed from broad stock exchange data should be adjusted, or individual ratios should be developed for separate industry groups, if the industries represented in the broad stock exchange for a given economy are not representative of the industry mix of direct investment enterprises located in the same economy. Book values that are based on another set of accounting standards – such as US generally accepted accounting principles – that contain major attributes of International Accounting Standards (inclusion of cumulative reinvested earnings; revaluation of financial instruments in current period prices; and inclusion of cumulative depreciation of plant and equipment, including write-offs of worthless assets) may also be used with the capitalisation ratio method.

Usage: Useful exercise if the overall enterprises listed in the stock exchange are good representatives of the national industry.

Caveats: Some very large local foreign direct investment unlisted enterprises might represent almost the entire industry. Another strategy is then required to better reflect the market valuation of that enterprise. Apart from this, some other considerations could be seen as caveats of this method, for example, some specialists question the assumption that quoted and non-quoted companies should use the same ratio to own funds. Being quoted in a public market means that a company has to comply with more strict rules, provide more detail information to market participants, etc. Moreover a liquid asset (quoted shares) may have a higher value for the fact of being liquid.

1.7. Present value / price to earnings ratio

526. The value of unlisted equity can be estimated as the present value of the forecast stream of future earnings. This method has at its heart the issue of choosing an appropriate discount rate, which can be inferred from the implicit discount rate obtained for listed equity, and forecasting the future profits. At its simplest, this method can be approximated by applying a market or industry price-to-earnings ratio to the (smoothed) recent past earnings of the unlisted enterprise to calculate a price. In this case, the recent past earnings are used as the basis to forecast the future earnings, and the market price-to-earnings ratio implies the discount rate.

Usage: This method is most appropriate where there is a paucity of balance sheet information but earnings data are more readily available. It also requires an appropriate discount rate or reasonably broad-based price-to-earnings ratio to be calculated.

Caveats: Earnings for an individual enterprise can have a highly irregular component and can be negative (leading to negative equity valuations). As a result, if earnings information over a longer period of time is available, the earnings of the enterprise should be smoothed. If earnings for only one period are available or discount rates or price-to-earnings ratios are based on a narrow market, other methods are preferable.

1.8. Apportioning global value

527. If the equity in a particular direct investment enterprise is unlisted, but the enterprise belongs to a global enterprise group whose equity is listed, the current market value of the global enterprise group can be calculated and apportioned to the operations in each economic territory. The current market value of the global enterprise group should be based on its market price on the exchange on which it is traded, and the apportionment of this value to each economic territory should be based on an appropriate indicator (*e.g.* sales, net income, assets or employment).

Usage: Current market capitalisation of the global enterprise group is required. As such, this method may only be feasible for outward investment. An indicator that is well-correlated with market value and readily available is also necessary. This is more likely to occur in enterprise groups that are horizontally integrated.

Caveats: Weaknesses in the correlation between market value of equity and the variable used for apportioning the global value will lead to distortions – sensitivity to the distortion is greatest when the proportion allocated to an economic territory is

small or when different activities take place in different economic territories. In this case, other methods may be preferable. The use for outward investment only may lead to asymmetries in bilateral comparisons.

2. Methods not recommended by the *Benchmark Definition*

2.1. Overview

528. As stated in Chapter 5, there are other methods of valuing equity which are not recommended by this *Benchmark Definition*, however they may be the only methods available to the compiler from the information available to them. These methods include:

- Historic or acquisition cost.
- Accumulation of foreign direct investment equity capital flows.
- Stock market price index applied to accumulated direct investment equity capital flows.
- Book value.

These are briefly described below.

2.2. Historic or acquisition cost

529. Historic cost as defined here represents the original cost of purchasing a direct investment enterprise, and acquisition cost represents an enterprise's original cost for acquiring major assets and liabilities. These costs are usually based on the books of the investor, and may not reflect cumulative reinvested earnings, current period charges for depreciation, foreign currency exchange rate changes, or the impact of other economic events that may have resulted in substantial changes in the value of direct investment enterprises since their initial establishment or acquisition.

2.3. Accumulation of foreign direct investment equity capital flows

530. Direct investment equity positions could be compiled by accumulating (or summing) direct investment equity capital flows, and perhaps adjusting this amount for changes in foreign currency exchange rates. This method is not recommended for use in the main accounts. It does not take account of cumulative reinvested earnings, depreciation on fixed assets, direct investment enterprise holding gains or losses, and other factors that often will have a substantial impact on current period values of direct investment equity.

2.4. Stock market price index applied to accumulated direct investment equity capital flows

531. Direct investment equity positions could be compiled by accumulating direct investment equity capital flows, adjusted as appropriate for changes in foreign currency exchange rates, and then applying changes in a related stock market price index to this amount. Under this method, changes in stock market indexes for large countries or broad regions would be applied to the direct investment equity position. Country indexes would be used when markets in the individual country are broad and trading volume is relatively high, and broad regional indexes would be used when these circumstances do not exist.

532. This method is similar to "accumulation of foreign direct investment equity capital flows", except that it includes an adjustment for changes in stock market price indexes. This method is not recommended for use in the main accounts. It does not take account of depreciation of fixed assets, direct investment enterprise holding gains or losses, and other

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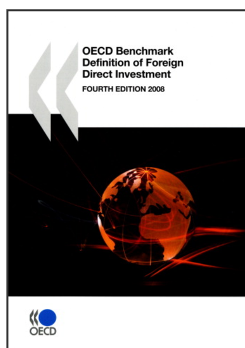
factors that often will have a substantial impact on current period values of direct investment equity. (To some extent, this method does take account of cumulative reinvested earnings, because a stock market price index will tend to rise due to reinvestment of earnings by companies included in the index. However, the earnings and reinvested earnings of companies in the index may be poorly correlated with the earnings and reinvested earnings of direct investment enterprises.)

2.5. Book value

533. Book value is a term that broadly encompasses many different accounting methods. It represents the values that appear on someone's books. It could represent the values on the books of direct investors or on the books of direct investment enterprises. In fact, in common usage, the term may encompass any of the valuation methods described in this section, whether or not recommended for use in the main accounts.

534. For countries that begin their valuation process via the collection of book value information, the *Benchmark Definition* recommends that the books of the direct investment enterprise serve as the starting point. International comparability of direct investment earnings and direct investment positions is only possible if both the investing and host countries use the same set of books as their starting point for deriving estimates of market values.

535. The books of the direct investment enterprise are usually more comprehensive than those of the direct investor. This is because, under tax and financial accounting rules followed by most countries, the books of the direct investment enterprise will typically reflect current period earnings and reinvested earnings. In contrast, the books of direct investors may not reflect the current period earnings or reinvested earnings of their direct investment enterprises, particularly in the case where ownership interests are less than 20% (these investments are frequently carried at cost on the investor's books).



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