

ALLOCATION OF SUBSIDY BENEFITS OVER TIME

Communication from the United States

The following communication, dated 8 April 2004, is being circulated at the request of the Delegation of the United States.¹

In our general subsidies paper, we raised the issue of when and how to allocate subsidy benefits over time.² This paper does not address the issue of *when* subsidy benefits should be allocated over time but rather provides an overview of the issues that arise in determining *how* to allocate subsidy benefits over time.

It is generally accepted by Members that have conducted countervailing duty investigations that the benefit from certain types of subsidies should be allocated over time, rather than attributed or “expensed” entirely to the year of receipt.³ The principle that certain subsidies should be allocated over time has also been recognized, implicitly, by the Appellate Body⁴ and, explicitly, by the Informal Group of Experts.⁵ Although the principle is widely recognized and accepted, the Agreement on Subsidies and Countervailing Measures does not provide for a specific methodology by which to allocate subsidy benefits over time. Because different methodologies can result in significant differences in the subsidy benefit attributable to a particular year, it is important for the Rules Negotiating Group to clarify and improve the rules in this area.

This paper is divided into three parts. The first part covers some basic issues related to the allocation of benefits over time. The second part describes the particular allocation formula used by the United States. The last section discusses the “lead and bismuth carbon steel” GATT panel report, which examined the allocation issue, generally, and the US formula, specifically.

¹ The Delegation of the United States has requested that this paper, which was submitted to the Rules Negotiating Group as an informal document (JOB(04)/45), also be circulated as a formal document.

² TN/RL/W/78, *Subsidies Disciplines Requiring Clarification and Improvement*, 19 March 2003, p. 6.

³ For example, a \$20 million grant will benefit a company for many years. Therefore, it is reasonable to allocate the subsidy benefit over a similar time period.

⁴ See, for example, WT/DS212/AB/R, *United States – Countervailing Measures Concerning Certain Products From the European Communities*, 9 December 2002; WT/DS138/AB/R, *United States – Imposition of Countervailing Duties on Certain Hot-Rolled Lead and Bismuth Carbon Steel Products*, 10 May 2000.

⁵ The Informal Group of Experts (IGE) was created by the WTO Subsidies Committee pursuant to footnote 62 of the Subsidies Agreement. The cite for the IGE’s report is: G/SCM/W/415/Rev.2, 15 May 1998, p. 3.

Basic Principles

To begin, it is helpful to visualize the various allocation issues by picturing the stream of allocated benefits as a line on a graph. The x-axis of the graph represents each allocation year and the y-axis represents the corresponding annual allocated benefits. Any method of allocated benefits over time must deal with three issues: the shape of the benefit stream, the length of the benefit stream and the discount rate.

The shape of the benefit stream, or the slope of the line on the graph referred to above, can be flat, upward sloping or downward sloping. If the line is flat, the assumption is that the subsidy recipient is receiving benefits over time in equal increments. If the line is upward sloping, the assumption is that the recipient receives greater benefits in the later years of the allocation period. If the line is downward sloping, the level of benefits is assumed to be declining over time. Different arguments can be made as to what slope the line should take. The US model assumes that the subsidy recipient receives greater benefits in the early years and thus has a downward sloping line.

The length of the benefit stream depends on the period over which benefits are to be allocated. The allocation period used by the United States is the average useful life of assets. This issue has already been raised in the Group.⁶ However, this is a distinct issue and will not be discussed further in this paper.

The final issue to resolve when allocating the benefits over time is the selection of the discount rate. The effect of choosing a discount rate is to set the height of the flat benefit stream or the slope of the slanted stream of benefits. Once it is accepted that the benefit from a subsidy should be allocated over time, use of a discount rate is necessary to take into account the time value of money.

As is generally accepted, the real value of \$1,000 received today is greater than the value of \$1,000 received one year or five years from today, even though the nominal amount (or face value) would be the same. Once a time element is introduced into any measurement of value, nominal values must be converted into real (i.e. present) values for such a measurement to be meaningful.

Use of the discount rate ensures that the net present value of the benefits spread over time are equal to the subsidy provided in the initial year. The result is that the real benefit provided by the original grant is determined, in constant grant-year dollars, regardless of the period over which the benefit is allocated.

US Grant Allocation Formula

The formula used by the United States to allocate the benefit from a grant is given below. It is known as the declining balance formula because the allocated benefits are highest in the first year and decline over the allocation period. The discount rate used by the United States is the subsidy recipient's long-term borrowing rate.

⁶ TN/RL/W/19, *Countervailing Measures: Illustrative Major Issues*, 7 October 2002.

$$A_k = \frac{y/n + [y - (y/n)(k-1)]d}{1+d}$$

Where:

A_k	=	the amount countervailed in year k
y	=	the face value of the grant
n	=	the average useful life of the assets in the industry being investigated
d	=	the discount rate, and
k	=	the year of allocation, where the year of receipt = 1 (If the grant was given in 1990 and $n = 5$, we would allocate a benefit from 1990 through 1994.)

Although seemingly complex, the formula is relatively easy to understand if it is broken into three parts, where:

y/n	=	the annual nominal benefit
$[y - (y/n)(k-1)]d$	=	the interest on the declining balance of the face value of the grant (as k increases, y decreases by the annual nominal allotment (y/n))
$1 + d$	=	the factor that discounts the cash flow back to day one of the year of allocation

At this point, an example would be helpful. Assume the benefit will be allocated over five years ($n = 5$). In year one, $(k - 1)$ equals zero. Therefore, multiplying (y/n) by $(k - 1)$ equals zero. The equation then becomes:

$$\text{Year 1} \quad \frac{y/n + (y)(d)}{1 + d}$$

Numerator The numerator can be viewed as consisting of a principal and interest component, where y/n is "principal" allocated in year one added to $(y)(d)$, which is the "interest" on the principal in that year. To earn interest, time has to be a component. On day one, the benefit is y/n and on day 364 of year one, the benefit is $y/n + (y)(d)$

Denominator The function of the denominator is to bring the benefit back to day one dollars. In other words, it discounts the benefit on the 364th day back to day one of the year to which you are allocating.

In the second year, k equals 2 and $(k - 1)$ equals 1. The equation then becomes:

$$\text{Year 2} \quad \frac{y/n + [y - (y/n)]d}{1 + d}$$

Numerator The numerator still consists of a principal and interest component, where y/n is the nominal amount of the benefit allocated in year two added to the interest earned on the outstanding principal in that year. Since we have already allocated one portion of

the principal in year one, there is no interest component on that portion in year two. So we first subtract y/n from the face value of the grant y before we derive the interest. Once again, to earn interest, time has to be a component. Therefore, on day one of year two, the benefit is still y/n and on day 364 of year two the benefit is $y/n + [y - (y/n)]d$.

Denominator As in year one, the function of the denominator is to bring the benefit back to year two, day one's dollar terms. In other words, it discounts the benefit on the 364th day of year two back to day one of year two.

In years three, four and five the annual allotted benefit amount, y/n , stays the same. The interest component, $[y - (y/n)(k - 1)]d$, declines as portions of the benefit allocated to previous years are taken out. The discounting factor, $(1 + d)$, discounts the benefit on the 364th day of years three, four and five back to day one of each respective year.

If the benefits received by a company as calculated above were put on a graph, the line would slope downwards. It does so because the interest component decreases each year as the annual allotted benefit is deducted from the face amount of the grant.

The GATT Panel Report

The US allocation formula was examined in the Lead and Bismuth Steel GATT panel report.⁷ While the panel report involved the old subsidies code, the decision is instructive because it shows that the time value of money is not an unfathomable principle of financial analysis but also has intuitive appeal.

The Lead and Bismuth Steel panel first pointed out that the basic legal question before it was not the declining balance formula *per se*, but rather whether it was improper to apply a discount rate to the allocation of subsidies over time to take into account the time value of money, regardless of the method of amortization that was followed (page 177, paragraph 655).

The panel went on to state:

In the panel's view, because value could be affected by time, it could not be said that when a signatory allocated a subsidy over time and in doing so used the net present value concept to ensure that the present value of the amounts of the subsidy allocated over time equalled the subsidy found to exist, the countervailing duty imposed as a result of such allocation was necessarily in excess of the value, significance or quantity of the subsidy found to exist . . .

(page 178, paragraph 661). Simply stated, the panel recognized the time value of money principle when allocating subsidy benefits over time.

Following its recognition of the time value of money principle, the next question the panel addressed was whether the "time element" involved in the allocation of a subsidy provided a rational basis to apply the principle to equate the amounts allocated over time and the face amount of the subsidy provided (page 178, paragraph 661). In this regard, the panel noted that the argument had been made that the time value of money concept was inapplicable to the allocation over time of subsidies because a subsidy in the form of a grant did not actually involve money received over time (page 178, paragraph 662).

⁷ SCM/185, *United States – Imposition of Countervailing Duties on Certain Lead and Bismuth Steel Products Originating in France, Germany and the United Kingdom*, 15 November 1994.

Relying on the Guidelines on Amortization and Depreciation,⁸ which compared the benefit from a grant to the elimination of financial obligations the recipient company would otherwise incur, the panel stated that “such a benefit could be conceptualized, for instance, in terms of a loan on which the repayment of principal and interest was waived” (page 179, paragraph 663). If so conceptualized, “the time value of money provided a rational basis to argue that the sum of the nominal amounts allocated to different years was not equivalent in value, quantity or significance to the amount of the subsidy found to exist” (page 180, paragraph 666).

Conclusion

While the United States recognizes that its methodology may not be the only reasonable approach, because the subsidy allocation methodology employed by Members can result in significantly different results, it is an important issue for this Group to discuss. Ideally, the Group would reach a consensus on a single methodology to be employed by all Members. At a minimum, Members should be required to notify the methodology they will use in a countervailing duty investigation and if the notified methodology is not used in a particular case, the Member should be obligated to explain the facts and logic which led it to conclude that the normal methodology was not appropriate.

⁸ These guidelines were adopted by the Committee on Subsidies and Countervailing Measures in April 1985; BISD 32S/154.