Supplementing Consolidation and Apportionment with Anti-Abuse Provisions

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1. Introduction

In the autumn of 2001 the European Commission released a communication suggesting changing the taxation of multinational enterprises operated within the EU territory from Separate Accounting (SA) to Consolidation and Formulary Apportionment (C&FA).[1]

According to the SA system, each national affiliate of a multinational is subject to the corporate tax in the country where it operates; the tax base is computed according to domestic tax law and the tax rate depends on that law. In contrast, under the C&FA mechanism, a single consolidated tax base is computed at EU level and then distributed between the Member States according to a pre-established formula; then each Member State levies tax at its own rate on the fraction of the tax base which is assigned to it.

The respective properties of those systems have been much studied in the literature as have many of the implications of the reform. Briefly, the reform could eliminate a series of strategic behaviours including manipulation of transfer prices and relocation of profits and losses. It may also reduce tax competition if the weighting in the apportionment formula emphasizes criteria that the firm may not control. And it saves the company from dealing with as many tax codes as Member States; instead, knowledge of the provisions of a single tax code would be enough. Representatives of the various national administrations and of the EU Commission have already met several times and they have worked on a single tax code and on the formula. This work however has not been completed so far.

Moreover, it rapidly became clear that not all the EU Member States would support the reform. One can imagine some countries adopting the reform within the framework of an Enhanced Cooperation Agreement, a

1. European Commission Communication, *Towards an Internal Market without tax obstacles – A strategy for providing companies with a consolidated corporate tax base for their EU-wide activities*, COM (2001) 582. These communications, as well as other Commission documents on the common consolidated corporate tax base are available on the DG Taxation and Customs website (http://ec.europa.eu/taxation_customs).

possibility now open since the entry into force of the Lisbon Treaty.[2] However, countries remaining outside the consolidation area, especially if they have low corporate tax rates, can attract the tax base of the multinational enterprises on their own territory, exactly like under the SA system. Consequently, much of the advantage in the adoption of C&FA by a sub-group of countries might be lost. However, the countries joining the consolidation area can escape that loss by simultaneously adopting supplementary measures including giving up exemption in favour of credit and enacting anti-abuses mechanisms such as CFC provisions.

In this paper we focus mainly on the latter measures.

2. The economic argument[3]

Assume a multinational enterprise with activities in three Member States of the European Union. Let us call them *a*, *b* and *c*. In addition, headquarters are located in country *a*; and country *c* only hosts a financial centre servicing the multinational enterprise (with at least enough substance for its reality not to be challenged by tax authorities). Country *a* is larger than country *b* which in turn is larger than country *c*. Consequently the fraction of sales of the multinational in country *a*, denoted by q, exceeds that in country *b*, denoted by $1-q$, and so does the initial fraction of productive investment, α_0. No production or consumption occurs in country *c*. And similarly corporate tax rates τ are increasing with the size of the country, reflecting the traditional argument that large countries are less subject to tax competition than small countries. We deliberately formally ignore tax shields so that our tax rates might be interpreted as effective tax rates.

2. TEU, Art. 20; TFEU, Arts. 326 to 334.
3. The economic argument developed in this paper is based on Gerard, M., "Reforming the Taxation of Multijurisdictional Enterprises in Europe", 53 *CESifo Economic Studies* 2 (2007), pp. 329-361, (non-technical mathematics are in appendix); and on Gerard, M., "Reforming the taxation of multijurisdictional enterprises in Europe: a tentative appraisal", *European Economy*. *Economic Papers of the DG Economy and Finance*, *EU Commission* 265 (2006), p. 47; both of which have a lengthy bibliography; see also Martens-Weiner, J., *Company Tax Reform in the European Union: Guidance from the United States and Canada on Implementing Formulary Apportionment in the EU* (New York, NY: Springer Science + Business Media, 2006), for a general discussion of the subject. Although quite technical, this paper deserves special interest: Riedl, N. and M. Runkel, ''Company Tax Reform with a Water's Edge'', 91 *Journal of Public Economics* 7-8 (2007), pp. 1533-54.

Let us now compare three situations corresponding to Separate Accounting and to Consolidation and Formulary Apportionment, first applied by the three countries together, then only by *a* and *b* within an Enhanced Cooperation Agreement. In any case the company decides on the distribution of its activities based on the maximization of its value. We will then present the supplementary measures which are required for an efficient operation of the new system and finally sum up our proposal.

2.1. Separate Accounting

In this first scenario, the company pays tax in each country, in line with its reported profit in that country. We assume the distribution of sales being exogenously determined by market forces outside the decision of the company. Therefore, the latter only distributes its investment and its reported income. Let us tentatively assume that exemption mechanism applies to cross-border flows of income so that income is only taxed at source. Then, one can show – see the Appendix for the proof – that the optimal distribution of the investment, and thus of the actual production, is driven by differences between tax rates in *a* and *b*: investment and thus real activity in country *a* increases when the tax rate decreases in that jurisdiction and when it increases in the competing country.

This relation needs to be qualified, however. Its magnitude depends on the fraction of the taxable income which is actually subject to taxation in the jurisdiction. Indeed, if the activity in *a* is carried on through a subsidiary or even through the parent company, it is possible that part of the pre-tax profit, a simple version of EBIT (Earnings Before Interest Deduction and Tax), may escape taxation in that jurisdiction because it corresponds to interest payments to another subsidiary located in low-tax country *c*. Let *x* be the fraction of EBIT paid to the affiliate in *c*. Then the foreign indebtedness of the subsidiary may reduce the sensitivity to tax changes of the company's investment location decision.

Moreover, the magnitude also depends on the transfer price being used. Suppose that all what is sold in *a* needs to be sold through the subsidiary in that country, and, tentatively, that the transfer price has not been decided by the company but is equal to the wholesale price at arms' length. Due to the fact that the corporate tax rate is higher in country *a*, it is in the interest of the company to relocate away from that country and to import from the low-tax subsidiary much of the amount sold in the country. That relocation will be larger when the transfer price is higher. Indeed, a higher transfer price reduces the fraction of the margin between the retail price and the production cost which is taxed in *a*.

Eventually the magnitude will also depend on the cost γ of relocating an investment.

Now suppose that the strategic variable is not the distribution of investment and production or real activity, but that of taxable profit. Therefore, the company will first try to manipulate the transfer price. The optimal departure of that price from the arms' length price will depend on a series of parameters. Suppose, in line with the assumptions above, that sales in *a* exceed production in that country due to the fact that, given the relative size of countries *a* and *b*, the tax rate is higher in the former jurisdiction. It turns out that such a situation is an incentive for the company to increase the transfer price beyond its arm's-length value. Finally, the departure will depend on its cost; especially if that cost is high, the difference will be small.[4] In the extreme case where such a difference is without cost, the transfer price will reach its upper boundary and be equal to the retail price; then no import by the subsidiary located in the high-tax country will be subject to corporate income tax.

However, the fraction of the investment financed through a loan of the subsidiary located in the low-tax country *c* is also a strategic variable for the multinational enterprise. Its optimal value is given by equation in the Appendix. That equation might seem complicated, but without loss of insight (since the focus is on the flow away from countries where real activity occurs), one may assume that countries *a* and *b* are symmetric, and then the equation becomes much simpler.

Therefore, the fraction of investment financed by debt and thus the fraction of the EBIT taxed in the low-tax jurisdiction will increase with the tax rate differential and the margin between the retail price and the unit cost, but will decrease with the cost of that strategy. If that strategy is costless, the fraction *x* will go up to its upper boundary and all the taxable income will be located in low-tax country *c*.

So far we have assumed that the exemption mechanism applied.

4. That cost includes the risk of being audited by the tax administration and the transfer price then to be revised by the tax authorities, with possibly a fine imposed.

If instead a credit system is used, the tax rates have to be reinterpreted but the lessons remain. Indeed, suppose that all profits are eventually repatriated to country *a*. Then the interpretation of the tax rate in *a* is unchanged. However, the tax rates in countries *b* and *c* now have to reflect the taxation in country *a*, too. It turns out – see the Appendix for the proof – that adopting a credit system protects the investment and tax base location of the high-tax country, assumed to be the one where profits are to be repatriated. Then indeed there is no longer room for strategic behaviour regarding both the distribution of real activities and the opportunity for paper profits through transfer price manipulation and outflow of taxable profit.

However, the location of the holding company now matters. If the head company of the multinational enterprise moves from country *a* to country *c*, then despite the formal adoption of a credit system, the exemption mechanism actually remains in place.

Note that under the exemption mechanism, if country *c* is outside the European Union, it is possible that the tax administration of country *a* will consider the tax rate in *c* as being too low for income repatriated from or through the latter country to benefit from the exemption mechanism. Then, consequently, outflow of taxable profit to that jurisdiction vanishes.

2.2. Consolidation and Formulary Apportionment in the three countries

Let us now turn to C&FA. Then the maximization of the value of the multinational enterprise again provides us with the optimal distribution of investment and consequently of production. That distribution – see the Appendix – is driven, as previously, by the difference in tax rates and by the cost of relocation. But it is also driven by the respective weighting of sales and of investment – or wage costs, assumed to be proportional to investment in this setting – in the apportionment formula. Then, due to the consolidation operation across the three subsidiaries of the company, the value of the transfer price and the fraction of taxable profit flowing to the lowest tax jurisdiction *c* are no longer relevant.

Especially if sales have the heaviest weight in the apportionment formula, the company has nearly no reason to reallocate its real activities – remember that the distribution of sales is not controlled by the company. On the contrary, when the distribution of investment or that of labour costs, has a positive weight, the company will redistribute its activities away from the high-tax country.

More generally, assuming that the tax differential will not be altered by the reform (which may be a strong assumption), the reallocation of real activities will be smaller under C&FA than under SA if the weight given in the apportionment formula to the variable not controlled by the company exceeds a threshold. That threshold depends positively on the size of the outflow to *c* under Separate Accounting, and on the margin between the retail price and the unit cost, but negatively on the margin between the transfer price and the unit cost, again under Separate Accounting.

That result, illustrated by inequality (11) in the Appendix stems from the comparison of equations (2) and (10) in that Appendix. One of its implications is the following: if the inequality holds, the company is less sensitive to tax differentials under C&FA than under SA.

Consequently, the multinational enterprise is less likely to reallocate its real activity in response to a tax change under CF&A and that mitigated reaction makes the governments less likely to engage in tax competition. In other words, if that inequality holds, the proposed reform will reduce tax competition and allow the government to increase corporate tax rates. Should the corporate income tax rates be inefficiently low under SA, one can conclude that, if the inequality holds, social welfare is increased. However, that inequality is less likely to hold the larger the outflow under SA.

Although a welfare gain is made possible by the reform, its occurrence in the three jurisdictions obviously needs a side payment. Indeed, country *c* taken in isolation necessarily experiences a welfare loss since the outflow from *a* and *b* to *c* vanishes. Therefore, country *c* may not be enthusiastic about adopting the reform. And its lack of enthusiasm for the reform may be fed by the company; the latter will achieve its own best interest by lobbying the low-income country in order to prevent it from joining the consolidation area. Let us therefore investigate whether not participating in that area is a better option for country *c*.

2.3. Consolidation and Formulary Apportionment and the Enhanced Cooperation Agreement

We will now investigate whether not participating in that area is a better option for country *c* and show that it is a worse option for *a* and *b*. Then, we turn to the measures that the last two countries may adopt to prevent C&FA reform decided by them from leading to a decrease in their economic welfare.

Assume thus that country *c* decides not to enact the reform although countries *a* and *b* do adopt it within an Enhanced Cooperation Agreement. Then, the distribution of investment between the two jurisdictions where the location of real activities is found is represented by equation (13) – or (15) in case of symmetric countries *a* and *b* – in the Appendix, and the optimal outflow of taxable income to country *c* is represented by equation (14) of the Appendix.

We immediately see that if the size of the outflow to the non-participating low-tax rate jurisdiction is not zero the sensitivity of the distribution of real activities to tax changes in either *a* or *b* is further decreased; especially if all the taxable income flows to *c* that sensitivity vanishes exactly as it does under SA. However, the sole existence of a possible non-zero value for that outflow prevents the governments of the consolidation area to increase their corporate income tax rate and then to benefit from the possible mitigation of tax competition between them, which may occur when the heaviest weight in the formula is on sales.

Then, it is possible that the corporate income tax rates remain inefficiently low in *a* and *b* and that the welfare gain for those countries is definitely smaller than under C&FA adopted by the three countries together. The main reason for the smaller welfare gain is the outflow of tax base. Otherwise, due to that outflow and thus to its attractiveness for tax base location, country *c* may find its best interest remaining outside the consolidation area.

2.4. Consolidation and Formulary Apportionment, Enhanced Cooperation and supplementary measures

How can the governments of countries *a* and *b* prevent the outflow of tax base to country *c*? Two instruments are suggested. However, only one of them seems to be feasible in the framework of the European Union.

The first instrument is indeed to reject the benefit of the exemption mechanism for countries subject to a too-low corporate income tax rate. The use of such an instrument is not allowed with respect to EU Member States.

The second instrument consists in supplementing the adoption of CF&A with (i) the adoption of credit instead of exemption by all the countries participating in the CF&A area and (ii) the adoption of CFC measures such that taxable profits flowing from the consolidation area will be taxed within that area with possibly a credit for the tax levied abroad. This is equivalent to not recognizing the reality of those outflows.

If such supplementary measures are adopted, the flow of taxable profits channelled through country *c* is actually taxed at a rate which is a weighted average of the tax rates in the other two countries; the weights are related to the distribution of sales and investment between those two countries and to the weights of those variables in the apportionment formula – see equation (16) in the Appendix. That rate holds not only when the amount taxed in *c* is further repatriated but also when it is kept in that country, possibly for reinvestment purposes. Then, the optimal outflow vanishes and the outcome of the Enhanced Cooperation Agreement corresponds to that of the adoption of the reform by the three countries together, both for the multinational enterprise and for the three governments.

2.5. Tentative conclusion

To sum up the economic argument of this paper, we support a move from SA to C&FA, possibly adopted by a sub-group of EU Member States within the framework of an Enhanced Cooperation Agreement, provided that

– the application of the new system is mandatory within the consolidation area
– the formula put strong emphasis on sales, since this is considered to be a factor that the company cannot easily manipulate
– the reform is supplemented by the simultaneous adoption of the credit system and CFC rules by all the participants in the reform.

That reform, and especially the last point, that of the supplementary measures, will now be discussed from a legal point of view.

3. Legal analysis of the proposed reform

From a legal perspective, the C&FA mechanism raises several fundamental issues, concerning two distinct categories of international legal relations:

– between the EU Member States that adopt C & FA and third states,
– between the sub-group of EU Member States and the other Member States, if the instrument of Enhanced Cooperation is used.

The legal issues at stake in the first case mostly concern the compatibility of C&FA with bilateral double taxation conventions generally based on the OECD Model. The legal questions raised in the second case address the compatibility of this reform with EU law, and particularly the freedoms of movement enshrined in the EU Treaty. Nevertheless, even in the latter category, several problems of international tax law arise, since, in the absence of significant harmonization of direct taxes within the European Union, the tax treatment of cross-border income remains mainly governed by the bilateral tax treaties concluded by the Member States (and by their domestic law).

These issues have already been thoroughly discussed within the framework of the European Commission's initiatives on the Common Consolidated Corporate Tax Base (CCCTB). Therefore, we cannot but refer to these preparatory works (Commission working papers, contributions from legal and economic scholars in the academic literature and at scientific conferences)[5] for a more general overview of all the economic and legal issues related to this project.

The specific problem put in evidence by the economic analysis above is the possibility of free-riding by one or more Member States that would distort capital allocation. This problem can be tackled by adopting measures aimed at reducing or removing the economic incentive to locate business profits in a dependent entity located in a third country, or in a Member State not participating in the C&FA. These measures can be general, such as a denial of exemption or a switch from exemption to credit. They can also specifically target abusive situations, such as, on the one hand, anti-abuse measures aimed at disregarding "sensitive" operations, such as the transfer of assets, payments of dividends or deductible payments (in particular, interest), and on the other hand, anti-abuse mechanisms aimed at reintegrating business profits that should normally not be part of the consolidation perimeter (CFC legislation).

We will examine the possibility of the introduction of such measures from a tax treaty perspective, having regard to the consequences of the adoption of C&FA, on the one hand, on the relations between the EU countries adopting

5. See in particular European Commission (EC), *CCCTB: Possible Elements of a Technical Outline,* Working Document CCCTB\WP\057\doc, 26 July 2007; Lang/Pistone/Schuch/Staringer (eds.) *Common Consolidated Corporate Tax Base* (Vienna: Linde Verlag, 2008); Schön/Schreiber/Spengel (eds.) *A Common Consolidated Corporate Tax Base for Europe / Eine einheitliche Körperschaftsteuerbemessungsgrundlage für Europa* (Heidelberg: Springer, 2008).

a C&FA mechanism and the other EU countries, and on the other hand, on the relations between C&FA countries and (non-EU) third countries.

3.1. Territoriality

As a preliminary remark, we assume that the scope of the C&FA mechanism is limited to the territory of the Member States adopting the system (water's edge), and does not encompass the worldwide income of the group. This assumption contradicts the lessons of economic theory, but is justified by reasons of a legal (and political) nature. In order to avoid distortions in the allocation of the tax base, unitary taxation indeed should – from an economic perspective – require that the entire business as a whole be taken into account for the computation of the profits forming part of the taxable base to be apportioned.[6]

In a water's edge approach, however, the tax base to be computed is limited to the territory of the participating states: this reflects the influence of a fundamental principle of international tax law, which is territoriality. As an expression of the sovereignty in tax matters, states only tax income that are linked to their territory, i.e. income accrued to their residents, or income having its source on their territory. This limitation can also be seen as a practical restriction: because of the principle of territoriality, which also binds national tax administrations, states cannot easily reach taxpayers or income located outside their borders. Tax treaties themselves are also – to a certain extent – justified by territoriality. By entering into international agreements, sovereign states manage to partially overcome the limits caused by territoriality, for example in the field of exchange of information, or caused by the lack of coordination typical for sovereign states, like double taxation.

Moreover, another legal principle supports the choice of water's edge in the C&FA mechanism: the prohibition, or at least, the reduction of double taxation. Since sovereignty implies the power to autonomously define the features of the tax system, there is an important risk of overlap in the tax base. Exclusion of income potentially subject to uncoordinated tax rules (those of the uniform C&FA system and those of another country having a nexus with the income at stake) thus allows a reduction of the risk of

6. On unitary business, see Mc Lure, C.E., Defining a unitary Business: an economist's view, in Mc Lure (ed.) *The State corporation income tax: issues in Worldwide unitary combination* (Stanford: Stanford University Press, 1984), p. 89.

double taxation. Moreover, being subject to two or more tax systems would mean important administrative compliance obligations, as well as currency exchanges risks.

Implementing water's edge in legal terms means defining a territorial scope based on notion of residence, for example the place of effective management or the place of incorporation of the company, or at least, based on a business concept that can be defined according to legal criteria, such as the permanent establishment (PE). In the CCCTB working documents, the Commission recommended a system including resident companies according the OECD Model, as well as PEs of non-resident companies.[7] On the other hand, income from PEs located outside the (participating) EU countries of EU-resident companies should in principle be exempt and thus not taken into account for consolidation, as well as dividends received from major shareholdings in foreign companies (which is an extension of the participation exemption mechanism already existing inside the European Union[8]). Other types of foreign income, i.e. passive income such as portfolio income, royalties, patent income and interest would be taxable in the hands of the receiving company and be part of the consolidation if the latter is resident in a participating country.

Such a definition of the territorial scope has the advantage of being compatible (in principle) with the double taxation conventions based on the OECD Model. The only uncertainty is whether exemption of PE income and major shareholding could be compatible with tax treaties providing for the credit method. However, despite being an important political change for some Member States, the switch from credit to exemption should not have a negative impact on the contracting (third) states,[9] nor on taxpayers, except in the – theoretical – case of a full credit, or – more likely – if the exemption of income were to be accompanied by the exemption of foreign losses.[10]

7. EC, *CCCTB: possible elements of a technical outline*, Working Document CCCTB\WP\057\doc, 26 July 2007, p. 5-7 and 20. See also EC, *The Territorial Scope of the CCCTB*, Working Document CCCTB\WP\026\doc, 17 February 2006.
8. See the Parent-Subsidiary Directive 90/435/EC and EC, Working document CCCTB\WP\057, p. 31.
9. Baker, P. and J. Mitroyanni, The CCCTB rues and Tax Treaties, in Lang/Pistone/Schuch/Staringer (eds.) *Common Consolidated Corporate Tax Base* (2008), pp. 627-653.
10. In this latter hypothesis, it would be preferable to allow the deduction of foreign losses, with a recapture mechanism. Applied to companies resident in non-participating EU Member States, this system would also be compatible with EU law. See ECJ 23 October 2008, C-157/07, *Krankenheim Ruhesitz am Wannsee-Seniorenheimstatt GmbH* [2008] ECR I-8061; as well as Malherbe, J., Ph. Malherbe, I. Richelle and E.

The next sections will focus on the compatibility of measures which have to be regarded as exceptions to the above-mentioned principles, since their result is to reintegrate in the consolidation perimeter and to tax income located in non-participating countries.

3.2. Anti-abuse measures in the relations between countries with Consolidation and Formulary Apportionment

In the relations between the countries adopting a C&FA mechanism, anti-abuse measures would normally not be necessary. All the profits, in whatever the Member State they have originated had it still applied separate accounting, would be consolidated. Possible abuses could be made at the level of the sharing mechanism: however, if the chosen criteria are not (too) easy to manipulate, for example using a combination of factors such as sales, labour and capital, attracting income to one jurisdiction within the consolidation area would not result in the increase of the share of the corporate tax attributable to this jurisdiction.

This does not mean that the adoption of the C&FA mechanism would have no impact on existing bilateral tax treaties between participating countries. The common consolidation and apportionment rules would merely replace the tax treaty provisions on the allocation of corporate profits.[11] In practice, this reform should lead to a reduction of the scope of bilateral conventions to personal income taxes and taxes on the income on legal persons other than companies. Tax treaties between participating countries could still apply secondarily to corporate taxes, i.e. for all the matters that are not regulated by a common uniform legislation. It seems very unlikely; however, that Member States would leave at the discretion of each of them the sensitive matter of anti-abuse measures (at least within the consolidation area). Moreover, in any case, these anti-abuses mechanisms would have to be tested against EU law, and in particular the EC Treaty freedoms (see under, 3.4., on the relations between EU participating countries and EU non-participating countries).

Traversa, *Direct taxation in the case-law of the European Court of Justice* (Brussels: Larcier, 2008), pp. 84-88.

11. In the field of social security, existing bilateral conventions between Member States have been replaced by a European regulation. On the problems raised by the application of transitional provisions in such a context, see Traversa, E., National Report: Belgium, in Lang (ed.) *Double Taxation Conventions and Social Security Conventions* (Vienna: Linde Verlag, 2006), pp. 165-194, esp. p. 175.

3.3. The relations between Consolidated and Formulary Apportionment countries and (non-EU) third countries

Between EU participating countries and third countries, bilateral tax treaties would continue to apply. The proposed anti-abuse mechanism could take very different forms. In international tax law, there are indeed a rather large number of anti-abuse measures whose result is to keep income linked to the territory of one particular state, allowing that state to tax it, although it would fall outside its taxing jurisdiction according to the normally applicable treaty provisions.

3.3.1. Denying exemption of foreign income from low-tax jurisdictions/switch from exemption to credit

In the above-mentioned proposal, the first mechanism contemplated is to deny exemption of foreign income, in particular foreign PE income and income from major shareholdings in foreign companies, whenever the corporate rate applicable in the foreign country is considered too low. In the case of PE income, this measure would certainly be contrary to the OECD Model (Arts. 5 and 7): income attributable to a foreign PE of a company may not be taxed by the company's state of residence.

Moreover, this would inevitably lead to double taxation (except if the foreign country does not levy any corporate tax): this would be not only very damaging for the taxpayer, but would also be out of proportion to the objective of the measure, i.e. to avoid a distortion in the allocation of profits.

A less radical mechanism is to refuse to exempt foreign income, but to simultaneously provide for a switch from exemption to credit. This measure can be either general, or limited to certain (abusive) situations.

A general change in the double taxation relief would not be as such contrary to the OECD Model, but would necessarily imply a renegotiation of the tax treaties for all the Member States that generally use the exemption method. Firstly, it would also be against an international trend, which seems to favour exemption over credit, notably because the implementation of credit involves a rather high administrative burden on tax administrations and taxpayers.[12]

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12. See in particular Vogel, K., "Which Method Should the European Community Adopt for the Avoidance of Double Taxation?", 56 *Bulletin of International Fiscal Documentation* 1 (2002), p. 4.

Secondly, in the specific context of the C&FA mechanism, foreign taxes will have to be apportioned across the members of the group, influencing the share of income taxable by each participating Member State. In practice, common apportionment criteria would have to be found, which could turn out to be extremely complex, considering that they concern tax and not income.[13] From a legal perspective, a third country could object about the compatibility of such a system with the tax treaty it has concluded with one participating EU Member State, even if this tax treaty provides for the credit, because other participating Member States could indirectly benefit from an advantage contained in a tax treaty to which they are not part and which could provide for a more generous treatment of particular items of income (for example, a reduced withholding tax on dividends in the case of a major shareholding).

The latter problem could also arise for other type of foreign income, i.e. passive income such as income from portfolio investment, royalties, patent income and interest.

If the switch over is limited to certain abusive situations, the question arises whether such a measure would be allowed by the OECD Model.[14] These abusive situations have first to be determined. We assume that a switch would take place in situations involving business entities located in third countries applying a corporate income tax treatment significantly more favourable that the one applicable (on average) in the consolidation area.[15]

The switch-over clause in relation to specific items of income is a well-known practice in international tax law. For example, Art. 23A of the OECD Model, which concerns the exemption method, provides in its Para. 2 the possibility to switch to credit for passive income.[16] The OECD

13. Moreover, this apportionment is not always feasible. This is in particular the case for an ordinary credit if the foreign tax exceeds the amount of tax due in the consolidation area. Calculating the latter amount would also raise important difficulties. See Baker, P. and J. Mitroyanni, in Lang/Pistone/Schuch/Staringer (eds.) *Common Consolidated Corporate Tax Base* (2008), pp. 627-653.

14. Weber, D.M. and A. Russo, The CCCTB and possible elements of a technical outline: The "switch-over" clause, in Lang/Pistone/Schuch/Staringer (eds.) *Common Consolidated Corporate Tax Base* (2008), pp. 751-770.

15. The determination of the rate of reference to be taken into account would have to be computed taking into account the diversity of the corporate tax rates among the Member States participating in the C&FA system.

16. Art. 23A, Para. 2 OECD Model: "Where a resident of a Contracting State derives items of income which, in accordance with the provisions of Arts. 10 and 11, may be taxed in the other Contracting State, the first mentioned State shall allow as a deduction from the tax on the income of that resident an amount equal to the tax paid in that other

Commentary to Art. 23A(2) (at Para. 47) recognizes that the switch-over works as a mechanism safeguarding the domestic tax base. Nevertheless, Art. 23 A (2) does not deal with specific abusive situations. However, the OECD Commentary (at Para. 31) suggests that a switch-over could also work as a more general "anti-avoidance" mechanism for items of income benefiting from a preferential tax regime in the state of source. This possibility should, however, be explicitly included in the Convention and be limited to preferential regimes adopted by the contracting states after the signature of the convention. Therefore, even if targeted switch-over clauses cannot *per se* be considered as contrary to the OECD Model, they may still imply a renegotiation of all tax treaties concluded between the participating EU Member States and third countries.

Finally, it is worth mentioning that although switch-over is certainly a very effective tool against zero or low taxation in the state of source,[17] it has several drawbacks, for instance when reduced taxation is used by developing countries as a tool to attract foreign investment (tax sparing).[18] In this perspective, other measures should be preferable, such as for example, exemption with a subject-to-tax proviso.[19]

3.3.2. CFC legislation and anti-abuse measures aimed at disregarding capital outflows to third countries

Another option would be to allow participating EU Member States to disregard flows of profits from and to foreign states. Here again, a distinction has to be made between general measures, such as CFC legislation, and more specific measures targeting particular transactions.

State. Such deduction shall not, however, exceed that part of the tax, as computed before the deduction is given, which is attributable to such items of income derived from that other State".

17. Lang, M., General report, in IFA (ed.) *Double non-taxation, Cahiers de droit fiscal international*, Vol. 89a (Amersfoort: Sdu Fiscale & Financiele Uitgevers, 2004), p. 103 et seq.

18. See for Brazil, Coelho, C., "Tax Sparing and Brazil's Tax Treaties", 51 *Tax Notes Int'l* 8 (2008), p. 685. However, the fact that the residence country applying the credit method benefits from tax incentives in the country of investment, as well the very reason of such tax incentives, i.e. that tax sparing clauses do attract (genuine) foreign investment, can be seriously questioned. See OECD, *Tax sparing: a reconsideration* (Paris: OECD Publishing, 1998), especially pp. 23-29.

19. Weber, D.M. and A. Russo, in Lang/Pistone/Schuch/Staringer (eds.) *Common Consolidated Corporate Tax Base* (2008), pp. 751-770.

CFC rules form an anti-avoidance mechanism which generally provides that resident shareholders of foreign companies are taxed on a share of the undistributed income of these companies. This mechanism departs from the rule generally accepted in international tax according to which the foreign income of a foreign corporation is not taxed in the shareholder's state of residence, even if shareholder controls the company, as long as profits are not distributed. Therefore, a taxpayer can, by setting up a company in a foreign country, defer taxation by his/her state of residence on this income. The same is true even if there are no separate legal entities, for foreign permanent establishments are also excluded from taxation by the country of residence of the company. This situation can result a difference of tax treatment between domestic and foreign income, and cause an erosion of the domestic tax base. CFC rules have become a very important tool in the fight against harmful tax practices for many OECD countries,[20] and are recognized as such by international organizations such as the OECD and the European Commission.[21] From an international tax law perspective, the question whether CFC rules are compatible with tax treaties remains debated.

As a preliminary remark, it must be said that due to the great variety of CFC mechanisms adopted by OECD and non-OECD states, it is not possible to generally assess the compatibility of such mechanisms with tax treaties.[22] Moreover, some CFC rules provide for a credit of foreign tax paid on the foreign income reintegrated in the domestic taxable base. In this latter case, we refer to what we have written on the switch from credit to exemption.

In a nutshell, it can be argued that domestic CFC regimes are in conflict with provisions of the OECD Model attributing income exclusively to the country where the foreign company is established, like Art. 7 of the OECD

20. Countries applying CFC legislation are, for example, the United States, Germany, Canada, the United Kingdom, Spain and Italy. See Arnold, B.J. and P. Dibout, General Report, in IFA (ed.) *Limits on the Use of Low-tax Regimes by Multinational Businesses: current measures and emerging trends, Cahiers de Droit Fiscal International,* Vol. 86b (The Hague: Kluwer, 2001).
21. OECD, *Controlled Foreign Company Legislation* (Paris: OECD Publishing, 1996) pp. 97 et seq.; OECD, *Harmful Tax Competition – An Emerging Global Issue* (Paris: OECD Publishing, 1998); European Commission Communication, *The application of anti-abuse measures in the area of direct taxation – within the EU and in relation to third countries*, COM(2007) 785 final.
22. For a thorough analysis on the compatibility of the various types of CFC rules with tax treaties, see De Broe, L., *International Tax Planning and Prevention of Abuse*, Doctoral Series, Vol. 14 (Amsterdam: IBFD Publications BV, 2008), pp. 575-633; Lang/Aigner/Scheuerle/Stefaner (eds.) *CFC Legislation Tax Treaties and EC Law* (The Hague: Kluwer Law International, 2004).

Model on business income or Art. 10(5) of the OECD Model on undistributed profits. Nevertheless, many countries do not see these conflicts as a hindrance to the application of CFC regimes, since they consider them justified by anti-avoidance objectives.

There is uncertainty whether (domestic) CFC rules have to be explicitly authorized by double taxation conventions,[23] or if their application can be considered in all cases as allowed by the text of the Convention.

This latter position seems to be endorsed by the OECD Commentary, reflecting the position of the majority of OECD member countries, which states that:

> (…) It has sometimes been argued, based on a certain interpretation of provisions of the Convention such as paragraph 1 of Article 7 and paragraph 5 of Article 10, that this common feature of controlled foreign companies legislation conflicted with these provisions. […], that interpretation does not accord with the text of the provisions. It also does not hold when these provisions are read in their context. Thus, whilst some countries have felt it useful to expressly clarify, in their conventions, that controlled foreign companies legislation did not conflict with the Convention, such clarification is not necessary. It is recognised that controlled foreign companies legislation structured in this way is not contrary to the provisions of the Convention.[24]

The same Commentary justifies this position by adding that:

> [Article 7] does not limit the right of a Contracting State to tax its own residents under controlled foreign companies provisions found in its domestic law even though such tax imposed on these residents may be computed by reference to the part of the profits of an enterprise that is resident of the other Contracting State that is attributable to these residents' participation in that enterprise. Tax so levied by a State on its own residents does not reduce the profits of the enterprise of the other State and may not, therefore, be said to have been levied on such profits. [25]

However, some countries, like Belgium, the Netherlands, Ireland and Switzerland, do not agree with this position. For instance, Belgium considers that [by applying CFC rules, "[a Contracting] State increases the tax base of its resident by including in it income which has not been derived by that resident but by a foreign entity which is not taxable in that State in

23. See for example the Belgium-Canada DTC of 23 May 2002, O.G., 24 September 2004.
24. OECD Comm., Art. 1, §23.
25. OECD Comm., Art. 7, §13. See also OECD Comm., Art. 10, §37-39.

accordance with the Convention. That Contracting State thus disregards the legal personality of the foreign entity and therefore acts contrary to the Convention (…)".[26] Moreover, national courts remain divided on this issue.[27]

In this context, it is worth wondering whether CFC rules could also be justified by an implicit authorization contained in tax treaties to apply domestic anti-abuse rules. Most countries consider that tax treaties do not prevent the application of such rules. This position reflects a certain monistic conception of the international and internal legal order: (domestic) anti-avoidance provisions are to be applied in the same way both to internal and to international situations. The OECD Commentary considers that "it is agreed that States do not have to grant the benefits of a double taxation convention where arrangements that constitute an abuse of the provisions of the convention have been entered into".[28] In the academic literature, the existence of an implicit anti-abuse rule that would be contained in all tax treaties has been thoroughly studied by Prof. De Broe. He considers that no general international law provision, in particular Art. 26 of the Vienna Convention on the law of treaties (principle of good faith) and Art. 38 of the Statute of the ICJ (general principle of international law), provides an adequate support to this viewpoint. He founds his reasoning not on the fact that tax treaties are concluded between states, and could thus not contain a principle of abuse that would primarily affect taxpayers, but rather on the disparity between the national tax systems and on the correlative absence of homogeneity in the legal treatment of "abusive practices" in the application of tax treaties. This statement does not mean that tax treaties have to be interpreted in a manner favouring tax avoidance. On the contrary, each provision of a tax treaty based on the OECD Model (i.e. almost all tax treaties signed by EU Member States) should be fairly construed, in the

26. See OECD Comm., Art. 1, §27.4: Art. 7 (§ 66) and Art. 10 (§68.1).
27. Comp. Court of Appeal (UK) 25 July 1997, *Bricom Holdings Ltd v. Inland Revenue* [1997] EWCA Civ 2193 and Conseil d'Etat (France) 28 June 2002, *Société Schneider Electric*, No. 232276, 4 *International Tax Law Reports* 2002, p. 1077. See also Kofler, G., CFC Rules, in Lang/Pistone/Schuch/Staringer (eds.) *Common Consolidated Corporate Tax Base* (2008), pp. 725-749; Douvier, P. and D. Bouzoraa, "France: Court of Appeals Confirms Incompatibility of CFC Rules with Tax Treaties", 41 *European Taxation* 5 (2001), pp. 184 et seq.; Bourtourault, P.-Y. and M. Mbwa-Mboma, "French High Tax Court Confirms that the Former France-Switzerland Treaty Overrides the French CFC Legislation", 30 *Intertax* 12 (2002), pp. 493 et seq.
28. OECD Comm., Art. 1, §9.4, as modified in 2003. On this topic, see Bourgeois, M. and E. Traversa, Belgian Report, in IFA (ed.) *Tax treaties and tax avoidance: application of anti-avoidance provisions*, *Cahiers de droit fiscal international*, Vol. 95A (Amersfoort: Sdu Fiscale & Financiele Uitgevers, 2010), pp. 127-148.

light of the objective of the treaty (the promotion of exchange of goods and services) and the OECD Commentary, if it can be assumed that the contracting parties have wished to implement it by concluding the tax treaty. However, he rejects any teleological interpretation bypassing the express wording of the Convention.[29] In any case, this debate is limited to abusive situations. The proposed scheme, however, would necessitate CFC legislation also being applicable to genuine business activities (unlike existing CFC regimes in some countries, like Japan, for example).

From an EU law perspective, the compatibility with EU law of CFC rules regarding third countries has been accepted by the European Court of Justice (ECJ) in the *CFC and Dividend Group Litigation* case, on the grounds that even in the framework of the free movement of capital (in principle applicable to third countries, restrictions could be justified by the absence of administrative cooperation mechanisms allowing the Member States to ascertain that the taxpayer has satisfied the requirements necessary to escape CFC legislation.[30]

Besides CFC measures, one could consider implementing anti-abuse measures targeting particular transactions. These types of measures already exist both in the OECD Model and in the domestic law of contracting parties. A first – simple – measure aimed at safeguarding the taxable base of the country of source as regards outflows of profits is to share the power to tax this income with the country of residence and to allow it to tax it up to a certain percentage, generally by imposing a withholding tax. Application of this mechanism is made in the OECD Model with regard to dividends, interest and royalties (not in the latest version of the OECD Model) – see Arts. 10, 11 and 12. In a C&FA context, such a measure requires defining a sharing mechanism between all participating countries with regard to the (withholding) tax levied.[31]

29. De Broe, L., *International Tax Planning and Prevention of Abuse* (2008), pp. 374-376. See also De Broe, L., “Kroniek international Belastingrecht 2007-2008”, *TRV* 2 (2009), p. 115.

30. ECJ 23 April 2008, C-201/05, *Test Claimants in the CFC and Dividend Group Litigation* [2008] ECR I-2875, Paras. 87-97.

31. Moreover, the withholding tax should be deducted as an expense from the consolidated income. See EC, *An overview of the main issues that emerged at the third meeting of the subgroup on International aspects (SG 4)*, Working document CCCTB\WP\049\doc\en, 23 November 2008, p. 3; See also EC, *International aspects in the CCCTB*, Working document CCCTB\WP\019\doc\en, 18 November 2005; EC, *An overview of the main issues that emerged at the first meeting of the subgroup on International aspects*, Working Document CCCTB\WP\029\doc\en, 2 March 2006; EC, *An overview*

Another type of measure would be to deny the deduction of the payments to low-tax jurisdictions, which would make them indirectly taxable within the consolidation area. Some countries apply such measures, which generally create a presumption that the payment is made for tax purposes only. The presumption can be rebutted when the taxpayers prove that these payments are justified by valid economic reasons and/or have been calculated at arm's length.

These measures could conflict with the OECD Model, and in particular, Art. 9 of the OECD MC which allows the tax authorities to adjust the profits of a resident company in the case of the transfer to a foreign company of the same multinational group without respecting the arm's-length principle. According to the OECD Commentary, contracting states may deny the application of the tax treaty for income paid or accrued to entities beneficiating from preferential tax regimes. However, a specific clause to this effect has to be inserted in the tax treaty (Commentary on Art. 1, Para. 21). The Commentary does not limit such an exclusion to abusive transactions: the proposed mechanism could therefore take the form of such a measure. However, a modification of existing bilateral treaties between EU Member States and third countries not already containing a clause drafted in accordance with the OECD Commentary would be necessary.

3.4. The relations between C&FA countries and other EU Member States

Between C&FA countries and other EU Member States, the proposed mechanism must not only be tested against tax treaties, but also against all applicable provisions of EU law, in particular the EC Treaty freedoms and the EC Directives applicable to intra-group payments, such as dividends, interest and royalties.

As a preliminary remark, one could wonder whether the territoriality of the system itself could be seen as a violation of EU law, since companies located in EU Member States not participating in the C& FA would not be entitled to consolidation. A similar question has been discussed before the ECJ in the *Oy AA* case, concerning the exclusion from a consolidation system in a

of the main issues that emerged at the second meeting of the subgroup on International aspects (SG4), Working document CCCTB\WP\033\doc\en, 24 May 2006.

Member State of a parent company established in another Member State.[32] The Court considered that :

> Article 43 EC does not preclude a system instituted by legislation of a Member State, such as that at issue in the main proceedings, whereby a subsidiary resident in that Member State may not deduct an intra-group financial transfer which it makes in favour of its parent company from its taxable income unless that parent company has its establishment in that same Member State.

A case concerning the opposite situation, i.e. the compatibility with EU law of a consolidation system which does not permit the inclusion of subsidiaries resident in another Member State in a tax entity, has been similarly decided by the ECJ.[33] Therefore, it is possible to infer from such case law that there is no obligation under EU law to extend a consolidation mechanism to the companies of the group located in other Member States. There is indeed a risk that such an extension could "have the effect of allowing groups of companies to choose freely the Member State in which their profits will be taxed (…)".

Concerning the compatibility of anti-abuse measures with EU law, the ECJ has adopted in several cases a rather restrictive position. This case-law can be summarized as follows. Between EU Member States, taxpayers have the freedom to establish and carry their business wherever they want, and Member States cannot restrict this right, even if the taxpayer chooses to move to a Member state applying a more favourable tax regime. Anti-abuse measures can only be applied specifically to abusive transactions, and taxpayers must have the possibility to prove that they have entered into genuine business activities.

On the compatibility of CFC rules with EU law,[34] according to the ECJ, the freedom of establishment (Art. 49 TFEU) and the free movement of capital (Art. 63 TFEU) preclude CFC legislation, "unless such inclusion relates only to wholly artificial arrangements intended to escape the national tax normally payable". CFC rules cannot therefore be applied "where it is proven, on the basis of objective factors which are ascertainable by third parties, that despite the existence of tax motives that controlled company is actually established in the host Member State and carries on genuine

32. ECJ 18 July 2007, C-231/05, *Oy AA* [2007] ECR I-6373.

33. ECJ 25 February 2010, C-337/08, *X Holding BV*, Opinion Advocate General Kokott 19 November 2009.

34. Malherbe, J., F. Jacob, A. Silvestri, et al., "Controlled Foreign Corporations in the EU after Cadbury-Schweppes", 36 *Tax Management International Journal* 12 (2007), p. 607 et seq.

economic activities there".[35] This requires a case-by-case approach, which would render more difficult the application of domestic CFC regimes.

On the compatibility of a switch-over clause from credit to exemption, the Court is however much less restrictive. In the *Columbus Container services* case, it considered that such a mechanism was fully compatible with EU law. According to the Court, "it follows from [the Member States'] tax competence that the freedom of companies and partnerships to choose, for the purposes of establishment, between different Member States in no way means that the latter are obliged to adapt their own tax systems to the different systems of tax of the other Member States in order to guarantee that a company or partnership that has chosen to establish itself in a given Member State is taxed, at national level, in the same way as a company or partnership that has chosen to establish itself in another Member State".[36]

Moreover, recent ECJ decisions on the the EU-compatibility of domestic anti-abuse measures applicable to transactions between associated companies tend to show that the Court has rather loosened its strict approach and seems less willing to restrain Member States's capacity to tackle international tax planning.[37] In these judgments, the Court, although recognizing that anti-abuse-measures may constitute a restriction to the freedom of movement of the economic actors, accepts that theses measures can be justified by the prevention of abuse and the "balanced allocation of taxing powers between Member States", which is more or less an equivalent to territoriality.

Indeed, as the Court said in the *Société de gestion industrielle* case (C-311/08, at Para. 62) , "to give companies the right to elect to have their losses or profits taken into account in the Member State in which they are established or in another Member State could seriously undermine a balanced allocation of the power to impose taxes between the Member States, since the tax base would be increased in one of the States in question, and reduced in the other, by the amount of the losses or profits transferred (…)".

Despite this recent case law, it would still be preferable to try to reach an agreement between Member States on a common anti-abuse mechanism, both within the EU and with third countries. Several proposals exist, such

35. ECJ 12 September 2006, C-196/04, *Cadbury Schweppes* [2006] ECR I-7995, Para. 75.
36. ECJ 18 December 2007, C-298/05, *Columbus Container Services*, [2007] ECR I-10451.
37. ECJ 18 January 2010, C-311/08, *Société de Gestion Industrielle (SGI)*; See also ECJ 25 February 2010, C-337/08, *X Holding BV*.

as the one concerning a common CFC regime drafted by Profs. Pasquale Pistone and Guglielmo Maisto.[38]

4. Conclusion

The economic argument according to which a C&FA mechanism adopted by EU Member States within the framework of an Enhanced Cooperation has to be supplemented by the simultaneous adoption of crediting and CFC rules by all the participating Member States can only be partially accepted from a legal perspective. The existing legal framework must be taken into consideration. From a tax treaty perspective, the proposed measures would at least necessitate a renegotiation of all the treaties concluded by the Member States, in particular those providing for an exemption method as relief for double taxation, in order to allow them to use the credit method, at least as regards jurisdictions with a more favourable tax system. Moreover, clauses allowing these states to apply domestic CFC legislation should also be inserted in existing tax treaties, even if the OECD Commentary does not require it, since several Member States consider that CFC legislation is contrary to the OECD Model. Within the European Union, CFC legislation could be applied only in abusive situations, i.e. towards companies not carrying on genuine economic activities. And from an EU law perspective, a mechanism consisting in a mere switch from exemption to credit would be acceptable even outside abusive situations.

Appendix

A1. Separate Accounting and exemption

Under SA, the multinational enterprise maximizes its value over a long horizon of time (see the main text for the meaning of the symbols)

$$\begin{aligned} V^{SA} = {} & \left[pq - p_t(q-a) - ca\right](1-x)(1-\tau_a) \\ & + \left[p(1-q) + p_t(q-a) - c(1-a)\right](1-x)(1-\tau_b) \\ & + (p-c)x(1-\tau_c) - \frac{\gamma^2}{2}(a-a_0)^2 - \frac{\lambda^2}{2}(p_t - p_w)^2 - \frac{\delta^2}{2}x^2 - 1 \end{aligned} \tag{1}$$

38. Pistone, P., and G. Maisto, “A European model for member states’ legislation on the taxation of controlled foreign subsidiaries (CFCs) – Part 1”, 48 *European Taxation* 10 (2008), pp. 503-513 and Pistone, P. and G. Maisto, G., “A European model for member states’ legislation on the taxation of controlled foreign subsidiaries (CFCs) – Part 2”, 48 *European Taxation* 11 (2008), pp. 554-570.

This maximization is operated with respect to three instruments, α, p_t and x. From the respective first-order conditions of that programme one obtains the equilibrium values of the instruments

$$\alpha = \alpha_0 2 \frac{\tau_a - \tau_b}{\gamma} (1-x)(p_w - c) \tag{2}$$

$$p_t = p_w + \frac{(q-\alpha)(1-x)}{\lambda}(\tau_a - \tau_b) \tag{3}$$

and

$$x = \frac{1-\tau_c}{\delta}(p-c) - \frac{1-\tau_a}{\delta}\left[(p-p_w)q + (p_w - c)\alpha\right] \tag{4}$$
$$- \frac{1-\tau_b}{\delta}\left[(p-p_w)(1-q) + (p_w - c)(1-\alpha)\right]$$

Under the further assumption that countries a and b are symmetric ($\tau_a = \tau_b = \tau; q = \alpha = 1/2$), those values become

$$\alpha = \alpha_0, \; p_t = p_w$$

$$x = \frac{\tau - \tau_c}{\gamma}(p-c) \tag{5}$$

A2. Separate Accounting and crediting

So far we have assumed that exemption mechanism applied. If instead a credit system applies, the tax rates above have to be reinterpreted but the lessons from the equation remain. Indeed, suppose all profits being repatriated to a. Then the interpretation of τ_a is unchanged, formally $1-\tau_a = 1-\tau_{aa}$ where a double subscript refers to domestic tax rate. However τ_b now also reflects the taxation in a,

$$1-\tau_b = 1-\tau_{bb} - \tau_{aa} + min\,(\tau_{aa}, \tau_{bb})$$
$$= 1-\tau_{aa}, since\ min\,(\tau_{aa}, \tau_{bb}) = \tau_{bb} \tag{6}$$

and similarly for τ_c

$$1 - \tau_c = 1 - \tau_{cc} - \tau_{aa} - min\,(\tau_{aa}, \tau_{cc})$$
$$= 1 - \tau_{aa}, since\ min\,(\tau_{aa}, \tau_{cc}) = \tau_{cc} \tag{7}$$

It turns out that adopting a credit system protects the investment and tax base location of the high-tax country, supposed to be the one where profits are to be repatriated. Then, since

$$\tau_a = \tau_b = \tau_c = \tau_{aa} \tag{8}$$

there is no longer room for strategic behaviour regarding the distribution of real activity ($\alpha = \alpha_0$) and the opportunity of paper profits ($p_t = p_w$ and $x = 0$).

A3. Consolidation and Formulary Apportionment in the three countries

When the three countries give up SA for C&FA, the objective function of the multinational enterprise becomes

$$\begin{aligned} V^{C\&FA/3} &= (p - c)\left[\mu q + (1 - \mu)\alpha\right](1 - \tau_a) \\ &= (p - c)\left[\mu(1 - q) + (1 - \mu)(1 - \alpha)\right](1 - \tau_b) \\ &- \frac{\gamma^2}{2}(\alpha - \alpha_0)^2 - 1 \end{aligned} \tag{9}$$

where μ stands for the weight of sales in the apportionment formula and $1 - \mu$ for that of investment or wage costs assumed to be proportional to each other in this setting. Then, due to the consolidation, values of p_t and x are no longer relevant.

From the first-order condition of the maximization of that function with respect to the sole remaining instrument α we obtain

$$\alpha = \alpha_0 - \frac{\tau_a - \tau_b}{\gamma}\,(1 - \mu)\,(p - c) \tag{10}$$

Especially, if $\mu = 1$, the company has no reason to reallocate its real activities while if the distribution of investment or that of labour costs has some positive weight, the company will redistribute its activities away from the high-tax country. More generally, assuming that the tax differential will not be altered by the reform (which may be a far-reaching assumption), the reallocation of real activities will be smaller under C&FA than under SA if

$$\mu \geq 1 - \frac{(p_t - c)(1-x)}{p-c} \tag{11}$$

That expression stems from the comparison of equations (2) amd (10).

A4. Consolidation & Formulary Apportionment, Enhanced Cooperation Agreement and Supplementary Measures

Finally, when the reform is solely adopted by countries *a* and *b* within the framework of an Enhanced Cooperation Agreement, the objective function becomes

$$\begin{aligned} V^{C\&FA/2} &= (p-c)\left[\mu a + (1+\mu)\alpha\right](1-x)(1-\tau_a) \\ &+ (p-c)\left[\mu(1-q) + (1-\mu)(1-\alpha)\right](1-x)(1-\tau_b) \\ &+ (p-c)x(1-\tau_c) - \frac{\gamma^2}{2}(\alpha-\alpha_0)^2 - \frac{\delta^2}{2}x^2 - 1 \end{aligned} \tag{12}$$

Two instruments remain in the hands of the multinational enterprise, *a* and *x*. Their optimal values are given by

$$\alpha = \alpha_0 - \frac{\tau_a - \tau_b}{\gamma}(1-\mu)(1-x)(p-c) \tag{13}$$

and

$$x = (p-c)\left[\frac{1-\tau_c}{\delta} - \frac{1-\tau_a}{\delta}\left[\mu q + (1-\mu)\alpha\right] - \frac{1-\tau_b}{\delta}\left[\mu(1-q) - (1-\mu)(1-\alpha)\right]\right] \tag{14}$$

Again, under the assumption that countries *a* and *b* are symmetric, those values become

$$\alpha = \alpha_0, x = \frac{\tau - \tau_c}{\gamma}(p-c) \tag{15}$$

In the case of adoption of the supplementary measures suggested in the main text, the tax rate actually supported by the flow of taxable profit channelled through *c* is

$$\tau_c = \tau_a\left[\mu q + (1-\mu)\alpha\right] + \tau_b\left[\mu(1-q) + (1-\mu)(1-\alpha)\right] \tag{16}$$