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Seeking New Ways of Financing the EU Budget: on the Proposal of a European Tax on Foreign Exchange Transactions

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Sándor Richter

Seeking New Ways of Financing the EU Budget: on the Proposal of a European Tax on Foreign Exchange Transactions

January 2008

Sándor Richter is a research economist at the Vienna Institute for International Economic Studies (wiiw).

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Sándor Richter

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Executive summary

The financing of the redistribution of resources across member states of the European Union, the EU's 'own resources', currently consists of three main components: customs duties collected at the common external border of the customs union, part of the VAT revenues in the individual member states calculated by statistical methods and, as the biggest part, the component proportional with the member states' GNI calculated by a unified rate. This system lends decisive leverage to the national treasuries in negotiations about the size and, to a lesser extent, the ways of the allocation of funds earmarked for cross member state redistribution by the European Union. The periodically returning debates and the disappointing bargaining on the financial perspectives for 2007-2013 have led to the proposal for a comprehensive review of the EU budget in 2008/2009.

The forthcoming review provides an opportunity for initiating fundamental reforms. The reform of the EU's own resources system may take two different courses. The first is the extension of the GNI-based component of the current system, with member state contributions reflecting as closely as possible the differences in the individual member states' economic strength. This would be a transparent, simple and efficient system and also a fair one, in terms of burden sharing at member state level.

The alternative course of reform relies on the principle that the EU should increasingly become a 'Union of the citizens', therefore the 'own resources' should be collected through the introduction of a European tax. In the past decade several options for a European tax were discussed: income taxes (personal income tax, corporate income tax, withholding tax on interest income, and transfer of seigniorage revenue); taxes on real economy transactions (genuine VAT, taxation of energy, communication taxation, climate charge on aviation, and excise duties on tobacco and alcohol); and finally a tax on financial transactions (tax on stock exchange transactions in shares and bonds). This latter group has recently been extended by proposals for a tax on foreign exchange transactions and a tax on 'all' financial transactions. The present paper first examines the traditional proposals for reform; then the various forms of a tax on financial transactions are discussed in detail.

The assessment and the comparison of the various options for reform are based on a set of criteria. First, an assessment is made to what extent the proposed European tax would help create a Union of the citizens (in terms of independence from national treasuries; visibility, transparency and simplicity; allocation of resources along EU policies). Second, the budgetary aspects of the tax to be introduced are scrutinized (sufficiency and stability of revenues to be delivered, costs of tax collection). Finally, the fair sharing of burdens is analysed (at the level of taxpayer citizens and/or companies in Europe and at the level of national contributions by member states).

The result of the assessment shows that even relatively well performing candidates for a European tax have one or more weak points.

Of the three proposals for a financial transactions tax, the first one, a charge on traditional stock exchange transactions in stocks and bonds, has the disadvantage that the potentially available resources would ensure only a rather small proportion of the revenues of the EU budget. Moreover, the UK and to some extent also Spain would be contributing to the community resources far above the proportionate level reflecting their relative economic strength in the EU.

The second proposal, taxation of foreign exchange transactions (the 'Tobin tax'), has in the past decade become the central issue for internationally active political groups which try to mobilize resources for the implementation of global development programmes. In a more recent development, the idea appeared as a proposed solution to the EU's own resources problem. The tax base in this proposal includes transactions in traditional foreign exchange markets as recorded by the Bank for International Settlements but excludes foreign exchange transactions involving financial derivatives. The present paper has found several weaknesses of that proposal. In the absence of experience, predictions about the effect of and revenues from a taxation of foreign exchange transactions are highly arbitrary. Even the most optimistic estimate reckons with revenues covering only about half of those required for financing the EU budget. Nevertheless, in the medium and longer run the tax has the potential to deliver sufficient revenues. The criterion of fair contribution across member states is not fulfilled. It turns out that the United Kingdom would deliver up to two thirds of the revenues from an EU-wide foreign exchange tax. Other big member states such as Germany, France and Italy would contribute to the common budget with 5%, 6% and less than 2% of the total, respectively. The new member states, the main beneficiaries of the intra-EU redistribution, taken together would contribute only about 1.6% to the collected revenues. A further concern is about who would eventually bear the tax burden. While the bulk of the tax revenues would be collected from a very small circle of financial institutions, the final dispersion of the tax burden in the societies involved after various rounds of secondary redistribution is unpredictable.

The third version of a financial transactions tax would be a charge on 'all' transactions, i.e. including transactions in financial derivatives. The advantage of this proposal is that the potential tax base is enormous by all standards and the revenues would be sufficient to cover the EU budget revenues. However, while for the foreign exchange transactions tax a couple of serious attempts have been made to predict the possible effects, for the effects of a tax charged on financial derivatives no similar assessments or predictions exist. The problem of a fair sharing of burdens across member states would in this case be at least as severe as in the case of the tax on foreign exchange transactions.

A financial transactions tax, in any of the three versions discussed in the paper, is thought to be introduced in the European Union only and not world-wide. In all cases the problem of relocation (from the EU generally, and from the leading market place, London, in particular) would emerge, the extent of which is unknown. The prospect of losing the benefits derived from London as one of the most eminent financial markets in the world would make any British government a strong opponent to an EU-wide financial transactions tax.

Of the three discussed versions of a financial transactions tax, the charge on foreign exchange transactions has been commented on in detail by the European Commission and the European Central Bank. The comments, warning of the legal and economic difficulties that would possibly be related with such a tax, are not supportive. While assessing the political reception of a foreign exchange transactions tax it must be recalled that the intention to utilize these revenues for financing the EU budget may meet resolute opposition by political movements being critical towards globalization. These movements envisage the financing of third world development projects from revenues from a foreign exchange tax. More EU financing for global development programmes would ease this tension.

Finally, various forms of a tax on financial transactions are compared to the two options with the best evaluation results among the 'traditional' proposals, genuine VAT and taxation of energy. The dangers of relocation, tax evasion and unpredictable behaviour of the economic agents concerned are substantially smaller in the case of both 'traditional' options than they are in the case of a financial transactions tax. They would be more visible and simple for the EU citizens than any of the financial transactions taxes. The strongest point, however, favouring the two 'traditional' proposals is their ability to guarantee a relatively fair sharing of the tax burdens across the member states of the EU.

Keywords: *EU, cross member state redistribution, taxation, EU taxes, own resources, expenditures, EU policies, faire sharing of burdens, foreign exchange markets, derivatives, globalization*

JEL classification: *F15, F21, F23, F31, F32, F36, F59, H23, H26, H61, H62, H77, H87*

Sándor Richter

Seeking new ways of financing the EU budget: on the proposal of a European tax on foreign exchange transactions *

Part One
The own resources of the European Union at the cross-roads of reform

Why is the EU budget something very special?

The redistribution of resources across member states has been a strikingly unique and particularly important feature of European integration. It has grown from a modest level in the early stages of integration to its present volume. Accounting for approximately 1% of the European Union's aggregate economic performance, its extent is rather small compared to the nation-wide redistribution of resources by the general governments in the individual EU member states. The latter ranges from 35% of the GDP in Ireland to nearly 60% in Sweden. However, the redistribution across member states is huge when viewed in the context of economic integration among independent states and also from the point of view of the major net beneficiary member states.

The history of the EU financing system

Before the system of own resources was installed in 1971, the Community budget was financed directly by member state contributions.[1] The change was motivated by the intention to gradually enhance the Community's financial independence from its member states' direct contributions. The first own resources were customs duties and agricultural levies. In 1979 an additional resource coming from a value added tax (VAT) base was introduced. The resource is levied on the notional harmonized VAT bases of the member states. These statistical 'notional' VAT bases are calculated in order to compensate for differences in national VAT regimes due to incomplete harmonization of VAT at EU level. The notional VAT is calculated for each member state by dividing total national VAT receipts by the so-called weighted average rate of VAT. The weighted average rate is derived from macroeconomic statistics (mainly national accounts). In order to arrive at a harmonized base, changes are made either to the net revenue collected ('corrections') or to the VAT base ('financial

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[1] The review of the evolution of the own resources system relies on European Commission (1998).

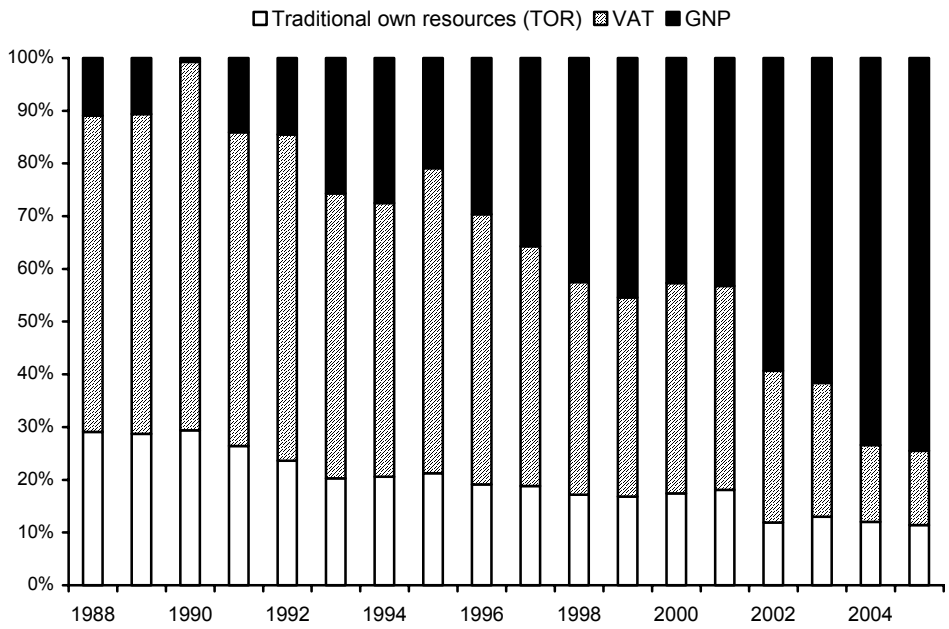
compensations').[2] The tax rate is currently 0.5% of the harmonized VAT base; if the tax base is higher than 50% of the GNI that excessive segment is exempted from taxation.[3]

In the early 1980s, a growing tension appeared between resources and expenditures due to eroding revenues from customs and levies (traditional own resources, TOR), slower than expected economic growth, and expanding costs of the Common Agricultural Policy (CAP). Continuous complaints by the UK pointed to the miserable net financial position of the country relative to other member states. The Fontainebleau European Council in June 1984 raised the maximum call rate for the VAT resource and introduced a correction mechanism to diminish the UK's deficit vis-à-vis the Community budget.

Figure 1

The composition of EU own resources, 1988-2005

(as % of total)



Source: Data for 1988-1995: European Commission (1998), p. 2; Data for 1996-2005: European Commission (2004), p. 8.

As the financing bottlenecks became more frequent due to unstoppable growth of CAP expenditures, especially after the accession of Spain and Portugal in 1986, a set of reforms were introduced in 1988. These created the current framework of the European Union's own resources. First, a new channel for revenues was introduced based on a uniform rate in per cent of the member states' GNP (GNI from 2002 on) in order to better match member states' contributions to their ability to pay. Second, the base of the VAT resource was capped at 55% of the GNP. Finally, a payment ceiling expressed in per cent of the

[2] European Commission (2004a), p. 6.

[3] Szemlér (2005), p. 10.

member states' aggregate GNP was set up (starting at 1.15% and rising to 1.27% by 1999).[4] Since 1997 actual spending has remained considerably below the levels envisaged in the multi-annual financial framework.

The latest important modifications took place in September 2000, when the percentage of retained traditional own resources (to cover costs related to collection) was raised from 10% to 25%, the maximum rate of call of the VAT resource was set to be reduced from 1% to 0.5% by 2004[5], finally the share of Austria, Germany, the Netherlands and Sweden in the financing of the UK correction was reduced to one quarter of the calculated standard value.[6]

Proposals for reforms

Discussions on a fundamental reform of the own resources system, introducing some form of European tax, gained momentum in the course of the preparatory work for the 2000-2006 financial perspective.[7] With no feasible outcome whatever resulting from these discussions, a new wave of debates started in 2004, now related to the forthcoming 2007-2013 financial perspectives.[8]

The 15/16 December European Council in 2005 approved the main principles and the financial framework for the EU budget in 2007-2013, leaving the own resources system in its prevailing form. Nevertheless, the document ends with points 79 and 80, which 'invite the Commission to undertake a full, wide ranging review covering all aspects of EU spending, including CAP, *and of resources*, including the UK rebate, to report in 2008/9' [9] (italics added by the author).

The Commission's 1998 review of the current system of the EU's own resources gave a favourable assessment for equity (fairly shared burdens, or proportionality) among member states, which increased over the years in parallel with the growing importance of the GNP/GNI-based contribution. The system was also found to operate adequately in terms of providing the necessary resources to finance the EU expenditures. Nevertheless, the system is of poor efficiency in the political and budget process. The main shortcomings identified were the lack of financial autonomy, *ad hoc* features and interventions, such as the correction mechanism for the UK, and the lack of transparency in the financial relationship between the member states and the EU budget. The role of the only true 'own

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4 With the changeover from GNP to GNI, this share was reduced to 1.24% (of the EU GNI).

5 The cap on the VAT base was also reduced by 5 percentage points.

6 European Commission (2004), p. 8.

7 The review of the evolution of the own resources system relies on European Commission (1998), Appendix 1, and European Commission (1997a), Agenda 2000.

8 European Commission (2004b), European Commission (2004a), Cattoir (2004).

9 Council of the European Union (2005), p. 32.

resources' component in the current system of revenues, namely the 'traditional own resources', has been shrinking continuously, thus increasing the problems deriving from lack of financial autonomy. The growing importance of transfers from the national budgets compel member states 'to seek to maximize ill-defined concepts of the national benefits from the EU budget'[10]. This entangles EU budgetary issues with domestic financial and fiscal problems, obscuring for the citizens the EU-wide priorities at stake.

The 1998 European Commission paper saw three options for modifications of the system of contributions to the EU budget:[11]

- simplification of the system through a reduction of the number of financing sources;
- introduction of new own resources in addition to the existing ones;
- introduction of new own resources as a replacement of (one or more of) the existing ones.

The preparatory work for the 2007-2013 Financial Perspective and the related consultations and political declarations[12] made it clear that the 2004 enlargement by ten new members and the subsequent increase in differences as to the level of development within the enlarged Union[13] will bring about an unprecedented climax of conflicts over the size of the budget and the budgetary balances reflecting the narrow 'juste retour' (fair return) stance of the old member states. With these debates in mind the 2004 Commission Report on the financing of the European Union presented more radical options for finding the optimal system of contributions to the EU budget:

- maintaining the present system unchanged;
- introduction of a purely GNI-based system;
- introduction of a system based on fiscal own resources.

At the 15/16 December European Council last year the first option was chosen and – besides maintaining the non-rule based interventions such as the UK rebate and the concessions for four member states for financing the UK rebate – further *ad hoc* measures were taken in order to arrive at a compromise that was acceptable for all 25 member states.[14] By these latest improvisations the original philosophy of the EU budget: to practise solidarity among member states through the expenditure side of the EU budget and not on the revenue side,[15] has been distorted beyond recognition.[16]

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[10] European Commission (1998), p. 9.

[11] European Commission (1998), p. 10.

[12] Joint letter (2003).

[13] Richter (2005), pp. 74-85.

[14] Council of the European Union (2005).

[15] European Commission (1998), p. i.

The above-mentioned planned revision of the EU budget, including the revenues in 2008/2009, will be strongly motivated to depart from the present system. In that case two basic options will remain: the *purely GNI-based* system and the *fiscal-based* own resources, these latter in several variations.

The *purely GNI-based system* is unbeatable in terms of equity at member state level, since the contributions would precisely correspond to the economic strength of the individual member states. Operation costs would be minimal, sufficiency and stability within the agreed own resources would be guaranteed. Two main problems however are mentioned in the 2004 Commission paper related to this option: first, that the 'status of the EU as a Union of member states *and* citizens would be abandoned'[17], and second, the 'juste retour' approach by member states would be brought to the forefront of debates even more than at present. In 2004 Finland put forward a proposal for a reform that would leave in place traditional own resources while all other resources would be delivered by the GNI component.[18]

The second option is securing own resources through an *EU tax*. There are considerations which deliver supportive arguments for that case.[19]

First, it is a generally valid principle of taxation that it should be carried out at the same level where the expenditures are allocated to beneficiaries.

(a) European integration was born as a project of liberalization. The powers of the European Union are described as regulatory, to distinguish them from the redistributive functions of the member states. However, a good deal of the Union's policies are either openly aimed at redistributing economic resources or have consequences for redistribution. The existing redistributive power at the European level is in mismatch with the non-existence of own resources based on European taxation.

(b) The EU has become the provider of a range of public goods typical of a 'political' community. Paying for those public goods, whose beneficiaries are European citizens and legal persons, should be undertaken directly by the individual citizens and legal persons, instead of the member states.

(c) In the European Union the legislative framework that defines the statute of corporations and limits their financial liability, the norms concerning the establishment and prudential supervision of financial institutions and insurance activities are heavily determined by Community law. These, together with the 'four freedoms', represent the

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[16] For instance, a coefficient allowed only for Poland to calculate the maximum level of transfers for cohesion with a reference to the zloty exchange rate volatility; 'special treatment' for certain regions in Poland, the Czech Republic, Hungary, Finland, Spain, the UK, Sweden, Estonia, Latvia, Austria, Germany, Italy and France; lower call rates than the rule (0.30%) of the VAT resource for Austria, Germany, the Netherlands and Sweden. (Council of the European Union, 2005)

[17] European Commission (2004a), p. 42.

[18] European Parliament (2007), p. 7.

[19] Menéndez (2003), pp. 17, 18, 19, 21, 23, 27, 37.

basic framework of the socio-economic order within the EU. The basic rationale, which supports the allocation of the power to tax over certain tax bases to the authorities of the nation state, has been eroding. As the benefits but also the detrimental side effects of the common market-making rules are shared by all citizens and legal persons of the EU, national communities of risks have been transcended into a European economic community of risk, with major normative implications. Corporate tax, capital gains tax and savings income tax are all traditional resources of the central governments in national states. But with the gradual transfer of setting the normative framework of the market economy to the EU level, the emerging Europe-wide community of economic risks calls for reconsideration in this respect.

Second, national contributions, the pillars of the current system, are doubtful in two important respects.

(a) National contributions to the EU budget are an obstacle to public control and intervention for the decision-making at the European level, explaining, at least in part, the missing enthusiasm for European issues as illustrated by the low participation in elections to the European Parliament and the topics and level of the debates before.

(b) The range of public goods provided by the European Union is characteristic of political communities. Nevertheless, how much each European resident currently contributes to the costs of the EU is closely related to the member states in which he or she resides – which is not in compliance with the principle in Article 12 of the Treaty on the European Communities and leads to a discrimination on the basis of nationality. (For instance, a Lithuanian millionaire contributes less to the EU budget than a person living on unemployment benefits in the United Kingdom.)

Other approaches are rather critical of an EU tax. Currently the redistributive elements in the EU budget are predominantly support for agriculture and cohesion, with a clearly limited circle of beneficiaries, far from comprising all EU citizens. Gligorov (2006) underlines that the EU budget does not spend money on social welfare services and, consequently, does not attract significant political effort on the part of the EU citizens. Individuals in the EU do not depend on each other for their welfare. Gligorov also argues that regulation, the strong point of the EU, is a poor substitute for mutual financial dependence. Trade and other business relations plus common rules and even a common legal system may support economic growth and increase public trust but not necessarily social interdependence.[20] That, however, implies that awakening a 'European' consciousness of the Union's citizens via an EU-wide tax cannot easily be reconciled with the current expenditure pattern of the EU budget.

[20] Gligorov (2006), pp. 10-12.

Options for an EU tax

The decision to change over to an EU tax from the current own resources system would raise another question: which of the several options for this tax would be appropriate? A working paper of the Directorate-General Taxation & Customs Union distinguishes nine possible options for this tax.[21] An additional one was adapted from a 1998 publication of the European Commission.[22]

- Genuine VAT
- EU corporate income tax
- Personal income tax
- Taxation of energy
- Excise duties on tobacco and alcohol
- Transfer of seigniorage revenue
- Communication taxation
- Climate charge on aviation
- Tax on stock exchange transactions
- Withholding tax on interest income

Genuine VAT

Genuine VAT is basically different from the currently applied 'notional VAT'-based contribution.[23] While the latter is levied on a calculated VAT base, the genuine VAT would rely on the real life harmonized VAT base in the member states. VAT rates would be combined (national and EU, respectively) in each member states. The total, combined VAT rate should not be higher than it was prior to the changeover to the new system, as the 'national' rates could be decreased as a consequence of the elimination of pre-changeover contributions (nominal VAT and GNI-based) to the EU. The main challenge to face with this solution is the harmonization of VAT bases across member states. Though considerable progress has been achieved, the harmonization is far from being completed and the difficulties to be overcome (differences in rules on tax deduction, exemptions for small firms, etc.) are considerable. Another relevant problem is constituted by the differences among member states concerning the role of the shadow economy.

EU corporate income tax[24]

The European Union corporate income tax (EUCIT) would be considered as serious candidate for an EU tax if a common consolidated tax base were already established or

[21] Cattoir (2004).

[22] European Commission (1998), Annex 2.

[23] The idea was advocated by the European Parliament in European Parliament (1994).

[24] First raised by the European Parliament (European Parliament, 1990).

seemed available in the medium term. That would create the precondition for an applicable tax rate set at the EU level. The EU tax would replace the national corporate taxes, though autonomous surcharges could be levied by individual member states. Contrary to VAT, where an approximation of the tax rates has already been achieved, attempts towards an approximation of the corporate tax base were vehemently opposed by some member states. The business community would most probably oppose a compulsory EU tax scheme with tax rates that in certain cases may be higher than they are currently. Nevertheless, support or opposition may depend on the combined effect of the tax mix for companies.

Personal income tax

One option for this tax would be a surcharge on the member states' personal income tax. The progressiveness introduced by individual member states would be preserved. Still the considerable differences in tax base and rules in individual member states' personal income tax would necessitate harmonization or complicated equalizing calculations. The alternative option is an independent EU personal income tax. EU citizens would fill in two separate tax returns, one for the EU and one for the own country's tax authorities. The tax base and rate would be defined by the EU. A specific progressiveness and exemptions could be built in, but in principle the tax should be as simple as possible. This solution may involve political difficulties.

Taxation of energy

Here two options are possible: a *broad-based* energy tax and a *narrower* one on motor fuel used for transport.[25] The former would include mineral oil, electricity, coal and natural gas. The latter would consist of a tax on leaded and unleaded petrol, diesel, kerosene, liquefied petroleum gas (LPG) and natural gas for transport. The tax would be collected not from the final consumer but one stage earlier, when the products are delivered for consumption. An important advantage of this proposal is that since 1 January 2004 a valid taxation directive on energy has been in force. The directive involves the harmonization of the tax base for various sorts of energy and sets out EU-wide minimum tax rates. Though the directive was not initiated with the purpose to create revenues for the own resources, it offers an opportunity for the elaboration of an energy taxation-based own resource for the EU budget. However, here emerges the well-known problem of target conflict. An environmentally harmful activity will be taxed, but the revenues raised by the tax will not be used to reduce the damage concerned, but to ensure the financing of a completely different target, namely the own resources of the European Union.

[25] First recommended in 1992 by the European Commission; the most recent proposal was put forward in European Commission (1997b).

Excise duties on tobacco and alcohol

In the European Union tobacco, alcohol and mineral oils are subject to excise duties (here only alcohol and tobacco are addressed). Various directives regulate the excise rates on these two commodity groups. This existing regulation could help transform the system into an own resource of the EU budget.[26] After removing still existing exemptions and derogations, the EU would define a minimum rate levied on a harmonized tax base. Member states would be allowed to levy additional rates if they wished to do so.

Transfer of seigniorage revenue

Seigniorage in a monetary union can be seen as a common good of member states with a common currency. This would make seigniorage a good candidate for an own resource for the EU budget – but only if all EU members, and not merely 13 (from 2008: 15) countries, were members of the monetary union.[27] Further, the national central banks have various sorts of revenues beyond seigniorage and very different cost and income structures. The loss of seigniorage to the EU budget could have a profound impact on the national central banks, leading to forced adjustment in their revenues and costs structures that would imply political problems in several member states. Apart from all these considerations, the main drawback of seigniorage as an own resource is the low level of revenue generated: it is about 10% of the annual EU budget.

Communication taxation

A tax on communication services could include road and air transport, and various forms of telecommunication and broadcasting.[28] The European Parliament narrowed the choice to three candidates: a tax as a fixed amount per telephone line paid by consumers; a tax on road transport in the form of a harmonized vehicle tax; and a per capita tax on air travellers. Any of these proposals requires either tax harmonization or the creation of new taxes besides already existing ones. There are considerable problems related to this solution: in a rapidly changing technological environment the definition of 'telephone line' is becoming more and more difficult; the road and air transport taxation in the proposed form is not selective in terms of desired environmental objectives; finally, reasonable taxes on air departures or telephone lines would not be sufficient to cover more than a tenth of the budget each.[29]

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[26] Proposed in European Parliament (1994) and in European Commission (1997).

[27] The idea was raised in the course of the preparations for the introduction of the common currency for the EU.

[28] Proposed by Begg et al. (1997), analysed in detail by the European Parliament (1997).

[29] Estimation by Begg et al. (1997) as cited by Cattoir (2004).

Climate charge on aviation

This proposal ties the aim of environment protection to the financing of the EU budget.[30] The tax would be levied on carbon dioxide and nitrogen oxide (both greenhouse gases) emissions of aircraft. It could be based either on an *ex ante* profile derived from performance manuals or on *ex post* criteria derived from recorded actual flight data. However, the revenue would be far from sufficient, with about one tenth of the required sum. Further, the introduction of this tax may deteriorate the competitive position of EU airplanes relative to carriers of all non-EU countries.

Tax on stock exchange transactions[31]

The tax would be levied on transactions of shares and bonds or of shares only. Similarly to currently imposed taxes in several of the stock markets in the EU, it would be charged on the value of transactions. With regard to the high degree of internalization of capital markets and the mobility of capital flows, the danger of displacement of financial investments is significant. It is therefore difficult to foresee the potentially available revenues. Even if this consideration is left aside, the stock markets developments are influenced by many, not interrelated factor and the volatility of traded values is very high. Thus the stability of these revenues is highly questionable.

Withholding tax on interest income[32]

In some member states, savings and capital income of non-residents is taxed, while there is no such tax in other EU members. This difference leads to capital flows to the lowest tax jurisdiction, with the potential to trigger a harmful tax competition. A minimum of effective taxation of interest and dividend income introduced in the individual member states for non-resident member state beneficiaries would create own resources for the EU budget and, parallel to this, would help avoid misallocation of resources. The proposed minimum rate is 20%; member states would be allowed to levy higher rates to ensure revenues for the national budget if they wish. However, the tax base is far from being harmonized across member states. The tax would considerably influence the global competitiveness of international financial centres located within the EU. Finally, with the elimination of existing tax differences and the motivation of non-residents to utilize them, the tax base could soon evaporate, creating no or insufficient revenue for the EU budget.

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[30] European Commission (2001).

[31] Cattoir (2004), p. 33.

[32] This was a proposal for a Directive to ensure a minimum of taxation on interest income paid in a member state to a beneficiary in another member state, in European Commission (1998), Annex 2, pp. 20 and 27.

Criteria for assessing the individual reform proposals

In order to evaluate the various proposals it is necessary to apply certain criteria.[33] These can be allocated to three separate themes. The first set of criteria is to evaluate the proposals with respect to their serving the transition from a Union of *member states* to a Union of its *citizens*. The second set of criteria helps assess the proposals in merely practical aspects: to what extent they are able to deliver the necessary revenues for the EU budget, and at what costs. The third set of criteria tries to find out to what extent the individual proposals meet the conditions of equity, a fair sharing of burdens.

1 Creating a Union of the citizens (as opposed to a Union of member states)
   - 1 (a) Financial autonomy
   - 1 (b) Visibility, transparency and simplicity
   - 1 (c) Allocation of resources along EU policies (externalities)

2 Budgetary aspects
   - 2 (a) Sufficiency
   - 2 (b) Stability
   - 2 (c) Cost effectiveness of tax collection

3 Equity (fair sharing of burdens)
   - 3 (a) Horizontal equity
   - 3 (b) Vertical equity
   - 3 (c) Fair contribution across member states

In the following section the current system of own resources, a purely GNI-based system and the ten proposals for a European tax will be tested with the help of these three sets of criteria.

1 Creating a Union of the citizens

1 (a) Financial autonomy

In the ideal case, the EU budget's own resources are entirely independent of the national treasuries in the member states and possibly of the national tax collecting authorities as well, ensuring financial autonomy for EU-initiated programmes and related expenditures. This criterion helps assess the degree of the financial autonomy allowed by the own resource concerned.

[33] This exercise was done in a number of studies: European Commission (2004a); Cattoir (2004); European Commission (1998), Annex 2. The set of criteria presented here has been constructed from various elements of the enlisted studies.

The *current system* of own resources consists of three components, of which only the component 'traditional own resources' is independent of national treasuries. The relative significance of this component has been decreasing continuously; thus the performance of the current system is far from satisfactory in this respect. In fact this situation has triggered the debate and the search for possible substitutes.

The *purely GNI-based system* has the worst possible ranking according to this criterion, as 100% of the revenues would be collected and transferred by member states' national treasuries.

– *Options for a European taxation*

The best solutions according to this criterion are those which charge taxes on an item or group of items that have not been subject to taxation yet. In this case the conflict with the national budget is minimal. *Communication taxation* and *climate charge on aviation* are the best performing candidates in this respect. Here the net effect for the national budgets is positive, as revenues from the new EU tax replace national contributions from the budget while the earlier level of tax revenues for the national budget remains unchanged. In this case, however, the tax burden of the firms and/or citizens increases. If one or more national taxes were reduced to avoid this, the net effect for the budget would be zero.

Somewhat less advantageous solutions are those where taxation on the item(s) concerned already exists in all or some of the member states. If the EU tax is new in the member state concerned or is introduced on top of an existing tax, it can be applied without direct national budgetary implications. This group consists of *taxation of energy*, *excise duties on tobacco and alcohol, tax on stock exchange transactions,* and *withholding tax on interest income.*

The least advantageous solutions according to this criterion are those where long-established revenues of the national budgets are to be split up between revenues redirected to the EU budget and revenues secured for the national budget. These are the *genuine VAT, corporate income tax, personal income tax,* and the *seigniorage revenue.* It is important to point out that even in this group of European taxes the *net effect* for the national budgets would be zero, since what is lost in terms of revenues redirected to the EU budget is gained in terms of eliminated expenditures paid as GNI- and VAT-based contributions.

The main issue here is the allocation of competences in decisions about the revenues earmarked for the EU budget, and not the sum to be paid.

1 (b) Visibility, transparency and simplicity

In a Union of the citizens the Union's revenues are expected to be visible, fully transparent and as simple as possible so that every citizen is placed in a position to follow the developments in this field, and exercise his or her rights in terms of accountability. Accountability implies a more important role for the European Parliament in budgetary matters than it has currently.

While transparency and simplicity are requirements with unambiguously positive connotations, visibility is a more complicated issue. Visibility of an EU tax fits well in the picture of a European citizen enjoying this status, however, recent public opinion polls indicate a low popularity of the European Union among its citizens; visibility (such as a clear indication on a wage bill that part of the tax charged on it goes to the EU) may thus be a handicap rather than an advantage. In the medium run, low visibility combined with transparency and simplicity may better correspond to the realities of the EU today.

The *current system* of own resources is very complicated and anything but transparent and visible.

A *GNI-based* system is fully transparent, very simple and can either be made visible with appropriate public relation campaigns or be left invisible if that is preferred.

– *Options for a European taxation*

In the case of this criterion, the clear winner is the *genuine VAT*. Paid by virtually all adult persons as consumers of traded goods and services, as well as by all economic agents, it ensures the highest possible 'participation rate' of all options. Citizens would have the opportunity to 'see' their contribution to the EU budget several times a day. The tax rate and the value paid to the EU being clearly indicated on each bill (separated from the tax rate and the sum paid to the national budget), this solution offers high visibility, transparency and simplicity. Should invisibility be preferred to visibility, the splitting-up of total VAT collected into components for the national budget and the EU budget on each bill may simply be avoided.

In the case of the *personal income tax*, *communication tax* and *energy tax*, the circle of tax payers is still wide, but less so than in the case of the VAT. Apart from this narrower visibility, transparency and simplicity were as satisfactory as with the VAT.

As concerns the *corporate income tax*, *excise duties on tobacco and alcohol*, a *climate charge on aviation*, a *tax on stock exchange transactions* and a *withholding tax on interest income*, the circle of taxpayers is substantially smaller than in the above options. Many citizens would never come across the European tax. Nevertheless, the spectrum is

certainly wide, ranging from the excise tax on tobacco and alcohol with a relatively large circle of potential European taxpayers to the very limited number of clients (non-member states beneficiaries of interest and dividend payments in individual member states) of the withholding tax on interest income. Visibility, transparency and simplicity are equally given with all these options.

The least suitable European tax according to this criterion is the *seigniorage*. Non-visible, non-transparent and hopelessly complicated for non-economists, it ranks at the bottom. Still, seigniorage is the optimal European tax if, considering the unpopularity of the EU among its citizens, the aim is to avoid the irritation possibly caused by an every-day confrontation with a tax charged by the 'bureaucrats in Brussels'.

1 (c) Allocation of resources along EU policies (externalities)

The main function of the own resources is to ensure revenues for EU-initiated expenditures. Besides this, taxation may have a selective impact on taxpayers; if one or more EU policies can be fostered through the selection of the subjects carrying the tax burden, *ceteris paribus* the solution delivering positive externalities should be preferred to those without doing so.

The *current system* of own resources has no feature of positive externalities, and the same applies to the *GNI-based* system.

– *Options for a European taxation*

There are two proposals with unambiguously positive externalities. A *climate charge on aviation* and the *taxation of energy* would enhance the protection of the environment.

Communication taxation is a mixed bag, with elements enhancing a cleaner environment (road and air transport) and other elements without any positive externalities (telephone lines, broadcasting). *Excise duties on tobacco and alcohol* would figure as 'educational tax' [34] discouraging consumption and may help ease public health problems related to tobacco and excessive alcohol consumption in the EU. Nevertheless, the special problems of addiction to tobacco or alcohol make the relation between the taxation and the targeted change in behaviour ambiguous.

The solutions g*enuine VAT, corporate income tax, personal income tax, tax on stock exchange transactions* and *withholding tax on interest income* would require a harmonization of the tax base in the member states. This would be an important

[34] European Parliament (1994) as cited by European Commission (1998), Annex 2, p. 10.

contribution to internal market policies, particularly in those fields where the harmonization process has not yet started or is in its initial stage.

Seigniorage revenue is a solution without any feature of positive externalities.

2 Budgetary aspects

2 (a) Sufficiency

Sufficiency, in this context, is defined as the ability of any own resources system to deliver the previously fixed revenues for the EU budget. It does not refer to the problem whether or not the resources secured for the EU budget are sufficient to implement ambitions of the European citizens, member states or EU organizations.

Is the proposed solution for own resources able to ensure the required revenues in the long run? In this criterion there are three degrees of compliance. The highest degree is reached if the solution delivers the required revenues fully, with no supplementary resources needed. The second best degree is reached if the bulk of revenues are guaranteed but minor supplementary resources are needed. Finally, the lowest degree of compliance is reached if the proposed solution provides only a minor contribution to the EU budget and can only serve as a supplementary element to one or more sources of revenue.

Both the *current system* of own resources and a *GNI-based* system correspond to the requirement of sufficiency.

– *Options for a European taxation*

In five of the proposals the own resource concerned is able to deliver the required revenues for the EU budget (approximately 1% of the EU GNI) without any supplementary resources. Collected *personal income tax* amounted to over 10%, collected *VAT* to 7% and *corporate income tax* to 2.6% of GDP in 2001. *Taxes on energy* represented 2% of the EU GDP in 2001. With somewhat more than 1% of GDP, the *excise tax on tobacco and alcohol* is the last sufficient potential new solitary own resource. [35]

Communication tax in its narrowest version, charged on airport departures and telephone lines, would probably deliver no more than 10% of the required revenues of the EU budget each.[36] An extension of the tax base to other means of communication could sum up to a much higher coverage, but charging the EU tax on several means of communication would

[35] European Commission (2003) and Eurostat (2003) as cited by Cattoir (2004), pp. 15, 18, 22, 24, 31.

[36] Begg et al. (1977) as cited by Cattoir (2004), p. 28.

make the implementation fairly complicated and expensive. A *tax on stock exchange transactions* could theoretically deliver substantial revenues, but the broader the tax base and the higher the tax rates, the stronger the motivation of investors to move out of the stock exchanges involved. Stock exchange developments also are influenced to a large extent by circumstances not related to the EU or the host economy and which are hardly predictable. Therefore this solution cannot be considered as a major source of revenues of the EU budget.

What was said about a tax on stock exchange transactions applies to a *withholding tax on interest income* as well, but the tax base is smaller in this case. Estimated revenues from a c*limate charge on aviation* (EUR 1-9 billion)[37] and seigniorage (EUR 10 billion)[38] are far from sufficient, and they may serve, together with a withholding tax, only as a minor supplement to a system based on other own resource(s).

2 (b) Stability

The fulfilment of this criterion requires that the own resource concerned does not undergo any abrupt and substantial changes in its value, and the fluctuations, which are unavoidable, leave continuously sufficient contributions to the EU revenues.

The *current system* of own resources is fairly stable due to the high share of GNI-based component, and a purely *GNI-based* system would be even more stable.

– *Options for a European taxation*

Personal income tax and the *genuine VAT* can be seen as the most stable source of revenue, due to the general stability of wages paid and the broad range of economic activities charged with VAT.

Corporate incomes are more prone to fluctuations, *taxes on energy* may deliver changing revenues depending on the development of prices. *Excise taxes on tobacco and alcohol* are 'educational taxes' with the potential to diminish their tax base, nevertheless, due to low price elasticity that danger is minimal. *Communication taxation* has components which are fairly independent of business cycles (telephone lines, road transport) but also components which may in fact be strongly influenced by business cycles and other developments such as terrorism, war or epidemics (e.g. airport departures). This latter argument also applies to a *climate charge on aviation.*

[37] Wit and Dings (2002).

[38] Estimation for the year 2001 (Cattoir, 2004, p. 26).

Revenues from *seigniorage* are difficult to evaluate from the stability point of view: besides fluctuations related to business cycles in the shorter run, electronic means of payments may erode the tax base while increasing circulation of banknotes outside the euro area (e.g. in Montenegro and Kosovo) may broaden the tax base.[39]

The *tax on stock exchange transactions* and the *withholding tax on interest income* are particularly unstable due to mobility of the economic operators involved and the substantial impact on the tax base of political, economic and other, unpredictable events.

2 (c) Cost effectiveness of tax collection

This criterion requires the low-cost collection and simple administration of the revenues selected for financing the EU budget. Solutions relying on existing structures are favourable, those introducing a new tax of a special collection modality are of deteriorating cost effectiveness.

In the *current system* of own resources, the traditional own resources (TOR) are expensive, but customs duties would be collected in a customs union even if there were no common budget and these revenues would not be channelled to it. Most probably, under any reformed own resources system, TOR remain part of the solution, and the related costs are unavoidable. Currently 25% of the collected duties remain in the member states where they were charged in order to cover the related costs. In principle this area of own resources should be free of conflicts, but it is not. When comparing member states' contributions to the EU budget, TOR should be exempted as they are the revenue of the customs union, and it is the geographical location of any given member state which determines its 'national' TOR revenues and contributions to the EU budget. The Netherlands, with one of the world's biggest harbours (Rotterdam), cannot be compared to the Czech Republic in this respect, a country with no external EU borders and thus with minimum duties charged on non-EU imports (from air cargo only). The difficulties emerge if despite the above argumentation a member state such as the Netherlands insists on presenting TOR contributions as its national contribution, with a (negative) impact on the country's net financial position. The outcome is virtually the worst net financial position of all 25 member states and the respective bellicose Dutch position in the recent bargaining of the 2007-2013 financial perspective.

The notional VAT revenues, the second element of the current own resources, is highly cost efficient. Apart from the complicated calculations performed by the ministries of finance in the individual member states, the due contribution is simply transferred from the national treasuries.

[39] Cattoir (2004), p. 26.

Thirdly, the GNI component of the current system is cost-efficient as it necessitates only a transfer from the member states' treasuries. This certainly applies to a *purely GNI-based* own resources system, which would be the most cost effective of all possible solutions.

– *Options for a European taxation*

The most cost-efficient taxation would be the *seigniorage*, with a minimum of additional administration in the participating member states' central banks.

Any splitting or topping-up of already existing taxes (*personal income tax, energy tax, corporate income tax*, *genuine VAT*) would necessitate limited investment and a moderate increase of administrative costs.

In the case of new taxes, additional administrative capacities are required, with potentially high one-off costs at the introduction and thereafter permanent costs for management and control (e.g. *climate tax on aviation*, *communication taxation*, *withholding tax on interest income*).

3 Equity (fair sharing of the burdens)

Here two fundamental options exist: first, when a fair sharing of burdens is a requirement; second, when the solution chosen represents regional arbitrariness, i.e. where the tax is collected but it is impossible to render an account to individual member states. (For the latter option, a tax on stock exchange transactions would be a typical case.)

Next the case for a fair sharing of burdens will be addressed.

3 (a) Horizontal equity

Horizontal equity refers to the concept that taxpayers (member states, firms or individuals) in identical circumstances are treated identically in their tax liability across the European Union.[40]

In the current system, the GNI-based component provides satisfactory horizontal equity, however, only at member state level and not at the level of EU citizens. In terms of per capita contributions to the EU budget, financially equally positioned citizens pay different contributions in the individual member states: more in rich member states and less in poor member states.

[40] European Commission (1998), Annex 2, p. 2.

This applies to the VAT component as well, since in this case, for the lack of a harmonized tax base, complicated calculations are made in each member state to create a statistically comparable basis in order to guarantee horizontal equity. The traditional own resources principally ensure horizontal equity. Nevertheless, the identical rate of reimbursement of collected duties (25% of the value) in all member states for the coverage of the collection costs creates distortions, because the personal cost component is relatively smaller in low-wage member states compared to that in high-wage member states on the western external borders of the EU. Thus, less wealthy member states enjoy preferential treatment due to the unified reimbursement rate.

A *purely GNI-based* system would perfectly comply: member states that are at the same level of development measured in GNI would pay the same contribution calculated by the uniform call rate – but, as argued above, this does not hold at the EU citizen level.

– *Options for a European taxation*

Two levels have to be addressed here. First, horizontal equity across *individuals* and *firms*. This is critically dependent on the degree of tax harmonization in the field concerned. Each proposed option of European taxation is able to deliver equity across taxpayers provided tax harmonization has been completed. Tax harmonization is in a relatively advanced stage in some cases (*VAT, energy tax*) while it has not even started and is facing strong opposition by some member states in other cases (*corporate income tax*). From the point of view of horizontal equity, only those options for a European tax can be seen as feasible where the prospects for a successful completion of tax harmonization are encouraging in the short and medium run.

The second level refers to horizontal equity across *member states*. Harmonization may ensure perfect horizontal equity of involved firms and/or individuals but the different weight of activities taxed across member states may lead to an unequal sharing of burdens across countries (for details see below).

3 (b) Vertical equity

Vertical equity requires that taxpayers in different circumstances be accordingly differentiated in their tax liability.[41] Translated into practical terms, high-income tax payers would contribute more to the EU budget than low-income ones.

The *current system*, based predominantly on the GNI-based and the notional VAT components (the latter is adjusted so that it reflects the differences in the member states'

[41] European Commission (1998), Annex 2, p. 2.

economic strength), is complying with expectations concerning vertical equity at the member state level but not at the EU citizen level. The TOR component is indifferent in this respect.

The purely *GNI-based* own resources correspond to the requirement of vertical equity at member state level, as more affluent member states pay proportionally more to the EU budget than do the less affluent ones, but again, not at the EU citizen level.

– *Options for a European taxation*

Here again the same two levels as in the case of horizontal equity have to be addressed. Looking first at *firms* and *individuals,* it is possible to identify degrees of progressiveness by the different options for European taxation.

The first group of taxes is more or less progressive, bearing the features of vertical equity. A *climate charge on aviation* would certainly involve primarily high-income citizens. This is partly true for the *communication taxation*, but the extent of progressiveness depends on the selected means of communication: it is largest in the case of aviation, smaller if road transport is taxed and probably minimal in the case of telephone lines. Less ambiguous is the *taxation on energy*, where a tax on gasoline for road vehicles is progressive while a tax on heating oil is regressive. At first glance, a *tax on stock exchange transactions*, a *withholding tax on interest income* and an *EU corporate income tax* are progressive, as capital owners typically belong to high-income groups. However, pension funds are increasingly important participants of the capital markets, and their increased costs via a European taxation may have repercussions on low-income pensioned citizens as well, to a strongly varying extent in the individual member states.

In the second group of taxes there are those which are not progressive originally but which can be made progressive by adjusting the tax rates. The *genuine VAT* may be introduced with two rates: 1.5% for basic necessities and 3% for all other goods. [42] The *personal income tax* can be charged with differentiated rates or with a tax-free basic allowance. [43]

In the third group of taxes (*seigniorage*; *excise duties on tobacco and alcohol*) there is no progressive effect on income distribution.

Assuming that a European tax has the required features of progressiveness and that wealthy taxpayers contribute more to the EU budget than less wealthy ones, this alone does not guarantee vertical equity across member states. Just as in the case of horizontal equity, different weights of activities taxed across member states may lead to a burden

[42] European Parliament (1994).

[43] Cattoir (2004), p. 32.

sharing pattern across member states that is far from the progressiveness we would see in a purely GNI-based system, which precisely reflects the differences in economic strength of the individual member states (for details see below).

3 (c) Fair contribution across member states

As shown above, both horizontal and vertical equity are provided by the *current* and by a potential *purely GNI-based* system at the level of member states.[44] Hence the criterion of fair contribution across member states is seen as fulfilled in these cases.

Unlike under the current or a GNI-based system, certain options for European taxation with equal tax rates for *citizens* or *firms* may lead to violation of horizontal or vertical equity *at member state* level.

– *Options for a European taxation*

A *genuine VAT* own resource would possibly harbour inequities in member state contributions because in less wealthy member states higher proportions of income are spent on consumption than in more affluent member states, as the propensity to consume tends to be higher (and the propensity to save lower) in the former than in the latter group of member states. That means that *genuine VAT* is, in itself, unfair in terms of fair contributions across member states. This tax may find its normative justification as being part of a 'tax mix' with other taxes capable of redressing the mentioned distributive unfairness.[45] Another remedy (mentioned above) may be a *VAT* with two rates: a lower one for basic necessities and a higher one for all other goods.[46] This latter solution would secure vertical equity for the taxpayers as well as for the member states.

A European *energy tax*, provided the harmonization has been completed, may be optimal from the point of view of horizontal equity. However, problems may arise with vertical equity. If e.g. heating oil is selected as the subject of taxation, this may lead to regressive contributions at the member state level, with poor countries taking relatively higher burdens due to the higher weight of heating costs in their consumption structure. Conversely, taxation of kerosene would bring a strong progressive element into contributions compared at the member state level, due to the more important role of air transport in wealthy

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[44] In a milder form of vertical equity, the same tax rate (in per cent of GNI) is sufficient to ensure vertical equity, as the more affluent member state contributes to the common budget with a higher sum per capita than a less affluent one. In a stricter version, if progressive burden sharing is required, tax rates are to be differentiated (lower rates for the relatively poor member states) so that any more affluent member states' contribution be more than the contribution of any less affluent member states beyond the proportions determined by the different level of economic development of the countries involved. As mentioned earlier, solidarity among member states is the task of the EU budget expenditures, thus for the vertical equity the milder interpretation (equal tax rates) was applied.

[45] Menéndez (2003), pp. 15 and 20.

[46] European Parliament (1994).

member states. An appropriate mix of energy carriers selected as the subject of taxation may alleviate that problem. Nevertheless, geographical location and specific features of individual member states may cause problems that may be difficult to cope with. In Malta and Cyprus heating oil certainly plays a much smaller role than in Finland or Sweden, while a tax on kerosene may be a serious problem for Malta and Cyprus where tourism based on arrivals by air is a key component of the national economic performance.

The patterns of *tobacco and alcohol* consumption show considerable differences by member states due to tradition, geographical determination of production location, etc. This means that while horizontal equity may not be a problem for European citizens in the case of completed harmonization of the tax base, the outcome in terms of *member state contributions* may be embarrassingly fuzzy and deviant from the requirements of horizontal or vertical equity.

Seigniorage collected from the central banks of the euro system will be a good candidate for a European tax from the equity point of view, as from 2008 on monetary income will be distributed fully to the participating member states' central banks, according to an ECB capital key closely linked to the GDP of the member states.[47] The main problem here is that more than half of the member states are not participating in the euro system, and even in the medium run participation of at least one very important member states (UK) is uncertain. This duality makes an assessment of the contributions' fairness at member states level for an EU-25 difficult.

The *communication tax* is a mixed bag. Telephone lines were found to be in close correlation with the level of development of the member states, at least back in 1997.[48] Rapid technological change and falling prices due to strong competition may have changed this picture fundamentally, leading to regressive contributions by *member states* if the European tax were based primarily on telephone lines. Taxation on road transport may cause similar distortions. Revenues from a tax on air travel departures may be a case for regional arbitrariness (see below).

Member states' contributions in the case of a harmonized *personal income tax* would probably be closely correlated to the level of the member states' economic development. What is more important, revenues could be easily assessed for a longer period ahead even before the introduction of the system. Should the danger of major anomalies from a fair distribution of burdens by member states be discovered in a comparison with per capita GNI, a corrective mechanism could be added to the system.

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[47] Cattoir (2004), p. 27.r

[48] European Parliament (1997) cited by Cattoir (2004), p. 29.

Certain options of a European tax have so far been left out in the discussion from the point of view of fair sharing of burdens across member states, as this approach is not suitable for them. These latter options are addressed in the following.

Regional arbitrariness

If *regional arbitrariness* enjoys a clear preference over a fair sharing of burdens across member states, then the suitable options for a European tax are as follows:

Corporate income tax is a difficult case for ensuring cross member state equity. Multinational enterprises play an important and increasing role in the European Union in general and in the new member states in particular. Due to the distortions caused by transfer prices and the huge repertoire of 'creative bookkeeping', a European *corporate income tax* cannot be reapportioned to individual member states in a way that the burdens borne are clearly defined.

A *tax on stock exchange transactions* would again be a case for regional arbitrariness. With the introduction of this tax the question of fair contributions by member states could simply not be raised. Major financial centres would certainly be affected as their competitiveness would be impaired vis-à-vis non-EU competitors exempted from the tax. While incomes from the tax could not be attributed to member states, a possible loss of attractiveness of the major financial centres concerned (London, Frankfurt and Paris) could be interpreted by host countries to these centres as unfair contribution of burdens across member states.

A *withholding tax on interest income* paid in individual member states by non-resident EU citizens would be an extreme case for regional arbitrariness, where actually the contributions delivered by individual member states would be collected from citizens of other member states. Still, it would be possible to aggregate the involved taxpayers' data by country of origin, arriving at a secondary contribution by citizens of individual member states.

As mentioned in the discussion of the *tax on communication*, revenues from a tax on air travel departures may be a case for regional arbitrariness. The differences in holiday traditions (the French preferring to stay in France, Germans preferring Mediterranean holiday resorts) or the fact that some member states record high numbers of air travel departures with marginal participation of own citizens (Malta, Cyprus, Portugal, Spain, Greece) suggest the lack of horizontal and vertical equity at member state level. Making this statement more exact, the actual picture emerging is too fuzzy for any usable assessment of fair distribution of burdens across member states.

For the *climate charge on aviation*, the same applies as was said on the communication tax on air transport departures.

In the cases of a tax *on air travel departures* and *climate charge on aviation*, regional arbitrariness is less meaningful than in the other cases enlisted above, and militant member state positions may emerge relying on data of air travel statistics.

* * *

A final remark on fair contribution across member states: a change in the own resources system will have to be approved by the European Council, then by each member state's parliament. That means that any perception of injustice or unfair treatment in just one of the 25 (27 in 2008/2009) member states may cause a blockade of the reform process. A departure from the present system may cause a deterioration for some member states. It is important that fairness be projected to the future reformed system and not interpreted as preserving an earlier achieved status or requiring compensation for a move towards a generally more fair but, from an individual member state's point of view, less advantageous position.

Ranking of the reform proposals

Testing the various reform proposals with the help of the nine (3x3) criteria leaves the observer with the impression that there is no option available which could simultaneously correspond to all expectations.

The European Commission, after evaluating and comparing various options for reform, proposed three main candidates for a possible future own resource of the EU: [49]

- A tax on energy consumption
- Genuine VAT
- Corporate income tax

The Commission, commenting on its proposition, is of the opinion that the energy- and VAT-based own resources may be introduced in the medium term, considering the progress achieved so far in harmonization in both areas, while a tax on corporate income may only be seen as a much longer-term option.

The author of the present paper is of the opinion that the decision on a possible future own resource of the EU can best be made if the *priorities* are ranked first.

[49] European Commission (2004a), p. 58.

If the **Budgetary aspects** are the most important, the *purely GNI-based system* is a clear winner, with the best performance in all three sub-criteria – sufficiency, stability and cost effectiveness. It is also performing best in the priority **Equity** at member state level. However, it fails completely in the priority **Creating a Union of the citizens**. Concerning again the **Budgetary aspects**, the *genuine VAT* and *energy taxation* are the two options that are performing best among the proposals for a European tax, and they have a good ranking in the other two aspects as well.

If the aspect **Creating a Union of the citizens** is the number one priority, it is the *taxation on energy* which corresponds best to the requirements in this aspect and it is simultaneously a good or satisfactory performer according to all other criteria. The other strong candidate in this category, *climate charge on aviation*, has a partly miserable performance in budgetary terms.

Taking **Equity** as the selected priority, *genuine VAT* (introduced with two rates: 1.5% for basic necessities and 3% for all other goods) and a *tax on energy* (with a carefully selected mix of energy carriers) are the options with the least problems, and both figure well in matching with other criteria.

Overture to the discussions preceding the 2008/2009 review of the EU budget

The Lamassoure report

In Spring 2007 the European Parliament took over the initiative concerning the preparations for reforms of the EU budget. Based on a report by MEP Alain Lamassoure[50], the European Parliament approved a resolution on the future of the European Union's own resources.[51] This document exerts serious criticism over the current own resources system, pointing out that the system has accentuated the short-sighted net payer debate. The document is not less critical about the European Council agreement of 14/15 December 2005. The European Parliament 'believes that the financial package agreed, with its numerous exceptions on the revenue side and its compensation gifts to certain Member States on the expenditure side, is the clearest proof of the complete failure of the current system'.[52]

The proposed solution envisages two stages for reforming the EU budget. The first, provisional measures would be introduced as soon as possible and would be replaced by the genuine reform measures from 2014 onwards. In the first stage the currently applied VAT component of the own resources would be abolished, and beside the traditional own

[50] Lamassoure (2007).

[51] European Parliament (2007).

[52] European Parliament (2007), p. 5.

resources solely the GNI component would deliver the necessary resources for financing the budget. The UK rebate would be progressively diminished to zero by 2013.

For the second phase of the reform important guiding principles are pinned down. The fiscal sovereignty of the member states remains untouched: the EU will not collect a tax in the member states. It will, however, benefit from a certain share of a tax collected in the member states. The new measures will be fiscally neutral, the magnitude of the EU budget will remain unchanged, i.e. the increase of the tax burden in certain areas must be accompanied by measures to reduce the tax burden in other areas. The new own resources system should be introduced gradually with a smooth phasing out of the old system. The reform of the own resources system is expected to go hand in hand with a reform of the expenditure side of the budget.

The core idea of the reform is that an already existing tax in the member states will have to be fed, partly or in full, into the EU budget as a genuine own resource, thus establishing a link between the European Union and the European taxpayers.

As concerns the candidate taxes, the European Parliament, relying on previous reports of the Commission and the results of consultations with the national parliaments, put forward the following list:

- VAT
- Excise duties on motor fuel for transport and other energy taxes
- Excise duties on tobacco and alcohol
- Taxes on corporate profits

The resolution notes that other possible candidates also were explored in the discussions, such as taxes on dealings and securities, on transport and telecom services, income tax, withholding tax on interest, seigniorage, ecotax, taxes on currency transactions, financial transactions and savings.

The European Parliament wishes to pursue the examination of the above-listed options together with the national parliaments and arrive at a final position by the end of 2007.

Study on four candidate taxes

On commission by the European Parliament's Committee on Budgets, a detailed (external) study was compiled about the applicability of four taxes as a future source of own resources for the EU.[53] The candidates (VAT, excise duty on motor fuel, excise duty on

[53] Doherty (2007).

alcohol and tobacco and tax on corporate profits) were investigated by two criteria: sufficiency and stability.

The study came to the conclusion that solely the VAT would fulfil both the sufficiency and stability criteria. For VAT the required share of revenues is always below 25% of the total and, in almost all member states, the correlation with GDP per capita is significant (i.e. growing per capita GDP is accompanied by accordingly increasing revenues from this tax).[54]

Concerning excise duty on motor fuel for road transport, this tax would not raise sufficient revenues in Ireland and the Netherlands. Most of the remaining member states would need to transfer between 50% and 75% of their revenues, a few member states even more. The correlation with GDP per capita is generally high, although in some cases it is below 50%. Excise duties on alcohol and tobacco would ensure insufficient revenues in nine member states, and in several other member states the required share would be larger than 75% of total revenues. Correlation with GDP per capita is generally high, but it is negative in Denmark, Finland and Sweden. Revenues from corporate profit tax appear to be sufficient in all member states, with transfers ranging between 25% and 50% of the respective revenues. Correlation with GDP per capita is negative in nine member states, suggesting low stability of revenues. [55]

Proposal of the Green Group

In April 2007 the Green Group in the European Parliament proposed the following taxes for securing the EU's own resources: proceeds from the auctioning of CO_2 allowances, contributions from the harmonized excise duty on mineral oils and an effective EU company tax.[56]

The Iain Begg proposal

Iain Begg has raised a new idea in the discussion on who should finance the EU budget. As a possible approach, he suggests that those entities (not necessarily the member states) which benefit the most from the existence of the European integration should come up with the financing.[57] 'To the extent that it is businesses that benefits from the single market … a tax on profits could be justified to pay for the EU's spending. Or if the EU integration can be shown to have been especially beneficial to certain industries, those

[54] Doherty (2007), p. 3.

[55] Doherty (2007), pp. 3-4.

[56] Lührmann, Schick and Steenblock (2007), p. 44.

[57] Begg (2007), p. 12. This idea was also raised by a Hungarian researcher, Miklós Somai, at the conference 'EU-Taxes', organized by the Institute for Austrian and International Tax Law of the Vienna University of Economics and Business Administration in Rust (Austria), 5-7 July 2007.

might become the tax base.'[58] Nevertheless, it is difficult to understand why the bargaining across industries on who gains more or less from the existence of the single market would be less frustrating than the one between member states on net financial positions.

Begg points out that there is no one optimal candidate for becoming an EU tax base; each option has its strengths and drawbacks, and the assessment may be different in individual member states depending on the political weight attached to various characteristics of the tax.[59] From this view follows Begg's suggestion for providing autonomy for each member state in the decision to choose the tax which ensures the revenues to be transferred to the EU budget from that particular member state. Taxes should not be identical or even similar across member states.[60] For instance, Sweden might opt for an alcohol excise tax, Cyprus for a tax on tourism while Germany for a tax on energy consumption. Certainly the sum of member state contributions should be fixed for each particular year, so that overpayment can be reimbursed. Begg does not go into the discussion how the member state contributions should be allocated within the EU. For the author of the present paper a GNI-proportional allocation seems to be the most simple and expedient solution.

[58] Begg (2007), p. 12.

[59] Begg (2007), p. 16.

[60] Begg (2007), p. 17.

Part Two

Tax on financial transactions

In April 2006, four of the five political parties represented in the Austrian Parliament (People's Party, Social-Democrats, Greens and BZÖ) submitted a joint motion for a resolution to investigate the feasibility of a foreign exchange transactions tax. The revenues should finance partly the own resources of the EU budget, partly global development programmes.[61] This event and similar recent initiatives in France, Belgium and the European Parliament give reason to investigate the pros and cons of a *financial transactions tax* as the source of revenues for the European Union's own resources in a detailed way. This issue is the focus of Part Two of this paper.

Considering the 'standard' proposals for an EU tax as discussed in Part One from a new angle and adding two new ideas proposing taxes on various financial transactions, we arrive at a new grouping of possible European taxes.

A Income taxes

- Personal income tax
- Corporate income tax
- Withholding tax on interest income
- Transfer of seigniorage revenue

B Tax on real economy transactions

- Genuine VAT[62]
- Taxation of energy
- Communication taxation
- Climate charge on aviation
- Excise duties on tobacco and alcohol

C Tax on financial transactions

- Tax on stock exchange transactions
- Tax on foreign exchange transactions
- Tax on all financial transactions

In the following only the European tax proposals in Group C will be discussed.

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[61] *Der Standard*, 29/30 April and 1 May 2006. In Austria the issue of tax on financial transactions as a promising source for the EU's own resources in the future was discussed in Schratzenstaller (2006) and Schratzenstaller and Berghuber (2007).

[62] VAT systems typically exempt 'core' financial services. (Merrill and Edwards, 1996, p. 487.) However, the Commission proposes changes in this respect and considers the introduction of VAT in various financial services. (Reuters, interview with László Kovács, Taxation Commissioner for taxes and customs, as cited in NOL, 8 May 2006.)

Tax on stock exchange transactions

As mentioned in Part One of this paper, a European tax on stock exchange transactions would be charged on the value of transactions of shares and bonds or of shares only. In some EU member states, taxes on transactions on stocks and bonds (stamp duty) exist, other member states have eliminated such taxes in the past one and a half decades in order to foster the development of local stock exchanges.

As financial flows are highly mobile across international market places, any EU-wide tax on stock exchange transactions should be based on a sufficiently low tax rate to avoid displacement of financial investments. Table 1 provides insight into the volume of transactions in shares and bonds in the EU-25 in 2006.

In 2006 the total value of shares traded in market places within the EU-25 amounted to USD 19,422 billion. Taking the combined value of transactions in shares and bonds, the total amounted to USD 31,517 billion in 2006 (38% of the respective value of transactions globally).[63]

The EU own resources requirement in that year (USD 148.2 billion)[64] would have amounted to 0.5% of that sum, nevertheless under the assumption, that the tax base remains unchanged, i.e. omitting the possible effects of tax evasion and/or relocation. The implied EU tax rate would thus also be around 0.5%, or less, if revenue components other than the tax on stock exchange transactions were included.

This is lower than the real life tax rate charged on stocks and bonds in Ireland (1%, except for state bonds), and similar to the tax rates which had been applied (but have already been abolished) in Germany (0.5% for stocks and 0.4% for bonds). France has a 0.13% tax rate (except for small investments). The tendency is clear; Austria, Italy, the Netherlands, Sweden and Spain no longer impose such a tax. The United Kingdom has a 0.5% stamp duty for purchases of shares of UK companies. The UK government has for years been bombarded by petitions to abolish the stamp duty. The UK business circles call for the abolishment referring to the disadvantage to the London Stock Exchange in the global competition: the main competitor US applies a rate of 0.003%, which is planned to be gradually decreased in the coming years.[65]

Along with increasing globalization, computerized and therefore accelerated transactions and less and less obstacles in the way of relocation of financial investments, the prospects

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[63] Own calculation based on data of World Federation of Exchanges, Annual Report and Statistics 2006.

[64] Actually EUR 108.4 billion, changed to USD at an exchange rate of 1.367 USD/EUR.

[65] United Kingdom International Tax Site (2006).

for a one-country or even a regional tax on stock exchange transactions are gloomy, while no efforts for creating a global tax in this field are in sight.

Table 1

Value of share and bond trading in the European Union, 2006

(USD billion)

	Shares		Bonds		Shares and Bonds	
	USD billion	%	USD billion	%	USD billion	%
Eurozone	**10,387**	**53.5**	**5,839**	**48.3**	**16,226**	**51.5**
Athens Exchange	108	0.6	0	0.0	108	0.3
BME Spanish Exchanges	1,934	10.0	4,980	41.2	6,914	21.9
Borsa Italiana	1,591	8.2	156	1.3	1,747	5.5
Deutsche Börse	2,737	14.1	288	2.4	3,025	9.6
Euronext* (BE, FR, NL, PT)	3,853	19.8	390	3.2	4,243	13.5
Irish SE	82	0.4	23	0.2	105	0.3
Luxembourg SE	0	0.0	2	0.0	2	0.0
Wiener Börse	82	0.4	0	0.0	82	0.3
London SE	**7,572**	**39.0**	**3,305**	**27.3**	**10,877**	**34.5**
EU-NMS	**131**	**0.7**	**65**	**0.5**	**196**	**0.6**
Budapest SE	31	0.2	2	0.0	**33**	0.1
Ljubljana SE	2	0.0	2	0.0	**4**	0.0
Malta SE	0	0.0	0	0.0	**0**	0.0
Warsaw SE	56	0.3	1	0.0	**57**	0.2
Cyprus SE	4	0.0	0	0.0	**4**	0.0
Prague SE	38	0.2	27	0.2	**65**	0.2
Bratislava SE	0	0.0	33	0.3	**33**	0.1
OMX**	**1,332**	**6.9**	**2,886**	**23.9**	**4,218**	**13.4**
Total	**19,422**	**100.0**	**12,095**	**100.0**	**31,517**	**100.0**

Note: * Euronext provides services for regulated stock and derivatives markets in Belgium, France, the Netherlands, Portugal as well as in the UK (derivatives only). ** OMX is the alliance of stock exchanges for the Nordic countries, including Copenhagen, Stockholm, Helsinki, Riga, Vilnius, Tallinn and Reykjavik.

Source: World Federation of Exchanges, Annual Report and Statistics 2006, own calculations, websites of the Prague and the Bratislava stock exchange.

Apart from the general problem of relocation, the stock exchange transactions tax as a potential source of EU budget revenues raises the specific problem of fair contribution to the EU budget across member states.

The geographical distribution of the transactions in *shares* in the EU-25 (Table 1) shows disparities compared to the distribution of the economic strength (GNI) of the member states. 39% of the turnover falls on the London Stock Exchange, the combined share of the 12 Eurozone member states in 2006 is not significantly higher than that (53.5%). In the

latter group, the stock exchanges under the umbrella of Euronext (Belgium, France, the Netherlands and Portugal) are the major players with 19.8% participation; the German, Spanish and Italian financial markets rank next. The ten new member states have only a small share in the total value of transactions in shares (0.7%), which is far below their relative economic strength in the EU.

As concerns the geographical distribution of transactions in *bonds*, the role of the market place London with 27.3% of the total turnover is less strong than it was in the case of shares. The leading position is held by the Spanish Exchanges, providing the market place for more than 40% of total bond transactions in the EU. What is remarkable is the relative importance of the alliance of Nordic stock exchanges (OMX). The new member states' share in total transactions is very small.

The geographical pattern of the transactions in shares and bonds *combined* clearly shows the outstanding role of the market places London (34.5%) and Madrid (21.9 %). This implies that in the case of an EU-wide transactions tax on shares and bonds introduced hypothetically in 2006, two member states of the 25 would provide more than half of the own resources of the EU budget. Even if London and Madrid are international market places with significant activity of non-domestic investors, the relevance of the financial market place make it more than unlikely that these two member states would ever accept a proposal for an EU tax on shares and/or bonds.

Taking the 3x3 criteria for testing the proposal, the tax on stock exchange transactions shows a mixed performance in *Creating a Union of the citizens*. The tax could be made independent of national treasuries, financial autonomy would thus be secured. Visibility of the tax would be fairly limited, as only a small segment of the EU population would come across the tax, even if a growing share were involved due to the pension funds. In the limited circle of citizens involved there would be no problems concerning simplicity and transparency. The tax would not support any current EU policies. As an externality, one should reckon with a decline of the turnover in shares and/or bonds in the European financial market places. The extent of this drop would dependent on the tax rate.

Concerning the *Budgetary aspects*, the 0.5% tax rate that could cover the financing requirements of the EU budget appears too high for avoiding relocation. A substantially lower tax rate with less incentive for relocation could deliver only a fragment of the required revenues. Addressing stability next, turnover in shares is volatile, therefore the tax is not really promising in this respect. The collection of the tax helped by computerized accounting systems would be simple and cost-efficient, no new institution would be necessary for the implementation.

In terms of *Equity*, a unified tax rate would guarantee horizontal equity for market participants (companies/citizens). Vertical equity would be ensured by the fact that shareholders are among the more well-to-do citizens of the Union, even if due to pension funds investing in the stock exchange an increasing number of less wealthy citizens are involved. However, a tax on stock exchange transactions would not provide a fair sharing of burdens across member states. In terms of vertical equity the system would be extremely progressive, with negligible contributions to the EU budget by the relatively poor new member states. Parallel to this, there would be serious problems with horizontal equity, with the UK contributing to the EU budget by a much bigger sum than would be proportional to the UK's share in the EU-25 GNI. The same applies to Spain, even if to a somewhat less extreme degree than in the case of the UK.

If regional arbitrariness is required, this tax is an interesting candidate. The listed companies have in many cases complicated multinational ownership structure, investors operating at the stock exchanges concerned are also typically multinational. In so far the source of the tax collected could not be traced back by home countries of the tax payers. Nevertheless, the geographical distribution of the collected tax by financial market place would be quite clear; as shown above, the deviation from the distribution by member state GNI is considerable.

Tax on foreign exchange transactions

The idea of an EU-wide tax on *foreign exchange transactions* as a new own resource of the EU budget has been raised repeatedly in the past few years. Due to the important political implications of this issue in a global dimension, more efforts have been invested in the assessment of this potential source of revenues than in the assessment of any other type of financial transactions tax.

The original idea of a *global* tax on foreign exchange transactions was first raised by the US economist James Tobin in 1972.[66] The tax (often referred to as the Tobin tax) was intended to 'throw sand into the wheels of international speculation'. The essential property of the transactions tax, as Tobin formulates it, is 'that this simple, one-parameter tax would automatically penalize short-horizon round trips, while negligibly affecting the incentives for a commodity trade and long term capital investments. ... It handles, with built in flexibility, problems that were formerly tackled by rigid quantitative exchange controls or financial regulations.' [67]

[66] James Tobin put forward the idea at his Janeway Lectures at Princeton in 1972, published in Tobin (1974).

[67] Tobin (1996a), Prologue in Haq et al. (1996), p. xi.

The world economy background of the proposal for a transactions tax on foreign exchanges has been the diverging development of foreign exchange transactions related to the real economy and of speculation, respectively. According to data from the latest Triennial Bank Survey published by the Bank for International Settlements (BIS), the average global *daily* turnover in April 2007 ('traditional' foreign exchange transactions[68] only) amounted to USD 3.2 trillion (or USD 3,210 billion).[69] On the basis of 245 business days this is an annual turnover of USD 786 trillion or USD 786,450 billion. It is expedient to compare this with global GDP and FDI data. We do not have these data for 2007 as yet, thus only a comparison of foreign exchange transactions and the respective data in 2004 is possible.[70] In 2004 USD 11,069 billion global exports of goods and services and USD 730 billion global FDI outflows were reported. The former amounted to 2.4%, the latter to 0.16% of the annual value of foreign exchange transactions in 2004. The world GDP in that year (USD 40,671 billion) made up 8.8% of the foreign exchange transactions.[71] What concerns Europe, close to half of the global turnover falls on the 27 EU members and a further over 8% share of the total turnover on non-EU Europe, primarily Switzerland.

As the above figures indicate, only a fragment of foreign exchange transactions are directly related to real economy transactions such as trade and foreign direct investment. A considerable, though not exactly known part of the transactions concerned are of indirect relevance for the real economy: these consist of insurance, hedging and arbitrage. What remains is speculation.

Though Tobin's proposal was long neglected, the rapid expansion of foreign exchange transactions over the past decades and major currency crises in Western Europe (1992-93), Mexico (1994-95), East Asia (1997-98), Russia (1998) and Brazil (1999) have aroused new interest in a tax on foreign exchange transactions from the middle of the 1990s on.

The transactions tax would have the following purposes: [72]

- diminishing the exchange rate volatility by reducing currency speculation;
- diminishing the vulnerability of national economic policies to external shocks;
- raising revenues for international economic organizations and participating governments.

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[68] Spot and outright forwards transactions, foreign exchange swaps.

[69] BIS (2007), Triennial Central Bank Survey, p. 4.

[70] The turnover of foreign exchange transactions is published every third year; for the comparison we relied on data published in BIS (2005), Triennial Central Bank Survey, p. 5.

[71] World Investment Report (2005), p. 14.

[72] After Galliano and Patterson (1999), p. iii.

The first two points, though they are of immense importance, are not subject to discussion in this paper. The focus of this analysis will be the third point, the revenue raised with the help of the tax.

In the original Tobin proposal the revenue-raising capacity of a tax on foreign exchange transactions was seen as a by-product of an economic policy measure whose primary role would be to put an efficient brake on the growth of international speculation in a world economy where traditional restrictions on cross-border capital movement have been practically removed completely.[73] The revenue-generating capacity was rediscovered and became increasingly popular in the middle of the 1990s.

Who would pay and how much in the end?

The potential payers of a tax on foreign exchange transactions would be the economic agents participating in foreign exchange trade.[74]

– Reporting dealers

(Financial institutions that actively participate in local and global foreign exchange and derivatives markets. Mainly large commercial and investment banks and securities houses trading in currencies both for their own account and/or meeting customer demand. They typically deal through electronic platforms, EBS or Reuters.)

– Other financial institutions

(Financial institutions that are not classified as reporting dealers, including smaller commercial and investment banks and securities houses plus pension funds, insurance and leasing companies, hedge funds, mutual funds, money market funds, currency funds, building societies, financial subsidiaries of corporate firms and central banks.)

– Non-financial customers

(Any counterparty in a deal other than those described above; mainly end users such as corporates and governments.)

In 2007 somewhat less than half of the total foreign exchange turnover fell on reporting dealers. (Their share is decreasing; in 1995 it had still been over two thirds, in 2004 more than half of the total.) Other financial institutions had an only 20% share in 1995, one third in 2004 and 40% in 2007. Non-financial customers participated with 13-14% earlier, in

[73] 'Raising revenue has never been my main motivation', Tobin (1996), p. xvi, cited in Haq et al. (1996). In any case, the principal purpose of the tax is to expand the autonomy of national monetary policies. Tobin (1996b), p. 496.

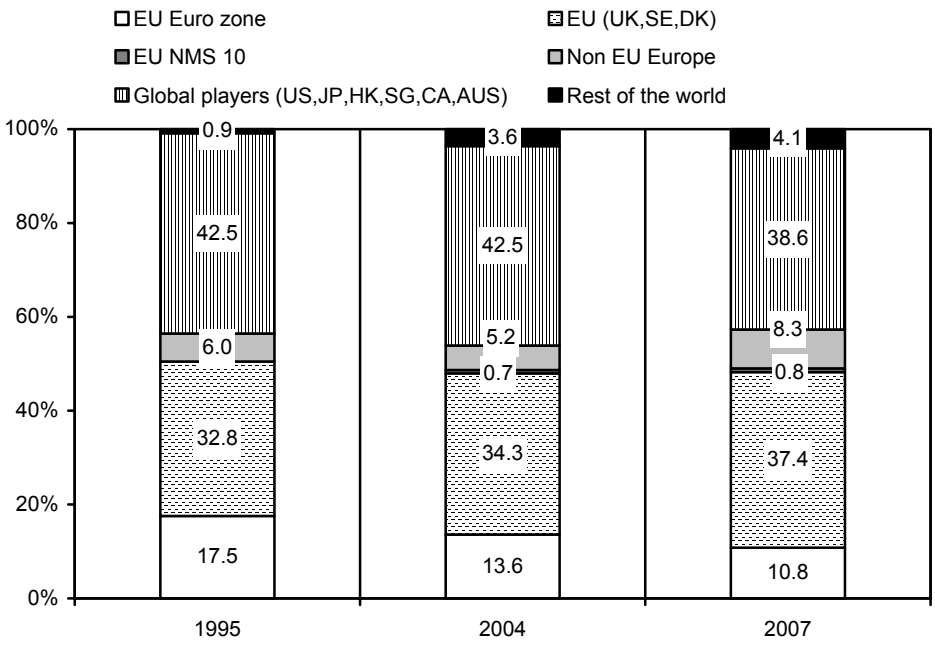
[74] Definitions in BIS (2007), Triennial Central Bank Survey, p. 38-39.

2007 they attained 17%.[75] Roughly one third of the trade was local, among traders located in the same country, and two thirds of the turnover fell on cross-border deals with traders located in two different countries. Trade in foreign exchange is highly concentrated. In the year 2007 75% of the total turnover in the UK was conducted by 12 banks (in 1998 24 banks), in the US by 10 banks (in 1998 20 banks). Japan, Switzerland, Singapore, Germany and France show the same signs of concentration.

Figure 2

Geographical distribution of reported foreign exchange market turnover

share in %



Source: BIS (2005) and (2007), Triennial Central Bank Survey, Table B6.

In order to arrive at an estimate of the revenues from a foreign exchange tax, assumptions must be made about a few key parameters. 'This is a difficult task due to the unavoidable arbitrary hypotheses that must compensate the absence of past experience.' [76]

The decisive question arising here is what reduction in trading volume would have to be expected due to the tax. The answer requires an assumption about the likely extent of *fiscal evasion*, the share of trade possibly *exempted* from taxation ('official' trading), and the *pre-tax transactions costs* for dealer banks, other financial institutions and non-financial customers. Further, volume *elasticity* must be estimated for each of the three groups of potential taxpayers in the case of various tax rates.

[75] BIS (2007), p. 7.

[76] Jetin and Denys (2005), p. 130.

Table 2

Geographical distribution of reported foreign exchange market turnover

Daily averages in April 1995, 2004 and 2007

	1995 % share	2004 % share	2007 % share
EU-15 Eurozone*	**17.5**	**13.6**	**10.8**
Austria	0.8	0.6	0.4
Belgium	1.8	0.8	1.2
Finland	0.3	0.1	0.2
France	3.7	2.6	3.0
Germany	4.8	4.9	2.5
Greece	0.2	0.2	0.1
Ireland	0.3	0.3	0.3
Italy	1.5	0.8	0.9
Luxembourg	1.2	0.6	1.1
Netherlands	1.7	2.0	0.6
Portugal	0.1	0.1	0.1
Spain	1.1	0.6	0.4
EU-15 national currencies	**32.8**	**34.3**	**37.4**
Denmark	2.0	1.7	2.2
Sweden	1.3	1.3	1.1
United Kingdom	29.5	31.3	34.1
EU-NMS-10**	**...**	**0.7**	**0.8**
Bulgaria	...	...	0.0
Czech Republic	...	0.1	0.1
Estonia	...	0.0	0.0
Hungary	...	0.1	0.2
Latvia	...	0.1	0.1
Lithuania	...	0.0	0.0
Poland	...	0.3	0.2
Romania	...	...	0.1
Slovakia	...	0.1	0.1
Slovenia	...	0.0	0.0
Non-EU Europe	**6.0**	**5.2**	**8.3**
Switzerland	5.5	3.3	6.1
Norway	0.5	0.6	0.8
Turkey	...	0.1	0.1
Russia	...	1.2	1.3
Global players	**42.5**	**42.5**	**38.6**
Japan	10.2	8.3	6.0
United States	15.5	19.2	16.6
Hong Kong SAR	5.7	4.2	4.4
Singapore	6.7	5.2	5.8
Australia	2.5	3.4	4.3
Canada	1.9	2.2	1.5
Rest of the world	**1.2**	**3.7**	**4.1**
Total	**100.0**	**100.0**	**100.0**

Notes: *2007 data are without Slovenia. **Without Cyprus and Malta, as for these two countries there were no available data.

Source: BIS (2007), Triennial Central Bank Survey, Table B.2.

Table 3

The market makers: reporting dealers with over 50% combined global market share,

April 2001

Reporting dealer	global market share
Citygroup	9.7%
Deutsche Bank	9.1%
Goldmann Sachs	7.1%
JP Morgan	5.2%
Chase Manhattan Bank	4.7%
Credit Suisse First Boston	4.1%
UBS Warburg	3.6%
State Street Bank and Trust	3.0%
Bank of America	3.0%
Morgan Stanley Dean Witter	2.9%

Source: Spahn (2002), p. 27.

Global revenues from the tax

Depending on the above assumptions, the estimates for global revenues from a foreign exchange tax differ widely. The lowest revenue was estimated by S. Kapoor. Calculating with the 2004 daily turnover, with no fiscal evasion, pre-transactions costs between 0.01% and 0.03% and a very low 0.005 tax rate, he arrived at an annual tax revenue of USD 10 to 15 billion.[77] The high end of the altogether 13 independent estimates shows annual revenue of USD 176 billion, USD 177 billion and USD 180 billion.[78] The very similar final results are based on fairly different assumptions in details. Taking the most important one, the tax rate, Frankel arrived at his result by calculating with a tax rate 0.1%, the Finnish Ministry of Finance with one of 1%, and Felix and Sau with one of 0.25%. The calculations by Jetin with a 1% tax rate (his lead scenario is based on a 0.1% tax rate) arrive at USD 210 billion annual global revenues.

Revenues from the tax in Europe

There are four estimations for the tax revenues in the EU. The French Ministry of Finance, working with 1998 turnover data, arrived at USD 22 billion revenues from the tax with differentiated tax rates (0.01% for dealer banks, 0.2% for others).[79] Spahn, working with 2001 turnover data and differentiated tax rates (0.01% for dealer banks, 0.02% for others),

[77] Calculations by S. Kapoor, published in 2004 as cited in Jetin and Denys (2005), p. 131.

[78] Frankel (1996), calculations by the Ministry of Finance, Finland in 2001 and Felix and Sau (1996) as cited in Jetin and Denys (2005), p. 131.

[79] Calculations by the Ministry of Finance, France in 2000 for the EU-15, as cited in Jetin and Denys (2005), p. 131.

arrived at a range of USD 16.6 to 20.8 billion annual revenues at EU-15 level.[80] The Belgian Ministry of Finance, based on 1998 turnover data, estimated USD 9 to 39 billion, depending on the tax rate (0.01% and 1%, respectively).[81]

The most recent and detailed estimation has been made by Jetin for the Eurozone, the EU-15 and the EU-15 plus Norway and Switzerland.[82] He calculates with differentiated pre-transactions costs (0.02 for the dealer banks, 0.05 for other financial institutions and 0.1% for non-financial institutions) and volume elasticity (-1.75 for the dealer banks, -1.1 for other financial institutions and -0.55 for non-financial institutions).[83]

Jetin and Denys reckon with fiscal evasion ranging from 25.2% in the case of the lowest and 40% in the case of the highest tax rate. A wide range of tax rates are tested, the lowest being 0.01% and the highest 1%. Their central estimation is based on a 0.02% tax rate for dealer banks and a 0.1% tax rate for other financial institutions and non-financial customers. At these tax rates the fiscal evasion is assumed to reach 25% to 26.5% in the Eurozone, 20% to 21.5% in the EU-15 and 18% to 19% in the EU-15 plus Norway and Switzerland. The endogenous reduction of the trade volume would amount to about 70% in the dealer banks' group and in the circle of other financial institutions, and somewhat above 30% in the non-financial sector.

Table 4

Main assumptions in Jetin's central estimation for the EU-15

	Reported dealers	Other financial institutions	Non financial institutions
Fiscal evasion (in %)	20.3	21.5	21.5
Pre-tax transaction costs (in %)	0.02	0.05	0.1
Tax rate (in %)	0.02	0.1	0.1
Elasticity (in %)	-1.75	-1.1	-0.55
Endogeneous reduction of volume (in %)	70.3	70.1	31.7

Source: Jetin and Denys (2005), pp. 131-151.

Based on 2004 global trade volume data, the estimated tax revenue for the Eurozone amounts to USD 29.3 billion a year. In the EU-15 the revenues would be USD 47.5 billion, the upward jump is explained by the extraordinary importance of the market place London. Finally, in the EU-15 plus Norway and Switzerland tax revenues would amount to USD 55.3 billion.

[80] Spahn (2002), p. 57.

[81] Ministry of Finance, Belgium (2001) as cited in Jetin and Denys (2005), pp. 146-151.

[82] Jetin and Denys (2005), p. 131.

[83] Transactions costs may actually vary in a very wide band. (More on that see in the IHS paper.) Concerning volume elasticities, J. Frankel warns that any hypothesis concerning the volume elasticity is arbitrary (Frankel, 1996, pp. 61-63).

A back-on-the-envelope estimate for the EU-25 can be made by taking the share of the new members in the global foreign exchange turnover. In 2004 the EU-15 had a share of 47.9% in the global foreign exchange turnover, the ten new members 0.7%.[84] That means that, if the tax revenues from the EU-25 were proportional to the old and new members' share in global foreign exchange turnover, the EU-25 tax revenue would have amounted to USD 48.2 billion, that is USD 0.7 billion more than for the EU-15.

It turns out from all these estimations that, independently of the methodology selected and the range of the tax rates and other important parameters, the estimated revenues from a foreign exchange transactions tax in 2004 would have been far from the needed resources for the EU budget. The EU's own resources in 2004 amounted to EUR 103.5 billion[85] or USD 128.7 billion.[86] The hypothetical revenues from the tax would have corresponded to 37.5% of the own resources required in 2004.

Nevertheless, the recently published data on the year 2007 change the above picture. The foreign exchange transactions reported by the EU members increased, in current USD terms, by 67% within three years.[87] Provided the revenues from an EU-wide tax on foreign exchange transactions had increased proportionally with the expansion of the foreign exchange turnover, the hypothetical revenues in 2007 would have amounted to USD 80.5 billion. At the 2007 USD/EUR exchange rate of 1.3706 this amounts to EUR 58.7 billion. The 2007 own resources requirement of the EU budget was EUR 115.1 billion at 2004 prices, EUR 122 billion at 2007 prices.[88] Tax revenues would then have covered up to 48% of the required amount. As the EU budget will expand only marginally over the period 2007-2013, while the foreign exchange turnover will by all probability increase further on very dynamically, an ever increasing share of the EU budget's own resources could be covered by the foreign exchange tax. We may conclude that, although the new tax would currently not be able to replace the prevailing system, it has the potential for doing so in the medium to longer run.

All estimations reckon with a substantial decrease in the volume of transactions. Unless the foreign exchange transactions tax is introduced globally, the reduction registered is the outcome of two processes: on the one hand, transactions will not be realized under the changed conditions (absolute decline), on the other hand they will be realized but outside the jurisdiction of the involved region (relative decline due to relocation). This latter is the more inconvenient for the financial market places benefiting from their outstanding role in foreign exchange transactions. Even if there are no estimates about the possible extent of

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[84] BIS (2005), Triennial Central Bank Survey, p. 12.

[85] European Commission (2005a) p. 112.

[86] At 1.2439 USD/EUR exchange rate.

[87] Own calculation based on BIS (2007), Triennial Central Bank Survey Table B2.

[88] European Council (2007) and own calculation with 2% annual inflation.

relocations after the introduction of the tax, the prospect of London's downgrading as a financial market place will make the UK government, beyond any doubt, a fervent opponent to the foreign exchange tax.

Assessing the foreign exchange tax according to the criteria applied to other options for an EU tax

1 Creating a Union of the citizens

The foreign exchange tax, as a newly introduced tax, could be easily made fully independent of the national budgets.

As concerns visibility, the foreign exchange tax would perform poorly. Citizens resident in the Eurozone and travelling rarely outside it would practically never come across the tax. Citizens in the currently non-Eurozone member states would have more chance to experience the tax, but only as tourists travelling abroad and changing money in their home country or in another EU member state.[89] Direct 'visibility' would be confined to the level of firms (and those employees whose daily work involves currency exchanges).

With regard to the widespread sentiments in the population of the EU member states against speculation in general, the idea of the tax may become popular or can be made popular with public relations campaigns. For the non-professional audience it may seem that the tax is paid predominantly by the dealer banks and other financial institutions. The secondary redistribution of the tax burdens and the fact that eventually all economic agents and finally the citizens themselves would participate in financing the EU budget will remain disguised. If the main target consists in citizens getting closer to their Union in the sense that they sacrifice a small fraction of their incomes for supporting the provision of EU-wide public goods from a community budget, then the above-mentioned effect is negative. If the main target is to introduce a European tax which is easily acceptable for the citizens, then the hidden secondary redistribution is an important advantage.

We cannot speak about externalities in the traditional sense (protection of the environment, less consumption of alcohol and tobacco) as we did in the case of the options analysed earlier. Nevertheless, the likely sharp decline in the foreign exchange turnover is an externality to be reckoned with. But the classification of this externality as desirable or undesirable depends on the observer's judgement of the role of speculation in the economy. Practical experience with the primary and secondary impacts of the tax would verify or not the predictions in this field.

[89] If foreign exchange transactions in the range of average tourists' needs were exempted from the tax, as it would be expedient due to the high costs of collection relative to the revenues, the citizens would practically never come across the tax.

2 Budgetary aspects

The revenues generated by a foreign exchange tax would not be sufficient to deliver the resources required as for now. Currently it could cover only about half of the EU budget revenues (in a hypothetical '2007'). Nevertheless, the tax has the potential to deliver the required revenues in the medium to longer run, provided the dynamic growth of foreign exchange turnover experienced in the recent years will carry on.

In term of stability, the foreign exchange tax is not among the best candidates for an EU tax with regard to the uncertain degree of turnover reduction triggered by the tax.

Collection costs may be kept relatively low with regard to the high degree of computerization in this segment. Nevertheless, as a new tax, the instalment of the collecting bodies and the organization of management and control may induce high initial costs.

3 Equity

With equal tax rate(s) across the three main groups of participants in the foreign exchange market in each member state, the conditions for equal treatment (horizontal equity) at the level of enterprises is secured. An important advantage is that, being a new tax, no harmonization across member states would be necessary.

Vertical equity in the case of this tax can hardly be interpreted. A likely differentiation in the tax rate applied (lower for the reporting dealers, higher for the other financial and non-financial institutions) would reflect the different pre-tax transactions costs for participants in the groups concerned and by no means a differentiation between wealthy and less wealthy taxpayers. About the vertical equity emerging in the course of the *secondary redistribution* of the tax burdens we do not know anything.

By far the most important issue for 'equity' will be the fair contribution across member states. The participation of the individual EU member states in global foreign exchange trade may be the starting point for an assessment. Under the assumption that the proportions of the global market shares reflect the proportions of the foreign exchange tax revenues that may be collected in member states, it turns out that the United Kingdom would deliver about 70% of the revenues from an EU-wide foreign exchange tax. Other big member states such as Germany, France and Italy would contribute to the common budget with 5%, 6% and 2% of the total, respectively. The new member states together (but without Malta and Cyprus) would contribute about 1.7% to the collected revenues.[90] It is obvious that this allocation across member states is far from being fair as it does not reflect the proportions of the EU member states' actual economic performance. Further,

[90] Own calculation based on BIS (2007), Triennial Central Bank Survey Table B2.

the proportions in the global foreign exchange turnover before the introduction of the tax are not necessarily identical or similar to those emerging after the introduction of the tax. The reduction in trading volumes may be different across member states, thus it is impossible to predict the proportions of member state contributions to the EU budget after the introduction of the tax.

As mentioned above, we do not know anything about the emerging proportions of market shares in the global foreign exchange turnover after the introduction of the tax. Due to likely relocations of related activities to non-taxed jurisdictions, the European market place for foreign exchange transactions would lose its current significance, but we do not know either how much or in what cross member state proportions.

The special position of the United Kingdom has to be carefully analysed. Should its outstanding position in the global foreign exchange market be maintained in the future, the 'nominal' UK contribution to the EU budget would be extreme high relative to the country's economic performance. But, in the opposite case, if the relevance of the London market declined to a level where the UK contribution would be consistent with the country's relative economic strength in the EU, the loss of secondary benefits derived from London being one of the most eminent market places in the world would make any British government a strong opponent to an EU-wide foreign exchange tax.

Concluding, the foreign exchange tax, tested by the 3x3 criteria and compared to the test results of the other options for a European tax, is not among the most promising candidates.

Tax on 'all' financial transactions

It is important to clearly define the concept of all financial transactions. If we take the world 'all' seriously, then drawing cash from the automatic teller machine or borrowing from a bank are just as part of the total as are operations involving derivatives. Due to the manifold nature of the activities concerned, a tax on indeed all financial transactions would cause practically insurmountable difficulties in the collection of the tax and the management of revenues. It appears thus inevitable to restrict the definition of the range of financial transactions addressed. In this approach, a tax on 'all' financial transactions includes a tax on shares and bonds traded at the stock exchanges, a tax on traditional foreign exchange transactions and a tax on trade in financial derivatives. Two of these types of transactions have already been discussed, in the following the issue of derivatives transactions will be addressed.

The world-wide trade in financial derivatives is accounted for in two statistical series. The first, published by the World Federation of Exchanges, provides information on the turnover

of derivatives traded at *stock exchanges*, while the Bank for International Settlements (BIS) publishes data on *over the counter (OTC)* activities.

Derivatives traded at stock exchanges

As can be seen from Table 5, derivatives traded at the stock exchanges of the EU member states amounted to USD 606,363 billion in 2006 (USD 452,256 billion in 2004). The own resources of the EU-25 amounted to EUR 108.4 billion[91] or USD 136 billion[92] in 2006. This sum corresponds to 0.02% of the value of turnover in derivatives traded at stock exchanges in that year. This means that, theoretically, a tax on derivatives transactions with a tax rate of 0.02% would ensure the whole value of revenues required for the EU budget, provided the tax does not cause a reduction of the turnover. Even in the case of a hypothetical reduction of transactions by 75%, a tax rate of 0.1% could still deliver the required financing of the EU budget.

However, the geographical distribution of the transactions concerned is extremely uneven across member states. 76% of the turnover is implemented in Euronext liffe, an alliance of stock exchanges of Belgium, France, the Netherlands, Portugal and the UK (derivatives only). Within the Euronext alliance, the market place London is outstanding in a global dimension (see Figure 3) and its exceptional role has been on the rise for years. About one fifth of the turnover falls on Eurex, which is an alliance of stock exchanges operated by Deutsche Börse AG and SWX Swiss Exchange.

Not all EU member states would contribute to the EU budget revenues if a tax on derivatives traded at stock exchanges were the source of those revenues. Of the ten new members only Hungary and Warsaw are involved in derivatives transactions. However, the share of the Budapest Stock Exchange in total (EU-25) derivatives transactions in 2006 was 0.005%, that of the Warsaw Stock Exchange 0.01%. Eight other new EU member states had no reported turnover. That means that in the case of an EU-wide tax to ensure the EU budget revenues, these member states would become free riders.

[91] European Commission (2007) Annex 3 and 4.

[92] At 1.2556 USD/E'UR exchange rate.

Table 5

Derivatives traded in stock exchanges in the European Union in 2006

Derivatives turnover, notional value, USD billion

	Stock Options	Stock Futures	Stock Index Options	Stock Index Futures	Short Term Interest Rate Options	Short Term Interest Rate Futures	Long Term Interest Rate Options	Long Term Interest Rate Futures	Currency Options	Currency Futures	Commodity Options	Commodity Futures	Total
Athens Derivatives Exchange	0	0	9.6	38.0	0	0	0	0	0	0	0	0	**47.6**
BME Spanish Exchanges	27.8	43.3	83.3	1,012.0	0	0	0	0	0	0	0	0	**1,166.4**
Borsa Italiana	91.8	49.6	331.7	1,041.8	0	0	0	0	0	0	0	0	**1,514.9**
Budapest SE	0	9.1	0	7.3	0	0	0	0	1.3	14.5	0	0.1	**32.3**
Eurex*	964.1	203.0	9,556.3	18,565.4	0	937.1	10,870.9	92,905.9	0	0	0	0	**134,002.7**
Euronext liffe**	603.2	344.2	3,872.1	6,318.8	104,878.0	341,274.2		4,356.7	9.1	0.2	0.3	119.4	**461,776.2**
London Metal Exchange	0	0	0	0	0	0	0	0	0	0	0	7,146.6	**7,146.6**
OMX	69.7	6.1	185.6	329.4	0	0	0		0	0	0	0	**590.8**
Warsaw SE	0	0.8	3.1	59.9	0	0	0	0.4	0	0	0	0	**64.2**
Wiener Börse	5.4	0.2	2.4	13.5	0	0	0	0	0	0	0	0	**21.5**
Total	1,762.0	656.3	14,044.1	27,386.1	104,878.0	342,211.3	10,870.9	97,263.0	10.4	14.7	0.3	7,266.1	**606,363.2**

Distribution of the derivatives turnover by stock exchange, in %

	Stock Options	Stock Futures	Stock Index Options	Stock Index Futures	Short Term Interest Rate Options	Short Term Interest Rate Futures	Long Term Interest Rate Options	Long Term Interest Rate Futures	Currency Options	Currency Futures	Commodity Options	Commodity Futures	Total
Athens Derivatives Exchange	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
BME Spanish Exchanges	1.6	6.6	0.6	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.2**
Borsa Italiana	5.2	7.6	2.4	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.2**
Budapest SE	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	12.5	98.6	0.0	0.0	**0.0**
Eurex*	54.7	30.9	68.0	67.8	0.0	0.3	100.0	95.5	0.0	0.0	0.0	0.0	**22.1**
Euronext liffe**	34.2	52.4	27.6	23.1	100.0	99.7	0.0	4.5	87.5	1.4	100.0	1.6	**76.2**
London Metal Exchange	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.4	**1.2**
OMX***	4.0	0.9	1.3	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.1**
Warsaw SE	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Wiener Börse	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	**100.0**

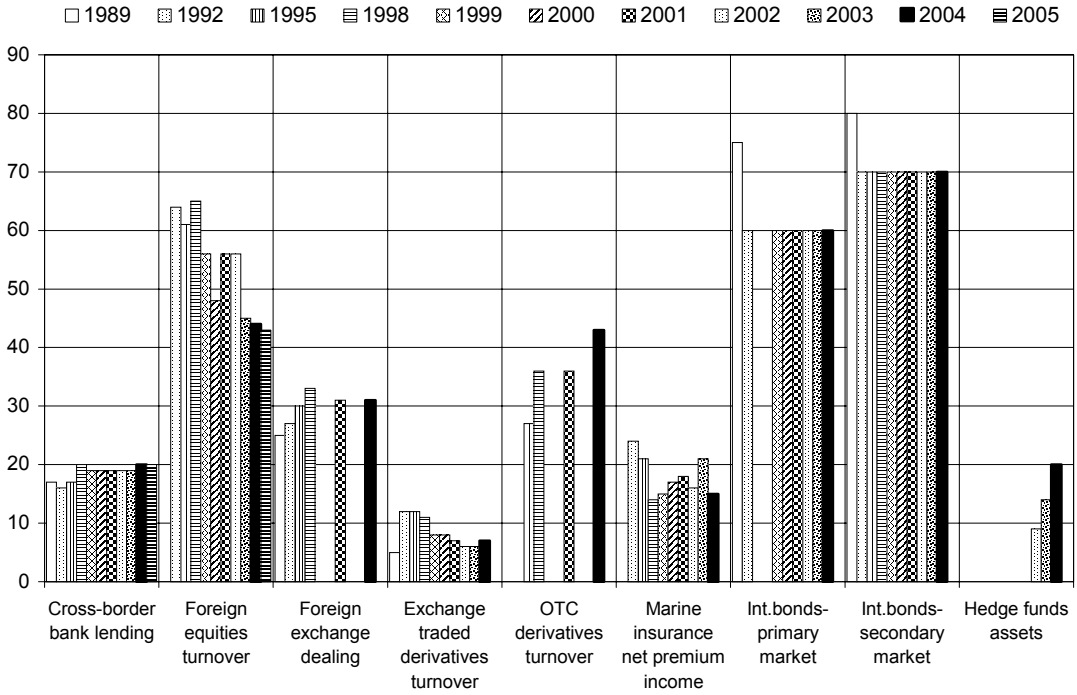
Notes: *) Eurex is an alliance of stock exchanges operated by Deutsche Börse AG and SWX Swiss Exchange. **) Euronext.liffe is the international derivatives business (electronic trading platform) comprising the Amsterdam, Brussels, Lisbon, London and Paris derivatives markets. *** OMX is the alliance of stock exchanges for the Nordic countries, including Copenhagen, Stockholm, Helsinki, Riga, Vilnius, Tallinn and Reykjavik.

Source: World Federation of Exchanges Annual Report and Statistics 2006

Figure 3

London's share in international financial markets, 1989-2005

shares in %



Source: International Financial Services, London, http://www.ifsl.org.uk/research/index.html.

OTC derivatives

Over the counter derivatives are contracts that are traded directly between two partners; exchanges or other intermediaries are not involved. In April 2007, the global daily turnover amounted to USD 4,198 billion (74% more than in April 2004). Assuming 245 business days a year, the annual turnover may have been USD 1,028,510 billion. Of the total turnover 57.9% falls on trade implemented in the EU-27 (see Table 6). About 0.015% of this sum would have been sufficient to cover the financing requirements of the whole EU budget in that year, provided the tax would not cause a reduction of the turnover. Just as in the case of the stock exchange traded derivatives, a hypothetical reduction of the transactions by 75% would make a tax rate of 0.1% sufficient to finance the EU budget.

The geographical distribution of the OTC derivatives transactions is as extreme as that of the stock exchange traded derivatives. Again London has the leading role: 70.5% of the total EU turnover was transacted there in 2007 (see Table 7). The whole Eurozone accounted for one fifth of the UK turnover. Only France and Germany (9.3% and 5.6% of the total EU turnover, respectively) were relevant participants. The new member states' combined share was 0.9%, much below their relative economic strength in the EU-27.

Table 6

Geographical distribution of reported global OTC derivatives market activity [1)]

Daily averages in billion USD, April 2004 and 2007

	1998	2004	2007
		Distribution by country/region, in %	
EU-15 Eurozone	**19.4**	**18.6**	**14.0**
Austria	0.6	0.7	0.3
Belgium	1.5	1.5	1.1
Finland	0.3	0.0	0.2
France	5.9	6.6	5.4
Germany	5.2	4.1	3.2
Greece	0.2	0.1	0.1
Ireland	0.4	0.5	0.3
Italy	1.2	1.7	1.1
Luxembourg	1.0	0.6	0.7
Netherlands	1.8	2.0	1.0
Portugal	0.2	0.1	0.1
Spain	1.0	0.7	0.5
EU-15 national currency	**37.6**	**40.5**	**43.4**
Denmark	1.5	1.4	1.6
Sweden	0.9	1.0	0.9
United Kingdom	35.1	38.1	40.9
EU-NMS-9*	**0.3**	**0.4**	**0.5**
Bulgaria	...	...	0.0
Czech Republic	0.2	0.1	0.1
Estonia	0.0	0.0	0.0
Hungary	0.1	0.1	0.1
Latvia	0.0	0.0	0.0
Lithuania	0.0	0.0	0.0
Poland	0.1	0.2	0.2
Romania	…	…	0.0
Slovakia	0.0	0.0	0.1
Slovenia	0.0	0.0	0.0
Non-EU Europe	**4.3**	**3.2**	**5.0**
Switzerland	3.7	2.4	3.9
Norway	0.5	0.6	0.7
Turkey	0.0	0.1	0.1
Russia	0.1	0.2	0.3
Global players	**37.0**	**35.4**	**34.6**
Japan	7.2	6.0	4.4
United States	17.5	19.4	18.6
Hong Kong SAR	3.0	2.7	3.1
Singapore	5.4	3.2	4.1
Australia	1.9	2.4	3.0
Canada	2.0	1.7	1.4
Rest of the world	**1.3**	**1.9**	**2.5**
Total	**100**	**100**	**100**

Note: * There was no trade reported from Cyprus and Malta.

Source: BIS (2007), Triennial Central Bank Survey, Table C.4; own calculations.

Table 7

Distribution of OTC derivatives market activity by member state in the EU-27 in April 2007

	Average daily turnover, USD billion	Distribution by country/region, in %
EU-15 Eurozone	**721**	**24.2**
Austria	18	0.6
Belgium	57	1.9
Finland	11	0.4
France	278	9.3
Germany	167	5.6
Greece	4	0.1
Ireland	15	0.5
Italy	56	1.9
Luxembourg	34	1.1
Netherlands	49	1.6
Portugal	4	0.1
Spain	28	0.9
EU-15 national currency	**2,236**	**74.9**
Denmark	83	2.8
Sweden	48	1.6
United Kingdom	2,105	70.5
EU-NMS-10*	**27**	**0.9**
Bulgaria	0	0.0
Czech Republic	4	0.1
Estonia	1	0.0
Hungary	5	0.2
Latvia	2	0.1
Lithuania	0	0.0
Poland	10	0.3
Romania	2	0.1
Slovakia	3	0.1
Slovenia	0	0.0
EU-25 (2004)	**2,984**	**100.0**

Note: * There was no reported turnover from Cyprus and Malta.

Source: BIS (2007), Triennial Central Bank Survey, Table C.4; own calculations.

Some of the new member states (Bulgaria, Lithuania, Slovenia, Malta and Cyprus) had no reported transactions at all; they would be free riders in the case of an EU tax on OTC derivatives transactions.

Concluding, in principle both a tax on stock exchange traded derivatives and on OTC derivatives would provide ample resources with a low tax rate. However, contrary to the

foreign exchange transactions tax, no detailed estimates about the possible effects, including the expected reduction of the trade volume, are available in the case of a tax on derivatives transactions. The danger of tax evasion and relocation has not been analysed either, but the fact that the concerned segment of the financial sector has had a record of being highly innovative may be taken as a warning sign in this respect.

The really important obstacle to choosing the tax on derivatives transactions as a resource for EU budget revenues is, however, the extreme disproportions across member states in terms of their contributions to the community budget. With free riders (some new member states) on the one hand and a disproportionately high contribution of the UK, on the other hand, the probability that any UK government will vote for the introduction of a European tax on derivatives transactions is very low.

An *overall*[93] financial transactions tax (on stock exchange, foreign exchange, and derivatives transactions simultaneously) would have the advantage of ample resources and a respectively low tax rate required to collect the necessary resources for the EU budget, but the problems concerning relocation and disproportionate member state contributions would remain unsolved. There is an additional concern over the costs of collections. Due to the different characteristics of the financial market segments involved, segmented tax rates and different institutional preconditions for efficient tax collection, control and revenue management would be necessary, with consequently high costs (at least initially).

The political discussion: who should get the money?

Of the three options of a financial transactions tax discussed above, i.e. a tax on stock exchange transactions, on foreign exchange transactions and on 'all' financial transactions, only the *foreign exchange transactions tax* has been subject to political discussion as a potential source for financing the EU budget, though in a wider than a merely EU budgetary context.

Since the rediscovery of the Tobin tax in the mid-1990s, there has been growing competition for the revenues thought to be generated by the tax. Principally the revenues from the transactions tax at the *global* level can be accrued to national treasuries, international organizations with a mandate to take care of the global financial order (IMF, World Bank) and the international community (UNO or new organizations to be

[93] In a recent Commission Staff Working Paper, concerns are raised about the compatibility of a foreign exchange tax with the EC Treaty (Article 56) in the context of member states within and outside of the Eurozone, respectively. The proposed remedy to the problem is 'to have a tax on *all* transactions, which may, however, have adverse effects on EU financial markets. Furthermore, it needs to be clarified whether such a tax would be compatible with GATS rules and other international obligations' (italics by the author) – European Commission (2005b), p. 17.

established). Tobin initially envisaged the revenues to augment the resources of the World Bank, later he proposed to divide the revenues generated between the two Bretton Woods organizations and the national governments, in a way that the poorest countries would be allowed to keep the full amount of receipts to ensure their participation in the scheme.[94] In the case of a selective (regional) foreign exchange transactions tax, supra-national organizations such as the European Union become potential beneficiaries of the tax, too.

The revenues from a foreign exchange transactions tax are claimed primarily by globalization critical movements. The globally organized globalization critical movement *Attac* placed the transactions tax in the focus of its programme.[95] Even the organization's name derives from the idea: *Association pour une taxation des transactions financières pour l'aide aux citoyens* (Association for a transactions tax to support the citizens). The financial resources made available through revenues from a transactions tax are seen as the appropriate tool to fight poverty in the 'global South'. The targets set are related to the Millennium Development Goals (MDG) of the United Nations, among others the one to reduce extreme poverty to half the 1990 level by 2015.[96] Most of the 22 richest countries in the world participating as donors in the official development assistance (ODA) are lagging with their contributions behind the target set (0.7% of GDP each year). Among the wealthy EU members only Denmark, Luxembourg, the Netherlands and Sweden are above the set target with their national development assistance programme (0.8%, 0.9%, 0.8% and 1% respectively, of their GDP in 2006).[97] Actual ODA amounted to USD 104 billion in 2006;[98] had the targeted GDP-proportional 0.7% been attained, the sum would have been USD 243 billion. The USD 139 billion gap is thought to be filled by revenues from a transactions tax.

The idea of a transactions tax introduced in the European Union in order to finance the expenditures of the EU budget cannot be treated independently of the global context. globalisation critical movements but other organizations as well, with development aid for the third world in their focus and with vested interests in securing revenues from a potential foreign exchange transactions tax for development purposes, might become hostile towards the EU. The EU's initiative could be seen as a hijacking of the idea. 'The financing of the EU must be solved but not to the detriment of other targets. The introduction of the

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[94] Jetin and Denys (2005), p.128.

[95] Attac, established in France in 1998, has about 90,000 members in 50 countries. The organization is a broad platform of NGOs, trade unions, environmental organizations and peace initiatives united in a critical approach towards the current world order and against the process labelled neoliberal globalization.

[96] United Nations (2005).

[97] www.oecd.org/dataoecd/14/5/38354517.pdf

[98] Jetin and Denys (2005), p. 129.

Tobin tax had the purpose, from the very beginning, to raise Europe's contribution to development assistance to the urgently needed 0.7% of the GDP.' [99]

The solution could be either the observance of the MDG by each member state, filling the gap between the actual and the normative (0.7% of the GDP) compliance, or a redirection of a substantial share of the foreign exchange transactions tax revenues to EU-financed development programmes in the third world. Both solutions would radically diminish the capacity of the tax revenues to finance the EU budget.

Should the unlikely case of a global transactions tax be realized, it is very difficult to imagine that EU members could reserve 'their' revenues for financing the EU budget.

The reception of the foreign exchange transactions tax proposal by various institutions

European Commission

In a few documents of the Commission there are comments on the foreign exchange transactions tax, nevertheless *always in the context of global development aid*, and not as a potential source of the EU's own resources.

In a 2002 working document of the Commission Services, the foreign exchange tax is analysed as one of several alternative financing instruments to complement official development assistance.[100]

Commenting on the legal basis of a foreign exchange transactions tax, the Commission finds that 'An international tax raises issues of compatibility with other international agreements as well as with national policies. A tax on transactions between the euro and currencies of other EU Member States is likely to be found contrary to the Treaties. Furthermore, the compatibility of a CTT (currency transactions tax – S.R.) applied by EU Member States vis-à-vis the rest of the world with the Community's obligations within the WTO remains to be explored.' [101]

The Commission also refers to the risk of relocation of taxable activities. 'The risk of relocation of economic activities is very high in the case of the tax on currency transactions, due to the high mobility of the tax base. The new technologies of electronic settlement systems make it easier to relocate financial centres to non-taxing jurisdictions.

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[99] '23 January 2006: Attac zur Tobinsteuerdiskussion: nicht verkünden, sondern handeln', citation from Benno Breuss, Attac Österreich at www.attac.at. See also Felber (2006).

[100] European Commission (2002).

[101] European Commission (2002), p. 107.

… A unilateral application of the currency tax base could constitute a disincentive to the use of the taxed currency for the citizens, institutions and companies operating outside the currency zone. A unilateral geographical tax at, for example, the EU-level with respect to non-EU currencies clearly has a risk of relocation and substitution through other currencies. From this perspective, implementing a sustainable CTT would require a multilateral approach, including the willingness to apply the tax in the major financial centres.' [102]

The Commission expresses its doubts about the equity and the efficiency of the tax. Equity in this context has been hardly investigated. The available considerations focus on avoiding that the tax penalizes hedging activities on the retail market, as including hedging activities would result in a shift of the tax burden to households' and the corporate sector's normal trade and investment activities.[103] For measuring efficiency the value of future revenues is of importance, however, the Commission finds that all related calculations are hypothetical and the absence of experience with such a tax makes it difficult to provide reliable estimates.[104]

The Commission's comment emphasizes the difficulties in defining the tax base and reminds that introducing exemptions for obvious non-speculative transactions (such as travellers' currency exchanges and other clearly-defined non-speculative banking operations) could open the door to tax avoidance.[105]

The concluding judgement put forward in the Executive Summary of the paper that was sent as Communication of the Commission to the Council, the Parliament, the Economic and Social Committee and the Committee of the Regions, is politely dismissive: 'While as a source of additional revenue a currency transactions tax may look appealing, its feasibility is, however, not demonstrated. Various proposals have been put forward, but even if applied in the settlement system, issues such as the enforcement of the tax and the preservation of the tax base need to be addressed. To be sustainable, such a tax would most likely require a multilateral approach, including the compliance of the major international financial centres.' [106]

In a more recent publication by the European Commission on new sources of financing for third world development, there is an evaluation of the various options.[107] The comment on the foreign exchange tax includes an additional concern, addressing the liquidity of the

[102] European Commission (2002), p. 99.

[103] European Commission (2002), p. 103.

[104] European Commission (2002), p. 104.

[105] European Commission (2002), p. 101.

[106] European Commission (2002), p. 13.

[107] European Commission (2005b).

financial markets. It is seen related to the risk of substitution of bank transactions by non-bank transactions. This, together with the high degree of uncertainty about the relocation of transactions to countries where such a tax is not levied, 'could reduce the liquidity of some financial markets, which may even exacerbate their volatility'. [108]

The foreign exchange tax has been seen as a double-edged weapon; the main function proposed by its inventor, Tobin, was increasing stability in foreign exchange or financial markets. The Commission, commenting on this aspect of the foreign exchange tax, underlines that the tax needs to be compared to other options for increasing stability, such as the international coordination of economic policies.[109]

The paper repeats the earlier mentioned concern about the compatibility of the tax with the EC Treaty (Article 56) in the context of member states within and outside of the Eurozone, respectively. The proposed remedy to the problem is 'to have a tax on *all* transactions, which may, however, have adverse effects on EU financial markets. Furthermore, it needs to be clarified whether such a tax would be compatible with GATS rules and other international obligations' [110] (italics by the author).

In a Communication of the Commission to the Council and the European Parliament on the efficiency of development aid, the foreign exchange tax is mentioned, without evaluation, among the genuinely additional sources which have been put forward in the course of recent discussions. (The other proposals are environment/energy/transport-related taxes, health-related food taxes, taxes on arms trade and taxes on the profits of large multinational companies.)[111]

Before approving a law on the foreign exchange tax in the Belgian legislation, the Ministry of Finance in Belgium requested the EU Commissioner for Taxation to comment on the draft text. In his response Commissioner Bolkestein pointed out that such a tax might constitute a restriction to free movement of capital and payments. In particular, the tax would apply to exchange operations, meaning that operations with EU member states outside the Eurozone would be principally subject to less favourable treatment than the one applying to EU member states within the Eurozone. The Commissioner proposes a more in-depth analysis in the light of Article 56 of the EC Treaty.[112]

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[108] European Commission (2005b), p. 15.

[109] European Commission (2005b), p. 16.

[110] European Commission (2005b), p. 17.

[111] European Commission (2005b), p. 19.

[112] The Bolkestein comment is cited in Jetin and Denys (2005), p. 103.

European Central Bank

The attitude of the European Central Bank (ECB) is *explicitly negative*. This turns out from an opinion of the ECB of 4 November 2004, provided at the request of the Belgian Ministry of Finance on a draft law introducing a tax on exchange operations involving foreign exchange, banknotes and currency.[113]

In a preliminary remark the ECB acknowledges the good intentions underlying the draft law, but considers that 'pursuing these intentions through the imposition of a tax such as envisaged by the draft law raises serious economic and legal difficulties'.[114]

The ECB reckons with the following *economic* difficulties: [115]

Economic analysis and empirical evidence indicate that there is reasonable doubt with regard to the general validity of the three arguments for the tax mentioned in the daft law, namely that, first, excessive short-term trading created excessive volatility in foreign exchange markets; second, this volatility significantly affected other economic activities, such as trading or investment; and, finally, the tax could reduce this excessive volatility without creating excessive distortions. There is little evidence that a transactions tax such as the Tobin tax would reduce exchange rate volatility. Its effect on volatility is ambiguous, it could also increase volatility, as it may lead to reduced depth and liquidity in the foreign exchange markets, and 'therefore, the effectiveness of the tax with regard to its main objective could be seriously questioned'.[116]

The daily turnover in short-term transactions is very high, but to a large extent it is related to hedging and distribution of risks among market participants. The ECB finds that as the functioning of financial markets might be hampered by the tax, the risk-sharing benefits of deep and liquid markets might be diminished by its implementation.

Since the end of the Bretton Woods system, most economists believe that exchange rate volatility is inherent in floating exchange rate regimes and is not necessarily detrimental to international trade. On the contrary, a flexible exchange rate may play an important role in absorbing asymmetric shocks. Also, there exists no strong empirical evidence that exchange rate volatility has a negative effect on trade, in particular among developed economies.

The ECB points out that significant exchange rate volatility and a high level of short-term capital flows do not necessarily signal market failure. They can frequently be interpreted as

[113] ECB (2004).

[114] ECB (2004), p. 2.

[115] ECB (2004), pp. 3-4.

[116] ECB (2004), p. 3.

symptoms of underlying macroeconomic imbalances. In these cases the tax would focus on the symptoms, while financial market participants are likely to find ways to circumvent the tax. The tax also might not help prevent speculative attacks, as the proposed levy from such a tax would, in any case, be small compared to the expected gains from exchange rate changes.

The Belgian draft law proposes a two-tier solution, the so-called Spahn variant of the tax.[117] The ECB notes that economic theory argues against variable taxes because they create uncertainties in the markets. Wider spreads as a consequence would make investment in emerging markets (i.e. countries with currencies more prone to volatility) more expensive.

The ECB questions whether monetary and exchange rate autonomy would benefit from the tax. It finds that there is no need to enhance monetary policy autonomy by 'introducing further distortions to the asset price setting mechanism'.[118]

The ECB also expressed doubts concerning the implementation. Market participants would develop alternative instruments and/or would move to financial centres not subject to the tax. If instead of an EU-wide implementation a global one were considered, difficulties should be reckoned with in agreeing on a global implementation with regard to the problems emerging when enforcing sanctions against non-participants.

In the second part of the ECB opinion the *legal* aspects of the tax are addressed.[119]

The ECB finds that the draft law is incompatible with the Treaty, as its application would interfere with the Communities' exclusive competence in the field of exchange rate policy.

The draft law is regarded incompatible with Article 56 of the Treaty ensuring free movement of capital and payments between member states, and between member states and third countries. '… the tax will imply less favourable treatment of certain transactions in the currency of a non-euro area Member State or a third country compared to the same kind of transactions in euro only. It is underlined in this context that EMU's proper functioning depends on the fundamental freedom of capital movement and payments both within and beyond the boundaries of the EU. EMU is indeed based on completion of the internal market, of which the free movement of capital and payments is a centrepiece (Article 14(2) of the Treaty).' [120]

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[117] It consists of a foreign exchange transactions tax and a higher, exchange rate normalization duty that responds to exchange rate volatility beyond a pre-set margin. (Spahn, 2002, p. 15.)

[118] ECB (2004), p. 4.

[119] ECB (2004), pp. 4-7.

[120] ECB (2004), pp. 4-5.

The exceptions laid down in the Treaty[121] which allow member states to restrict, under specific circumstances, the free movement of capital and payments, are considered by the ECB as not covering the measures envisaged by the draft law. The Treaty only justifies 'a tax measure that distinguishes between taxpayers on the basis of their place of residence or the place where their capital is invested. However, the draft law does not distinguish according to taxpayers, but according to transactions.' [122] The ECB is of the opinion that such a tax cannot be justified and objectively required for mandatory reasons of general interest.[123]

The draft law envisages that the proceeds of the tax will be paid in a fund managed by the European Union and allocated for cooperation and development. That means that a legislator of an individual member state would attribute the management of a fund, established at national level, to the EU. The creation of a new Community task by national legislation is found incompatible with the Community legal order.

The draft law provides the introduction of a tax rate of a maximum 80% as a safeguard measure against excessive exchange rate changes (in third countries) by a decision in the Belgian government. This rate will be applied on the condition that the competent European authorities agree. According to Article 59 of the Treaty, safeguard measures with regard to third countries are an exclusive Community competence.

As a condition for the law to enter into force, the draft law requires that all member states of the EMU have introduced the tax in their legislation. The problems deriving from the collision of competencies concerning the adoption of the tax by an individual member state mentioned above remain the same, even if all EMU member states were to introduce such a tax in their national legislation.

OECD

The OECD has not published an official comment on the foreign exchange tax. The position of this organization can, however, be discerned from a 2002 article in the OECD Economic Outlook.[124] This article is, though not explicitly dismissive, rather critical towards the idea.

Weighing the pros and cons of a foreign exchange tax, the article acknowledges the potential for cost saving through the reduction of costs of financial insurance due to lower volatility after the introduction of the tax. But, the argument continues, such costs are not

[121] Article 57(1), Article 60(2), Articles 119 and 120, and Article 297.

[122] ECB (2004), p. 5.

[123] ECB (2004), p. 5.

[124] OECD (2002), pp. 185-197.

high in the first place, and empirical studies prove that the trade-reducing effect of volatility does not appear to be large.[125]

The OECD paper underlines the potential negative effects of the tax. The tax, to be effective, should be applied to all instruments, including options and other vehicles used to insure against risks. It is found that this would raise the costs of insuring, possibly more than it would be lowered by the expected reduction in volatility. A more important 'con' is the reduced ability of the markets to respond to policy changes.

It is found impossible to introduce the foreign exchange tax in one region of the world economy only, referring to the migration of market players to tax-free jurisdictions.

The paper argues against the proposed utilization of the potential tax revenues for development financing in the third world. The popular appeal of the tax is explained by the belief that it would be paid by relatively well-to-do taxpayers. This rests on the confusion that the tax is paid by those on whom it is levied. In practice taxes are being shifted through changes in prices and wages and the ultimate payer of the tax may be a quite different legal or natural person. Finally, it is argued, easy access to additional development assistance may divert attention away from the issue whether such transfers should be increased.[126]

[125] OECD (2002), p. 192. For a review of the empirical studies the authors propose Côté (1994).

[126] OECD (2002), p. 195.

Table 9

Overview: comparative assessment of possible options for a European tax according to the criteria applied in the study

	VAT	Corporate income	Personal income	Withholding tax on Interest Income	Energy	Excise duties	Seigniorage	Commu-nication	Climate charge on aviation	Stock exchange tax	Foreign exchange tax	Tax on 'all' financial transactions
Union of Citizens												
Financial autonomy	X	X	X	XX	XX	XX	XXX	XXX	XXX	XXX	XXX	XXX
Visibility, Transparency, Simplicity	XXX	XX	XXX	XX	XXX	XX	X	XXX	XX	XX	X	X
Allocation along EU policies	XX	XX	XX	XX	XXX	XX	X	XX	XXX	X	X	X
Budgetary aspects												
Sufficiency	XXX	XXX	XXX	X	XXX	XXX	X	XX	X	XX	XX	XXX
Stability	XXX	XX	XXX	X	XX	XX	XX	XX	XX	X	X	?
Cost-effectiveness	XXX	XXX	XXX	XX	XXX	XXX	XXX	XX	XX	XXX	XX	XX
Equity (fair sharing of burdens)												
Horizontal	XXX	XX	XX	XX	XXX	XX	XXX	XX	XXX	XXX	XXX	XXX
Vertical	XXX[1)]	XXX	XXX	XXX	XXX[2)]	X	-	XXX	XXX	XX	?	?
Fair sharing of burdens across Member States	XXX[1)]	?	XXX	X	XXX[2)]	XX	XX	XX	?	X	X	X

Key to the table: XXX suitable; XX partially suitable; X unsuitable; ? unpredictable; - not applicable

Notes: 1) In the case if a lower tax rate is applied for basic necessities. 2) In the case of an appropriate mix of energy carriers to be taxed.

Conclusions

The current system of financing the EU budget creates periodically returning serious problems in the European Union. The disappointing bargaining in 2004-2005 on the financial perspectives for 2007-2013 revealed that the envisaged comprehensive review of the EU budget in 2008/2009 is justified and unavoidable.

The reform of the EU's own resources system may take two different courses. The first is the extension of the *GNI-based component* of the current system so that it alone will be able to deliver the own resources for the EU budget. This would be a transparent, simple, efficient and a fair system in terms of burden sharing at member states level, but less so at the EU citizen level. This system would imply that the national treasuries in the individual member states remain the main actors in the EU-wide redistribution – an idea that is becoming increasingly unpopular among decision makers in the EU and the member state governments.

The alternative course of reform relies on the principle that the EU should more and more become a Union of its citizens (and not almost exclusively a Union of the member states, i.e. national governments, as it is perceived currently) and that the reform of the own resources should take place through the introduction of a *European tax*. In the past decade several options for a European tax were proposed. In the present paper an evaluation of these options was made with the help of a set of criteria covering three issues: *Creating a Union of the citizens; Budgetary aspects;* and *Equity or fair sharing of burdens across member states.* The result shows that there is no optimal solution: no candidate for a European tax corresponds completely to the set of criteria put forth in this paper. Even relatively well performing candidates have had one or more weaknesses. With all these reservations in mind, genuine VAT (introduced with two rates: 1.5% for basic necessities and 3% for all other goods) and a tax on energy (with a carefully selected mix of energy carriers) were found to be the two best performing candidates for a European tax. It must be recalled, however, that this assessment is based on the selected criteria applied in this study; a different set of priorities and criteria might lead to evaluation results other than those presented here.

Of the three possible groups of a future European tax (income taxes, taxes on real economy transactions and taxes on financial transactions), special attention was paid in this paper to the financial transactions tax.

The most simple version of a financial transactions tax, a charge on traditional *stock exchange transactions in stocks and bonds*, has been one of the 'classical' proposals for a European tax. The main problem with this proposal is that the potentially available resources would ensure only a rather small proportion of the revenues of the EU budget. In terms of fair burden sharing across member states, this tax performs poorly as the UK and

to some extent also Spain would contribute to the community resources far above the proportionate level reflecting their relative economic strength in the EU.

The *taxation of foreign exchange transactions* (the 'Tobin tax') has in the past decade become the central issue for internationally active political groups which try to mobilize resources for the implementation of global development programmes. In a more recent development, the idea appeared as a proposed solution to the EU's own resources problem. The tax base in this proposal includes transactions in traditional foreign exchange markets as recorded by the Bank for International Settlements but excludes foreign exchange transactions involving financial derivatives.

In the absence of experience, predictions about the effect of and revenues from a taxation on foreign exchange transactions are highly arbitrary. Concerning the potential income from the tax, in 2007 revenues would have covered less than half of those required for financing the EU budget. However, in the medium and longer run the tax has the potential to deliver sufficient revenues for that purpose. The most important shortcoming of the proposal is the non-fulfilment of the criterion of fair contribution across member states. Under the assumption that the proportions of the global market shares reflect the proportions of the foreign exchange tax revenues that may be collected in the EU member states, it turns out that the United Kingdom would deliver up to two thirds of the revenues from an EU-wide foreign exchange tax. Other big member states such as Germany, France and Italy would contribute to the common budget with 5%, 6% and 2% of the total, respectively. The new member states together would contribute to about 1.6% of the collected revenues. A further concern is the question who would eventually bear the tax burden. While the bulk of the tax revenues would be collected from a very small circle of financial institutions, the final dispersion of the tax burden in the societies involved after various rounds of secondary redistribution is unpredictable.

The third version of the financial transactions tax would be a charge on *'all'* transactions, i.e. including transactions in *financial derivatives*. The advantage of this proposal is that the potential tax base is enormous by all standards and the revenues would be sufficient to cover the EU budget revenues. Nevertheless, financial derivatives are indeed 'terra incognita' as a potential tax base. For the foreign exchange transactions tax, a number of serious attempts have been made to predict the possible effects, even if important assumptions in these estimates were rather arbitrary. But for the effects of a tax charged on financial derivatives, no similar assessments or predictions exist. Apart from the unpredictable effects, the problem of fair sharing of burdens across member states would in this case be at least as severe as in the case of the tax on foreign exchange transactions.

A financial transactions tax, in any of the three versions discussed in the paper, is thought to be introduced in the European Union and not world-wide. In all cases the problem of relocation (from the EU generally, and from the leading market place, London, in particular) would emerge, and its extent cannot be judged. This leads to an unresolvable dilemma: if the outstanding position of the UK in the international financial markets were to remain more or less unchallenged, the 'nominal'[127] UK contribution to the EU budget would be unacceptably high relative to the country's economic strength. But, in the opposite case, if the relevance of the London financial market declined to a level where the UK contribution would be consistent with the country's relative economic strength in the EU, the prospect of losing the secondary benefits derived from London being one of the most eminent financial markets in the world would make any British government a resolute opponent to an EU-wide tax on financial transactions.

Among the three discussed versions of a financial transactions tax, the charge on *foreign exchange transactions* was commented on in detail by the European Commission and the European Central Bank. The comments, warning of the legal and economic difficulties which would possibly be related to such a tax, are not supportive.

While assessing the political reception of a foreign exchange transactions tax it must be recalled that the intention to utilize these revenues for financing the EU budget may meet strong opposition by political movements being critical towards globalization. These movements envisage the financing of third world development projects from revenues from a foreign exchange tax. More EU financing for global development programmes would ease this tension.

Finally, the various forms of a tax on financial transactions can be compared to the two options with the best evaluation results among the 'traditional' proposals: genuine VAT and taxation of energy. The dangers of relocation, tax evasion and unpredictable behaviour of economic agents are substantially smaller in the case of both 'traditional' options than they are in the case of a financial transactions tax. They would be more visible and simple for EU citizens than any of the financial transactions taxes. The strongest point, however, favouring the two 'traditional' proposals is their ability to guarantee a fair sharing of the tax burdens across the EU member states. In this point all real or virtual advantages of a financial transactions tax for financing the EU budget are called into question by the unacceptably high share of burdens falling on the United Kingdom. To counterbalance this, a second edition of the UK rebate could be invented – but that brings us to the point from where we started our search for a better system of financing the EU budget compared to the current one.

[127] Nominal in the sense that financial transactions potentially taxed in the London market place would be made to a large extent by non-UK investors, but the tax paid by them would be part of the UK contribution to the EU budget.

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