Tax Co-ordination in Europe: Assessing the First Years of the EU-Savings Taxation Directive

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Abstract

This paper reviews the economic effects of the EU Savings Taxation Directive. The Directive aims at enabling taxation of foreign interest payments received by individuals in accordance with the rules of their State of residence. The data suggest that the Directive, which is based on automatic information exchange, has not led to major shifts in international savings. However, this result has to be interpreted with caution since the available data is scarce and not always conclusive.

JEL Code: F21, F33, G12, G28, H24, H26, H87, K34, O16.

Keywords: savings taxation, withholding tax, information exchange, European Union.

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1. Introduction

The analysis of tax competition and tax co-ordination has a long tradition in public economics.[2] A considerable part of the literature comes to the conclusion that in a world with tax competition, tax rates on the income of mobile factors might be inefficiently low and tax co-ordination would be welfare enhancing.[3] However, in reality there are only very few examples where governments actually agree to co-ordinate tax policies internationally. One example of a co-ordination on the international level is the Savings Taxation Directive in the European Union (EU).[4] EU-Member States and fifteen other countries introduced a system to ensure taxation of foreign interest income of domestic households according to domestic tax rules. Although not a co-ordination of tax rates, the system is however a means to reduce tax evasion by enabling residence-based taxation of (part of) households' capital income. It can be seen as a procedural arrangement that ultimately aims at exchanging information in order to allow taxation according to the residence principle. The Directive is therefore expected to increase tax compliance. Three years after the introduction of the Directive, the first review of the legislation was prepared by the European Commission and published in September 2008.[5] The review led also to a proposal for amendments of the current Directive whose objectives have been supported by the Council of Finance Ministers (ECOFIN) in December 2008.[6]

This paper provides an analysis of the functioning of Council Directive 2003/48/EC on taxation of savings income in the form of interest payments. It analyses the evolution of

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[2] See Fuest, Huber and Mintz (2005) and Nicodème (2007) for surveys of the tax competition literature.
[3] Edwards and Keen (1996) show that co-operation is not necessarily welfare enhancing if the assumption of a benevolent state is relaxed. The idea for negative welfare effects of tax co-ordination was already made by Brennan and Buchanan (1980) in its most drastic form: The government only maximizes its own utility; the utility of households disappears in the objective function.
[4] The title of the legal document is "Council Directive 2003/48/EC of 3rd June 2003 on taxation of savings income in the form of interest payments". The national implementing measures came simultaneously into application on July 1st 2005
[5] European Commission, COM(2008) 552
[6] The political support for amendments to the Directive has been increased by recent prominent tax evasion cases in countries such as Liechtenstein.

certain proceeds from investments that are covered by the Directive or that contain elements falling within its scope. In addition, the analysis looks at the effects of the implementation of the Directive on investment patterns[7].

The data suggest that the Savings Taxation Directive had no measurable effects on the development of different investments that fall under the scope of the Directive. At a first glance, this is surprising since the expected tax increase due to the Directive should lead to economic reactions. A possible reason for this surprising result is that the existence of loopholes makes it easy for investors to circumvent taxation on foreign-source interest.[8] Furthermore, the countries where most of the international deposits are held (Switzerland and Luxemburg) did not exchange information, but levied a withholding tax with a relatively low rate of 15 percent in the period surveyed in this paper. Generally, the analysis of the effects of the Savings Taxation Directive faces some shortcomings linked to definitions in the legal provisions of the Directive, to data limitations and to technical issues, all of which make an assessment of the Directive more difficult. The issues linked to the legal provisions include the facts that the beneficial owner may use intermediate structures not covered by the Directive or that the country of the paying agent may be different from the country where the funds are located. Finally, the analysis is also constrained by the difficulty of separating many concomitant effects. The Directive is aimed at enabling Member States to tax their resident individuals on interest income received in another Member State. To the extent that the income covered by the Directive previously escaped taxation, there is likely to be an effect on the vehicles that fall within its scope: investors might decrease their savings because of a lower net-of-tax interest rate; investors might reallocate their savings in the same vehicle but in another country (e.g. one not subject to the Directive); investors might reallocate their savings towards other investment vehicles as the relative net-of-tax return has changed; and

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[7] It has to be mentioned that for many of these instruments the data availability is weak, which leaves us with a

(or) investors might evade taxation. This and the different data limitations mentioned above must be borne in mind when interpreting the results of the analysis.

In the remainder of the paper, section 2 gives a brief overview of the functioning, the detected loopholes, and the proposed amendments of the Savings Taxation Directive. Section 3 gives a brief overview of the literature in this field. In Section 4 we explore different data sources to give an impression on the effects of the Savings Taxation Directive. Section 4 is organised as follows: the next sub-section looks at the evolution of interest payments in general. The third sub-section looks at the evolution of bank deposits. Next, the data collected from the Member States on exchange of information and withholding taxes is analysed. The last subsection offers a statistical analysis of the impact of the introduction of the Directive on savings and on bank deposits. Section 5 concludes.

2. The functioning of the Savings Taxation Directive

2.1 Current Regulation and Loopholes

The Savings Taxation Directive has one particular goal: to allow EU Member States to tax the foreign interest income of their resident individuals. This goal shall ideally be reached by an automated information exchange between Member States. However, for a transitional period, three Member States – Austria, Belgium and Luxembourg – do not exchange information, but levy a withholding tax instead. 75 percent of the revenue from the withholding tax is then shared with the country of residence of the beneficial owner. The end of the transitional period is not fixed and depends on the agreement of third countries to establish an information exchange relationships with EU Member States.

Information is exchanged (or a withholding tax is levied) when different criteria are fulfilled. Firstly, the beneficial owner of a payment must be a resident of an EU country.

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rather descriptive analysis in most cases.

[8] For a discussion of legal loopholes see Gläser (2007) and Jiménez (2006).

Secondly, the payments must fall under the scope of the Directive. The Directive defines interest as *"interest paid or credited to an account, relating to debt claims of every kind, whether or not secured by mortgage and whether or not carrying a right to participate in the debtor's profits, and, in particular, income from government securities and income from bonds or debentures, including premiums and prizes attaching to such securities, bonds or debentures; penalty charges for late payments shall not be regarded as interest payments."* This definition corresponds to the OECD definition of interest.[9] However, the Directive adds three more categories to the OECD definition and is therefore somewhat broader than the international definition of interest payments.[10] Furthermore, the Directive has foreseen a transitional regime for some negotiable debt securities. This so-called "grandfathering" of certain securities will be discussed in section 3. Finally, the information about the sum of the payments made, the name and address of the beneficial owner are sent by financial intermediaries ("paying agents" in the legal language of the Directive) to their national authorities. They collect the data, prepare it and send it to the country of residence of the beneficial owner where the interest can be taxed according to the national tax rules.

The current regulation is criticized by some authors because of loopholes and possible legal shortcomings. The existing problems identified by Jiménez (2006) Gläser (2007), and Gläser and Halla (2008) can be summarized by the following three points:

(a) Paying agents and the Geographical scope of the Directive

Paying agents are normally economic operators that pay or secure interest for the immediate benefit of the beneficial owner. In general, this is the bank charged by the beneficiary of managing his savings. The territorial scope of the Directive is limited to the European Union, and agreements for equivalent or similar measures have a coverage limited

[9] The definition of interest used by the OECD can be found in Article 11 in the condensed version of the "Model Tax Convention on Income and Capital", which can be found online at http://www.oecd.org/dataoecd/14/32/41147804.pdf (January 28, 2009).

to five third countries (Andorra, Liechtenstein, Monaco, San Marino, Switzerland) and ten dependent and associated territories (Aruba, Anguilla, Guernsey, Jersey, the Isle of Man, Cayman Islands, British Virgin Islands, Netherland Antilles, Montserrat, Turks and Caicos Islands). It is therefore clear that investors will still be able to evade taxes by shifting their funds to banks and other intermediaries located in tax havens and financial centres that do not fall under the scope of the directive and its related agreements. Hence, these jurisdictions do not ensure either a minimum level of taxation or an exchange of information on income paid to non-residents. The most frequently-mentioned examples are Hong Kong, Dubai, Panama, Singapore, and Macao. Tax evasion by using financial intermediaries that reside in these countries can be relatively easy.

(b) Beneficial owner.

The beneficial owner is *"any individual who receives an interest payment or any individual for whom an interest payment is secured"* (Art. 2(1) Savings Taxation Directive). The definition covers only payments made for the immediate benefit of individuals. The definition applies therefore only to individuals but not to companies or other legal persons, nor to those legal arrangements (e.g.: "discretionary" trusts) for which assets and income are not immediately entitled to any beneficial owner. An easy way of circumventing the current Directive is therefore to carry out interest payments using an interposed legal person or arrangement. In this case the Savings Taxation Directive does not apply. This is another way for circumventing taxation under the Directive.

(c) Definition of Interest Income.

Despite the fact that the concept of interest in the directive is broader than in international tax law and in most Member States' domestic legislation, the current version of the Directive still does not cover income from other forms of saving like innovative financial

[10] The detailed list of all payments under the scope of the Directive is given in Article 6.1b, c, and d of the Directive. Jiménez (2006) discusses this definition in detail.

products with capital protection and life insurance products. This could have led to distortions in the choice of households between different savings instruments.

2.2 Proposed Amendments

The Savings Taxation Directive in its current version has left loopholes for investors to avoid the application of information exchange or a withholding tax. For this reason the European Commission proposed amendments of the Directive which aim at closing the loopholes presented above. With regard to the beneficial owner, the proposed changes are supposed to identify and cover interest payments which are channelled through intermediate tax-exempted structures like non-charitable trusts or foundations established outside the EU. This is assumed to solve the problem that beneficial owners could use these legal persons and arrangements to circumvent the Directive. By applying a "look-through" approach based on information that is already available thanks to the application the Anti-Money-Laundering Directive[11], the beneficial could be identified even though legal entities and arrangements are interposed.

The proposed amendments also foresee a change in the definition of the "paying agent" (financial intermediary), in order to cover interest payments channelled through intermediate tax-exempted structures like non-charitable trusts or foundations established inside the EU. As seen above, the paying agent is usually defined as the bank or other intermediary that pays interest to the owner. In the case where the interest is not paid directly to the owner but instead to another entity or arrangement, there is currently room for abuse and distortions when these entities or arrangements do not pay out income in the form of interest and are not treated as paying agents upon receipt. This is similar to the loophole described above since the paying agents upon receipt are currently not clearly defined. According to the 2008 proposal, these entities and arrangement having to act as paying agents

[11] Directive 2005/60/EC of the European Parliament and of the Council of 26 October 2005 on the prevention of the use of the financial system fort he purpose of money laundering and terrorist financing.

upon receipt should be clearly defined and they should apply the provisions of the Directive when the beneficial owner of the interest they receive is resident in another EU-Member State. Finally, the proposal seeks to extend the scope of the Directive to income obtained from investments in some innovative financial products with capital protection and life insurance products. These products are supposed to be similar to savings instruments already covered by the Directive and the proposal add therefore them to the scope in order to avoid distortions in the choices made by the investors.

3. Literature

The literature on the Savings Taxation Directive can be divided in three strands: theoretical, legal and empirical contributions. While the theoretical literature deals so far only with the question as whether countries opt for an information exchange or a withholding tax and what determinants influence this decision, the legal part of the literature deals with the functioning of the current form of the Savings Taxation Directive and identifies loopholes of the system. The empirical part of the literature is only evolving now. The theoretical studies analyze mainly the incentives of countries to share information voluntarily and what role revenue sharing might play to make information sharing more attractive to other. An excellent survey by Keen and Ligthart (2006a) discusses the relevant literature in this field.[12]

So far there is almost no literature that empirically evaluates the Savings Taxation Directive directly. One exception is Klautke and Weichenrieder (2008). The authors analyze a specific loophole of the Directive due to grandfathering. They argue that there should be a difference in the rate of return for bonds that were issued under the scope of the Directive and for bonds that were issued before (and which are grandfathered). However, their study finds no significant effects for the difference in the rates of return on those two assets. Their conclusion is that the Savings Taxation Directive offers so many other loopholes that the grandfathering regulation is actually not changing rates of return since there are many other options for tax evasion. The other exception is Johannesen (2009) who uses bilateral data on external deposits from the BIS[13] and finds that the Directive had a significant negative effect on the depositing of EU residents in some external countries, notably Switzerland, but no evidence of a change towards increased depositing in countries outside of the scope of the Directive.

Additionally, Huizinga and Nicodème (2004) provide a contribution that is not directly related to the Savings Taxation Directive but to the determinants of international deposits. They show that foreign deposits do react to taxation and also to information sharing. Since income from interest from deposits is covered by the Directive, the results of their paper suggest that the introduction of the Directive should have led to changes in international depositing. Finally, a recent empirical paper by Ligthart and Voget (2008) deals the determinants driving governments' decisions to share information bilaterally. The authors use data from the Dutch Ministry of Finance and show that the willingness to share information depends on the domestic income tax rate, the size of the marginal cost of public funds, as well the share of a country's interest-bearing deposits held abroad. Interestingly, information sharing is shown to be reciprocal in most cases.

The next section will present data on the Savings Directive including data on deposit held by foreigners, the amounts of interested payments reported in information exchange and the withholding tax revenue shared between countries.

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[12] The most important contributions are Bacchetta and Espinosa (1995) and (2000), Eggert and Kolmar (2002) and (2004), Huizinga and Nielsen (2003) and Keen and Ligthart (2006b and 2007).

[13] See section 4.2 for a discussion of the pros and cons of these data. One potential shortcoming is that the data mixes deposits by individuals and by corporations.

4. Evidence from different data sources

4.1 Sectoral account data

A first step in the analysis is to use Eurostat's sectoral accounts data to follow the evolution of interest payments vis-à-vis other types of savings income and the evolution of household recipients vis-à-vis financial and non-financial corporate recipients. Two caveats shall be made. First, missing data do not allow the calculation of summary time-series for years before 2000 and for seven Member States. Secondly, it should be noted that the Eurostat data include many interest payments that do not fall under the scope of the Directive (for example, domestic interest payments). However, those figures may give some indications about the relative importance of interest income in comparison to other types of savings income and about the general evolution of income from savings.

The figures for interest and dividends are reported in Table (1). First, columns (1) and (2) of Table (1) show that gross savings[14] have been relatively stable in percentage of GDP, while the amount of income from savings[15] in percentage of GDP has followed a U-curve between 2000 and 2006. A noticeable element from columns (3) and (4) is the steady decrease of the share of interest income in total income from savings between 2000 and 2005, matched by an increase in the share of dividends. This situation might be explained by relatively low interest rates, causing interest-bearing instruments to be less attractive compared to stocks for example.

[14] This is category B8G of the Eurostat sectoral accounts. A finer distinction between savings from households and from corporations is not feasible because of poor data availability

[15] Category d4 of the sectoral accounts. This category represents 'property income', which is arguably larger than savings income and includes interest (d41), distributed income of corporations (d42), reinvested earnings on direct foreign investment (d43), property income attributed to insurance policy holders (d44), and rents (d45).

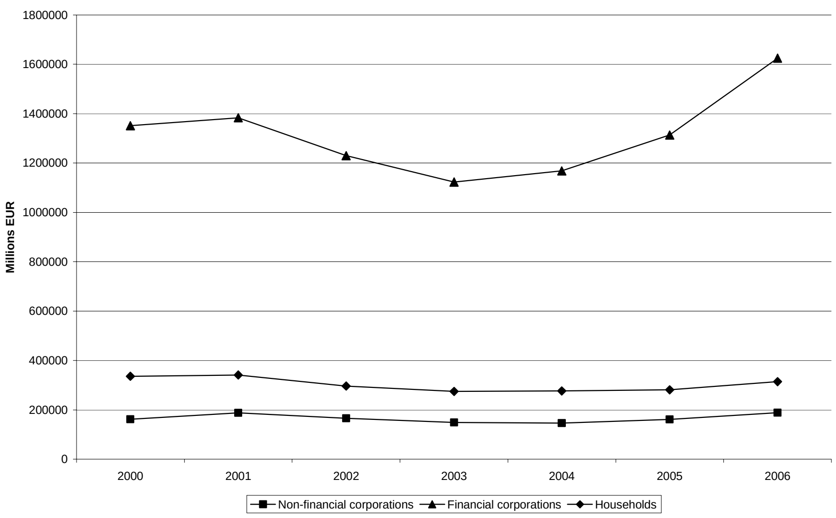
Table 1: Summary figures for various types of income from savings and recipients

Year	(1) Gross savings to GDP	(2) Savings income to GDP	(3) Share of interest income in total savings income	(4) Share of dividend income in total savings income
2000	20.4%	35.5%	60.6%	29.9%
2001	20.1%	35.7%	60.2%	31.9%
2002	19.8%	31.6%	58.1%	33.3%
2003	19.6%	29.8%	55.4%	35.7%
2004	20.2%	30.4%	53.2%	36.4%
2005	19.8%	32.4%	53.0%	37.0%
2006	20.2%	35.4%	55.7%	35.1%
	(5) Share of interest income of Households in total interest income	**(6) Share of dividend income of Households in total dividend income**	**(7) Share of interest income in Households' total savings income**	**(8) Share of dividend income in Households' total savings income**
2000	20.0%	52.8%	33.9%	42.6%
2001	19.6%	51.1%	33.4%	44.0%
2002	19.4%	51.2%	30.8%	45.1%
2003	19.7%	51.8%	28.9%	46.7%
2004	19.4%	51.3%	28.0%	48.2%
2005	18.1%	49.7%	27.0%	48.9%
2006	16.9%	48.8%	28.2%	47.8%

GDP-weighted averages for 20 EU Member States (series incomplete or not available for Bulgaria, Cyprus, Hungary, Lithuania, Malta, Romania, and Sweden). Data for Greece (2005 and 2006) are set as in 2004. Data for Ireland (2000 and 2001) are set as for 2002. Data for Poland, Portugal and Latvia (2006) are set as for 2005. Source: Eurostat Sectoral Data.

Second, columns (5) and (6) show that the share of household recipients in both total interest payments received and total dividends received is relatively stable between 2000 and 2004 and drops in 2005 and 2006. A finer analysis shows that this drop is due to an increase in payments received by financial corporations. Figure (1) illustrates this for interest payments.

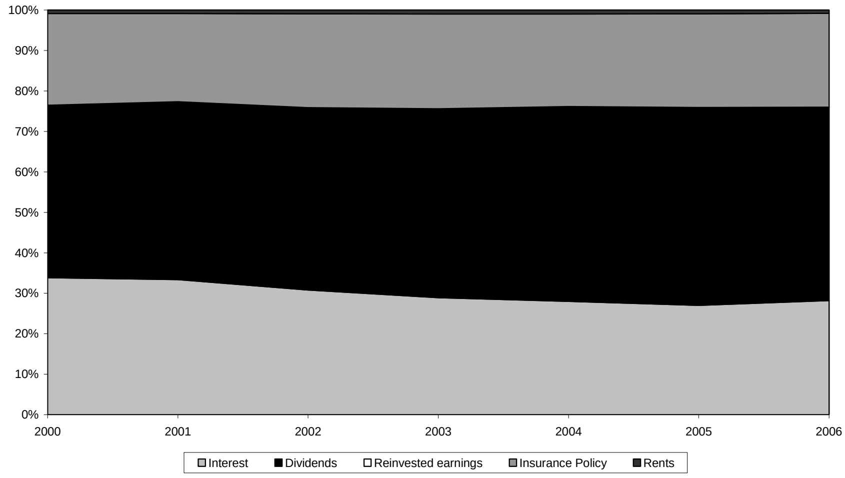
Figure 1: Total interest payments received



20 EU Member States (series incomplete or not available for Bulgaria, Cyprus, Hungary, Lithuania, Malta, Romania, and Sweden). Data for Greece (2005 and 2006) are set as in 2004. Data for Ireland (2000 and 2001) are set as for 2002. Data for Poland, Portugal and Latvia (2006) are set as for 2005. Source: Eurostat Sectoral data.

Finally, columns (7) and (8) display the share of interest and of dividends in households' total income from savings. The figures show that there has been a gradual shift from interest toward dividend revenue between 2000 and 2004[16]. Nevertheless a significant share of savings income is still made of interest income. This evolution is shown in figure (2). In conclusion, the introduction of the Directive does not appear to have led to major changes in the composition of savings incomes of European households.

Figure 2: Composition of income from savings for households



GDP-weighted averages for 20 EU Member States (series incomplete or not available for Bulgaria, Cyprus, Hungary, Lithuania, Malta, Romania, and Sweden). Data for Greece (2005 and 2006) are set as in 2004. Data for Ireland (2000 and 2001) are set as for 2002. Data for Poland, Portugal and Latvia (2006) are set as for 2005. Source: Eurostat sectoral data.

4.2. BIS data

4.2.1 The BIS bilateral data on international deposits

This section investigates the possible effect of the Directive on international depositing. To this end, <u>bilateral</u> data from the Bank for International Settlements (BIS) on deposits from foreign bank and foreign non-bank depositors are used. Non-Bank depositors are all depositors which are either individuals or companies excluding banks. Deposits held by this group are called "non-bank deposits" in the following analysis. If the depositor is a bank the name of the deposit is accordingly "bank deposits". The quarterly data cover the

[16] The remaining categories are property income attributed to insurance policy holders (d44) and rents (d45). Both are stable at respectively about 23% and 1% of the total revenues from savings. The category reinvested earnings (d43) is zero for households recipients.

period Q1-2000 to Q4-2007. The data concern deposits in all currencies and are expressed in (million of) USD. To measure the effects it is also necessary to take into account the agreements concluded with five European third countries on equivalent measures to the Directive and with ten dependent and associated territories of the EU Member States on the same measures.

As a first step, data for BIS reporting countries referring to payments made cross-border to depositors in a EU Member State has been selected. It should be noted that not all EU Member States report to the BIS and that, therefore, the coverage is incomplete. Next, the data for the BIS reporting countries where the deposits are located have been divided into three categories[17]:

(a) EU Member States and third countries or jurisdictions that apply a withholding tax to interest paid to individuals who are residents of a Member State. This category includes Austria, Belgium, Luxembourg, as well as Guernsey, Jersey, Isle of Man and Switzerland.

(b) EU Member States that exchange information under the Directive. This category includes: Germany, Spain, Finland, France, Ireland, Italy, the Netherlands, Portugal, Sweden and the United Kingdom.

(c) Finally, other jurisdictions that do not apply the Directive. This category includes: Australia, Canada, India, Japan, Turkey, Taiwan and the United States.

4.2.2 Data limitations

There are several problems inherent in the data. *Firstly*, two statistical breaks in reporting have a large impact on the totals. This is especially the case for the 1st quarter of

[17] Because of substantial gaps in the information for the whole period, the observations for Bermuda, Brazil, Chile, Denmark, Greece, Mexico and Panama, have not been taken into account in the summary statistics, as they would distort the picture across years. Finally, Singapore and Macao have not agreed to disclose their bilateral data for the purpose of this study.

2003 and for the 2nd quarter of 2006 for which large structural breaks appear for deposits by UK residents in the US. This break increases the share of non-bank deposits in the US substantially which in turn leads to a strong increase in the share of third countries which do not apply the Directive. *Secondly*, all currencies are expressed in USD. Exchange rates with the USD have been volatile throughout the period and this may affect some data. *Thirdly*, non-bank deposit data include both individual depositors (subject to the Directive) and corporate depositors (not subject to the Directive). There is no information on the exact split between the two types of depositor. One indication is that, as reported in a previous section, the total amount of interest income received by households in the total amount of interest income received by all private recipients was 16.9% in 2006. This share may vary across countries and years and there is unfortunately no proper way to deal with this problem in the context of this analysis.

4.2.3 Analysis

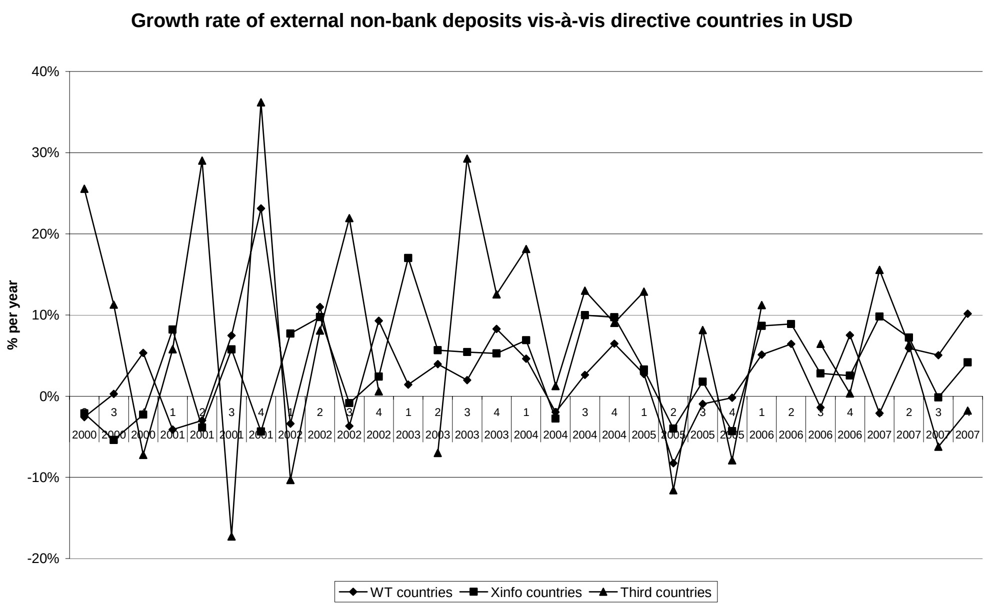
At the end of 2007, external non-bank deposits amounted to USD 627.6 billion for the countries applying a withholding tax (category (a) above); to USD 1,203.8 billion for Member States applying information exchange (category (b) above); and to USD 538.415 billion for third countries (category (c) above).

First, the quarterly growth rate of non-bank deposits for all three categories has been computed and is illustrated in figure (3). Because of the structural breaks, data for Q1-2003 and Q2-2006 for third countries (category (c)) are not included[18]. A visual analysis of figure (3) does not allow detection of a common pattern for the growth of non-bank deposits in the countries covered by the savings taxation measures (categories (a) and (b)) compared to the third countries (category (c)).[19] A difference between third countries (category (c)) and countries that applied the Directive (categories (a) and (b)) is that the volatility of growth

[18] There are two major statistical breaks in the first quarter of 2003 and the second quarter of 2006. Those statistical breaks inflate the share of third countries at the expense of other categories.

rates is much larger for the former until 2004. After that point in time the development is similar. This holds also for the years after the introduction of the Directive.

Figure 3: Quarterly growth of non-bank deposits



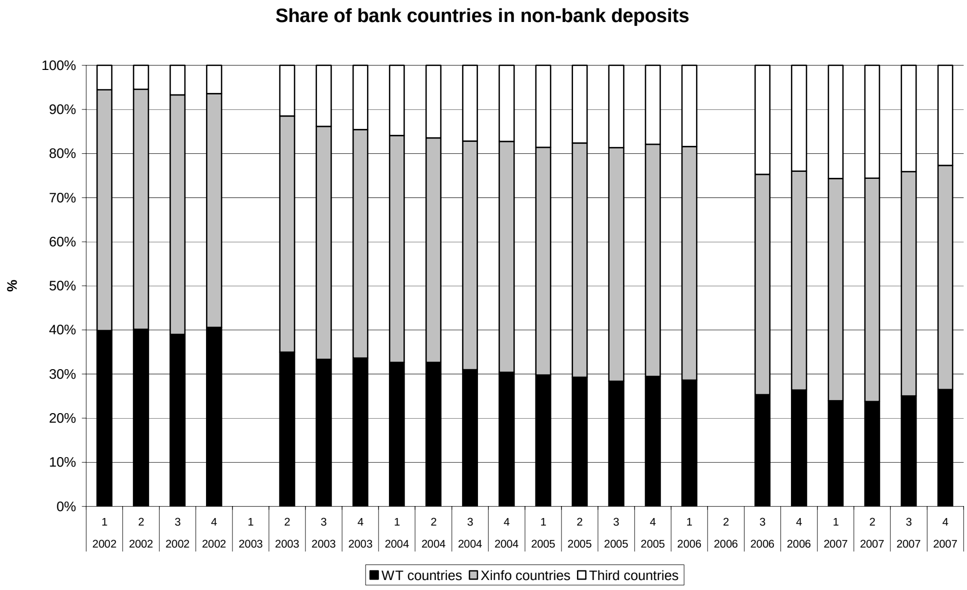
Source: BIS and own calculations

Next, for each category ((a), (b) and (c) above) of BIS reporting countries, the evolution of the share in the total external non-bank deposits made by residents in countries in category (a) and (b) has been studied. [20] Notwithstanding the two structural breaks mentioned above[21], figure (4) shows that the share of deposits in banks in BIS reporting countries that apply the withholding tax (category (a)) has decreased from 35.0% to 29.3% between mid-2003 and mid-2005 but has been stable after the introduction of the directive. This was mainly to the benefit of third countries (category (c)). The respective shares of each category of BIS reporting countries have been relatively constant since mid-2005. The same pattern emerges if the deposits are converted from US-Dollars to Euro. This is done in order to control for possible distortions due to the reporting in US-Dollars only and the volatility of

[19] Controlling for the exchange rate does not change the conclusions.
[20] i.e. the 13 EU Member States that report to the BIS.
[21] Therefore, the shares from the fourth quarter of 2002 cannot be directly compared with the shares of the second quarter of 2003, and the shares of the first and third quarters of 2003 cannot be directly compared either.

Dollar-Euro exchange rate. The only major difference in this case is that the share of third countries is larger. However, the general trend does not change.

Figure 4: Share of BIS reporting countries by category in non-bank deposits

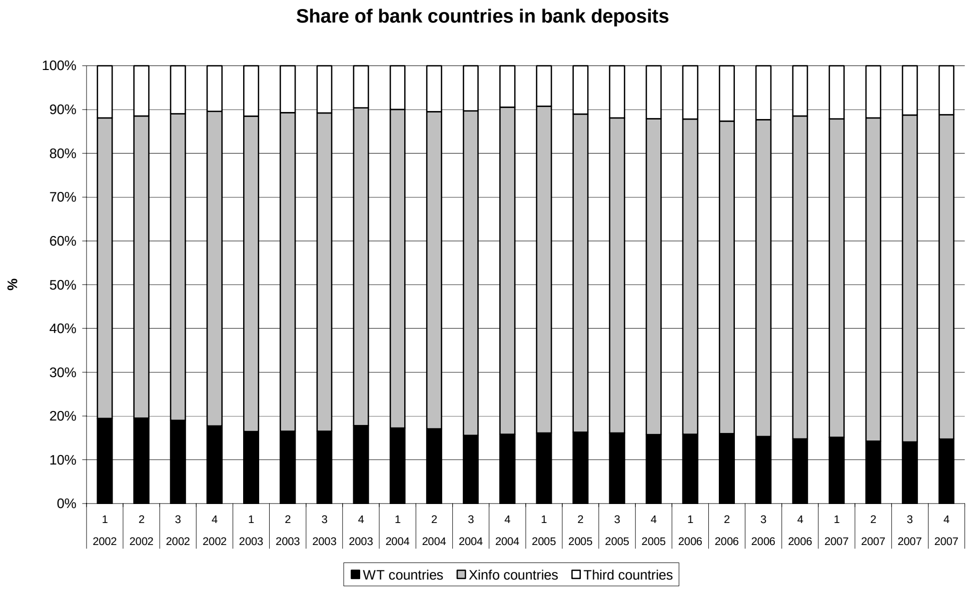


Source: BIS and own calculations

Finally, we can compare the previous data with the share of external deposits from bank depositors. This is done in figure (5). We see that the lion's share (about 70%) is for countries that apply information exchange and that the shares are stable over time. The large share of countries exchanging information (category (b)) reflects the fact that countries that host large financial sectors (such as the UK and Germany) belong to this group. As regards the share of non-bank deposits two observations can be made. First, from a static point-of-view the share of external non-bank deposits in countries applying the withholding tax and in third countries (categories (a) and (c)) is about 35% of total external deposits, while this proportion is 20% in countries applying exchange of information (category (b)). Secondly, from a dynamic point of view, while the share of deposits made by external banks has not changed, there has been a slight decrease in the share of non-bank deposits in countries exchanging information (category (b)). These two elements could suggest that non-bank depositors have a preference for countries maintaining some form of bank secrecy.

In conclusion, for deposits of non-bank depositors, there has been an observable shift from countries within the scope of the Directive towards third countries. However, this development took place before the Directive came into force. Nevertheless, the anticipation of measure against tax evasion might have induced some investors to shift their deposits.

Figure 5: Share of BIS reporting countries in bank deposits



Source: BIS and own calculations

4.3. Evolution of information exchange and withholding taxes using data from Member States and from other jurisdictions covered by the savings agreements

4.3.1 Description of the data

The EU Member States and other jurisdictions covered by the savings taxation measures deliver data on the information shared and on the tax revenue received from or paid to other countries. This data is available for the second half of 2005 and for 2006.[22] The data only contain information on payments covered by (and reported under) the Directive:

- The amount of withholding tax collected by countries that do not share information. The amount is split by the country of the recipient of the tax payment.

[22] Note that the UK is a special case because its tax year ends on 6th April, so its data refers to the period between 1st July 2005 and 5th April 2006 for 2005 and 6th April 2006 to 5th April 2007 for 2007.

However, there is no information about the number of beneficial owners concerned except for the case when beneficial owners opt for voluntary disclosure of payments. This is at this point in time only possible in Luxembourg.

- The amount of interest payments and sales proceeds sent (bilateral data), if possible with a breakdown between interest payments and sales proceeds, as well as a breakdown between beneficial owners and residual entities.

- The amount of interest payments or sales proceeds by type (debt claims, interest accrued or capitalised coming from sales of debt claims or undertakings, interest from undertakings, annualised interest).

- The number of beneficial owners on a bilateral basis, the number of residual entities on a bilateral basis, the number of paying agents, and the number of records exchanged between countries.

4.3.2 Data Limitations

Starting an international information exchange system is a challenging task. One can expect that the coherent application of a new set of rules for information exchange in 27 EU-countries is not easily established. In fact, data delivery and quality turned out to be difficult. One reason for this is that countries can choose to report different sorts of data. This will be discussed in detail in section 4.3.3. In general, the data from the member states shows only the amount of information exchanged or withholding tax collected. It is difficult to estimate, how much income was shifted to tax havens that not operate under the directive or that was shifted back to the domestic country. The following descriptive explanations have to be read in the light of this.

4.3.3 Descriptive data analysis

As pointed out above, the main aim of the Directive is to enable Member States to tax interest income received by their resident individuals from other Member States through an exchange of information. During a transitional period some of the Member States (Austria, Belgium, and Luxemburg) levy a withholding tax instead of exchanging information. The revenue from this tax is shared with the Member State of residence of the beneficial owner of the interest income. The agreements with the third countries and the other jurisdictions build on either of these two methods but in most cases they are unilateral in the sense that information is given to Member States (Anguilla and Cayman Islands) or the withholding tax levied is shared with Member States (Andorra, Liechtenstein, Monaco, San Marino, Switzerland, and Turks & Caicos Islands). Only Montserrat and Aruba (which apply reporting) and Jersey, Guernsey, Isle of Man, British Virgin Islands and the Netherlands Antilles (which levy a withholding tax) in their turn receive, from Member States, information or a share of the withholding tax levied.

In the following section available data on interest payments and sales proceeds reported or the amount of withholding tax shared is briefly described.

a. Countries operating information exchange system

The first group of countries is exchanging information as provided in Articles 8 and 9 of the Directive or under the respective Agreement. As mentioned above, countries can choose between two ways of reporting. They can either choose to restrict the minimum amount of information reported by paying agents to the total amount of interest or income and to the total amount of the proceed from the sale, redemption or refund (Article 8 (2), last paragraph) or by the type of interests as defined in Article 8 (2) (a) to (e). One problem is that these two datasets do not necessarily match. Some Member States reported both values with, in some cases, differences between them. We report both data sources but stress this caveat. In comparison with data from Article 8 (2) last paragraph, this might be used as an indicator for the quality of data treatment in national tax authorities. In the optimum, the sum of data delivered to all countries should equal the sum of all payments received from national tax authorities. As mentioned this is not yet the case. For some countries which delivered both values there are some large discrepancies.

Table (2) shows the countries that apply an information exchange regime and the sum of reported interest payments and sales proceeds according to Article 8 (2) last paragraph. As expected, the largest economies hosting a large part of economic activities and financial centres report the highest values. In 2006, Germany sent information on interest payments amounting to almost 1.4bn Euro which decreased to 0.94 in 2007. Similar values (1.6bn Euro in 2006 and 1.2bn Euro in 2007) can be found in Italy. France reported payments of 2.0bn Euro and 2.5bn Euro to other countries in 2006 and 2007 respectively. An extremely high value interest payments reported was reported from the UK (9.1bn Euro) for 2005.

A special case is the value for Luxembourg. As explained above, beneficial owners can opt for voluntary disclosure in Luxembourg. These voluntary disclosed values amount to more than 4bn Euro in 2006 and above 1.1bn in the second half of 2005. One reason for these high values might be the amnesty for tax evasion which was offered in Germany from 31 December 2003 until April 1 2005. Tax payers with foreign deposits that opted for the amnesty would also chose voluntary disclosure since the information was already disclosed to German tax authorities.

Table 2: Interest payments and sales proceeds reported by countries using information exchange*

EU Member States	2005 (2nd half)	2006	2007
Austria	n.a.	n.a.	n.a.
Belgium	n.a.	n.a.	n.a.
Bulgaria**	-	-	n.a.
Cyprus	5.26	15.05	25.41
Czech Republic	2.92	17.81	26.75
Germany	660.73	1392.06	942.09
Denmark	n.a.	1.16	693.10
Estonia	n.a.	4.40	n.a.
Spain	488.11	423.42	256.52
Finland	26.02	60.93	n.a.

France	568.14	2020.04	2485.40
Greece	6.85	23.11	1.00
Hungary	n.a.	n.a.	n.a.
Ireland	258.88	771.00	1901.24
Italy	280.53	1615.92	1210.35
Lithuania	n.a.	0.09	n.a.
Latvia	0.18	0.65	n.a.
Luxembourg	1119.79	4188.68	6344.34
Malta	1.02	2.10	n.a.
Netherlands	107.83	800.14	n.a.
Poland	0.00	0.71	10.00
Portugal	n.a.	0.56	5.18
Romania**	-	-	7.34
Sweden	n.a.	n.a.	n.a.
Slovenia	0.59	1.35	n.a.
Slovakia	1.87	4.76	n.a.
United Kingdom	9132.49	n.a.	n.a.
Third Countries			
Switzerland	70.50	549.12	500.89
Dependent and Associated Territories			
Anguilla	n.a.	n.a.	n.a.
Aruba	0.01	0.09	n.a.
Cayman Islands	8.81	18.02	n.a.
Netherlands Antilles	n.a.	0.05	n.a.
Montserrat	n.a.	n.a.	n.a.

in m Euro

*Amount of interest payments and sales proceeds under Art. 9 subject to exchange of information/ voluntary disclusore, (Beneficial owners and residual entities) reported accorsing to Art. 8(2) last paragraph.
**Bulgaria and Romania joined the EU in 2007 therefore no data is available for 2005 and 2006

Table (3) shows the figures reported according to Article 8 (2) (a) to (e). Since most countries reported only values according to Article 8 (2) last paragraph, there are many missing values. We report only the countries that send indeed values. The only country that did not report any values is Sweden.

Table 3: Amount of interest or sales proceeds subject to exchange of information/ voluntary disclosure, split by the categories of Art. 8.2 a) to e) of Directive 2003/48/EC

EU Member States	2005 (2nd half)	2006	2007
Austria	n.a.	n.a.	n.a.
Belgium	n.a.	n.a.	n.a.
Bulgaria**	-	-	1.54
Cyprus	5.23	15.04	25.44
Czech Republic	n.a.	n.a.	69.21
Germany	n.a.	n.a.	n.a.
Denmark	n.a.	415.31	690.16
Estonia	n.a.	n.a.	0.74
Greece	1.10	3.95	7.04
Spain	487.82	419.51	256.52

Finland	n.a.	n.a.	n.a.
France	n.a.	n.a.	n.a.
Hungary	62.03	5.22	6.60
Ireland	n.a.	n.a.	n.a.
Italy	n.a.	n.a.	n.a.
Lithuania	0.09	0.09	0.18
Luxembourg	n.a.	n.a.	n.a.
Latvia	0.18	0.66	n.a.
Malta	1.02	2.11	n.a.
Netherlands	320.65	816.22	370.26
Poland	4.84	15.40	7.93
Portugal	n.a.	n.a.	n.a.
Romania**	-	-	n.a.
Sweden	n.a.	n.a.	n.a.
Slovenia	0.59	1.35	1.95
Slovakia	n.a.	n.a.	n.a.
United Kingdom	n.a.	433.43	n.a.
			in m Euro

**Bulgaria and Romania joined the EU in 2007 therefore no data is available for 2005 and 2006

The values of countries reported both types of data are in most cases very similar. This means that information collected from national banks was almost completely used for the information exchange. However, there are also some cases for which there are huge differences as for Denmark in 2006. This shows that the exchange system and the data exchange and the reporting are still at the beginning. Improvements in the standardization have already been made and will lead to more coherent figures in coming years.

b. Countries levying a withholding tax

Table (4) displays available information, for the countries levying a withholding tax, about the amount of revenue shared with the Member States. The major part of revenue from the withholding tax in the second half of 2005, 2006 and 2007 was raised in Switzerland and Luxembourg. For both those periods, Switzerland accounted for more than 46% of the total amounts reported as regards withholding tax shared; Luxembourg's share was 23%. Austria and Belgium accounted for 8.3% and 3.9%, respectively, while Jersey and the Isle of Man contributed 6.2% and 4.2%. All other countries have very low shares or have not yet reported the revenue shared in 2007. This shows that the largest payments that fall under the scope of the directive are made in Switzerland and Luxembourg. They account for almost 70% of all withholding tax revenue. Note that this figure is only based on the available data. Some countries did not report payments for some years.

Table 4: Tax revenue shared by countries with withholding tax regime

EU Member States	**2005 (2nd half)**	**2006**	**2007**
Austria	9.48	44.32	59.53
Belgium	7.51	19.61	25.92
Luxembourg	35.90	124.59	153.00
Third Countries			
Andorra	3.50	12.77	16.34
Liechtenstein	1.94	7.08	9.06
Monaco	3.75	11.70	n.a.
San Marino	1.13	7.47	10.75
Switzerland	77.23	255.92	298.23
Dependent and Associated Territories			
British Virgin Islands	0.00	n.a.	n.a.
Turks and Caicos	0.01	0.02	n.a.
Guernsey	4.93	16.83	n.a.
Jersey	13.26	32.15	38.34
Isle of Man	13.26	20.35	23.39
Netherlands Antilles	n.a.	0.05	n.a.

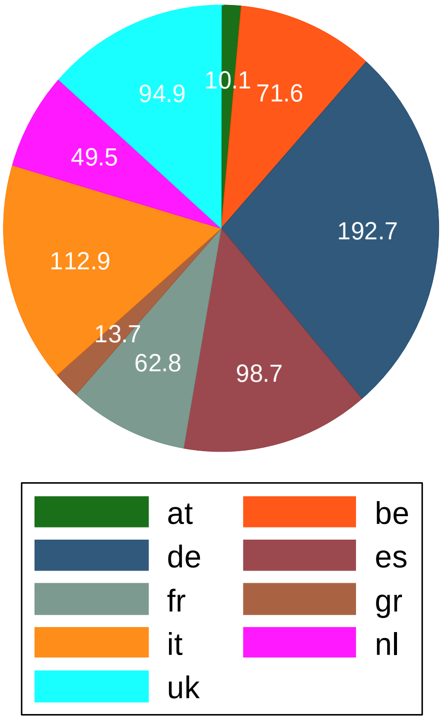
in m Euro

Figure (6) shows the distribution of revenue from the withholding tax levied for the second half of 2005, 2006 and 2007. The graph only takes into account countries which received more than 10m Euro in all years together. Unsurprisingly, the largest countries in the EU received the largest shares. Germany received 192.7 m Euro in 2005 and 2006, Italy 112.9m Euro followed by France and the United Kingdom (94.9m Euro). A notable exception is Belgium which received more than 71.6m Euro. This is due to the close ties between Belgium and Luxemburg. Hence, the revenue received from Luxembourg accounts for 74% of the Belgian part of the revenue.

Figure 6: Withholding tax collection

Received Withholding Tax Revenue

2005 - 2007 im m Euro



Source: European Commission

In conclusion, the data on information exchange from EU Member States and other jurisdictions show that reported interest payments increased significantly between the second semester of 2005 and 2006. In 2007 the development is more heterogeneous. While the information on payments and sales proceeds declined in Germany, Spain, Italy, and Switzerland, there was an increase in reported volumes in Ireland and Luxembourg. The data on withholding tax countries shows that Switzerland and Luxemburg are the main sources of withholding tax revenue while Germany, Italy and the UK receive the largest share of tax revenue.

Table 5: Withholding Tax received			
EU Member States	**2005 (2nd half)**	**2006**	**2007**
Austria	2.08	7.66	10.13
Belgium	15.78	55.81	n.a.
Bulgaria*	-	-	0.29
Cyprus	1.23	3.02	4.28
Czech Republic	0.89	2.99	3.74
Germany	38.13	154.62	n.a.
Denmark	0.69	8.54	2.38
Estonia	0.06	0.21	0.29
Spain	13.32	39.06	46.32
Finland	0.29	0.99	n.a.
France	12.76	50.06	63.98
Greece	5.06	13.67	n.a.
Hungary	0.44	1.66	2.55
Ireland	1.20	2.51	n.a.
Italy	27.84	85.06	107.46
Lithuania	0.03	0.05	0.05
Latvia	0.13	0.55	0.75
Luxemburg	0.59	1.50	2.06
Malta	0.57	1.35	n.a.
Netherlands	6.84	22.61	26.85
Poland	0.69	1.90	0.91
Portugal	2.14	6.09	2.45
Romania*	-	-	0.79
Sweden	1.54	5.00	7.15
Slovenia	0.44	1.48	2.08
Slowakia	0.25	0.89	n.a.
United Kingdom	33.23	61.67	85.51

in m Euro

*Bulgaria and Romania joined the EU in 2007 therefore no data is available for 2005 and 2006

4.4 Regression analysis

This section seeks to estimate the possible effect of the introduction of the Directive on variables such as the level of interest received by households and on the share of interest in the total property income of households. Again, many caveats need to be made. First, the category of interest covered by the data is larger than that covered by the Directive and it is not known which percentage of the data actually concerns payments subject to the Directive. Secondly, changes in explanatory variables will influence different types of interest payments in different ways. For example, domestic inflation will have a different impact on domestic-source interest received than on foreign-source interest. Thirdly, data on interest received by individuals are only available for some EU countries and for 1995-2006. This means that the effects can only been seen for the last year or two. Fourthly, the effects of introduction of the Directive can only be captured by introducing a binary explanatory variable that takes the value one in the country-year pairs for which the Directive is in force. Because there are only one or two years for which this variable applies and because the geographical coverage of this variable does not vary, the variable may also simply act as a fixed effect for a group of countries during the last year of observations, picking up some unobserved effects that are common to EU Member States during this year.

Table (6) shows the results of the regressions for the effect of the Directive on interest received by households[23]. Regressions (1) to (3) show that the estimated effect of the introduction of the Directive is heavily dependent on the specification of the model. In particular, simply changing the proxy for the size of the country from the level of population to the level of GDP turns the effect of the Directive on the level of interest received by households from a positive and significant effect into a negative but non-significant one. It also turns out that the results are very sensitive to the inclusion of some controls. For example, omitting inflation in the regressions washes out the significance of the Directive variable in all regressions. This, combined with the wrong sign for some controls, places doubts on the statistical significance of the result that introducing the Directive decreased the share of interest in the property income of households.

Before explaining in detail the single regressions, it should be stated that the econometric analysis does not detect any major effect of the Directive on the dependent variables explained above. The share of interest received by households in the total interest received by individual and corporate recipients has decreased but this is mainly due to an increase in financial corporations' receipts. Equally, the share of interest in total property income received by households has declined in favour of dividends but this phenomenon

[23] Category "d4s14_s15 received" of the Sectoral Accounts

started already in 2000. A regression analysis of the effect of the Directive on the level and the share of interest received by households shows some negative effects but those are not statistically robust. One reason could also be that some households decided to keep their portfolio structure despite the taxation because shifting to other investment vehicles could lead to an increase in the risk of the total portfolio.

Regressions (1) to (3) use the logarithm of the amount of interest received as dependent variable, while regressions (4) to (6) use the share of interest in the total property income received by households instead. The regressions include some control variables. The size of the country is supposed to have a positive effect on the amount of interest received by its households. This size is proxied by the logarithm of the population in regression (1) and (4). As an alternative, the logarithm of nominal GDP is used in the other four regressions. Next, inflation is expected to have an ambiguous effect on the amount of interest received by individuals. On the one hand, inflation increases the amount of any payment over time. On the other hand, interest payments are usually fixed and therefore investors may decide to shift to other investment vehicles. GDP growth is expected to have a negative effect on interest received because investors may prefer to choose investment vehicles which will include better returns such as stocks. Finally, the interest rate on deposits is used as a proxy for the interest rate. It is expected to have a positive effect on the level of interest received. Its effect on the share of interest is more ambiguous because the return on other investment types may follow the same pattern. Finally, all regressions include year dummies to control for unobserved year-specific effects that are common to all countries in the sample and all regressions except (3) and (6) include country dummies to control for unobserved country-specific that are common for all years.

Table 6: Effect of the Directive on Interest received by Households

Variables	(1) Log interest	(2) Log interest	(3) Log interest	(4) Share interest	(5) Share interest	(6) Share interest
Directive	.347**	-.160	-.095	-.253**	-.220**	-.113
	(2.67)	(.99)	(.45)	(3.98)	(3.96)	(1.33)
Log population	-13.459**			1.104		
	(5.96)			(1.10)		
Inflation	-.005	-.009	-.015	-.003	-.002	-.003
	(0.85)	(1.52)	(1.82)	(1.59)	(1.18)	(0.84)
Deposit interest rate	.046**	.048**	.040**	-.002	-.002	.008**
	(4.97)	(5.60)	(4.19)	(1.29)	(1.07)	(2.61)
Real GDP growth	-.023	-.030	-.020	-.014*	-.015*	-.014
	(0.85)	(1.43)	(0.84)	(2.21)	(2.30)	(1.68)
Log nominal GDP		2.019**	1.323**		-.033	-.003
		(7.37)	(37.25)		(0.30)	(0.23)
Constant	194.249**	-18.804**	-8.025**	-19.689	.920	.550*
	(6.07)	(4.62)	(15.33)	(1.08)	(0.94)	(2.61)
Time dummies	Y	Y	Y	Y	Y	Y
Country dummies	Y	Y	N	Y	Y	N
Observations	188	188	188	177	177	177
R-squared	0.99	0.99	0.95	0.90	0.89	0.20

Source: Eurostat, Sectoral Accounts. Robust t-statistics in parentheses. * significant at 5%; ** significant at 1%. T-stat in parenthesis. Standards errors are White coefficients.

In conclusion, regression analysis does not show a statistically significant and robust effect of the Savings Taxation Directive on the share of interest in the total property income received by households.

5. Conclusion

The entry into force of the Savings Taxation Directive in July 2005 constitutes a prime example of tax co-ordination at the European level. By introducing a system to ensure taxation of foreign interest income of domestic households in accordance with the same rules applicable to domestic interest income, EU Member States have made steps towards residence-based taxation and a reduction of tax evasion.

This paper provides an analysis of the functioning of the Savings Taxation Directive and analyses the evolution of proceeds from investments covered by the Directive. Despite poor data availability, the analysis suggests that the Directive had no significant effects on the development of the investment vehicles that fall under its scope. However, the current Directive suffers from several loopholes, which could explain this insignificant effect.

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Appendix. Data sources

Data	Description	Source
External loans and debt	Bilateral external loans and debts of the banking sector in 40 BIS members	BIS (restricted basis)
Inbound and outbound interest and dividends	For the EU-27, the amount of inbound and outbound interest and dividend payments for individuals and corporations	Eurostat Sectoral Account Statistics
Amount of withholding tax, split by country of residence of the beneficial owners	For all Member States, Dependent and Associated Territories and Third Countries having opted for the withholding tax mechanism, total amount of tax revenue shared from the withholding tax, split by MS of residence of the beneficial owners	Member States
Amount of withholding tax levied under article 11(5) of the Directive, split by country or Territory of establishment of residual entities	This item concerns Austria, Belgium and Luxemburg as well as the following Dependent and Associated Territories: Guernsey, Jersey, Isle of Man, Turks and Caicos, British Virgin Islands and the Netherlands Antilles.	Member States
Amount of interest payments and sales proceeds subject to exchange of information / voluntary disclosure, split by country of residence of the beneficial owners including residual entities	For all Member States, Dependent and Associated Territories and Third Countries, amount of interest payments and sales proceeds, split by country of residence of the beneficial owner and establishment of the residual entities	Member States
Amount of interest payments subject to exchange of information / voluntary disclosure under Art. 9, split by country of residence of the beneficial owner	For all Member States, Dependent and Associated Territories and Third Countries, amount of interest payments (excluding sales proceeds) split by country of residence of the beneficial owner - Art. 9	Member States
Amount of sale proceeds subject to exchange of information / voluntary disclosure under Art. 9, split by country of residence of the beneficial owners	For all Member States, Dependent and Associated Territories and Third Countries, amount of sales proceeds (excluding interest payments), split by country of residence of the beneficial owner - Art. 9	Member States
Amount of interest payments subject to exchange of information / voluntary disclosure, split by country of establishment of residual entities - Art. 4.2	For all Member States, Dependent and Associated Territories and Third Countries, amount of interest payments (excluding sales proceeds), split by country of establishment of residual entities - Art. 4.2	Member States
Amount of sales proceeds subject to exchange of information / voluntary disclosure under Art. 4.2, split by country of establishment of residual entities	For all Member States, Dependent and Associated Territories and Third Countries, amount of sales proceeds (excluding interest payments), split by country of establishment of residual entities - Art. 4.2	Member States
Amount of interest or sales proceeds subject to exchange of information / voluntary disclosure, split by the categories of Art. 8.2 of Directive 2003/48/EC	For MS exchanging information, amount of interest payments or sales proceeds subject to exchange of information split by the categories of art. 8.2 of Directive 2003/48/EC	Member States

Data	Description	Source
Deposit rate	Deposit interest rates for EU and BIS countries	IMF International Financial Statistics
Nominal GDP	Nominal GDP	Ameco
Real GDP growth	Real GDP growth	Eurostat
Population	Number of inhabitants	Eurostat, CIA Factbook, NationMaster.com
Inflation	Deflator of GDP	Computed from nominal and real GDP growth

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