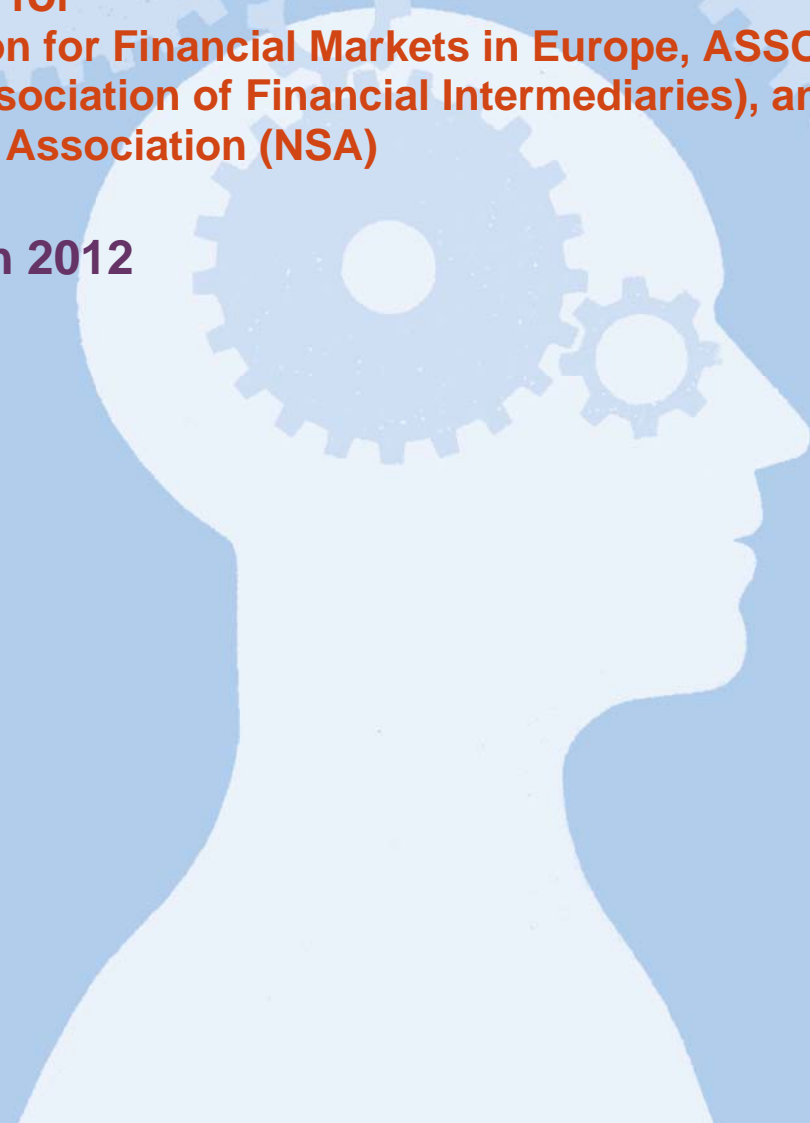


What would be the economic impact on the EU of the proposed financial transaction tax?

Review of the European Commission's latest commentary

**Prepared for
Association for Financial Markets in Europe, ASSOSIM
(Italian Association of Financial Intermediaries), and Nordic
Securities Association (NSA)**

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Main conclusions and executive summary

On May 4th 2012, the Commission published seven additional explanatory notes that summarise the results of its further analysis of the impact of the proposed financial transaction tax (FTT)—including a new economic model to assess the macroeconomic impact of the tax (ECFIN 450).¹ While the details of the FTT remain as originally proposed, there have been some changes to how the impact of the tax on the real economy has been estimated.

These explanatory notes have the status of ‘non-papers’, which Oxera understands to mean that the Commission’s commitment to any views expressed in the notes is relatively limited. This provides an opportunity to inform the Commission’s thinking and for it to address any shortcomings in the analysis before it takes an official position. In this context, the Association for Financial Markets in Europe, ASSOSIM (Italian Association of Financial Intermediaries) and Nordic Securities Association (NSA) (hereafter referred to as ‘the European trade associations’) have asked Oxera to review the additional analysis. The findings of this review are presented in this report.

In conclusion, Oxera’s review of the new analysis finds that many of shortcomings of the September impact assessment, as set out in Oxera (2011), remain. These shortcomings are summarised below.

Inconsistencies between the revenue estimate and the estimate of the economic impact

In the explanatory note on revenue estimates, the Commission presents a central estimate of FTT revenues of €57 billion.² This estimate has not been derived from the new economic model, and has different underlying assumptions. In particular, the revenue analysis includes an estimate of the expected revenue from taxing derivative transactions—expected to account for about two-thirds of the revenue—which are not considered in the economic model, and a higher effective securities tax rate of 0.2%. The difference in the underlying assumptions between the revenue analysis and the economic model means that the results cannot be directly compared.

The new analysis underestimates the impact of the FTT by more than the September impact assessment

In the explanatory note on the macroeconomic impact, the Commission states that the potential impact of the FTT will be to reduce annual real GDP by 0.28% in the long run.³ However, this estimate is based on an underestimate of the effective securities tax rate and an underestimate of the proportion of the investment financing that will be affected by the tax.

Investment from retained earnings of companies expecting to list and those already listed would be affected in a similar way as investment financed from equity or corporate debt. An FTT is also expected to increase the cost to banks of providing loans and therefore the cost of financing investment in this way. Furthermore, it is the trading of shares by a financial institution rather than listing that triggers the tax. As a result, shares in unlisted companies that are bought or sold by a financial institution are also expected to be subject to the FTT.

¹ Lendavi, J., Raciborski, R. and Vogel, L. (2012), ‘Securities transaction taxes: Macroeconomic implications in a general-equilibrium model’, European Economy, Economic Papers 450, March.

² European Commission (2012), ‘Technical Fiche: Revenue estimations’, May

³ European Commission (2012), ‘Technical Fiche: Macroeconomic impacts’, May.

In the new analysis the Commission continues to conclude that ‘borrowing from banks and the raising of capital through venture capital funds are not taxed’,⁴ but now assumes that the tax has **no** impact on these sources of financing.⁵ On this basis, it makes an even greater downward adjustment, and thereby underestimates the impact of the tax on GDP by more. The new analysis assumes that only 30% of a company’s value would be affected by the tax. This is roughly equivalent to reducing the impact on GDP by 70%, substantially more than the (incorrect) 40% reduction in the September analysis.

Correcting for these assumptions would significantly increase the impact of the tax.

Even based on the Commission’s own assumptions, the tax remains an inefficient way to raise public funds

The model finds that the ratio of GDP loss to FTT tax revenue gain ranges between 2:1 and 4:1. However, a reduction in the level of economic activity would also be expected to reduce other sources of government tax revenue, as it would be expected to reduce wages, profits, consumption and other taxed activities.

In most EU countries, total tax revenue tends to be around 40% of GDP. Therefore, taking the lower estimate of the ratio of GDP loss to FTT tax revenue raised of 2:1, some 80% of any FTT tax revenue would be lost owing to the negative impact on other tax sources. This implies a ratio of GDP loss for overall tax revenue gain of 10:1.

Other shortcomings of September impact assessment remain

Oxera’s review of the new analysis finds that other shortcomings of the September impact assessment, as set out in Oxera (2011), remain. These include (but are not limited to) the following.

- **Relocation**—as the model is for a closed economy, it provides no information on the extent to which the tax might result in the relocation of financial services and capital away from the EU.
- **Unintended consequences**—the model assumes that there is only one type of financial instrument, and therefore does not consider the full unintended consequences of the tax. For example, the FTT might increase the cost of effective risk management through the trading of derivatives, and therefore discourage such risk management. It is also likely to increase the cost of government debt.
- **Timing**—the Commission presents the impact on real GDP for a 40-year period in the future, assuming healthy growth in the meantime. The Commission has not shown that the economic impact would indeed happen gradually over the 40 years—it simply assumes this. Given that the impact on share prices can be expected to be relatively immediate, and many types of asset depreciate relatively quickly, the impact on GDP is likely to occur much sooner.

The efficiency of the tax looks worse if some of the Commission’s assumptions are adjusted to reflect more realistic scenarios. There is a risk that the imposition of the tax actually reduces total tax revenues from the economy. Given this risk, Oxera considers that the impact assessment would need to be more thorough and based on more robust evidence before a well-informed decision could be made about the proposed FTT.

⁴ European Commission (2012), ‘Technical Fiche: Macroeconomic impacts’, May.

⁵ Lendavi et al. (2012), op. cit., p. 9.

Contents

1	Introduction	1
1.1	Context and remit	1
1.2	Approach	2
2	Macroeconomic impact	4
2.1	Impact of the proposed FTT on different forms of funding	4
2.2	Overall impact of the FTT on GDP	7
2.3	Timing of the impact on GDP	9
3	Conclusion	10

List of figures

Figure 2.1	Conceptual basis of the closed-economy model, and links to the impact of using an open-economy model	6
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1 Introduction

1.1 Context and remit

On September 28th 2011 the European Commission adopted a proposal for a financial transaction tax (FTT), setting out the proposed base and rate of the tax, with the following rationale:⁶

- to avoid fragmentation in the internal market for financial services, bearing in mind the increasing number of uncoordinated national tax measures being put in place;
- to ensure that financial institutions make a fair contribution to covering the costs of the recent global financial crisis, and to ensure a level playing field with other sectors from a taxation point of view;
- to create appropriate disincentives for transactions that do not enhance the efficiency of financial markets, thereby complementing regulatory measures aimed at avoiding future crises.

Attached to the Commission's proposal were research documents providing information for the Commission's economic impact assessment. The research included some interesting findings, with some that might not provide support for the proposals, such as a potentially material negative impact on the annual GDP of the EU of 0.53%.⁷ The International Monetary Fund (IMF) has also published research into the feasibility and impact of such a tax.⁸ In addition, there is some academic literature focusing on the pros and cons of the type of FTT being proposed.⁹

The Association for Financial Markets in Europe (AFME), ASSOSIM (Italian Association of Financial Intermediaries) and Nordic Securities Association (NSA) asked Oxera to review the Commission's impact assessment of the proposals.¹⁰ Among other conclusions (see the Main Conclusions section at the start of this paper), Oxera's (2011) review found that:

- even the Commission's own analysis suggested that the negative impact on the wider economy (a reduction of 0.53% of annual GDP) could be quite significant when compared with the revenue expected to be collected by the tax;
- some assumptions underpinning the Commission's analysis were unrealistic. Adjusting these assumptions, the Commission's own macroeconomic model suggested that the impact would be even greater than outlined in the Commission's proposal. In other words, the overall negative impact on GDP was likely to be more severe.

On May 4th 2012, the Commission published seven additional explanatory notes in relation to the proposed introduction of the FTT. These notes summarise the results of further analysis—including a new economic model to assess the macroeconomic impact of taxation

⁶ See European Commission (2011), 'Proposal for a Council Directive on a common system of financial transaction tax and amending Directive 2008/7/EC', COM(2011) 594 final.

⁷ See Ibid, p. 3.

⁸ Matheson, T. (2011), 'Taxing financial transactions: issue and evidence', prepared for the IMF, WP/11/54, March, and Brondolo, J. (2011), 'Taxing financial transactions: an assessment of administrative feasibility', prepared for the IMF WP/11/185, August.

⁹ For an overview of the growing academic literature, see, for example, Mattheson (2011), op. cit.

¹⁰ Oxera (2011), 'What would be the economic impact of the proposed financial transaction tax on the EU?', prepared for The Association for Financial Markets in Europe, the Italian Association of Financial Intermediaries and the Nordic Securities Association, December.

on financial transactions (ECFIN 450)¹¹—and provide clarification on how the FTT would work in practice.

The details of the FTT remain as originally proposed. For example, the proposed effective tax rate on securities transactions continues to be 0.2% (0.1% on both the purchase and sale of securities) and 0.02% for derivatives. However, there have been some changes to the way in which the impact of the FTT on the real economy has been estimated. The effect of these changes is a reduction in the estimated impact. In addition, in the new material, the Commission refers to the potential use of FTT revenues in funding public investment, and suggests that this could further mitigate any adverse effect on GDP.¹²

These explanatory notes have the status of ‘non-papers’, which Oxera understands to mean that the Commission’s commitment to any views expressed is relatively limited. For example, as stated in ECFIN 450: ‘the views expressed are the authors alone and do not necessarily correspond to those of the European Commission’.¹³ This provides an opportunity to inform the Commission’s thinking and for it to address any shortcomings in the analysis before it takes an official position. In this context, the European trade associations have asked Oxera to review the additional analysis with a focus on two areas:

- the changes in the estimated economic impact of the proposed FTT in light of the European Commission’s new analysis; and
- the efficiency of the FTT in raising public revenues.

Oxera’s review indicates that many of the findings in Oxera (2011) still hold, and the tax is not an efficient way to raise public funds. Indeed, now the Commission underestimates the impact of the tax even further, and therefore underestimates the impact on investment and GDP to a greater extent.

The scope of this report is limited to a review of the principal elements of the Commission’s economic impact assessment, and consideration of selected unintended consequences not included in that assessment. The report does not assess the benefits of public investment (which in any case would depend on the specific investment concerned), but considers whether the FTT is an efficient way to raise public funds. Even if it could be demonstrated that an increase in public investment has significant benefits (in the current economic climate),¹⁴ this does not mean that any form of additional tax can be justified.

This report presents the findings of Oxera’s review.

1.2 Approach

Oxera conducted a review of the Commission’s proposals and recently published explanatory notes, and considered how any deficiencies or gaps in the analysis could alter the resultant conclusions on the likely economic impact of the proposals. In particular, Oxera conducted:

- a review of the Commission’s economic impact assessment, including consideration of the economic models and assumptions used;

¹¹ Lendavi, J., Raciborski, R. and Vogel, L. (2012), ‘Securities transaction taxes: Macroeconomic implications in a general-equilibrium model’, European Economy, Economic Papers 450, March.

¹² European Commission (2012), ‘Technical Fiche: Macroeconomic impacts’, May, p. 3.

¹³ Ibid.

¹⁴ For example, the economic literature suggests that, at least for R&D spending, tax incentives to the private sector have a stronger effect on R&D expenditure than direct funding by the government. See, for example, Jaumotte, F. and Pain, N. (2005), ‘From Ideas to Development: the Determinants of R&D and Patenting’, OECD Economics Department Working Papers, No. 457 and (2005), ‘Innovation in the Business Sector’, OECD Economics Department Working Papers, No. 459.

- a review of other relevant sources, including academic literature, analysis of the proposals by other commentators, and previous studies by Oxera in this area;
- an analysis of the deficiencies and gaps identified in the Commission's assessment, to provide some guidance on their likely significance;
- an appraisal of the likely consequences for the economic impact after consideration of the deficiencies and gaps in the assessment.

2 Macroeconomic impact

The European Commission's new economic impact assessment summarised in 'Technical Fiche: Macroeconomic impacts'¹⁵ includes a revised estimate of the potential impact of the FTT on the annual GDP of the EU. This estimate is based on a new economic model, ECFIN 450,¹⁶ which finds that the tax has a smaller impact than in the September impact assessment. The new analysis assumes that the tax affects a smaller part of the capital stock of the economy and is applied at a lower rate, and therefore estimates from the model of both tax revenues generated and the impact on GDP are lower.

Despite a smaller overall impact, the conclusion that the tax is an inefficient way to raise government revenues still holds. To raise 1% of FTT tax revenue, the European economy is estimated to sacrifice 2% of annual GDP. Furthermore, because a reduction in the level of economic activity can also be expected to reduce other sources of government tax revenue, the ratio of GDP loss to overall tax revenue gain can be estimated to be 10:1—ie, for every €1 increase in annual tax revenues, there would be a €10 reduction in annual GDP (see section 2.2).

The results from the new model reflect some changes in the approach used to take into account the differential impact of the tax on alternative forms of company finance, and the assumption about the effective tax rate. As there has not been any change in the details of the proposed FTT, it is likely that these changes were introduced with the objective of improving the accuracy of the estimates. However, Oxera's review of the new model finds that these adjustments are not appropriate. The new model underestimates the impact of the FTT on alternative forms of company finance to raising capital, and, as the proposals have not changed, the lower, assumed tax rate is not an appropriate assumption. On this basis the impact of the FTT on GDP can be expected to be more severe than the new model and Commission's Technical Fiche on the macroeconomic impact suggest.

In addition, a number of key aspects of the conceptual framework of the new economic model are the same as in the September analysis.¹⁷ These include an assumption that the economy is closed (and therefore relocation effects are not taken into account) and that there is only one type of financial instrument—for example, derivatives are not considered. These assumptions further underestimate the effect of imposing the FTT, and are considered in detail in Oxera (2011).¹⁸

The remainder of this section is structured as follows:

- section 2.1 summarises how the FTT will affect different forms of company finance;
- section 2.2 presents Oxera's review of the overall impact of the FTT on GDP and tax revenues, taking into account more realistic assumptions in relation to the impact of the FTT on different forms of investment financing and the effective tax rate;
- section 2.3 considers the Commission's assumption about the timing of the impact.

2.1 Impact of the proposed FTT on different forms of funding

The primary route through which an FTT will have an impact on GDP is through the impact on the cost of company finance, and hence on future levels of investment. Different forms of

¹⁵ European Commission (2012), 'Technical Fiche: Macroeconomic impacts', May.

¹⁶ Ibid., p. 3.

¹⁷ European Commission (2011), 'Impact assessment', SEC/2011/1102 final, Volume 16: Effects on Macroeconomic Variables.

¹⁸ Oxera (2011), op. cit.

company finance, and for different types of company, will be affected to a greater or lesser extent. However, as both the cost of equity and the cost of bank lending can be expected to increase, the cost of finance will increase for almost all companies. Assumptions about how the tax will affect company finance are critical to the estimate of the impact on the annual GDP of the EU.

The Oxera (2011) review considered this issue in relation to the Commission's previous economic impact assessment and concluded that the impact of the tax on company finance would be more extensive than the Commission assumes. This was primarily owing to the Commission's underestimate of the impact of the tax on financing using retained earnings.

In the September impact assessment, the Commission assumed that retained earnings and bank lending would be effectively ring-fenced and the impact on the cost of these investment financing sources would therefore be about half as severe as the impact on the cost of capital.¹⁹ Oxera's review found that while this adjustment is approximately correct for bank lending, it is not correct for retained earnings, which for a large number of companies will be affected to the same degree as capital, as explained in the second bullet below. These conclusions still hold.

In the new analysis the Commission continues to conclude that 'borrowing from banks and the raising of capital through venture capital funds are not taxed', but now assumes there is **no** impact on these sources of investment finance.²⁰ On this basis, the Commission makes an even greater downward adjustment, and thereby underestimates the impact of the tax on GDP by more.

In the September impact assessment, the adjustment was made outside the theoretical model, and the estimated reduction in annual GDP of 1.76% was reduced by 40%. The new analysis takes a different approach and incorporates this adjustment into the model by assuming only 30% of the value of a company is affected by the tax. This assumption is roughly equivalent to reducing the impact on GDP by 70%, substantially greater than the (also incorrect) 40% reduction in the September analysis. This new approach to the adjustment is one explanation for why the impact of the tax in the new analysis is smaller than in the previous analysis.

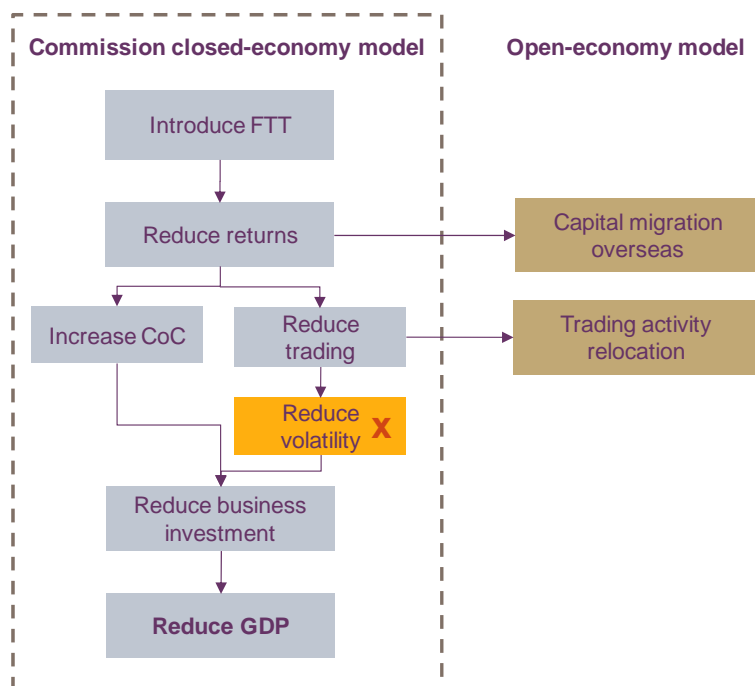
Oxera's analysis indicates that the Commission is underestimating the extent to which the proposed tax would affect different forms of company finance. The assumption that retained earnings and bank lending would not be affected by the tax is not correct, and therefore making such adjustments will result in an underestimate of the impact of the tax. Retained earnings for many companies are affected to the same degree as capital and, owing to the increased costs of providing loans, the cost of bank lending should also be expected to increase. The way in which an FTT would affect different sources of funding, and thereby the real economy, can be explained as follows.

- **Equity and corporate bonds:** a securities transaction tax (STT) increases the transaction costs for trading equity and corporate bonds, and thereby lowers the expected net (post-transaction costs) return to investors: investors will demand a higher gross return to their capital from the company, as they expect to be taxed when they sell their security. The higher gross return to capital restores the net (post-transaction costs) return to investors. This increases the cost of capital for companies, which discourages them from making investments, leading to lower capital accumulation and hence lower GDP. This impact is what the new model attempts to capture through its assumption that 30% of the value of a company is affected by the tax. The logic behind the impact is illustrated in Figure 2.1.

¹⁹ European Commission (2011), 'Impact assessment', SEC/2011/1102 final, Volume 1', p. 52.

²⁰ Lendavi et al. (2012), op. cit., p. 9.

Figure 2.1 Conceptual basis of the closed-economy model, and links to the impact of using an open-economy model



Source: Oxera.

- **Retained earnings:** the impact of the FTT on retained earnings as a source of finance depends on whether the company is listed, expects to be listed, or if the company never expected to be listed.²¹
 - *If the company is listed, current owners will demand the same higher (gross) return on capital investment from retained earnings as they would from new equity finance raised on a stock market.* Investment from retained earnings increases the value of the company, which results in the price of the firm’s shares rising. Owners of shares realise this increased value by selling their shares. The purchasers of these shares do not base their decisions on whether the prior investment by the firm was made from retained earnings or from new equity. Therefore, in the same way as for those investors who just purchased existing shares, an STT reduces the net return that shareholders can expect to earn on investment funded from retained earnings. For example, if a firm decides to use retained earnings to build another factory (rather than distribute the earnings to owners as dividends) and the factory is expected to double the firm’s output, then (all else equal) this could be assumed to double the firm’s share price. However, the introduction of the STT will have reduced the share price prior to the investment, and hence it is a lower initial share price that would be doubled. As a result, the investment from retained earnings would be worth less to shareholders with the STT than without it.
 - *If the company may list in the future²² (eg, venture capitalists), then investment is also affected by the tax in the same manner.* If investors expect the company to be listed in the future, the value of their investment depends on the expected IPO share price, with the amount of time before listing also being a factor. Given that an STT will affect the price of shares in the primary market, albeit indirectly (the

²¹ Strictly speaking, it is the trading of shares by a financial institution rather than listing that triggers the tax. As discussed on the following page, this means that shares in unlisted companies that are bought or sold by a financial institution are also expected to be subject to tax.

²² Within the expected life of any investments being made.

primary listing price will factor in the expected share price in the secondary market, which is directly affected by an STT), an STT will reduce the value of any investment, even for (currently) non-listed companies.

- *If the company never expects to be listed, the tax is not expected to have an impact on retained earnings financing.* However, other sources of investment financing—namely equity, corporate bonds and bank lending—may still be affected by the tax. Strictly speaking, it is the trading of shares by a financial institution rather than listing that triggers the tax. As a result, shares in unlisted companies that are bought or sold by a financial institution are also expected to be subject to tax. As the definition of financial institution is broad in scope (expected to include pension funds and possibly even venture capitalists), the proportion of transactions in the shares of unlisted companies subject to the tax could be substantial. The impact on bank lending is explained below.
- **Bank lending:** an FTT is expected to increase the cost to banks of providing loans to businesses—for example, by increasing the cost of trading derivatives and using repos to manage risk and short-term cash flows. In addition, to the extent that banks raise finance in the corporate bond market to enable them to make loans, the increase in the costs of those bonds will feed through into higher costs and, therefore, higher prices (interest rates) charged to borrowers. Oxera (2011) found the impact of the FTT on bank interest rates to corporates can be expected to be significant, and the increase in the cost of bank loans for companies could be in the region of 50% of the impact on the cost of equity.²³ This confirms the adjustment made by the European Commission in the previous macroeconomic impact analysis, but this has now been changed. In the new model, the Commission assumes that bank lending is untaxed, but does not provide an explanation for this change in approach.

In summary, the Commission is incorrect in assuming that bank lending and retained earnings will not be affected by the proposed FTT, and therefore underestimates the impact of the tax. The next section looks in more detail at the impact of the FTT on GDP.

2.2 Overall impact of the FTT on GDP

In the Technical Fiche, the Commission states the potential impact of the FTT would be to reduce annual real GDP in the EU by 0.28% in the long run. However, this estimate is based on an underestimate of the effective securities tax rate and an underestimate of the proportion of the investment financing that will be affected by the tax. A more realistic estimate would be significantly higher owing to the following factors.

- The assumed tax rate in the model is 0.14%, while current proposals are to impose an effective tax of 0.2% on securities transactions.²⁴ This suggests that the model will underestimate the impact of the tax on the real economy.
- The assumed proportion of investment financing affected by the tax in the model is 30%. As this excludes retained earnings and bank lending—which, as explained above, are also affected by the tax—this will also underestimate the impact of the tax.

It is helpful to put GDP impact estimates into context by comparing them with expected tax revenues. This relationship between the GDP impact and the tax revenues provides an indication of the efficiency of the tax, as a reduction in the level of economic activity would be expected to reduce government tax revenue from other sources, such as labour taxes and consumption taxes.

²³ Oxera (2011), op. cit.

²⁴ European Commission (2012), 'Technical Fiche: revenue estimations', May.

To measure the efficiency of the proposed tax, the new model reports the following results for an effective securities tax rate of 0.14%:

- **When 80% of company finance is untaxed:** the impact on real GDP is –0.19%, and the FTT revenues raised are 0.09% of GDP.²⁵ This implies a ratio of GDP loss to tax revenue gain of 2:1—ie, to raise 1% of tax revenue, the EU economy would sacrifice 2% of GDP.
- **When 60% of company finance is untaxed:** the impact on real GDP is –0.24%, and the FTT revenues raised are 0.13% of GDP.²⁶ This also implies a ratio of GDP loss to tax revenue gain of 2:1.
- **When 0% of company finance is untaxed:** the impact on real GDP is –1.14%, and the FTT revenues raised are 0.31% of GDP.²⁷ This implies a higher ratio of GDP loss for tax revenue gain of 4:1.

The model does not capture the full impact of the tax, most notably because of the exclusion of derivatives from the model. Assuming that the lower ratio of GDP loss for tax revenue gain described above (2:1) holds for derivatives as well as securities, the overall tax revenue expectations can be translated into a GDP impact.

The Commission's central estimate of the revenue, as presented in its proposals, is €57 billion per annum,²⁸ which is about 0.45% of annual EU GDP.²⁹ This estimate has not been derived from the new economic model, but is based on a different piece of analysis presented in the September impact assessment with different underlying assumptions. In particular, the revenue analysis includes an estimate of the expected revenue from taxing derivative transactions (expected to account for about two-thirds of the revenue)³⁰ and a higher effective securities tax rate of 0.2%. The difference in the underlying assumptions between the revenue analysis and the economic model means that the results cannot be directly compared. However, it is possible to apply the *ratio* of GDP loss to revenue gain, as estimated in the economic model, to the estimate of the tax revenue in order to calculate the expected GDP loss consistent with the Commission's own revenue estimates. Applying the lower estimate of the ratio from the model of 2:1 suggests that the tax would reduce annual EU GDP by 0.9%.

A reduction in the level of economic activity would be expected to reduce other sources of government tax revenue (as it would be expected to lead to lower wages, profits, consumptions, etc), and this reduction can be estimated in the long term by assuming a fixed ratio of the tax burden to GDP. In most EU countries, total tax revenue tends to be around 40% of GDP,³¹ and therefore one can assume that, in the long run, a reduction in annual GDP of 0.9% reduces annual revenue from other forms of taxation by 0.36% of annual GDP. This implies that the *net* tax revenues of the proposal would be 0.09% of GDP (0.45% - 0.36%).

This means that, even based on the Commission's own assumptions, the tax would not appear efficient in collecting revenue. Some 80% of the €57 billion revenue (as estimated in the Commission's impact assessment) would be lost due to the negative impact on other tax sources.

²⁵ Lendavi et al. (2012), op. cit, p.17, Table 3.

²⁶ Ibid., p. 19, Table 4.

²⁷ Ibid., p. 20, Table 5

²⁸ European Commission (2012), 'Technical Fiche: revenue estimations', May.

²⁹ The IMF estimates that the GDP of the EU in 2010 was approximately €12,300 billion. IMF, World Economic Outlook Database, April 2012.

³⁰ European Commission (2012), 'Technical Fiche: revenue estimations', May.

³¹ Oxera's assumption, based on a review of Eurostat data for tax revenues and GDP across Europe.

The efficiency of the tax looks worse if some of the Commission's assumptions are adjusted to reflect more realistic scenarios—for example, in relation to the broader impact on the different forms of company finance. There is a risk that the imposition of the tax actually reduces total tax revenues from the economy. Given this risk, Oxera considers that the impact assessment would need to be significantly more thorough and based on more robust evidence before a well-informed decision could be made about the proposed FTT.

2.3 Timing of the impact on GDP

In the Technical Fiche, the European Commission presents the impact on real GDP 40 years in the future, assuming healthy growth in the mean time. The Commission has not shown that the economic impact would indeed happen gradually over 40 years—it simply assumes this.

From an economic perspective, the FTT can be expected to have an immediate impact on share prices. When estimating the return on investing in any particular stock, investors are forward-looking and will therefore factor in any expected future transaction costs and taxes.³² An immediate impact on share prices, in turn, implies a relatively early impact on investment and consumption decisions.

Arguably the timing of the impact on real GDP depends on how quickly assets depreciate, as, to avoid a decreasing capital stock, investment must be sufficient to cover depreciation. On average, this can be relatively short. For example, it is a standard accounting practice to assume that computers, office machines (such as faxes, copiers) and research equipment have a useful life of five years, and that office furniture and fixtures depreciate over seven years.³³ Although this is not necessarily equivalent to the economic life of an asset, it would suggest that the impact on GDP may occur much sooner than the 40 years assumed by the European Commission.

³² For more detail on how expectations over financial transaction taxes can affect share prices today, see, for example, Oxera (2007), 'Stamp duty: its impact and the benefits of its abolition', May, section 4.

³³ Inland Revenue Service, Publication 946, Appendix B *Table of Class Lives and Recovery Periods*, available at: www.irs.gov.uk.

3 Conclusion

Oxera's review of the new analysis by the Commission finds that the proposed tax is an inefficient way to raise public funds, with a potentially significant adverse effect on the wider economy.

The Commission's own analysis suggests that in order to raise 1% of FTT tax revenue, the European economy could be expected to sacrifice 2% of annual GDP. This reduction in the level of economic activity would be expected to reduce government tax revenue from other sources, such as labour and consumption taxes, thereby implying an even worse overall tax efficiency. Assuming a total tax revenue burden of around 40% of GDP, it can be estimated that some 80% of the €57 billion revenue (as estimated in the Commission's impact assessment) would be lost owing to the negative impact on other tax sources. This means that, even based on the Commission's own assumptions, the tax would not appear efficient in collecting revenue.

The efficiency of the tax looks worse if some of the Commission's assumptions are adjusted to reflect more realistic scenarios—for example, in relation to the broader impact on the different forms of company finance. The Commission continues to draw the incorrect conclusion that 'borrowing from banks and the raising of capital through venture capital funds are not taxed',³⁴ and makes an even greater downward adjustment than in the September impact assessment. The new analysis assumes that only 30% of the value of a company is affected by the tax. This is roughly equivalent to reducing the impact on GDP by 70%, substantially more than the (incorrect) 40% reduction in the September analysis.

In addition, Oxera's review of the new analysis finds that many of the findings set out in Oxera (2011) still hold. This is because some key aspects of the conceptual framework of the new economic model are the same as in the September analysis.³⁵ These include an assumption that the economy is closed and that there is only one type of financial instrument—for example, derivatives are not considered in the Commission's revised analysis.

Assuming that the economy is closed means that the analysis cannot provide any information on the extent to which the tax might result in the relocation of financial services and capital away from the EU. The assumption that there is only one type of financial instrument means that the analysis does not consider the full unintended consequences of the tax. For example, the tax might increase the cost of effective risk management through the trading of derivatives, and therefore discourage such risk management, and is likely to increase the cost of government debt. The implications of the Commission's assumptions are considered in detail in Oxera (2012) and found to further underestimate the effect of imposing the FTT.³⁶

³⁴ European Commission (2012), 'Technical Fiche: Macroeconomic impacts', May.

³⁵ European Commission (2011), 'Impact assessment', SEC/2011/1102 final, Volume 16: Effects on Macroeconomic Variables.

³⁶ Oxera (2011), *op. cit.*

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