Goldman Sachs

Europe: Financial Services

Equity Research

Financial Transaction Tax: How severe?

FTT proposal: Impact assessment

The aim of this report is not to discuss the merits of the EC's FTT proposal. Rather, we look at the impact the current proposal could have on European banks, exchanges, asset managers and insurers.

Banks: 2012 pro-forma FTT: 92% of 2015E PBT

We perform a bottom-up analysis of the FTT proposal for 42 banks under our coverage and estimate the 2012 pro-forma FTT at €170 bn (92% of 2015E PBT; 16% of capital). **Geographically**, our analysis highlights the German, French and UK banks as those that would experience the greatest impact on profitability. All **business models** – universal, investment and retail – would be affected. **Product** wise, we estimate the pro-forma FTT effect on REPOs at €118 bn, derivatives at €32 bn and equities at €11 bn.

Mitigation = discontinuation?

With the pro-forma FTT bill amounting to multiples of 2015E PBT, discontinuation of select business lines (short-term REPO, IR swaps) could be a mitigation option, in our view.

Exchanges: A potentially severe hit

Based on EC expectations for the FTT's impact on volumes, we estimate that the average European Exchange & IDB would see PBT fall by c.22%. That said, derivative-biased exchanges in the EU-11 area would likely experience a far greater impact (in some cases above 50% of 2014E PBT).

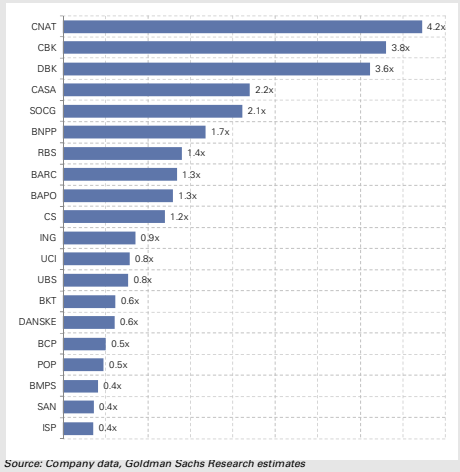
Asset managers: Taxing the end customer

We estimate that the European fund managers could generate c.€17 bn in FTT annually. In turn, our top-down analysis implies that investors based in FTT member countries could face an annual tax of 17-23 bp on their equity and bond portfolios. Our bottom-up analysis suggests that this tax would be borne disproportionately by retail investors (35 bp pa), owing to their shorter holding periods.

Insurance: Concern with indirect impacts

Insurers fall within the scope of the FTT, but the direct impact would likely be significantly smaller when compared with European banks, exchanges and AM.

FTT PROPOSAL: 2012 PRO-FORMA AS % OF 2015E PBT



Source: Company data, Goldman Sachs Research estimates

COVERAGE VIEW: NEUTRAL

Jernej Omahen
+44(20)7774-6324 jernej.omahen@gs.com Goldman Sachs International

Chris Turner, CFA
+44(20)7774-8867 chris.turner@gs.com Goldman Sachs International

Jean-Francois Neuez
+44(20)7552-9362 jean-francois.neuez@gs.com Goldman Sachs International

Luca De Angelis
+44(20)7552-3719 luca.deangelis@gs.com Goldman Sachs International

Table of contents

Overview: The European FTT: How severe?

Current proposal of the FTT: Implementation targeted for January 1, 2014

The Financial Transaction Tax is a complex measure, proposed by the European Commission (specifically, the Directorate General for Taxation and Customs Union (DG Tax)) that has a stated aim to: (1) harmonize legislation on indirect financial taxation within the EU-11, (2) ensure that financial institutions make their fair contribution to the cost of the recent crisis and (3) reduce externalities of the financial system on financial stability and wealth redistribution.

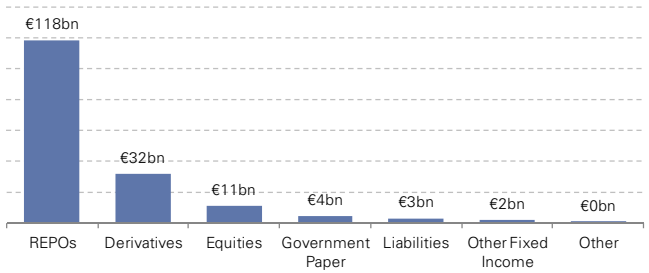
The Commission itself estimates that the proposal could result in some 75% reduction in derivative volumes and a 15% reduction in cash volumes. The Commission also estimates that following these volume adjustments, the FTT would yield a €34 bn tax revenue.

The targeted time-line to implementation is tight. The votes by the European Parliament and the European Council are expected to take place this spring. This is to be followed by transposition of the FTT into national law, currently planned by September 30. It is at this stage that key details, such as those relating to collection and payment, are expected to be set. The FTT is planned for implementation as of January 1, 2014, under the current proposal.

Banks: FTT's significant impact on European banks stretched across products and countries

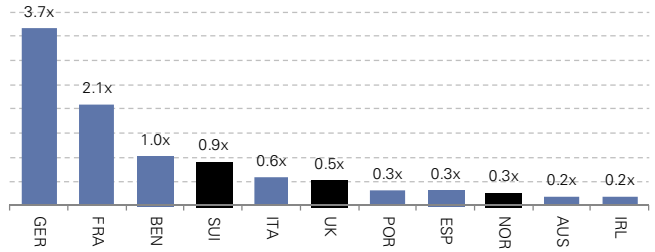
We show that the annual FTT rates are substantially higher than the proposed headline rates of 0.1% for cash and 0.01% for derivative transactions would suggest. This is especially true for shorter-term transactions, where the FTT would offset the expected benefit (be it funding or hedging) many times over. We show that, as a consequence of the FTT, the REPO market <12 months, interest rate swaps <6 months, and market making would likely be significantly impaired. The "post FTT" economics of these activities could result in far-reaching mitigation actions by banks (such as substantial downsizing/closure of these business lines). The knock-on effects could vary from reduced credit availability and increased pricing (and thus an impact on the credit quality of banks), to reduced ability to hedge risks (and thus a higher volatility threshold for banks/corporates) and disruption of funding markets.

Exhibit 1: GS covered banks: Severe implications, REPOs most impacted…
Pro-forma FTT impact by product on GS covered banks, 2012



Source: EC, Company data, Goldman Sachs Research estimates

Exhibit 2: … with scope to alter profitability profiles
Pro-forma FTT as % 2015E PBT GS covered banks, non EU-11 in black



Source: EC, Company data, Goldman Sachs Research estimates

On a 2012 pro-forma basis, the FTT would amount to €170 bn (or 92% of 2015E PBT) for the 42 European banks we have analyzed, on our estimates. By affected balance sheet category, the bulk of the impact stems from the European banks' REPO books (€118 bn), followed by derivatives (€32 bn), equities (€11 bn) and government bond books (€4 bn). By bank, the impact extends across business models – investment, universal, global and domestic retail banks. Similarly, by geography, it has a reach well beyond the EU-11. Indeed, we show some of the most affected banks would be those in the UK and Switzerland.

Individually, we show that the most affected banks are the French and German institutions. The six French and German banks show a 2012 pro-forma FTT as a percentage of 2015E PBT ranging from 168% (BNP), up to 362% (DBK) and finally 423% (Natixis). But even pure-play retail lenders – the Italian/Spanish domestic banks for example – stand to be significantly impacted (16%-130% of 2015E PBT).

In our view, the pro-forma 2012 FTT effect is significant enough to make certain business lines, and funding avenues, no longer viable for a large number of European institutions. If implemented, a major restructuring of funding and business models would likely be necessary. Given the magnitude of the possible impact, we believe the FTT could still be subject to substantial modification before it is passed, and ultimately, implemented.

Diversified Financials: A significant potential risk to European exchanges & IDBs

Material volume declines are a policy objective. The European Commission itself expects the FTT to reduce derivative volumes by 75% and to lower trading volumes in equities and bonds by 15%. We believe it is important to note that a material reduction in volumes is a stated policy objective of the FTT, rather than an unintended consequence of the tax. On the basis that exchanges & interdealer brokers are (to a lesser or greater degree) 'volume dependent' businesses, the FTT therefore constitutes a direct risk to the sector's earnings.

Significant reduction in profits is a potential outcome. Based on the Commission's volume expectations, we estimate that the average European Exchange & IDB under our coverage would see pre-tax profits decline by 22% as a result of the tax. Exchanges that are based outside the FTT area and are biased towards cash instruments would be least impacted (we estimate a small 2% reduction in PBT for the Warsaw Exchange) while derivative-biased exchanges in the FTT area would likely experience a far greater negative impact. Our analysis suggests that Deutsche Börse would see the largest impact to earnings, with a potential 51% reduction in our forecast pre-tax profits for 2014 (before any mitigating actions by management).

Although we would expect the larger variable costs of the IDBs to help offset some of the decline in volumes, we nonetheless estimate that ICAP and Tullett Prebon could see pre-tax profits decline by 16% and 26% respectively as a result of the tax.

Insurance: Less likely to be affected, but indirect impacts are a concern

While European insurers fall within the scope of the European FTT, we believe that the proposals would have a significantly smaller direct impact on the sector compared with banks or exchanges. The overarching aim of the FTT appears to be to encourage long-term investing, and insurers have always maintained that they are "buy and hold" investors. However, we believe the investment strategies of insurers could be altered by the FTT, which may result in weaker risk management and lower investment returns, particularly for insurers domiciled in countries not signed up to the FTT. Costs are likely to rise for insurers domiciled in countries that fall under the scope of the FTT and we expect this to be ultimately passed on to savers and pensioners. We also believe that the FTT could cause a decline in asset prices and creditworthiness of other financial institutions, which could have a significant impact on the insurance sector.

Exhibit 3: Pro-forma 2012 FTT effect is large and broad, when analyzed in the context of European bank profitability
2012 pro-forma FTT for GS covered banks as % of 2015E PBT

Bank	REPOs			Derivatives	Trading							Total Tax Bill
					Assets					Liabilities	Total	
	Assets	Liabilities	Total		Gvt.Bonds	Oth. Fixed Income	Equities	Other	Total			
Erste Bank	4%	4%	9%	2%	1%	0%	0%	0%	2%	0%	2%	12%
Raiffeisen	23%	4%	27%	1%	1%	0%	0%	0%	1%	0%	2%	30%
Danske Bank	33%	15%	48%	9%	0%	3%	0%	0%	3%	0%	3%	61%
BNP Paribas	52%	52%	104%	39%	4%	1%	17%	0%	22%	3%	25%	168%
Credit Agricole	77%	77%	155%	34%	6%	2%	20%	0%	28%	4%	32%	220%
Natixis	182%	160%	342%	31%	0%	8%	26%	0%	35%	15%	50%	423%
Societe Generale	70%	62%	132%	35%	4%	2%	31%	1%	38%	6%	44%	211%
Deutsche Bank	136%	91%	227%	92%	10%	3%	22%	2%	37%	6%	43%	362%
Commerzbank	196%	123%	319%	37%	3%	2%	18%	0%	23%	2%	25%	381%
Bank Of Ireland	4%	6%	11%	8%	0%	0%	0%	0%	0%	0%	0%	19%
Intesa Sanpaolo	19%	10%	29%	6%	0%	0%	0%	0%	1%	0%	1%	36%
Unicredit	33%	33%	67%	5%	2%	1%	2%	0%	5%	2%	7%	79%
BMPS	15%	16%	32%	3%	4%	1%	1%	1%	6%	0%	6%	41%
Banco Popolare	61%	61%	123%	0%	3%	1%	2%	0%	6%	1%	7%	130%
UBI Banca	9%	9%	17%	0%	0%	0%	1%	0%	1%	1%	2%	19%
BP Milano	6%	6%	12%	3%	0%	0%	1%	0%	1%	0%	1%	16%
ING Bank	52%	23%	75%	7%	1%	1%	2%	0%	4%	0%	4%	85%
DNB	0%	0%	1%	1%	3%	1%	0%	0%	4%	4%	8%	10%
BCP	16%	16%	33%	4%	10%	2%	2%	0%	14%	0%	14%	51%
Espirito Santo FG	2%	3%	5%	1%	6%	3%	11%	0%	19%	0%	19%	25%
Banco BPI	3%	3%	5%	0%	17%	0%	1%	1%	19%	0%	19%	25%
Santander	15%	15%	30%	3%	2%	0%	1%	0%	3%	0%	3%	36%
BBVA	7%	7%	14%	4%	2%	0%	1%	0%	4%	0%	4%	21%
CaixaBank	6%	7%	13%	4%	0%	0%	0%	0%	1%	0%	1%	17%
Banco Popular	24%	24%	47%	1%	0%	0%	0%	0%	0%	0%	0%	48%
Sabadell	16%	16%	32%	1%	0%	0%	0%	0%	0%	0%	0%	33%
Bankinter	29%	29%	58%	1%	2%	0%	0%	0%	3%	0%	3%	62%
Nordea	11%	7%	18%	6%	0%	1%	2%	0%	3%	1%	5%	28%
SEB	12%	3%	15%	4%	0%	2%	4%	0%	6%	1%	7%	27%
SHB	9%	1%	11%	2%	0%	0%	1%	0%	2%	0%	2%	14%
Swedbank	7%	3%	10%	3%	0%	1%	0%	0%	2%	0%	2%	15%

Source: Company data, Goldman Sachs Research estimates.

Exhibit 3 cont'd: Profitability within – and outside – the EU-11 stands to be significantly impacted
2012 pro-forma FTT for GS covered banks as % of 2015E PBT

Bank	REPOs			Derivatives	Trading							Total Tax Bill
					Assets					Liabilities	Total	
	Assets	Liabilities	Total		Gvt.Bonds	Oth. Fixed Income	Equities	Other	Total			
Credit Suisse	37%	37%	74%	30%	3%	1%	9%	0%	14%	2%	15%	120%
UBS	34%	10%	44%	23%	2%	1%	6%	1%	9%	1%	10%	77%
Julius Baer	8%	2%	10%	1%	0%	0%	2%	1%	3%	0%	3%	14%
EFG International	0%	0%	0%	0%	0%	0%	3%	0%	4%	0%	4%	4%
Vontobel	11%	0%	11%	0%	0%	0%	0%	0%	1%	0%	1%	12%
RBS	45%	45%	91%	39%	3%	1%	3%	1%	7%	2%	9%	140%
HSBC	6%	6%	11%	3%	1%	1%	0%	0%	2%	0%	2%	16%
Barclays	50%	50%	100%	26%	2%	1%	3%	0%	7%	0%	7%	134%
Lloyds	6%	6%	13%	6%	0%	0%	0%	0%	0%	0%	1%	19%
Standard Chartered	1%	1%	1%	2%	0%	0%	0%	0%	1%	0%	1%	3%
Total	35%	29%	64%	17%	2%	1%	6%	0%	9%	1%	11%	92%

Region	REPOs			Derivatives	Trading							Total Tax Bill
					Assets					Liabilities	Total	
	Assets	Liabilities	Total		Gvt.Bonds	Oth. Fixed Income	Equities	Other	Total			
Austria	12%	4%	16%	1%	1%	0%	0%	0%	2%	0%	2%	19%
Benelux	58%	29%	87%	9%	2%	1%	2%	1%	5%	0%	5%	101%
France	72%	68%	140%	36%	4%	2%	22%	0%	28%	5%	33%	209%
Germany	151%	99%	249%	78%	8%	3%	21%	2%	33%	5%	39%	366%
Ireland	4%	6%	11%	8%	0%	0%	0%	0%	0%	0%	0%	19%
Italy	26%	23%	49%	5%	2%	1%	1%	0%	3%	1%	4%	58%
Nordics	12%	5%	17%	5%	1%	1%	1%	0%	3%	1%	4%	26%
Portugal	6%	6%	12%	2%	9%	2%	6%	0%	18%	0%	18%	31%
Spain	13%	13%	26%	3%	2%	0%	1%	0%	3%	0%	3%	31%
Switzerland	33%	22%	55%	24%	2%	1%	7%	1%	11%	1%	12%	91%
UK	18%	18%	37%	12%	1%	1%	1%	0%	3%	0%	4%	52%
Total	35%	29%	64%	17%	2%	1%	6%	0%	9%	1%	11%	92%

Bank Type	REPOs			Derivatives	Trading							Total Tax Bill
					Assets					Liabilities	Total	
	Assets	Liabilities	Total		Gvt.Bonds	Oth. Fixed Income	Equities	Other	Total			
Domestic	23%	20%	44%	6%	1%	1%	2%	0%	4%	1%	5%	54%
International	44%	35%	79%	17%	2%	1%	8%	0%	12%	2%	14%	109%
Investment Banks	64%	49%	113%	42%	4%	2%	9%	1%	16%	2%	18%	172%
Private Banks	7%	1%	8%	0%	0%	0%	2%	0%	3%	0%	3%	11%
Global	19%	19%	38%	11%	2%	0%	4%	0%	7%	1%	8%	57%
Total	35%	29%	64%	17%	2%	1%	6%	0%	9%	1%	11%	92%

Source: Company data, Goldman Sachs Research estimates.

Overview of the Commission proposal

Contents

Overview of the Commission Proposal

Overview of the FTT proposal: A tough proposal, with a tight implementation timeline

The Financial Transaction Tax is a complex measure, proposed by the European Commission (specifically, DG Tax) that has a stated aim to: (1) harmonize legislation on indirect financial taxation within the EU-11, (2) ensure that financial institutions make their fair contribution to the cost of the recent crisis and (3) reduce externalities of the financial system on financial stability and wealth redistribution.

The Commission itself estimates that the proposal could result in some 75% reduction in derivative volumes and a 15% reduction in cash volumes. The Commission also estimates that following these volume adjustments, the FTT would yield €34 bn tax revenue.

The targeted time-line to implementation is tight. The votes by the European Parliament and the European Council are expected to take place this spring. This is to be followed by transposition of the FTT into national law, currently planned by September 30. It is at this stage that key details, such as those relating to collection and payment, are expected to be set. The FTT is planned for implementation as of January 1, 2014, under the current proposal.

Context: The EC sees the FTT as a post-crisis mechanism of financial stability

Discussions around an FTT intensified following the peaks of the financial crisis. Various tax proposals were debated, both at the national and the international (G20, EU27) level. In essence, the policy aim of the proposals was to (1) increase financial sectors' contribution towards the economic cost of the crisis; and (2) create disincentives for excessive risk-taking, particularly in those groups of financial products that were deemed to have contributed to the global financial instability.

In September 2011, the European Commission put forward a proposal that would have envisaged a Financial Transaction Tax (FTT) for the entirety of the EU. In June and July 2012, it was ascertained that the common adoption of the FTT was not viable owing to persistent divergence of opinion among Member States. Concerns regarding liquidity and market making were at the centre of the disagreements.

In January 2013, 11 states ("EU-11") – Belgium, Germany, Estonia, Greece, Spain, France, Italy, Austria, Portugal, Slovenia and Slovakia – were granted approval by the Council to proceed in a coordinated implementation of the FTT, creating the "enhanced cooperation in the area of the FTT". In this report, we analyze the impact of the latest Council Directive proposal, which involves the enhanced cooperation area only.

Stated aims: Raise a fair and substantial amount, harmonize, and reduce rent-seeking behaviour

The Commission's stated **aims** of the FTT proposal are to:

1. Harmonize legislation concerning indirect taxation of financial transactions across the member states;
2. Ensure that financial institutions make a fair and substantial contribution to covering the cost of the crisis and create a level playing field with other sectors; and
3. Create disincentives for transactions that do not enhance the efficiency of financial markets, and thus trigger over-investment in activities that are not welfare enhancing.

Exhibit 4: Commission's aim for the FTT: Restructure financial markets in EU-11, and re-align banking
Summary table of FTT proposal objectives and outcomes

	Objectives	Implied legislative principle	Legislative Outcome
1	**Harmonizing** indirect taxation on financial transactions legislation	• Avoid double taxation or double non-taxation • Prevent tax avoidance • Prevent geographical re-location	• Enhanced cooperation (EU-11) • Residence principle + issuance principle • All actors, all products and all markets are taxed
2	Ensuring that financial institutions make a **fair and substantial contribution** to covering the cost of the crisis and creating a level playing field with other sectors	• Tax Revenues should be ~0.3-0.5% of FFT area GDP	• Tax Revenues ~€34bn (0.4% of EU-11 GDP)
3	Create **disincentives** for transactions that do not enhance efficiency of the financial markets and thus trigger over-investment in activities that are not welfare enhancing	• Roll back of business models that mainly aim at redistributing wealth and rents instead of creating wealth and value • Avoid pure-rent seeking financial intermediation, excessive risk taking and leveraging that do not improve efficiency or stability	• Cascading effect of the FTT • Significant market turnover reduction • Significant impact on banks' business models

Source: European Commission, Goldman Sachs Research

From these objectives, the **European Commission has extrapolated the following policy-making conclusions** (see Exhibit 4):

1. **Harmonization.** The law must substitute all precedent taxation on financial instruments in order to achieve harmonization.
2. **Geographical reach is widely defined to avoid relocation.** The FTT must be designed in a way that avoids double taxation and double non-taxation, as well as geographical relocation of the financial sector. For this reason, tax will be payable according to both the residence (EU-11) *and* the issuance principle (tax payable on instruments issued in the EU-11). Moreover, to further avoid relocation, institutions will be taxed at both ends of the transaction. The stringent residence principle aims to avoid relocation of firms to more favorable tax regimes.
3. **The financial system needs to contribute substantially.** The FTT must raise a "fair and substantial contribution", which the Commission sets at 0.3%-0.5% of FTT area GDP. The current proposal aims for an FTT income of c.€34 bn or 0.4% of EU-11 GDP. The Commission's latest impact assessment, for example, discusses the current French FTT as raising only 0.06% of France's GDP, according to the EC; this "is far below what one would characterize as a fair and substantial contribution" (Proposal's Impact Assessment).
4. **Tax all products, all actors and all markets.** The proposal aims to avoid tax-induced distortion of competition and tax-induced substitution of activities. To this end, the tax extends across "all products, all markets, all actors".
5. **Disincentives for "toxic" trades and rents.** The proposal aims to create disincentives for transactions that do not enhance the efficiency or stability of the financial markets. This implies a willingness for reducing volumes and/or restructuring some business lines that "only divert rents from the non-financial sector of the economy to financial institutions". Therefore, the tax would need to significantly reduce business activities in those financial areas that are deemed to generate unjustified rents.

Detailed summary of the proposal

We summarize the details of the current version of the proposal in the following exhibit:

Exhibit 5: Scope of the tax is broad, but key details are left to Member States to implement
Overview of the European Council Directive implementing enhanced cooperation in the area of the financial transaction tax

Participating members (enhanced cooperation)	Belgium, Germany, Estonia, Greece, Spain, France, Italy, Austria, Portugal, Slovenia and Slovakia
Taxable transactions	• purchase and sale of financial instruments before netting • intragroup transfer of risk • derivatives contracts before netting • exchange of financial instruments • REPOs, reverse REPOs, securities lending and borrowing
Application principle	• Residence principle: financial transactions (exchange traded or OTC) that take place within entities or branches located in a Member State are taxable • Elements of the issuance principle: financial transactions (exchange traded but no OTC) that involve financial instrument issued by a Member State are taxable
Tax (not lower than)	• 0.1% on financial transactions other than derivatives applicable to the highest of consideration or market price • 0.01% on derivative instruments on the highest notional amount used for the definition of the contract
Payment	• Payable at occurrence • Payable by agent or party and if not paid they are jointly and severally liable for the payment • Member States will have to lay down registration, accounting, reporting obligations to ensure payment • Member States have to ensure record is kept for five years
Excluded entities	• Central Counter Parties (CCPs) • Central Securities Depositories (CSDs) • Member States - and in particular Debt Management Offices (DMOs)
Excluded transactions	• Primary market transactions, including underwriting • Transactions with Member States, ECB, NCBs, EFSF, ESM • Transactions with other European bodies or international institutions • Transactions part of restructuring operations

Source: European Commission, Goldman Sachs Research

An intended consequence: The cascading effect

The current FTT proposal calls for the tax to be paid at both ends of any transaction. A transaction involving multiple counterparts, therefore, would incur the FTT multiple times. This leads to the transaction FTT rate exceeding the headline rate by many times.

The resulting "cascading" effect, while leading to exponentially rising FTT rates, supports the spirit of the proposed legislation in at least two ways: (1) taxation at every leg of the transaction is perceived as necessary to prevent tax avoidance and (2) it is perceived to force market actors towards minimizing the number of steps in each transaction, thus eliminating rent-seeking behaviour and switching from trading to intermediation: *[...] so, while trading turnovers will decline, the initiating underlying economic substance remains unchanged, and the potential cascading effect of the tax within a single transaction chain can be avoided* (Proposal's Impact Assessment, p.20).

Exhibit 6: Cascading effect of the FTT aims to change trading into intermediation
Example of a hypothetical trade involving a CCP in four steps

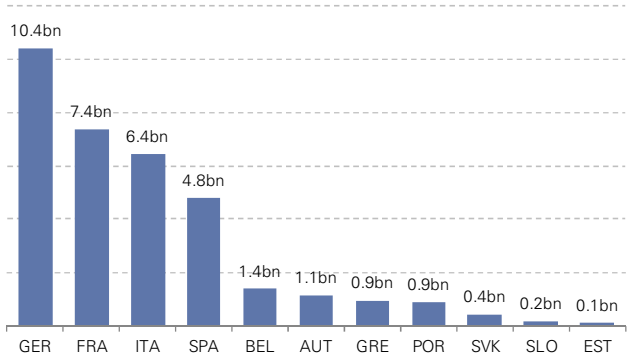
Source: European Commission

Commission's estimate of FTT revenues and market impact

The Commission's impact assessment forecasts that derivatives volumes will decline by 75% and cash volumes by 15% post the application of FTT. After incorporating the decrease in volumes, the Commission estimates a potential FTT revenue of €34 bn.

The Commission also expects that the largest economies in the area (Germany, France, Italy and Spain) will generate the bulk of tax revenues. From a product prospective, derivatives are expected to account for 62% of FTT revenue (€21 bn) – mainly from rates – while the second largest contributing categories would be fixed income securities, with a total FTT contribution of €8.4 bn.

Exhibit 7: €34 bn revenues, mostly from larger economies…
Commission estimates of FTT revenues by country, € bn



Source: European Commission

Exhibit 8: …while rates derivatives will pay the bulk
Commission estimates of FTT revenues by product, € bn

Product (€bn)	EU27	EU11
Shares	6.8	4.6
Bonds	12.6	8.4
Securities	19.4	13.0
Equity	3.3	1.8
Interest Rates	29.6	16.5
Currency	4.8	2.7
Derivatives	37.7	21.0
Total	57.1	34.0

Source: European Commission

EU budget implications: The first EU tax

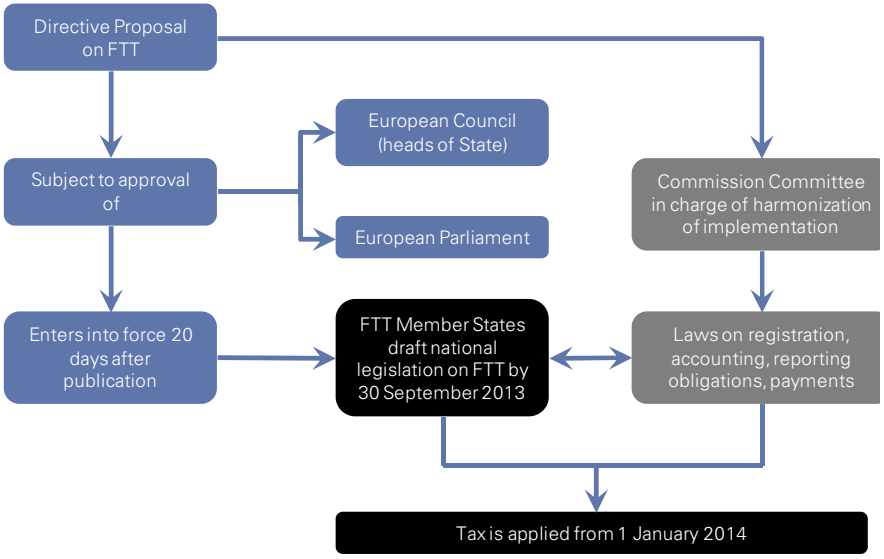
In a European context, the FTT is relevant as it stands to become the first tax to fund the EU budget directly. The FTT then, would be a revenue source for the EU budget that does not require recourse to Member States' budgets. In addition, the EU-11 states would see their required contribution to the EU budget decrease proportionally to the tax collected. This will generate the first revenues for the European bodies without needing to seek recourse to Member States' budgets.

Implementation timeline is tight, with key details still to be defined by national states

We summarize the implementation timeline below:

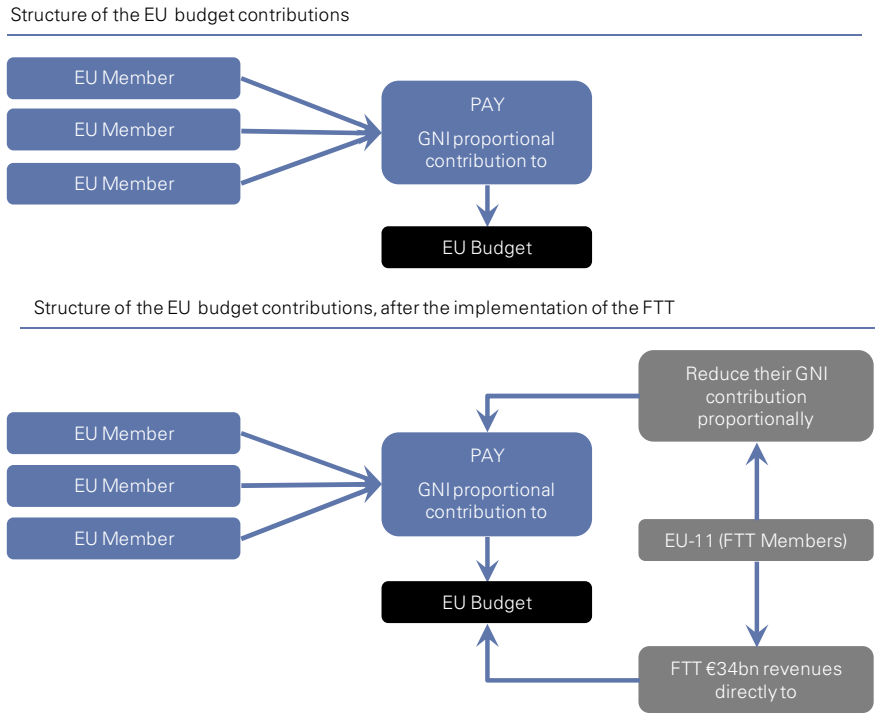
1. **Approval from Council key**: As a European Directive, the proposal will have to be approved by the European Council – EU27 Heads of State – and will receive a non-binding vote from the EU Parliament. The Parliament is scheduled to vote on May 28 (Committee) and June 7 (Plenary session); however, the calendar for the Council voting is not clear at this stage.
2. **Key details left to national states**: Key details of the proposal, such as payments, collection, accounting and reporting will be left to national states to implement throughout ordinary legislation by September 30. The process will be carried out under the guide of a specific Commission Committee.
3. **Start date is near**. Should the proposal receive approval from the Council as it stands, it will have to start on January 1, 2014.

Exhibit 9: Tax is still subject to approval from European bodies; legislation by September 30 and application from January 1, 2014
Legislative process and timeline for the implementation of the FTT



Source: European Commission, Goldman Sachs Research

Exhibit 10: FTT will create the EU's own tax, and reduce EU-11 contributions
Structure of EU budget financial contributions



Source: European Commission, Goldman Sachs Research

FTT impact assessment: European Banks

Contents

FTT impact assessment: European Banks

Banks: FTT's significant impact on European banks stretched across products & countries

We show that the annual FTT rates are substantially higher than the proposed headline rates of 0.1% for cash and 0.01% for derivative transactions would suggest. This is especially true for shorter-term transactions, where the FTT would offset the expected benefit (be it funding or hedging) many times over. We show that, as a consequence of the FTT, the REPO market <12 months, interest rate swaps <6 months, and market making would likely be significantly impaired. The "post FTT" economics of these activities could result in far-reaching mitigation actions by banks (such as substantial downsizing/closure of these business lines). The knock-on effects could vary from reduced credit availability and increased pricing (and thus an impact on the credit quality of banks), to reduced ability to hedge risks (and thus a higher volatility threshold for banks/corporates) and reduced liquidity of debt/equity markets.

On a 2012 pro-forma basis, the FTT would amount to €170 bn (or 92% of 2015E PBT) for the 42 European banks we have analyzed. By affected balance sheet category, the bulk of the impact stems from the European banks' REPO books (€118 bn), followed by derivatives (€32 bn), equities (€11 bn) and government bond books (€4 bn). By bank, the impact extends across business models – investment, universal, global and domestic retail banks. Similarly, by geography, it has a reach well beyond the EU-11. Indeed, we show some of the most affected banks would be those in the UK and Switzerland.

Individually, we show that the most affected banks are the French and German institutions. The six French and German banks show a 2012 pro-forma FTT as a percentage of 2015E PBT ranging from 168% (BNP), up to 362% (DBK) and finally 423% (Natixis). But even pure-play retail lenders – the Italian/Spanish domestic banks for example – stand to be significantly impacted (16%-130% of 2015E PBT).

In our view, the pro-forma 2012 FTT effect is significant enough to make certain business lines, and funding avenues, no longer viable for a large number of European institutions. If implemented, a major restructuring of funding and business models would likely be necessary. Given the magnitude of the possible impact, we believe the FTT could still be subject to substantial modification before it is passed, and ultimately, implemented.

Aim of our analysis: Estimate 2012 pro-forma FTT impact on individual banks, all else equal

Importantly, we do *not* attempt to estimate the actual FTT tax take by the EC. This would require us to make an assumption on the final form of the FTT, as well as the complex interplay between an FTT and mitigation by all participants. We attempt to gauge neither.

The aim of our analysis is to estimate the 2012 pro-forma effect of the FTT proposal on individual banks under our coverage. Essentially, we attempt to gauge what the 2012 FTT (theoretically) payable by individual banks would be, were they asked to apply FTT retroactively, to 2012 balances. This is a theoretical, "all else equal", exercise. The results, however, allow us to identify the business areas/product lines where the FTT impact would be most pronounced, and operational mitigation therefore most likely.

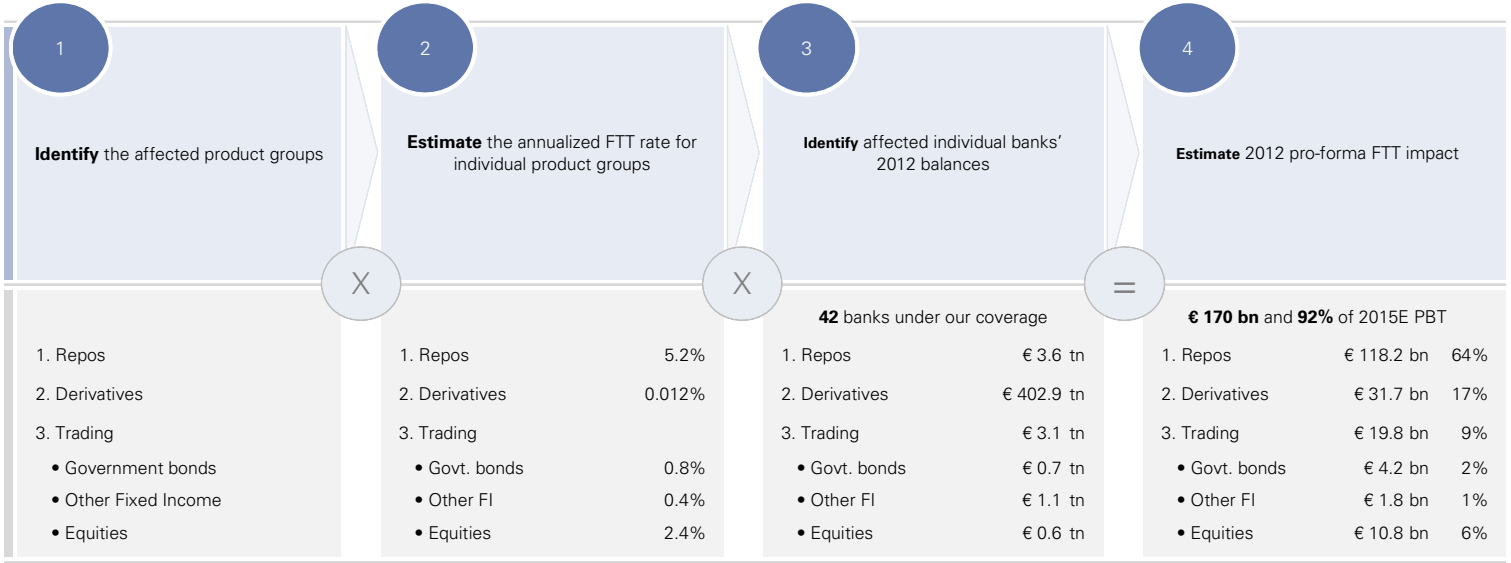
In reality, a potential FTT introduction could result in a wave of pre-emptive operational mitigation by banks, in our view. For example, where the FTT amount, as calculated in our exercise, is prohibitively high, the most likely mitigation strategy would be to simply discontinue the activity, in our view. The actual FTT payable by banks, then, would be reduced to nil – but so would the revenues currently associated with the activity in question.

In this context, the pro-forma 2012 FTT impact should not be confused with an estimated "tax take" in the event of its potential implementation. We do not attempt to estimate the tax take.

Our analysis consists of four steps:

- **Identify the affected product groups**: Here, we identify REPOs, derivatives (mainly interest rate swaps) and other trading assets (which we split between government bonds, corporate bonds and equities). Clearly, there is a larger number of affected products – but owing to available disclosure, we group them into these broad categories.
- **Estimate the annualized FTT rate for individual product groups**: Here, we estimate the average duration/churn of the product in 2012, to which we apply the relevant FTT rate. In this way, for example, we are able to estimate the **average annual FTT rate** to be 5.2% on a typical REPO book, 0.012% on derivatives, 0.8% on government bonds and 2.4% on equities.
- **Identify affected individual banks' 2012 balances**: We compile 2012 balances for the major product groups affected by the FTT, by individual bank. Bottom-up aggregation shows that for the 42 banks subject to our analysis, the most affected 2012 bank balances are €403 tn of notional outstanding derivative contracts, €3.6 tn of REPOs and €3 tn of trading assets.
- **Estimate 2012 pro-forma FTT impact**: With the three components above, we are able to estimate the 2012 pro-forma effect of FTT on individual banks. Bottom-up aggregation shows a €170 bn aggregate impact, of which €118 bn relates to REPOs (70% of total), followed by €32 bn in derivatives (19%), equities trading €11 bn (6%) and fixed income trading €4 bn (2%).

Exhibit 11: Four-step analysis aimed at estimating 2012 pro-forma impact of FTT proposal on individual banks under our coverage
Outline of our analysis



Source: Company data, Goldman Sachs Research estimates

Annual FTT rates for key product groups: Multiples of headline rate

We show that the annual FTT rates are substantially higher than the headline of 0.1% for cash and 0.01% for derivative transactions, as per the FTT proposal, would suggest. This is especially true for shorter-term transactions, where the FTT would offset the expected benefit (be it funding or hedging) many times over. We show that, as a consequence of the FTT, the REPO market <12 months, interest rate swaps <6 months, and market making would likely be significantly impaired. The "post FTT" economics of these activities could result in substantial mitigation actions by banks (such as major downsizing/closure of these business lines), in our view. The knock-on effects could vary from reduced credit availability and increased pricing (and thus an impact on the credit quality of banks), to reduced ability to hedge risks (and thus a higher volatility threshold for banks/corporates) and reduced liquidity of debt/equity markets.

(1) REPO: FTT impact could make large parts of the REPO market unviable, in our view

If implemented, the FTT proposal implies far-reaching changes to the current structure and viability of European REPO markets. We estimate that an annualized FTT rate, payable by an individual bank, would range from 0.1% on 12-month REPOs to up to 36% for O/N REPOs, while the FTT rate on tri-party REPOs would be well into triple digits. In our view, this would make most forms of REPO funding (a *collateralized* funding instrument) unviable even relative to other forms of *unsecured* funding. It is very likely, in our view, that the FTT proposal would (1) reduce the availability of European bank funding to corporates, and (2) substantially increase the cost of short-term bank funding, which (3) European banks would be forced to pass on to customers – and deleverage further. In addition, any closure of parts of the REPO markets could (4) substantially reduce European banks' ambition to remain a primary dealer in European government bonds, in our view.

Exhibit 12 summarizes the implied impact of the FTT on the sub-segments of the REPO market. It assumes that all REPOs are held to maturity, thereby making duration equal to turnover. To allow for comparison, we annualize the REPO rates across product type. We then attempt to assess the viability of the various REPO instruments assuming the full FTT impact, by (1) grossing up the **current product rate** (currently: 2 bp across the curve) with (2) **the FTT impact**, which we assume is passed on to the borrower. This pro-forma product rate is then (3) **benchmarked against the cost of a potential alternative**; here, we use the current cost of *unsecured* funds for a prime borrower (EURIBOR). Finally, we (4) describe likely mitigation actions by banks.

Exhibit 12: FTT impact on REPO sub-segments and banks: Lower duration, higher tax
Summary table of annualized tax rates by REPO segments, and benchmarking to alternative funding sources

REPOS	Duration	FTT	Annual tax:		Product rate:						Operational mitigation by banks:			
			per bank	per transaction	Current	Paid by borrower (FTT)	Current / PF FTT	Alternative	Alternative / Current	FTT rate / alternative	(1)	(2)	(3)	(4)
Bilateral	1 day	0.10%	36%	72%	0.19%	72.19%	379.9 x	0.08%	0.4 x	901.4 x	Closure	Secured lending	Unsecured lending	ECB
	1 week	0.10%	5.2%	10.4%	0.20%	10.60%	53.0 x	0.08%	0.4 x	126.7 x	Closure	Secured lending	Unsecured lending	ECB
	1 month	0.10%	1.2%	2.4%	0.19%	2.59%	13.6 x	0.12%	0.6 x	21.1 x	Closure	Secured lending	Unsecured lending	ECB
	3 months	0.10%	0.4%	0.8%	0.21%	1.01%	4.8 x	0.21%	1.0 x	3.9 x	Closure	Secured lending	Unsecured lending	ECB
	6 months	0.10%	0.2%	0.4%	0.24%	0.64%	2.7 x	0.32%	1.3 x	1.0 x	Reduction	Secured lending	Unsecured lending	ECB
	12 months	0.10%	0.1%	0.2%	0.33%	0.53%	1.6 x	0.51%	1.6 x	3%	Reduction	Secured lending	Unsecured lending	ECB
Tri-party	3x-5x / day	0.10%	180%	360%	0.19%	180.19%		0.08%		2252.4 x	Closure	-	-	-
Used for GS analysis	1 week	0.10%	5.2%	10.4%	0.02%	5.22%		0.50%		1044%				

Source: Goldman Sachs Research estimates

1. Tax rate: 0.1%
Proposed FTT of 0.1% for each participant involved in the REPO transaction.

2. Annual FTT rate per product: An exponential increase
REPO products are predominately short term in nature, and range from tri-party REPOs (where we estimate a transaction takes place 3-5x per day), through to one week to 12 months. The annual FTT rate (payable by an individual bank) would match the proposed 0.1% headline FTT rate for a 12-month REPO; however, it would rise to 5.2% for a one-week and to 36% for a one-day REPO. These rates double when the impact on the transaction, rather than a single bank is assessed.

3. Viability assessment: Large portions of REPO markets could become unviable
In our view, the calibration of the proposed FTT tax rate is such that it would bring a significant change to the functioning of the European REPO markets. The severity of the impact would vary depending on the duration of the product. We show our analysis in Exhibit 12, the outcome of which we summarize below:

- **Tri-party REPOs**:
  - **Viability**: With an estimated annual FTT rate of 180% per bank (360% per transaction), this funding product would not remain viable under the current proposal, in our view.
  - **Mitigation**: We would see the closure of this business line/funding avenue, with no meaningful scope for alternatives, as the most likely mitigation avenue for banks.
- **REPO market segments <12 months**:
  - **Viability**: Our analysis shows, that under the current FTT proposal, all REPO products with a duration of less than 12 months would see their product rates increase significantly, and exceed those for the current *unsecured* rates for prime borrowers (we use EURIBOR).

- **Mitigation**: We would see closure of this business line as the most likely mitigation action by banks. We would also see (1) other forms of secured lending (i.e. secured loans) and (2) unsecured lending as potential substitutes, but at significantly reduced volume and a substantially higher cost of funding. Finally, the ECB funds (also through the emergency ELA facilities) could become a more attractive – and more widely used – funding source, in our view. While theoretically, these products would provide a (partial) substitute in the new steady-state, they would also require a substantial initial administrative effort (re-certification), at a substantial operating cost.

- **REPO market segments >12 months**.
  - **Viability**: For this REPO segment, the increase in funding costs would remain substantial (20 bp, or an 11x increase); however, it would still be comparatively more attractive than unsecured funding sources. This business line would therefore be likely to remain in place, in our view.
  - **Mitigation**: A higher cost of >12-month REPO funding could result in reduced liquidity in this funding segment, in our view.

(2) Derivatives: Focus on interest swaps; short-term transactions could be unviable

We focus on interest swaps, as they represent more than three quarters of all derivatives' notional value, according to BIS. If implemented, we believe the FTT proposal could result in a drying up of swaps markets below six months, at the very least for the part concerning EU-11 resident banks. In turn, this would likely (1) move a substantial part of the business to non-resident institutions, as our understanding is that a euro swap is not subject to the issuance principle, (2) make banks and corporates less able to hedge rate risk on short-term maturities: a less efficient ALM policy would likely result in higher funding costs for banks' customers and a reduced product offering and (3) create an unlevel playing field between resident and non-resident dealers, hedgers and asset managers.

Exhibit 13: FTT impact on interest rate derivatives (swaps) sub-segments
Summary of tax rate and relative costs associated with swap transactions under the proposed FFT regime

IR Swaps	Maturity	FTT	Annual FTT rate per bank	Product cost				Transaction cost / expected return	
				Current (bid/ask)	Paid by client p.a. (FTT)	Current / PF FTT	Viability threshold: Rate vol	post FTT	pre FTT
	1 week	0.01%	0.52%	0.005%	2.09%	417.0 x	0.07%	2979%	7%
	1 month	0.01%	0.12%	0.005%	0.49%	97.0 x	0.11%	426%	4%
	3 months	0.01%	0.04%	0.005%	0.17%	33.0 x	0.20%	84%	3%
	6 months	0.01%	0.02%	0.005%	0.09%	17.0 x	0.28%	30%	2%
	12 months	0.01%	0.01%	0.005%	0.05%	9.0 x	0.39%	11%	1%
	2 years	0.01%	0.01%	0.005%	0.03%	5.0 x	0.56%	4%	1%
Used for GS analysis	0.8 x	0.01%	0.012%						

Source: Goldman Sachs Research estimates

1. Tax rate and scope

The proposed FTT rate is 0.01% per derivative transaction, paid by each participant, which is applied to the notional value of the contract. The tax is triggered if at least one of the participants is based in the FTT zone, or, if the underlying instrument is EU-11 issued. However, we believe that euro swaps, when traded by – exclusively – non FTT-zone parties, would not trigger an FTT event. This is important, as the derivative bank books in Europe remain dominated by swap contracts.

2. Annual FTT rate: From 0.01% for one-year swaps, rising sharply with declining duration

The headline FTT rate for a swaps transaction is 0.01%. However – similar to REPOs – this can rise dramatically depending on the duration of the contract. For example, a one-month swap would incur an annual FTT paid by each participant of 0.12% (so 12x the headline rate), rising to 0.52% (52x the headline rate) for one-week swaps. This is before re-hedging costs, which would trigger "cascading effects" in charging FTT.

3. Viability assessment: Large portion of IR swap markets would become prohibitively expensive

Swaps are used predominately to hedge rate risk, but also to express directional views on rates. We assess the viability of the various segments of IR swaps post an assumed FTT proposal implementation. Our approach is to compare post-FTT transaction costs with the expected hedging benefit (or rate risk) as measured by rate volatility over the relevant periods. We use the volatility of 1-year EURIBOR as a hurdle. We show that the FTT would sharply increase the transaction costs for IR swaps, especially at the shorter end.

- **IR Swap market segments <6-months**:
    - **Viability**: Exhibit 13 shows the impact on short-term IR swaps. For example: a 1-month IR swap would incur a headline FTT rate of 0.01%. On an annual level, this rises to 0.12% per participant or 0.24% per transaction. The need to hedge (from a provider's perspective) introduces an additional transaction into the equation – this too is taxable and therefore doubles the 0.24% rate to 0.48%. Finally, adding the current bid/ask spread of 0.005%, an all-in (cum-FTT) cost of a 1-month IR swap would therefore rise to 0.485%. The seller of the swap (i.e. the market maker) would clearly seek to shift the entire burden onto the buyer (i.e. the customer). The cost of a 1-month swap would therefore rise from 0.005% currently to 0.485%, or by a factor of 97x. With the volatility in rates suggesting an expected return of 0.11%, this type of transaction could appear unviable.
    - **Mitigation**: For EU-11 market makers, closure of this business line (IR swaps below 6-months) would be the likely mitigation action, in our view. For banks using swaps to hedge risk, the dealing could move to non EU-11 markets, where the tax would not materialize, in our view.
- **IR Swap market segments >6-months**.
    - **Viability**: Similar to the example above, the transaction costs for longer maturities (6-month and above) would also increase substantially. However, as the hedging benefit is higher, the transactions would become substantially more expensive, but still – partially – viable, in our view.
    - **Mitigation**: Higher cost would lead to lower volumes and hence constricted markets. Geographic relocation would be the most likely mitigation option, in our view.

(3) Trading: Bond and equity business stand to be impacted

Bonds: Reduced liquidity, higher yields for issuers (both governments and corporate), in our view

In our view, the current FTT proposal would significantly alter the economics of short-term **government bond markets** and reduce the liquidity of the instrument. In short, it is likely, in our view, that the FTT cost would be borne by the issuing entity, through higher expected yield. From a bank perspective, another important consequence would be reduced attractiveness of government debt for ALM purposes; ECB deposit facilities could become a more attractive cash management tool for banks.

Corporate bond markets stand to be affected in the same way, but the tax is comparatively lower, owing to the higher required returns on corporate securities when compared with government debt.

Exhibit 14: FTT impact on government debt sub-segments
Example of FTT impact on government bond markets

Bonds	Maturity	FTT	Annual tax rate per bank	Product cost				
				Current (bid/ask)	Increase in yield due to FTT	current € swap	pro-forma yield	increase in yields
Sovereign	3 months	0.10%	0.40%	0.01%	0.81%	0.21%	1.02%	3.9 x
	6 months	0.10%	0.20%	0.005%	0.41%	0.32%	0.73%	1.3 x
	12 months	0.10%	0.10%	0.005%	0.21%	0.39%	0.60%	0.5 x
	2 years	0.10%	0.05%	0.005%	0.11%	0.48%	0.59%	0.2 x
	5 years	0.10%	0.02%	0.005%	0.05%	0.76%	0.81%	0.1 x
	10 years	0.10%	0.01%	0.005%	0.03%	1.51%	1.54%	0.0 x
Used for GS analysis		0.10%	0.40%					

Source: Goldman Sachs Research estimates

1. Tax rate and scope

The proposed FTT is 0.1% per transaction, for each participant, applied to the value of the transaction. The FTT would be triggered when the traded instrument is an EU-11 government bond – or when at least one of the trading counterparts is EU-11 based.

2. Annual FTT rate: From 0.01% (10-year holding period) to 0.4% (3-month period)

The annual FTT rate depends on the holding period relevant for an EU-11 government bond. We show in Exhibit 14 that the range of annual FTT rates – depending on the typical maturities/holding periods of government debt – is 0.01% to 0.4%.

3. Viability assessment

Government debt is widely held as an investment. However, for banks, it is the most common asset liability management (ALM) tool. As such, for government debt to remain attractive, the liquidity of its markets is essential. When assessing the post-FTT viability of government debt markets, we assume that the cost of the FTT would increase the benchmark yield (expected return). We use the euro swap curve as a return benchmark, which we adjust for the pro-forma FTT effect. In essence, we believe that the FTT hit would be passed through to the required return, i.e. the issuing government. We show that the yield on short-term government debt would need to rise significantly to absorb the proposed FTT. On our analysis, the increases would range from 0.1x for 5-year holding periods to almost 4x for 3-month holding periods.

Equities: Churn periods are key

Exhibit 15: FTT impact on equity trading
Summary of tax rate and relative costs associated with equity transactions under the FFT regime

Equities	Holding period	FTT	Annual tax rate per bank	Product cost				Transaction cost / expected return	
				Current (bid/ask + commission x2)	Paid by client p.a. (FTT)	Current / PF FTT	Viability threshold: instrument volatility	post FTT	pre FTT
	1 day	0.10%	50.40%	0.18%	0.58%	3.2 x	1.30%	45%	13.9%
	1 week	0.10%	10.40%	0.18%	0.58%	3.2 x	2.74%	21%	6.6%
	1 month	0.10%	2.40%	0.18%	0.58%	3.2 x	5.14%	11%	3.5%
	3 months	0.10%	0.80%	0.18%	0.58%	3.2 x	9.17%	6%	2.0%
	6 months	0.10%	0.40%	0.18%	0.58%	3.2 x	14.11%	4%	1.3%
	12 months	0.10%	0.20%	0.18%	0.58%	3.2 x	21.29%	3%	0.8%
	5 years	0.10%	0.04%	0.18%	0.58%	3.2 x	31.36%	2%	0.6%
Used for GS analysis		0.10%	2.40%						

Source: Goldman Sachs Research estimates

1. Tax rate and scope

The proposed FTT is 0.1% per transaction, for each participant, based on the value of the trade. Transactions covered are those in which the equity is EU-11 issued or any equity security for which one of the trading parties is based in the EU-11.

2. Annual FTT rate: A function of churn

The FTT rate is again a function of churn, as shown in Exhibit 15. High frequency trading and statistical arbitrage would be most affected by the proposal. Market makers too would find the economics significantly impacted. As a consequence, we believe the liquidity of equity markets in general would likely suffer, as the EC itself estimates.

3. Viability assessment

In our view, equity securities on banks' trading books are held mainly as inventory for customer trading and as hedges for derivatives transactions. We assess the viability of trading equities by comparing the volatility over each time period of the security to the transaction cost post FTT over the various tenors. We view this as a very generous threshold for the viability of the transaction as it implies investors would be able to successfully trade shares' highs and lows. Using the long-term expected return (e.g. 10% pa), apportioned for the time period would reduce the viability of trading even more. We use the Stoxx 600 volatility as a benchmark.

- **Viability**: The annualized impact of the FTT for a bank that would trade a share daily (buy and sell in 24 hours) would be 50%. The tax take would be 10% for one-week and 0.2% for one-year trades. This would render short-term transactions unattractive as transaction costs eat up a very large proportion of the returns: even generously assuming that investors manage to successfully trade the share's volatility (1.3% daily for the Stoxx 600, i.e. achieve returns well in excess of long-run average), the transaction cost for each trade for investors would equate to 46% of the expected return.
- **Mitigation**: We believe non-resident investors would likely move some trading/investments in shares outside the EU-11 zone (either outside the Eurozone or to the Netherlands). For resident market makers and also for global brokers, we would see a combination of business reduction and bid/ask spread widening as the most likely mitigation measure.

Estimating 2012 pro-forma FTT: €170 bn for banks under analysis

On a 2012 pro-forma basis, the FTT would amount to €170 bn (or 92% of 2015E PBT) for the 42 European banks we have analyzed. By affected balance sheet category, the bulk of the impact stems from the European banks' REPO books (€118 bn), followed by derivatives (€32 bn), equities (€11 bn) and government bonds books (€4 bn). By bank, the impact extends across business models – investment, universal, global and domestic retail banks. Similarly, by geography, it has a reach well beyond the EU-11. Indeed, we show some of the most affected banks would be those in the UK and Switzerland.

Individually, we show that the most affected banks would be the French and German institutions. The six French and German banks in our analysis show a 2012 pro-forma FTT as a percentage of 2015E PBT ranging from 168% (BNP), up to 362% (DBK) and finally 423% (Natixis). But even pure-play retail lenders – the Italian/Spanish domestic banks for example – stand to be significantly impacted (16%-130% of 2015E PBT).

In our view, the pro-forma 2012 FTT effect is significant enough to make certain business lines, and funding avenues, no longer viable for a large number of European institutions. If implemented, a major restructuring of funding and business models would likely be necessary. Given the magnitude of the possible impact, we believe the FTT could still be subject to substantial modification before it is passed, and ultimately, implemented.

Summary of key assumptions

We aim to gauge the 2012 pro-forma FTT impact on individual banks under our coverage. To this end – and based on the product analysis in the previous section – we make the following key assumptions:

Exhibit 16: Annual FTT rate is a function of duration (or churn), the headline rate and number of steps in the transaction
Turnover assumptions and relative tax rate as per FTT proposal, as well as the taxable number of transactions

Financial Product	Average Maturity	Tax rate	Taxable transactions	Avg annual FTT rate
REPOs	52	0.10%	1	5.2%
Trading assets	**Churn p.a.**	**Tax rate**	**Taxable transactions**	**Avg annual FTT rate**
Tbills and government bonds	4	0.10%	2	0.8%
Other fixed income products	2	0.10%	2	0.4%
Equities	12	0.10%	2	2.4%
Trading loans	1	0.10%	2	0.2%
Other assets	4	0.10%	2	0.8%

Financial Product	Churn p.a.	Tax rate	Taxable transactions	Avg annual FTT rate
Derivatives	1.2	0.01%	1	0.012%
Trading assets	**Churn p.a.**	**Tax rate**	**Taxable transactions**	**Avg annual FTT rate**
Borrowed securities	3	0.10%	2	0.6%
Trading loans	1	0.10%	2	0.2%
Debt securities	0.2	0.10%	2	0.04%
Other liabilities	4	0.10%	2	0.8%

Source: European Commission, Goldman Sachs Research estimates

- **REPO:**
  - **REPO assets**: We assume an average duration of one week for all REPO assets. When taxed at 0.1% (per bank), this yields an **annual FTT rate of 5.2%.**
  - **REPO liabilities**: For balances lower than or equal to REPO assets, we assume the same (one-week duration, yielding a **5.2% annual FTT rate**). For balances that exceed REPO assets, however, we assume a turnover of 1x every two years, as we believe it relates to outstanding LTRO facilities (which have a residual duration of two years). This yields an **annual tax rate of 0.5% on this portion**.
  - We apply the average FTT rates to YE2012 balance sheet amounts of REPO outstanding.
- **Derivatives**:
  - First, we note that the overwhelming majority of derivatives on banks' books relate to IR swaps. We believe this proportion to be around 80%, as supported by the BIS data.
  - Further, we assume an average churn of 1.2x per year (as per the tri-annual BIS survey).
  - Finally, we assume a rate of 0.01% is charged (per bank), which yields an **annual FTT rate of 0.012%.**
  - We apply the average FTT rates to YE2012 amounts of notional derivatives outstanding, as per individual bank accounts.

- **Trading books:**
  - **Government debt**: We assume an average churn rate of 4x per year, and an FTT rate of 0.1% charged 2x per bank (at the time of purchase and sale). This yields an **average annual FTT rate of 0.8%.** We apply the average FTT rates to YE2012 balance sheet amounts of government bonds booked in trading assets.
  - **Corporate debt**: We assume an average churn rate of 2x per year, and an FTT rate of 0.1% charged 2x per bank (at the time of purchase and sale). This yields an **average annual FTT rate of 0.4%.** We apply the average FTT rates to YE2012 balance sheet amounts of "other" (i.e. non government) bonds booked in trading assets.
  - **Equities:** We assume an average churn of 12x per year, but believe that for brokers, this figure could be substantially higher. FTT is charged at 0.1%, and 2x per bank (at time of purchase and sale). This gives an **average annual FTT rate of 2.4%.** We apply the average FTT rates to YE2012 balance sheet amount of equities booked in trading assets.

- **The "outs" versus the "ins":**
  - For the banks domiciled in the EU-11 (the "ins"), we naturally apply the full force of the FTT. However, we assume that the banks outside the EU-11 (the "outs) are able to avoid payment of 60% of the tax. We apply this assumption in a non-discriminatory fashion to all the banks domiciled in the "out" countries. We recognize this is a simplification and that in reality the payment would differ substantially from bank to bank.

2012 pro-forma FTT: €170 bn by aggregating bottom-up results

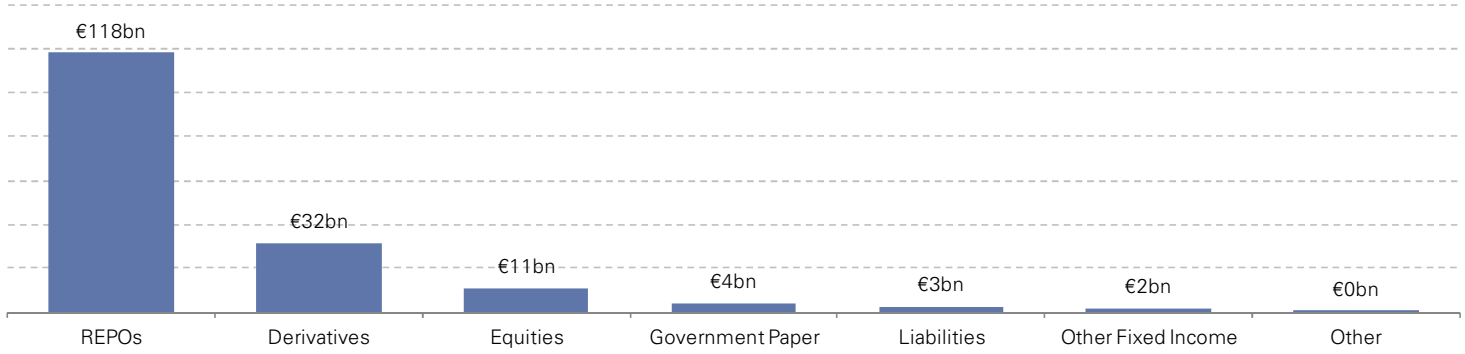
The 2012 pro-forma FTT hit stands at €170 bn, when the individual bank impacts – for the 42 banks under our coverage – are aggregated. This equates to 92% of 2015E PBT for this group of banks, and about 16% of their CT1 capital. By product, the largest component is REPO, which accounts for 70% of the total impact. However, the FTT for individual product lines consumes multiples of current revenue generation, in our view. Within our sample, the largest portion of the pro-forma FTT hit is absorbed by the French banks (€61 bn), followed by the two German banks (€35 bn). However, countries outside the EU-11 (UK, Switzerland) are also substantially affected.

Impact by product: REPOs, derivatives, equities, bonds … all significantly impacted

When aggregated by product line, our bottom-up analysis of the FTT impact shows:

- **REPOs** account for the lion's share of the pro-forma impact of the FTT, at €118 bn, equivalent to 70% of the total. This equates to 64% of 2015E PBT.
- **Derivatives** are the second largest component, at €32 bn, or 19% of the total. This equates to 17% of 2015E PBT. We stress, however, that we believe €32 bn to be multiple times the profit pool generated by this business line.
- Even if REPOs and derivatives were excluded, the tax contribution of other product categories, such trading assets (equities, government securities), would still be extremely high, both in absolute terms (€11 bn for equities and €4 bn for government debt trading), but particularly when put in the context of the profitability capacity of the relevant business lines.

Exhibit 17: Severe impact of FTT across funding and business lines, but especially on REPOs
Analysis of total impact of FTT on banks under GS coverage, by financial product, under the assumption of no change in volumes



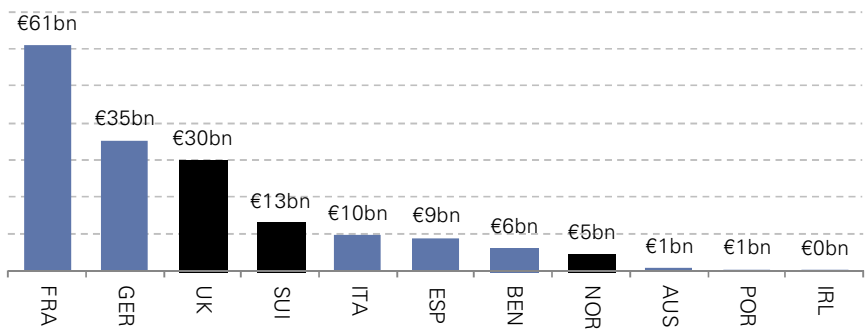
Source: European Commission, Goldman Sachs Research estimates

Impact by country: The "outs" share the hit with the "ins"

Our sample is composed of the banks under our coverage. These are the largest listed financial institutions in Europe – in short, they are the national champions. That said, only part of the banking market is listed and therefore the impact should be grossed up when analyzed by country – nowhere is this more true than for Germany, where DBK and Commerzbank (the only two banks under our coverage) represent only a small portion of the total banking market. However, for our sample, the geographic split is as follows:

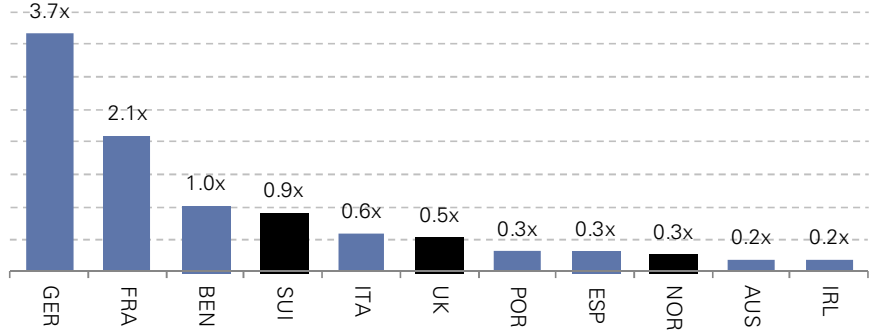
- French banks are the largest contributors, at €61 bn (36%). Germany (this includes only DBK and CBK) absorbs the second highest hit with €35 bn, mainly driven by Deutsche Bank (€26 bn).
- UK banks rank third, despite being outside the EU-11 zone (we apply the FTT on 40% of transactions of non EU-11 banks), with a pro-forma impact of €30 bn, on our estimates.

Exhibit 18: An impact beyond the EU-11 states …
Pro-forma FTT effect, aggregated by domicile of banks under review; non EU-11 states marked in black



Source: European Commission, Company data, Goldman Sachs Research estimates

Exhibit 19: … with scope to severely alter profitability profiles
pro-forma FTT effect relative to 2015E PBT, aggregated by domicile of banks under review; non EU-11 states marked in black



Source: European Commission, Company data, Goldman Sachs Research estimates

Individual banks: Capital market banks (French/German) hardest hit, but retail banks affected too

1. Capital markets banks hit hardest

We find that capital market banks are most affected by the proposed FTT, particularly if based in the participating EU-11 zone:

- Deutsche Bank and BNP stand out with the highest FTT hit of €26 bn and €24 bn pa, equivalent to 3.6x our forecast 2015 PBT for Deutsche and 1.7x for BNP.
- This is followed by Barclays, and the three French banks (SG, Credit Agricole and Natixis) with pro-forma hits of €10-14 bn each.
- For the capital market-exposed institutions, the pro-forma FTT hit is between 1.2x and 4.2x 2015E PBT. It is obvious at first glance that the proposed FTT would put substantial pressure on the business models of these banks, and could bring into question the viability of entire business lines.
- Capital markets banks outside the EU-11 are also strongly affected, with Barclays, RBS and CS showing a pro-forma hit of €8-15 bn.
- The impact on UBS is lower given the announced exit of FICC business lines; we estimate a pro-forma impact of €5 bn, equivalent to 0.8x 2015E PBT.

2. Money centers, national champions and systemic banks most affected

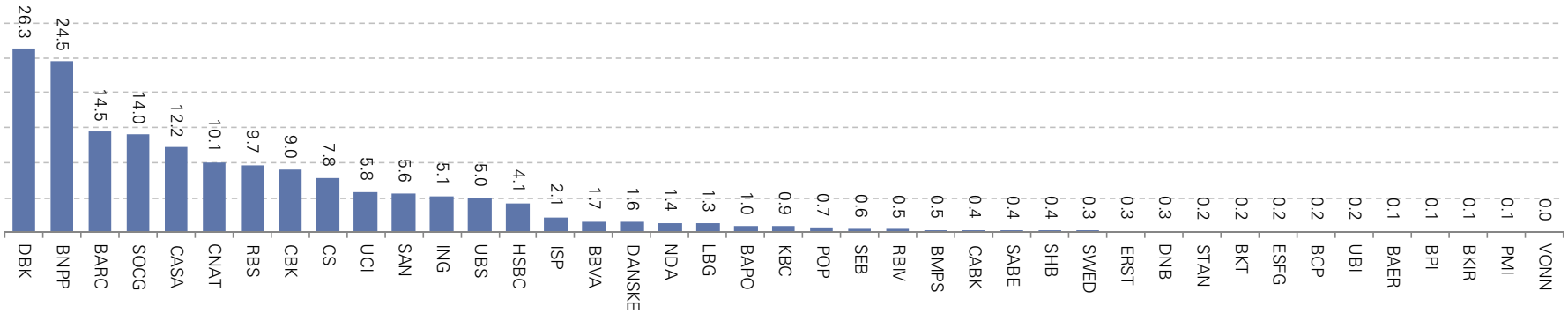
We find that strong national players, which are systematically important in the context of their national states, as well as in a European context, would be strongly affected by the proposed FTT:

- In addition to the large capital markets banks named above, other systemically important banks such as Erste, HSBC, ING, BBVA, Santander and Unicredit, all absorb substantial pro-forma FTT hits, on our analysis (equivalent to 0.1x 2015E PBT for Erste to 0.8x for Unicredit).

Even "plain-vanilla" retail banks would be severely affected, especially those in the periphery

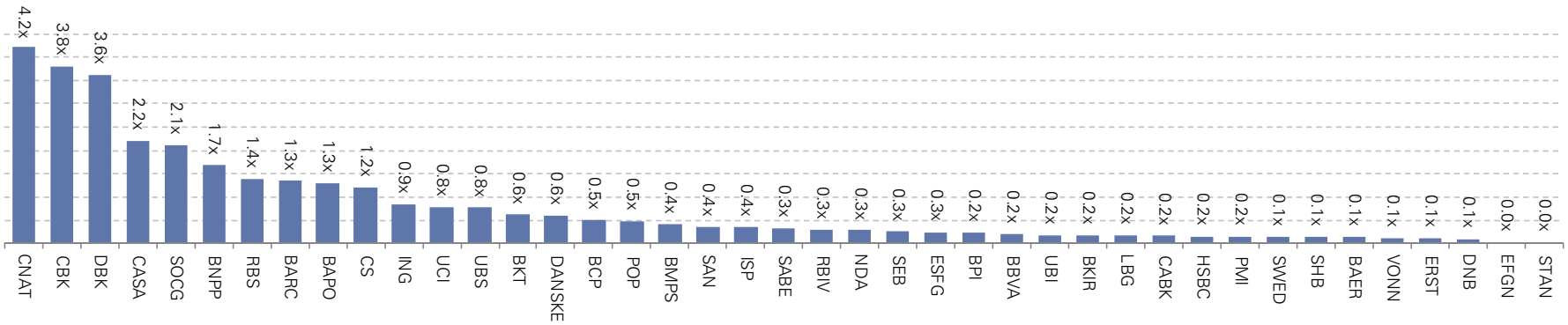
The impact of the FTT would also be significant for pure-play retail banks, such as Bankinter, BAPO and Banco Popular. We estimate that the pro-forma FTT impact here would range between 0.1x and 1.3x 2015E PBT.

Exhibit 20: In absolute terms, a large part of the pro-forma FTT impact is on the capital market banks…
FTT pro-forma impact by bank, assuming no change in volumes, € bn, balances as of 4Q12



Source: European Commission, Goldman Sachs Research estimates

Exhibit 21: …but the magnitude is enough to significantly affect retail banks PBTs too
FTT pro-forma impact relative to 2015E banks' PBT



Source: Source: European Commission, Goldman Sachs Research estimates

Exhibit 22: The effect of FTT extends across the all bank business models (universal, investment, retail banking) under our coverage …
2012 pro-forma FTT, € mn

Bank (€mn)	REPOs			Derivatives	Trading							Total Tax Bill
	Assets	Liabilities	Total		Assets				Total	Liabilities	Total	
					Gvt.Bonds	Oth. Fixed Income	Equities	Other				
Erste Bank	105	105	210	40	35	-	7	0	43	0	43	293
Raiffeisen	385	69	454	20	15	4	7	0	25	4	29	503
KBC	371	372	743	117	27	3	10	32	72	17	89	949
Danske Bank	865	399	1,265	248	-	86	4	(0)	90	-	90	1,603
BNP Paribas	7,579	7,606	15,185	5,698	556	128	2,514	2	3,200	374	3,573	24,456
Credit Agricole	4,297	4,301	8,599	1,866	325	125	1,114	1	1,565	207	1,772	12,237
Natixis	4,337	3,828	8,166	746	-	201	614	11	826	358	1,183	10,095
Societe Generale	4,667	4,105	8,772	2,308	285	143	2,045	39	2,512	431	2,942	14,022
Deutsche Bank	9,873	6,596	16,469	6,673	757	216	1,571	143	2,687	458	3,145	26,286
Commerzbank	4,638	2,904	7,542	886	60	44	426	5	534	48	583	9,010
Bank Of Ireland	17	26	43	32	-	1	-	-	1	0	1	76
Intesa Sanpaolo	1,108	611	1,719	350	25	15	20	0	59	-	59	2,129
Unicredit	2,479	2,486	4,965	389	180	59	141	3	383	112	495	5,850
BMPS	178	185	363	39	49	6	9	6	70	0	71	473
Banco Popolare	465	466	931	2	22	5	15	0	43	9	52	985
UBI Banca	82	83	165	3	0	0	5	0	5	9	15	183
BP Milano	20	22	42	9	0	1	3	-	4	1	5	55
ING Bank	3,103	1,382	4,485	415	70	35	114	3	221	6	228	5,128
DNB	8	10	18	40	94	21	9	(0)	124	105	229	286
BCP	66	66	133	15	38	10	7	-	56	1	57	204
Espirito Santo FG	18	21	39	9	49	22	89	-	159	0	159	207
Banco BPI	10	10	19	2	65	1	3	3	71	0	71	92
Santander	2,338	2,365	4,703	497	284	31	132	0	446	0	446	5,646
BBVA	540	563	1,103	292	185	20	70	(0)	275	-	275	1,670
CaixaBank	158	162	319	86	11	0	2	(0)	14	-	14	419
Banco Popular	353	355	709	9	0	0	4	0	5	-	5	722
Sabadell	177	177	354	10	2	0	1	(0)	3	-	3	367
Bankinter	105	107	212	4	9	1	1	0	11	-	11	227
Nordea	543	352	895	320	3	63	86	5	157	76	233	1,449
SEB	259	70	329	92	-	36	96	-	131	14	145	566
SHB	233	36	269	45	10	6	26	-	42	5	46	360
Swedbank	155	74	229	65	7	21	9	(0)	37	6	43	338

Source: Company data, Goldman Sachs Research estimates.

Exhibit 22 cont'd: … and has a geographic reach beyond the EU-11
2012 pro-forma FTT, € mn

Bank (€mn)	REPOs			Derivatives	Trading							Total Tax Bill
					Assets					Liabilities	Total	
	Assets	Liabilities	Total		Gvt.Bonds	Oth. Fixed Income	Equities	Other	Total			
Credit Suisse	2,425	2,428	4,852	1,974	177	89	586	32	884	122	1,006	7,832
UBS	2,220	638	2,858	1,486	98	57	371	84	610	38	649	4,993
Julius Baer	58	13	71	5	0	0	15	4	19	1	21	97
EFG International	-	-	-	0	0	0	8	-	9	-	9	9
Vontobel	26	-	26	1	0	1	1	(0)	2	-	2	29
RBS	3,154	3,158	6,312	2,734	184	92	188	45	508	150	658	9,704
HSBC	1,437	1,439	2,876	770	255	128	90	0	473	25	498	4,144
Barclays	5,397	5,408	10,805	2,850	269	135	348	17	770	37	806	14,461
Lloyds	440	443	883	386	21	10	-	0	31	9	40	1,309
Standard Chartered	41	39	80	118	17	8	12	3	39	7	47	245
Total	64,731	53,483	118,214	31,652	4,184	1,823	10,772	439	17,217	2,630	19,848	169,714

Region (€mn)	REPOs			Derivatives	Trading							Total Tax Bill
					Assets					Liabilities	Total	
	Assets	Liabilities	Total		Gvt.Bonds	Oth. Fixed Income	Equities	Other	Total			
Austria	491	174	664	60	50	4	14	0	67	4	72	796
Benelux	3,475	1,753	5,228	532	97	38	124	35	294	23	317	6,077
France	20,880	19,841	40,721	10,618	1,166	597	6,286	53	8,102	1,369	9,471	60,811
Germany	14,511	9,500	24,011	7,558	817	260	1,997	148	3,221	506	3,727	35,297
Ireland	17	26	43	32	-	1	-	-	1	0	1	76
Italy	4,332	3,854	8,186	794	276	86	193	10	565	131	696	9,675
Nordics	2,064	941	3,005	811	114	233	229	5	581	205	787	4,602
Portugal	93	98	191	25	152	33	99	3	286	1	287	504
Spain	3,670	3,730	7,400	898	491	53	211	0	754	0	754	9,052
Switzerland	4,729	3,079	7,808	3,466	276	147	981	121	1,525	161	1,687	12,961
UK	10,469	10,488	20,957	6,857	746	373	638	65	1,821	227	2,048	29,863
Total	64,731	53,483	118,214	31,652	4,184	1,823	10,772	439	17,217	2,630	19,848	169,714

Bank Type (€mn)	REPOs			Derivatives	Trading							Total Tax Bill
					Assets					Liabilities	Total	
	Assets	Liabilities	Total		Gvt.Bonds	Oth. Fixed Income	Equities	Other	Total			
Domestic	7,557	6,582	14,139	1,812	259	261	697	22	1,239	395	1,633	17,584
International	25,282	19,845	45,126	9,595	1,343	759	4,369	133	6,604	1,181	7,785	62,506
Investment Banks	19,914	15,071	34,985	12,983	1,301	496	2,877	277	4,951	655	5,606	53,574
Private Banks	85	13	97	6	1	1	24	4	31	1	32	135
Global	11,894	11,972	23,866	7,257	1,279	306	2,805	2	4,393	399	4,792	35,916
Total	64,731	53,483	118,214	31,652	4,184	1,823	10,772	439	17,217	2,630	19,848	169,714

Source: Company data, Goldman Sachs Research estimates.

A heatmap of the FTT: individually, all products would experience a significant impact

The heatmaps shown in Exhibit 23 allow us to understand the impact of the FTT on various products on a bank by bank basis:

Pro-forma impact of REPOs would be 64% of PBT:

- The REPO impact on eight banks would be greater than 100% of 2015E PBT.
- For 20 banks, the impact would be greater than 30% of 2015E PBT.

Even if REPOs were to be excluded, the tax payable on derivatives would still be significant at 17% of PBT:

- For eight banks (all capital market banks), the tax on derivatives would be over 30% of 2015E PBT.
- A total of ten banks would face a pro-forma FTT impact on derivatives of over 10% of PBT.
- For Deutsche Bank, which stands to be worst affected, the tax on derivatives would absorb virtually all of its 2015E PBT.

Excluding both REPOs and derivatives leaves residual pro-forma FTT impact of 11% of PBT

- The next most affected product line would be **equities**, with a pro-forma impact equivalent to **6% of 2015E PBT.**
- German and French banks would be disproportionally affected, with an impact of 17%-31% on 2015E PBT.
- The estimated impact on **government bonds** held in trading portfolios equals **2% of PBT**.
- Within this product line, active primary dealers such as Deutsche, BNP, SG and Credit Agricole would be particularly affected.
- While the pro-forma impact within this segment at first sight appears more modest compared with PBT, it would be significant in the context of the underlying products business lines.

Exhibit 23: Pro-forma 2012 FTT effect is large and broad, when analyzed in the context of European bank profitability
2012 pro-forma FTT as % of 2015E PBT

Bank	REPOs			Derivatives	Trading							Total Tax Bill
					Assets					Liabilities	Total	
	Assets	Liabilities	Total		Gvt.Bonds	Oth. Fixed Income	Equities	Other	Total			
Erste Bank	4%	4%	9%	2%	1%	0%	0%	0%	2%	0%	2%	12%
Raiffeisen	23%	4%	27%	1%	1%	0%	0%	0%	1%	0%	2%	30%
Danske Bank	33%	15%	48%	9%	0%	3%	0%	0%	3%	0%	3%	61%
BNP Paribas	52%	52%	104%	39%	4%	1%	17%	0%	22%	3%	25%	168%
Credit Agricole	77%	77%	155%	34%	6%	2%	20%	0%	28%	4%	32%	220%
Natixis	182%	160%	342%	31%	0%	8%	26%	0%	35%	15%	50%	423%
Societe Generale	70%	62%	132%	35%	4%	2%	31%	1%	38%	6%	44%	211%
Deutsche Bank	136%	91%	227%	92%	10%	3%	22%	2%	37%	6%	43%	362%
Commerzbank	196%	123%	319%	37%	3%	2%	18%	0%	23%	2%	25%	381%
Bank Of Ireland	4%	6%	11%	8%	0%	0%	0%	0%	0%	0%	0%	19%
Intesa Sanpaolo	19%	10%	29%	6%	0%	0%	0%	0%	1%	0%	1%	36%
Unicredit	33%	33%	67%	5%	2%	1%	2%	0%	5%	2%	7%	79%
BMPS	15%	16%	32%	3%	4%	1%	1%	1%	6%	0%	6%	41%
Banco Popolare	61%	61%	123%	0%	3%	1%	2%	0%	6%	1%	7%	130%
UBI Banca	9%	9%	17%	0%	0%	0%	1%	0%	1%	1%	2%	19%
BP Milano	6%	6%	12%	3%	0%	0%	1%	0%	1%	0%	1%	16%
ING Bank	52%	23%	75%	7%	1%	1%	2%	0%	4%	0%	4%	85%
DNB	0%	0%	1%	1%	3%	1%	0%	0%	4%	4%	8%	10%
BCP	16%	16%	33%	4%	10%	2%	2%	0%	14%	0%	14%	51%
Espirito Santo FG	2%	3%	5%	1%	6%	3%	11%	0%	19%	0%	19%	25%
Banco BPI	3%	3%	5%	0%	17%	0%	1%	1%	19%	0%	19%	25%
Santander	15%	15%	30%	3%	2%	0%	1%	0%	3%	0%	3%	36%
BBVA	7%	7%	14%	4%	2%	0%	1%	0%	4%	0%	4%	21%
CaixaBank	6%	7%	13%	4%	0%	0%	0%	0%	1%	0%	1%	17%
Banco Popular	24%	24%	47%	1%	0%	0%	0%	0%	0%	0%	0%	48%
Sabadell	16%	16%	32%	1%	0%	0%	0%	0%	0%	0%	0%	33%
Bankinter	29%	29%	58%	1%	2%	0%	0%	0%	3%	0%	3%	62%
Nordea	11%	7%	18%	6%	0%	1%	2%	0%	3%	1%	5%	28%
SEB	12%	3%	15%	4%	0%	2%	4%	0%	6%	1%	7%	27%
SHB	9%	1%	11%	2%	0%	0%	1%	0%	2%	0%	2%	14%
Swedbank	7%	3%	10%	3%	0%	1%	0%	0%	2%	0%	2%	15%

Source: Company data, Goldman Sachs Research estimates.

Exhibit 23 cont'd: Profitability of all European banks stands to be significantly impacted
2012 pro-forma FTT as % of 2015E PBT

Bank	REPOs			Derivatives	Trading							Total Tax Bill
					Assets					Liabilities	Total	
	Assets	Liabilities	Total		Gvt.Bonds	Oth. Fixed Income	Equities	Other	Total			
Credit Suisse	37%	37%	74%	30%	3%	1%	9%	0%	14%	2%	15%	120%
UBS	34%	10%	44%	23%	2%	1%	6%	1%	9%	1%	10%	77%
Julius Baer	8%	2%	10%	1%	0%	0%	2%	1%	3%	0%	3%	14%
EFG International	0%	0%	0%	0%	0%	0%	3%	0%	4%	0%	4%	4%
Vontobel	11%	0%	11%	0%	0%	0%	0%	0%	1%	0%	1%	12%
RBS	45%	45%	91%	39%	3%	1%	3%	1%	7%	2%	9%	140%
HSBC	6%	6%	11%	3%	1%	1%	0%	0%	2%	0%	2%	16%
Barclays	50%	50%	100%	26%	2%	1%	3%	0%	7%	0%	7%	134%
Lloyds	6%	6%	13%	6%	0%	0%	0%	0%	0%	0%	1%	19%
Standard Chartered	1%	1%	1%	2%	0%	0%	0%	0%	1%	0%	1%	3%
Total	35%	29%	64%	17%	2%	1%	6%	0%	9%	1%	11%	92%

Region	REPOs			Derivatives	Trading							Total Tax Bill
					Assets					Liabilities	Total	
	Assets	Liabilities	Total		Gvt.Bonds	Oth. Fixed Income	Equities	Other	Total			
Austria	12%	4%	16%	1%	1%	0%	0%	0%	2%	0%	2%	19%
Benelux	58%	29%	87%	9%	2%	1%	2%	1%	5%	0%	5%	101%
France	72%	68%	140%	36%	4%	2%	22%	0%	28%	5%	33%	209%
Germany	151%	99%	249%	78%	8%	3%	21%	2%	33%	5%	39%	366%
Ireland	4%	6%	11%	8%	0%	0%	0%	0%	0%	0%	0%	19%
Italy	26%	23%	49%	5%	2%	1%	1%	0%	3%	1%	4%	58%
Nordics	12%	5%	17%	5%	1%	1%	1%	0%	3%	1%	4%	26%
Portugal	6%	6%	12%	2%	9%	2%	6%	0%	18%	0%	18%	31%
Spain	13%	13%	26%	3%	2%	0%	1%	0%	3%	0%	3%	31%
Switzerland	33%	22%	55%	24%	2%	1%	7%	1%	11%	1%	12%	91%
UK	18%	18%	37%	12%	1%	1%	1%	0%	3%	0%	4%	52%
Total	35%	29%	64%	17%	2%	1%	6%	0%	9%	1%	11%	92%

Bank Type	REPOs			Derivatives	Trading							Total Tax Bill
					Assets					Liabilities	Total	
	Assets	Liabilities	Total		Gvt.Bonds	Oth. Fixed Income	Equities	Other	Total			
Domestic	23%	20%	44%	6%	1%	1%	2%	0%	4%	1%	5%	54%
International	44%	35%	79%	17%	2%	1%	8%	0%	12%	2%	14%	109%
Investment Banks	64%	49%	113%	42%	4%	2%	9%	1%	16%	2%	18%	172%
Private Banks	7%	1%	8%	0%	0%	0%	2%	0%	3%	0%	3%	11%
Global	19%	19%	38%	11%	2%	0%	4%	0%	7%	1%	8%	57%
Total	35%	29%	64%	17%	2%	1%	6%	0%	9%	1%	11%	92%

Source: Company data, Goldman Sachs Research estimates.

Valuation: A 10% weighting for FTT implementation reduces market value by 7 ppt

To assess the potential valuation impact of the introduction of the FTT in its current proposed form on the banks under our coverage, we perform the following analysis:

(1) We split the banks under our coverage into quintiles according to the severity of the first-round impact of the FTT
We recognize that banks would not simply incur the pro-forma tax – thus pushing a number of groups into loss-making territory – but would make operational changes to mitigate the impact of the tax. At the same time, however, we believe the ranking of the initial pre-tax profit hit provides a reasonable indication of the relative severity of the tax for each operator post mitigation.

(2) We adjust our cost of equity assumptions for banks according to quintile under the assumption that – in practice– the FTT would lead banks to exit certain business lines in order to limit associated losses. In turn, this could result in as much as half of banks' earnings falling away (primarily capital markets-related activities, although the potential impact on funding markets – as discussed at length in this report – would be sufficient to affect a majority of banks' operations, in our view).

We seek to capture this earnings – and thus valuation impact – by doubling our current cost of equity assumptions for the operators that fall into the first quintile of FTT earnings impact.

In turn, we scale the COE adjustment linearly across the quintiles, increasing COE by 80% for the second quintile, 60% for the third quintile and so forth.

(3) We illustrate the price target impact across various weightings of FTT implementation
We overlay this analysis with a weighting for the FTT being implemented in its current proposed form.

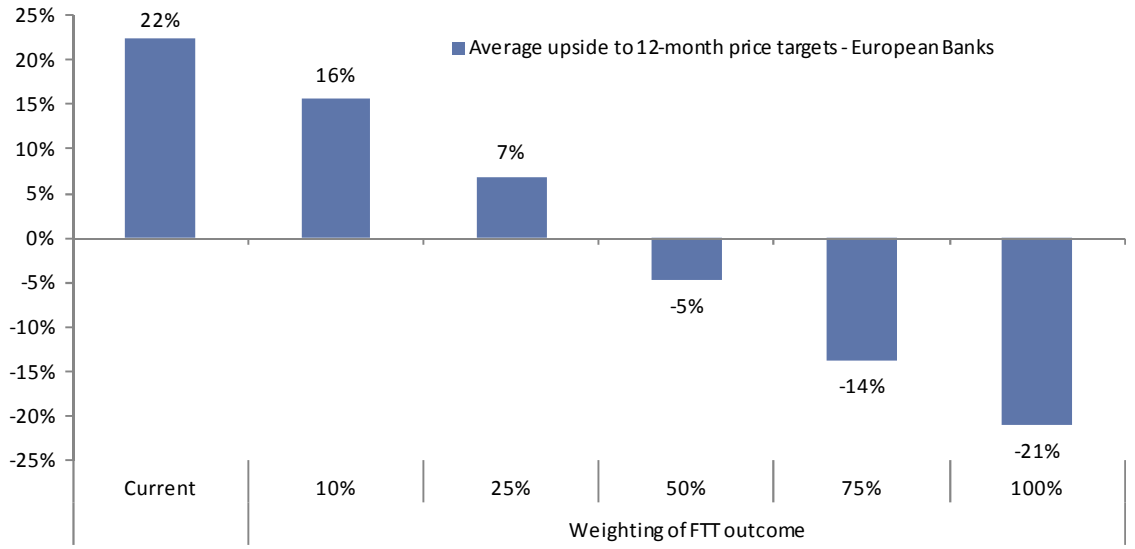
This analysis highlights the substantial sector-level valuation sensitivity to the outcome surrounding the FTT.

Specifically, on our top-down analysis, we estimate that the average upside implied by our 12-month price targets across the sector would decline from 22% at present (with a zero weighting to the FTT implementation outcome) to 16% under a 10% FTT weighting to -21% under a 100% weighting of the FTT outcome.

(4) We highlight substantial bank-by-bank variations in impact
Underneath these sector averages is considerable bank-by-bank variation.

We seek to illustrate this through a hypothetical cost of equity adjustment on a bank-by-bank basis under the assumption of a 25% weighting of the FTT implementation outcome. The variation is dramatic, with the price targets of fifth-quintile operators, including various emerging market-exposed banks, declining by less than 5% compared with 20% for operators in the first quintile of impact, including certain German, French and UK banks.

Exhibit 24: Valuation of banks is highly sensitive to the probability attached to the FTT proposal being implemented



Source: Company data, Datastream, Goldman Sachs Research estimates.

Appendix 1: Pro-forma 2012 FTT impact by bank, split by product

Exhibit 25: Pro-forma 2012 FTT impact by bank, split by product

FTT Bill

GS Estimate of Financial Transaction Tax Bill, 2012

Rank	Bank	€bn
1	Deutsche Bank	26.3
2	BNP Paribas	24.5
3	Barclays	14.5
4	Societe Generale	14.0
5	Credit Agricole	12.2
6	Natixis	10.1
7	RBS	9.7
8	Commerzbank	9.0
9	Credit Suisse	7.8
10	Unicredit	5.8
11	Santander	5.6
12	ING Bank	5.1
13	UBS	5.0
14	HSBC	4.1
15	Intesa Sanpaolo	2.1
16	BBVA	1.7
17	Danske Bank	1.6
18	Nordea	1.4
19	Lloyds	1.3
20	Banco Popolare	1.0
21	KBC	0.9
22	Banco Popular	0.7
23	SEB	0.6
24	Raiffeisen	0.5
25	BMPS	0.5
26	CaixaBank	0.4
27	Sabadell	0.4
28	SHB	0.4
29	Swedbank	0.3
30	Erste Bank	0.3
31	DNB	0.3
32	Standard Chartered	0.2
33	Bankinter	0.2
34	Espirito Santo FG	0.2
35	BCP	0.2
36	UBI Banca	0.2
37	Julius Baer	0.1
38	Banco BPI	0.1
39	Bank Of Ireland	0.1
40	BP Milano	0.1
41	Vontobel	0.0
42	EFG International	0.0
	Average	169.7

FTT Bill on REPOs

GS Est. of Financial Transaction Tax Bill for REPOs, 2012

Rank	Bank	€bn
1	Deutsche Bank	16.5
2	BNP Paribas	15.2
3	Barclays	10.8
4	Societe Generale	8.8
5	Credit Agricole	8.6
6	Natixis	8.2
7	Commerzbank	7.5
8	RBS	6.3
9	Unicredit	5.0
10	Credit Suisse	4.9
11	Santander	4.7
12	ING Bank	4.5
13	HSBC	2.9
14	UBS	2.9
15	Intesa Sanpaolo	1.7
16	Danske Bank	1.3
17	BBVA	1.1
18	Banco Popolare	0.9
19	Nordea	0.9
20	Lloyds	0.9
21	KBC	0.7
22	Banco Popular	0.7
23	Raiffeisen	0.5
24	BMPS	0.4
25	Sabadell	0.4
26	SEB	0.3
27	CaixaBank	0.3
28	SHB	0.3
29	Swedbank	0.2
30	Bankinter	0.2
31	Erste Bank	0.2
32	UBI Banca	0.2
33	BCP	0.1
34	Standard Chartered	0.1
35	Julius Baer	0.1
36	Bank Of Ireland	0.0
37	BP Milano	0.0
38	Espirito Santo FG	0.0
39	Vontobel	0.0
40	Banco BPI	0.0
41	DNB	0.0
42	EFG International	-
	Average	118.2

FTT Bill on Derivatives

GS Est. of Financial Transaction Tax Bill for Derivaties, 2012

Rank	Bank	€bn
1	Deutsche Bank	6.7
2	BNP Paribas	5.7
3	Barclays	2.8
4	RBS	2.7
5	Societe Generale	2.3
6	Credit Suisse	2.0
7	Credit Agricole	1.9
8	UBS	1.5
9	Commerzbank	0.9
10	HSBC	0.8
11	Natixis	0.7
12	Santander	0.5
13	ING Bank	0.4
14	Unicredit	0.4
15	Lloyds	0.4
16	Intesa Sanpaolo	0.4
17	Nordea	0.3
18	BBVA	0.3
19	Danske Bank	0.2
20	Standard Chartered	0.1
21	KBC	0.1
22	SEB	0.1
23	CaixaBank	0.1
24	Swedbank	0.1
25	SHB	0.0
26	Erste Bank	0.0
27	DNB	0.0
28	BMPS	0.0
29	Bank Of Ireland	0.0
30	Raiffeisen	0.0
31	BCP	0.0
32	Sabadell	0.0
33	BP Milano	0.0
34	Espirito Santo FG	0.0
35	Banco Popular	0.0
36	Julius Baer	0.0
37	Bankinter	0.0
38	UBI Banca	0.0
39	Banco Popolare	0.0
40	Banco BPI	0.0
41	Vontobel	0.0
42	EFG International	0.0
	Average	31.7

FTT Bill on Government Paper

GS Est. of Financial Transaction Tax Bill for Gvt. Paper, 2012

Rank	Bank	€bn
1	Deutsche Bank	0.76
2	BNP Paribas	0.56
3	Credit Agricole	0.33
4	Societe Generale	0.29
5	Santander	0.28
6	Barclays	0.27
7	HSBC	0.26
8	BBVA	0.18
9	RBS	0.18
10	Unicredit	0.18
11	Credit Suisse	0.18
12	UBS	0.10
13	DNB	0.09
14	ING Bank	0.07
15	Banco BPI	0.06
16	Commerzbank	0.06
17	BMPS	0.05
18	Espirito Santo FG	0.05
19	BCP	0.04
20	Erste Bank	0.04
21	KBC	0.03
22	Intesa Sanpaolo	0.02
23	Banco Popolare	0.02
24	Lloyds	0.02
25	Standard Chartered	0.02
26	Raiffeisen	0.01
27	CaixaBank	0.01
28	SHB	0.01
29	Bankinter	0.01
30	Swedbank	0.01
31	Nordea	0.00
32	Sabadell	0.00
33	Julius Baer	0.00
34	Vontobel	0.00
35	EFG International	0.00
36	Banco Popular	0.00
37	BP Milano	0.00
38	UBI Banca	0.00
39	Danske Bank	-
40	Natixis	-
41	Bank Of Ireland	-
42	SEB	-
	Average	4.18

FTT Bill on Equities

GS Est. of Financial Transaction Tax Bill for Equities, 2012

Rank	Bank	€bn
1	BNP Paribas	2.51
2	Societe Generale	2.04
3	Deutsche Bank	1.57
4	Credit Agricole	1.11
5	Natixis	0.61
6	Credit Suisse	0.59
7	Commerzbank	0.43
8	UBS	0.37
9	Barclays	0.35
10	RBS	0.19
11	Unicredit	0.14
12	Santander	0.13
13	ING Bank	0.11
14	SEB	0.10
15	HSBC	0.09
16	Espirito Santo FG	0.09
17	Nordea	0.09
18	BBVA	0.07
19	SHB	0.03
20	Intesa Sanpaolo	0.02
21	Banco Popolare	0.02
22	Julius Baer	0.01
23	Standard Chartered	0.01
24	KBC	0.01
25	DNB	0.01
26	BMPS	0.01
27	Swedbank	0.01
28	EFG International	0.01
29	BCP	0.01
30	Erste Bank	0.01
31	Raiffeisen	0.01
32	UBI Banca	0.01
33	Danske Bank	0.00
34	Banco Popular	0.00
35	Banco BPI	0.00
36	BP Milano	0.00
37	CaixaBank	0.00
38	Bankinter	0.00
39	Vontobel	0.00
40	Sabadell	0.00
41	Bank Of Ireland	-
42	Lloyds	-
	Average	10.77

Source: European Commission, Company data, Goldman Sachs Research estimates.

Exhibit 25 cont'd: Pro-forma 2012 FTT impact by bank, split by product

Financial Transaction Tax Total estimated cost, by bank, country, region and bank type as well as by product, 2012 balances, € bn

FTT Bill

GS Estimate of Financial Transaction Tax Bill, 2012

Rank	Country	€bn
1	France	60.8
2	Germany	35.3
3	UK	29.9
4	Switzerland	13.0
5	Italy	9.7
6	Spain	9.1
7	Netherlands	5.1
8	Sweden	2.7
9	Denmark	1.6
10	Belgium	0.9
11	Austria	0.8
12	Portugal	0.5
13	Norway	0.3
14	Ireland	0.1
	Average	169.7

FTT Bill on REPOs

GS Est. of Financial Transaction Tax Bill for REPOs, 2012

Rank	Country	€bn
1	France	40.7
2	Germany	24.0
3	UK	21.0
4	Italy	8.2
5	Switzerland	7.8
6	Spain	7.4
7	Netherlands	4.5
8	Sweden	1.7
9	Denmark	1.3
10	Belgium	0.7
11	Austria	0.7
12	Portugal	0.2
13	Ireland	0.0
14	Norway	0.0
	Average	118.2

FTT Bill on Derivatives

GS Est. of Financial Transaction Tax Bill for Derivaties, 2012

Rank	Country	€bn
1	France	10.6
2	Germany	7.6
3	UK	6.9
4	Switzerland	3.5
5	Spain	0.9
6	Italy	0.8
7	Sweden	0.5
8	Netherlands	0.4
9	Denmark	0.2
10	Belgium	0.1
11	Austria	0.1
12	Norway	0.0
13	Ireland	0.0
14	Portugal	0.0
	Average	31.7

FTT Bill on Government Paper

GS Est. of Financial Transaction Tax Bill for Gvt. Paper, 2012

Rank	Country	€bn
1	France	1.17
2	Germany	0.82
3	UK	0.75
4	Spain	0.49
5	Switzerland	0.28
6	Italy	0.28
7	Portugal	0.15
8	Norway	0.09
9	Netherlands	0.07
10	Austria	0.05
11	Belgium	0.03
12	Sweden	0.02
13	Denmark	-
14	Ireland	-
	Average	4.18

FTT Bill on Equities

GS Est. of Financial Transaction Tax Bill for Equities, 2012

Rank	Country	€bn
1	France	6.29
2	Germany	2.00
3	Switzerland	0.98
4	UK	0.64
5	Sweden	0.22
6	Spain	0.21
7	Italy	0.19
8	Netherlands	0.11
9	Portugal	0.10
10	Austria	0.01
11	Belgium	0.01
12	Norway	0.01
13	Denmark	0.00
14	Ireland	-
	Average	10.77

FTT Bill

GS Estimate of Financial Transaction Tax Bill, 2012

Rank	Region	€bn
1	France	60.8
2	Germany	35.3
3	UK	29.9
4	Switzerland	13.0
5	Italy	9.7
6	Spain	9.1
7	Benelux	6.1
8	Nordics	4.6
9	Austria	0.8
10	Portugal	0.5
11	Ireland	0.1
	Average	169.7

FTT Bill on REPOs

GS Est. of Financial Transaction Tax Bill for REPOs, 2012

Rank	Region	€bn
1	France	22.2
2	Germany	15.0
3	UK	10.7
4	Switzerland	4.9
5	Italy	4.5
6	Spain	3.7
7	Benelux	3.5
8	Nordics	2.3
9	Austria	0.5
10	Portugal	0.1
11	Ireland	0.0
	Average	118.2

FTT Bill on Derivatives

GS Est. of Financial Transaction Tax Bill for Derivaties, 2012

Rank	Region	€bn
1	France	10.6
2	Germany	7.6
3	UK	6.9
4	Switzerland	3.5
5	Spain	0.9
6	Nordics	0.8
7	Italy	0.8
8	Benelux	0.5
9	Austria	0.1
10	Ireland	0.0
11	Portugal	0.0
	Average	31.7

FTT Bill on Government Paper

GS Est. of Financial Transaction Tax Bill for Gvt. Paper, 2012

Rank	Region	€bn
1	France	1.17
2	Germany	0.82
3	UK	0.75
4	Spain	0.49
5	Switzerland	0.28
6	Italy	0.28
7	Portugal	0.15
8	Nordics	0.11
9	Benelux	0.10
10	Austria	0.05
11	Ireland	-
	Average	4.18

FTT Bill on Equities

GS Est. of Financial Transaction Tax Bill for Equities, 2012

Rank	Region	€bn
1	France	6.29
2	Germany	2.00
3	Switzerland	0.98
4	UK	0.64
5	Nordics	0.23
6	Spain	0.21
7	Italy	0.19
8	Benelux	0.12
9	Portugal	0.10
10	Austria	0.01
11	Ireland	-
	Average	10.77

FTT Bill

GS Estimate of Financial Transaction Tax Bill, 2012

Rank	Type	€bn
1	International	62.5
2	Investment Banks	53.6
3	Global	35.9
4	Domestic	17.6
5	Private Banks	0.1
	Average	169.7

FTT Bill on REPOs

GS Est. of Financial Transaction Tax Bill for REPOs, 2012

Rank	Type	€bn
1	International	45.1
2	Investment Banks	35.0
3	Global	23.9
4	Domestic	14.1
5	Private Banks	0.1
	Average	118.2

FTT Bill on Derivatives

GS Est. of Financial Transaction Tax Bill for Derivaties, 2012

Rank	Type	€bn
1	Investment Banks	13.0
2	International	9.6
3	Global	7.3
4	Domestic	1.8
5	Private Banks	0.0
	Average	31.7

FTT Bill on Government Paper

GS Est. of Financial Transaction Tax Bill for Gvt. Paper, 2012

Rank	Type	€bn
1	International	1.34
2	Investment Banks	1.30
3	Global	1.28
4	Domestic	0.26
5	Private Banks	0.00
	Average	4.18

FTT Bill on Equities

GS Est. of Financial Transaction Tax Bill for Equities, 2012

Rank	Type	€bn
1	International	4.37
2	Investment Banks	2.88
3	Global	2.81
4	Domestic	0.70
5	Private Banks	0.02
	Average	10.77

Source: European Commission, Company data, Goldman Sachs Research estimates.

Appendix 2: Pro-forma 2012 FTT by bank, split by product type, relative to 2015E PBT

Exhibit 26: Pro-forma 2012 FTT relative to 2015E PBT, per individual bank and split by product type

FTT Bill / 2015E PBT

Group 2015E PBT vs. FTT Total Cost

Rank	Bank	%
1	Natixis	423%
2	Commerzbank	381%
3	Deutsche Bank	362%
4	Credit Agricole	220%
5	Societe Generale	211%
6	BNP Paribas	168%
7	RBS	140%
8	Barclays	134%
9	Banco Popolare	130%
10	Credit Suisse	120%
11	ING Bank	85%
12	Unicredit	79%
13	UBS	77%
14	Bankinter	62%
15	Danske Bank	61%
16	BCP	51%
17	Banco Popular	48%
18	BMPS	41%
19	Santander	36%
20	Intesa Sanpaolo	36%
21	Sabadell	33%
22	Raiffeisen	30%
23	Nordea	28%
24	SEB	27%
25	Espirito Santo FG	25%
26	Banco BPI	25%
27	BBVA	21%
28	UBI Banca	19%
29	Bank Of Ireland	19%
30	Lloyds	19%
31	CaixaBank	17%
32	HSBC	16%
33	BP Milano	16%
34	Swedbank	15%
35	SHB	14%
36	Julius Baer	14%
37	Vontobel	12%
38	Erste Bank	12%
39	DNB	10%
40	EFG International	4%
41	Standard Chartered	3%
	Average	92%

FTT Bill on REPOs / 2015E PBT

Group 2015E PBT vs. FTT cost on REPOs

Rank	Bank	%
1	Natixis	342%
2	Commerzbank	319%
3	Deutsche Bank	227%
4	Credit Agricole	155%
5	Societe Generale	132%
6	Banco Popolare	123%
7	BNP Paribas	104%
8	Barclays	100%
9	RBS	91%
10	ING Bank	75%
11	Credit Suisse	74%
12	Unicredit	67%
13	Bankinter	58%
14	Danske Bank	48%
15	Banco Popular	47%
16	UBS	44%
17	BCP	33%
18	Sabadell	32%
19	BMPS	32%
20	Santander	30%
21	Intesa Sanpaolo	29%
22	Raiffeisen	27%
23	Nordea	18%
24	UBI Banca	17%
25	SEB	15%
26	BBVA	14%
27	CaixaBank	13%
28	Lloyds	13%
29	BP Milano	12%
30	HSBC	11%
31	Vontobel	11%
32	Bank Of Ireland	11%
33	SHB	11%
34	Julius Baer	10%
35	Swedbank	10%
36	Erste Bank	9%
37	Banco BPI	5%
38	Espirito Santo FG	5%
39	Standard Chartered	1%
40	DNB	1%
41	EFG International	-
	Average	64%

FTT Bill on Derivatives / 2015E PBT

Group 2015E PBT vs. FTT cost on Derivatives

Rank	Bank	%
1	Deutsche Bank	91.8%
2	RBS	39.4%
3	BNP Paribas	39.2%
4	Commerzbank	37.4%
5	Societe Generale	34.8%
6	Credit Agricole	33.6%
7	Natixis	31.2%
8	Credit Suisse	30.2%
9	Barclays	26.4%
10	UBS	22.9%
11	Danske Bank	9.4%
12	Bank Of Ireland	8.1%
13	ING Bank	6.9%
14	Nordea	6.3%
15	Intesa Sanpaolo	5.9%
16	Lloyds	5.6%
17	Unicredit	5.2%
18	SEB	4.3%
19	BBVA	3.7%
20	BCP	3.7%
21	CaixaBank	3.5%
22	BMPS	3.4%
23	Santander	3.2%
24	HSBC	3.0%
25	Swedbank	2.9%
26	BP Milano	2.6%
27	SHB	1.8%
28	Erste Bank	1.7%
29	Standard Chartered	1.6%
30	DNB	1.4%
31	Raiffeisen	1.2%
32	Bankinter	1.1%
33	Espirito Santo FG	1.1%
34	Sabadell	0.9%
35	Julius Baer	0.7%
36	Banco Popular	0.6%
37	Banco BPI	0.5%
38	UBI Banca	0.3%
39	Banco Popolare	0.3%
40	Vontobel	0.3%
41	EFG International	0.0%
	Average	17.1%

FTT Bill on Goverment Paper / 2015E PBT

Group 2015E PBT vs. FTT cost on Government Paper

Rank	Bank	%
1	Banco BPI	17.4%
2	Deutsche Bank	10.4%
3	BCP	9.5%
4	Espirito Santo FG	5.9%
5	Credit Agricole	5.9%
6	Societe Generale	4.3%
7	BMPS	4.3%
8	BNP Paribas	3.8%
9	DNB	3.3%
10	Banco Popolare	2.9%
11	Credit Suisse	2.7%
12	RBS	2.6%
13	Commerzbank	2.5%
14	Barclays	2.5%
15	Unicredit	2.4%
16	Bankinter	2.4%
17	BBVA	2.4%
18	Santander	1.8%
19	UBS	1.5%
20	Erste Bank	1.5%
21	ING Bank	1.2%
22	HSBC	1.0%
23	Raiffeisen	0.9%
24	CaixaBank	0.5%
25	Intesa Sanpaolo	0.4%
26	SHB	0.4%
27	Swedbank	0.3%
28	Lloyds	0.3%
29	Standard Chartered	0.2%
30	Sabadell	0.2%
31	Vontobel	0.2%
32	EFG International	0.1%
33	Julius Baer	0.1%
34	Nordea	0.1%
35	BP Milano	0.0%
36	Banco Popular	0.0%
37	UBI Banca	0.0%
38	Danske Bank	-
39	Natixis	-
40	Bank Of Ireland	-
41	SEB	-
	Average	2.3%

FTT Bill on Equities / 2015E PBT

Group 2015E PBT vs. FTT cost on Equities

Rank	Bank	%
1	Societe Generale	30.8%
2	Natixis	25.7%
3	Deutsche Bank	21.6%
4	Credit Agricole	20.0%
5	Commerzbank	18.0%
6	BNP Paribas	17.3%
7	Espirito Santo FG	10.8%
8	Credit Suisse	9.0%
9	UBS	5.7%
10	SEB	4.5%
11	EFG International	3.4%
12	Barclays	3.2%
13	RBS	2.7%
14	Julius Baer	2.1%
15	Banco Popolare	2.0%
16	Unicredit	1.9%
17	ING Bank	1.9%
18	BCP	1.8%
19	Nordea	1.7%
20	SHB	1.0%
21	BBVA	0.9%
22	Santander	0.8%
23	BMPS	0.8%
24	BP Milano	0.8%
25	Banco BPI	0.8%
26	UBI Banca	0.6%
27	Vontobel	0.4%
28	Raiffeisen	0.4%
29	Bankinter	0.4%
30	Swedbank	0.4%
31	HSBC	0.4%
32	Intesa Sanpaolo	0.3%
33	DNB	0.3%
34	Erste Bank	0.3%
35	Banco Popular	0.3%
36	Standard Chartered	0.2%
37	Danske Bank	0.2%
38	Sabadell	0.1%
39	CaixaBank	0.1%
40	Bank Of Ireland	-
41	Lloyds	-
	Average	5.8%

Source: European Commission, Company data, Goldman Sachs Research estimates.

Exhibit 26 cont'd: Pro-forma 2012 FTT relative to 2015E PBT, per individual bank and split by product type
Financial Transaction Tax Total estimated cost, by bank, country, region and bank type as well as by product compared to 2015E Profit-Before-Tax, %

FTT Bill / 2015E PBT
Group 2015E PBT vs. FTT Total Cost

Rank	Country	%
1	Germany	366%
2	France	209%
3	Switzerland	91%
4	Netherlands	85%
5	Denmark	61%
6	Italy	58%
7	UK	52%
8	Portugal	31%
9	Spain	31%
10	Sweden	23%
11	Austria	19%
12	Ireland	19%
13	Norway	10%
	Average	92%

FTT Bill on REPOs / 2015E PBT
Group 2015E PBT vs. FTT cost on REPOs

Rank	Country	%
1	Germany	249%
2	France	140%
3	Netherlands	75%
4	Switzerland	55%
5	Italy	49%
6	Denmark	48%
7	UK	37%
8	Spain	26%
9	Austria	16%
10	Sweden	14%
11	Portugal	12%
12	Ireland	11%
13	Norway	1%
	Average	64%

FTT Bill on Derivatives / 2015E PBT
Group 2015E PBT vs. FTT cost on Derivatives

Rank	Country	%
1	Germany	78.5%
2	France	36.5%
3	Switzerland	24.4%
4	UK	12.0%
5	Denmark	9.4%
6	Ireland	8.1%
7	Netherlands	6.9%
8	Italy	4.8%
9	Sweden	4.3%
10	Spain	3.1%
11	Portugal	1.6%
12	Austria	1.5%
13	Norway	1.4%
	Average	17.1%

FTT Bill on Goverment Paper / 2015E PBT
Group 2015E PBT vs. FTT cost on Government Paper

Rank	Country	%
1	Portugal	9.5%
2	Germany	8.5%
3	France	4.0%
4	Norway	3.3%
5	Switzerland	1.9%
6	Spain	1.7%
7	Italy	1.7%
8	UK	1.3%
9	Austria	1.2%
10	Netherlands	1.2%
11	Sweden	0.2%
12	Denmark	-
13	Ireland	-
	Average	2.3%

FTT Bill on Equities / 2015E PBT
Group 2015E PBT vs. FTT cost on Equities

Rank	Country	%
1	France	21.6%
2	Germany	20.7%
3	Switzerland	6.9%
4	Portugal	6.2%
5	Netherlands	1.9%
6	Sweden	1.8%
7	Italy	1.2%
8	UK	1.1%
9	Spain	0.7%
10	Austria	0.3%
11	Norway	0.3%
12	Denmark	0.2%
13	Ireland	-
	Average	5.8%

FTT Bill / 2015E PBT
Group 2015E PBT vs. FTT Total Cost

Rank	Region	%
1	Germany	366%
2	France	209%
3	Benelux	101%
4	Switzerland	91%
5	Italy	58%
6	UK	52%
7	Portugal	31%
8	Spain	31%
9	Nordics	26%
10	Austria	19%
11	Ireland	19%
	Average	92%

FTT Bill on REPOs / 2015E PBT
Group 2015E PBT vs. FTT cost on REPOs

Rank	Region	%
1	Germany	249%
2	France	140%
3	Benelux	87%
4	Switzerland	55%
5	Italy	49%
6	UK	37%
7	Spain	26%
8	Nordics	17%
9	Austria	16%
10	Portugal	12%
11	Ireland	11%
	Average	64%

FTT Bill on Derivatives / 2015E PBT
Group 2015E PBT vs. FTT cost on Derivatives

Rank	Region	%
1	Germany	78.5%
2	France	36.5%
3	Switzerland	24.4%
4	UK	12.0%
5	Benelux	8.9%
6	Ireland	8.1%
7	Italy	4.8%
8	Nordics	4.6%
9	Spain	3.1%
10	Portugal	1.6%
11	Austria	1.5%
	Average	17.1%

FTT Bill on Goverment Paper / 2015E PBT
Group 2015E PBT vs. FTT cost on Government Paper

Rank	Region	%
1	Portugal	9.5%
2	Germany	8.5%
3	France	4.0%
4	Switzerland	1.9%
5	Spain	1.7%
6	Italy	1.7%
7	Benelux	1.6%
8	UK	1.3%
9	Austria	1.2%
10	Nordics	0.6%
11	Ireland	-
	Average	2.3%

FTT Bill on Equities / 2015E PBT
Group 2015E PBT vs. FTT cost on Equities

Rank	Region	%
1	France	21.6%
2	Germany	20.7%
3	Switzerland	6.9%
4	Portugal	6.2%
5	Benelux	2.1%
6	Nordics	1.3%
7	Italy	1.2%
8	UK	1.1%
9	Spain	0.7%
10	Austria	0.3%
11	Ireland	-
	Average	5.8%

FTT Bill / 2015E PBT
Group 2015E PBT vs. FTT Total Cost

Rank	Type	%
1	Investment Banks	172%
2	International	109%
3	Global	57%
4	Domestic	54%
5	Private Banks	11%
	Average	92%

FTT Bill on REPOs / 2015E PBT
Group 2015E PBT vs. FTT cost on REPOs

Rank	Type	%
1	Investment Banks	113%
2	International	79%
3	Domestic	44%
4	Global	38%
5	Private Banks	8%
	Average	64%

FTT Bill on Derivatives / 2015E PBT
Group 2015E PBT vs. FTT cost on Derivatives

Rank	Type	%
1	Investment Banks	41.8%
2	International	16.7%
3	Global	11.5%
4	Domestic	5.6%
5	Private Banks	0.5%
	Average	17.1%

FTT Bill on Goverment Paper / 2015E PBT
Group 2015E PBT vs. FTT cost on Government Paper

Rank	Type	%
1	Investment Banks	4.2%
2	International	2.3%
3	Global	2.0%
4	Domestic	0.8%
5	Private Banks	0.1%
	Average	2.3%

FTT Bill on Equities / 2015E PBT
Group 2015E PBT vs. FTT cost on Equities

Rank	Type	%
1	Investment Banks	21.6%
2	Private Banks	20.7%
3	International	2.1%
4	Domestic	0.3%
5	Global	-
	Average	1.2%

Source: European Commission, Company data, Goldman Sachs Research estimates.

FTT impact assessment: Exchanges

Contents

FTT impact assessment: Exchanges

The FTT represents a significant potential risk to European exchanges & IDBs

Material volume declines are a policy objective

The European Commission itself expects the Financial Transaction Tax (FTT) to reduce derivative volumes by 75% and to lower trading volumes in equities and bonds by 15%. We believe it is important to note that a material reduction in volumes is a stated policy objective of the FTT, rather than an unintended consequence of the tax. On the basis that exchanges & interdealer brokers are (to a lesser or greater degree) 'volume dependent' businesses, the FTT therefore constitutes a direct risk to the sector's earnings.

Significant reduction in profits is a policy outcome

Based on the Commission's volume expectations, we estimate that the average European Exchange & IDB under our coverage would see pre-tax profits decline by 22% as a result of the tax. Exchanges that are based outside the FTT area and biased towards cash instruments would be least impacted (we estimate a small 2% reduction in PBT for the Warsaw Exchange) while derivative-biased exchanges in the FTT area would likely experience a far greater negative impact. Our analysis suggests that Deutsche Börse would see the largest impact to earnings, with a potential 51% reduction in our forecast pre-tax profits for 2014 (before any mitigating actions by management). Although we would expect the larger variable costs of the IDBs to help offset some of the decline in volumes, we nonetheless estimate that ICAP and Tullett Prebon could see pre-tax profits decline by 16% and 26% respectively as a result of the tax.

Exhibit 27: We believe that the pre-tax profits of most European exchanges & IDBs would significantly decline if the European Commission's current Financial Transaction Tax (FTT) proposals came into force in 2014
Analysis of how the current FTT proposals may impact the European market structure stocks under our coverage

	FTT area					
	BME (Spain)	Deutsche Boerse	Warsaw SE	London SE	ICAP	Tullett Prebon
	EUR mn	EUR mn	PLN mn	GBP mn	GBP mn	GBP mn
Cash revenues	197	137	125	145	325	213
FTT area as % clients/instruments	NA	NA	10%	15%*	20%	20%
FTT revenue impact	-30	-21	-2	-11	-10	-6
Derivative revenues	29	748	26	15	650	426
FTT area as % clients/instruments	NA	NA	10%	15%*	20%	20%
FTT revenue impact	-22	-561	-2	-9.5	-98	-64
Marginal cost:income	15%	10%	10%	15%	50%	60%
Cost offset	8	58	0	3	54	42
Other items (net)						
- Repo markets				-34		
- Stock lending		-40				
- ETFs		-9				
Total FTT impact on PBT	-43.9	-572.6	-3.5	-51.7	-53.6	-28.1
2014E PBT	196.6	1,128.0	157.2	351.4	332	109
% impact of FTT	-22%	-51%	-2%	-15%	-16%	-26%

Source: Goldman Sachs Research estimates.

What does the FTT hope to achieve, and how?

A primary objective of the tax is to lower volumes

Although the European Commission first mooted a tax on financial transactions in October 2010, it was not until September 2011 that the Commission put forward a firm proposal for a financial transaction tax (FTT) with the following stated three aims:

- To support the single-market by coordinating national governments' taxation of financial services post-crisis.
- To ensure that financial institutions 'make a fair contribution to covering the costs of the recent crisis' and to 'ensure a level playing field' with other sectors from a taxation point of view.
- To create disincentives for financial transactions that 'do not enhance the efficiency of financial markets' in order to help avoid future crises.

Is HFT really the target, or is it active management generally?

This final objective has been widely interpreted as targeting high frequency traders (HFT). HFT accounts for roughly a third of trading across most liquid financial markets and has been blamed for a number of market ills, ranging from disrupting exchange order books through to increasing market volatility.

We are not so certain. Designing a specific tax to target HFT is comparatively straightforward; indeed the recent French and Italian transaction taxes contained clauses that asymmetrically impacted HFT. The Commission's proposal goes much further than this however, in our view, and would disincentivize almost all active portfolio management.

A stated secondary objective of the FTT proposals is to modify the 'behaviour' of financial institutions. The Commission's technical fiche on pension funds appears to suggest that one such 'behavioral change' that it would like to see is greater penetration of passive or 'buy and hold' investment strategies. Indeed, the same document contrasts the impact of the tax on an actively managed pension fund (taxed at 40 bp pa) and a similar fund pursuing a passive investment strategy (taxed at only 4 bp pa). Viewed in this way, a reduction in portfolio turnover (and therefore a reduction in volumes) may be considered as an intended effect of the tax.

The impacts of the FTT are potentially very significant

This tax is very different to anything Europe has seen previously

A number of countries in Europe already have a transaction tax of some sort in place, and it is tempting to try and use these to read across to the potential impact of the European Financial Transaction Tax (FTT). This is ill-advised in our view, as the structure of the European FTT is significantly more onerous. We note four particularly significant differences compared with existing transaction taxes.

1. Much wider definition

The existing transaction taxes in the UK, France and Italy are based on country of issuance: if an instrument is issued in the UK, France or Italy then it is taxable, otherwise it is not. The European FTT similarly taxes transactions of instruments issued by its member countries, but it also expands the scope of the tax to include any financial transaction that includes a company or individual that is resident in an FTT country. So, for example, a transaction in which a US fund manager buys a Microsoft share from a French asset manager becomes a taxable event, even though the underlying instrument was issued outside the FTT area. Essentially, the only trades excluded from the tax are those in which neither the instrument nor the participant in the transaction is from the FTT area. Thus the scope of the European FTT is unprecedented.

2. Far more products

The French and UK transaction taxes are only levied on cash equity transactions, and also include exemptions for transactions in small companies. The Italian transaction tax adopted a slightly broader definition that also included equity derivative instruments. The FTT proposed by the European Commission would affect a much wider range of financial instruments, however, including fixed income and FX derivatives, REPOs, money market instruments, collateral transfers and units in UCITS funds. Not only does the European FTT envelope a much larger range of instruments, but many of these additional instruments are likely to be have far greater price elasticities in our view, and therefore the impact of the FTT could be many times greater than for other FTTs in Europe.

3. Many more transactions

The European FTT is a gross tax that is levied on every transaction. While the UK tax has exemptions for market makers and similar liquidity-providing activities, the European FTT explicitly backs away from providing any exemptions on the grounds of creating a level playing field and discouraging economic rents. In different ways, the UK & Italian taxes also enable market participants to net-off trades over the course of the day, such that only each day's net financial transaction is taxed. The European FTT will tax all transactions on a gross basis.

4. Onerous potential cascade effects

The European Commission's second primary objective for the tax is to ensure that the financial sector makes a 'more substantial contribution to government finances [...] which takes into account the VAT exemption of most financial services'.

Value added tax (VAT) is a business-to-consumer tax that is levied at the end of the value chain and its absence therefore acts as a 'subsidy' for savers. It seems somewhat disproportionate therefore that the proposed FTT is not levied at the end of a chain of transactions (as it is in the UK and Italy), but on each step. Unlike other transaction taxes and unlike VAT therefore, the tax burden accumulates with each step of the transaction, such that the cumulative tax on longer trades in some financial institutions could incur headline tax rates that are multiplied three or four times.

Exhibit 28: European FTT will be very different from the transaction taxes in France and Italy and stamp duty in the UK
Summary of key characteristics of transaction taxes in the UK, France, Italy and the FTT area

	UK	France	Italy	European FTT
Definition	Issuance	Issuance	Issuance	Issuance
				Residency
Products	Equity securities	Equity securities	Equity securities	Cash instruments
		HFT	Equity derivatives	Derivatives
		Naked sovereign CDS		
Transaction	Net basis	Net basis	Net basis	Gross basis
	Market-maker exemption	Market-maker exemption	Market-maker exemption	Intermediaries included
Cascade Effect	No	No	No	Yes, significant
Tax rate	50bps on cash equities	20bps on French shares	12bps Italian shares	10bps on cash instruments
		1bp on HFT	+10bps on OTC trades	1bp on derivatives
		1bp on naked CDS	2bps on HFT	

Source: National Governments, European Commission, Goldman Sachs Research.

The European Commission expects a material volume reaction

It is uncertain how transaction volumes will respond to the additional tax burden. The European Commission's own estimates are for a **15% decline in trading volumes of cash products** (from already moribund levels, for the most part), and for a **75% decline in volumes of derivative products** (revised down from a previous forecast of a decline of up to 90%).

With a large variation in the price elasticity of volumes, we expect the transaction tax to drive a significant mix effect. Apart from the obvious impact on trading strategies that are sensitive to frictional costs (high frequency, fixed income arbitrage, market neutral, etc.), hedging of tail risks will likely reduce as the economic value of such hedges is low in comparison to their notional value.

European Commission revenue estimates appear conservative

The European Commission expects the FTT to raise approximately €34 bn pa. It anticipates that almost half of this revenue will be generated by interest rate derivatives, one-quarter of the tax take will come from cash bonds and 14% will come from cash equities. We explore the potential impact of the FTT on the European asset management industry further on in this report. Our analysis implies that this industry alone will contribute €17.0 bn pa in tax on a pro forma basis, even before consideration of the cascade effect. We therefore believe that the risks to the Commission's forecasts are to the upside.

We believe the potential earnings impact could be significant

Bifurcation between Exchanges in and outside the FTT area

Although the proposed FTT would weigh on all European exchanges to some extent, we believe the impact would be asymmetric, with those Exchanges inside the FTT area particularly adversely impacted.

At the heart of this view is our belief that any trade conducted on an exchange in the FTT area will be considered taxable, regardless of the instrument traded or who is conducting the trade. Given the importance of this interpretation of the rules, it is worth reproducing the relevant section from the European Commission's FTT proposal in full:

"[A]s long as a financial institution intends to either undertake transactions in the FTT jurisdiction or to serve a client base of the FTT jurisdiction it would be deemed to be established in the territory of a participating Member State. Thus, a financial institution would have to both abandon to trade on trading platforms in the FTT jurisdiction and to abandon all its clients in participating Member States if it wanted to avoid paying the tax." Source: European Commission, 'Implementing enhanced cooperation in the area of financial transaction tax', February 14, 2013.

An uneven single market

The impact of this rule is likely profound for the European exchanges. Take the example of a trade between a Swiss and a Swedish fund manager (both outside the FTT area) of an instrument that was also issued outside the FTT area. If this trade was conducted on the London or Warsaw Stock Exchange it would not be subject to the tax, whereas our interpretation of the rules is that it would be taxed if it traded on Deutsche Börse or the Spanish Exchange BME. Insofar as one of the primary objectives of the FTT is to ensure that taxation of the financial sector does not distort the single market, this outcome would appear to run counter to the aims of the tax.

Motivation to relocate: The central role of residency in determining whether a group is liable for the FTT or not seems likely to create a 'push' factor for those exchanges and IDB groups currently based in FTT countries, incentivizing them to consider relocating outside the FTT area. Unlike many banking or asset management activities, we believe it would be comparatively straightforward to relocate pools of liquidity outside the FTT area.

Scenario analysis suggests significant potential impact

The European Commission's Financial Transaction Tax would clearly have a significant impact on the European financial markets. The precise outcome will depend on a number of factors: the aggregate volume response to the tax, the asset class and client exposures of each venue, the mitigation put in place by exchanges & IDBs, and so on.

A complete analysis of the impact of the Commission's FTT proposals would require significantly more granularity in the data than is publically available. In the absence of this information we conduct a scenario analysis based on the following assumptions:

- **Asset classes:** For the Exchanges we separate revenues between cash products and derivatives along reported lines. Neither of the two interdealer brokers reports revenues on this basis, so we make what we believe are reasonable assumptions as to each group's business mix.
- **Volumes:** We apply the Commission's forecasts of a 15% decline in cash instruments and a 75% decline in derivative volumes as a result of the FTT.
- **Bifurcation:** In line with our interpretation of the Commission's rules, we assume that any transaction on an Exchange in the FTT area is subject to the tax. For those exchanges outside the FTT area we make an assumption as to the percentage of trades that is likely to be subject to the tax, based on publically available information.
- **Marginal costs:** Electronic trading on exchange order books has a very low marginal cost, and this is reflected in the figure we use to estimate the cost relief from lower volumes. The compensation structure of the interdealer brokers gives them far greater relief from marginal cost reduction. Our assumptions do not incorporate any action by management to structurally reduce costs.
- **Other items:** We also incorporate other impacts that are likely to result from the FTT, including: a relisting of many ETFs outside the FTT area, lower net interest income for LSE owing to the effective closure of parts of the REPO market in the FTT area and lower Global Securities Financing (GSF) revenues for Deutsche Börse as a result of the tax's likely impact on stock borrowing activities.

Exhibit 29: We believe that Warsaw Stock Exchange would be least impacted, and Deutsche Börse most impacted, by the European Commission's financial transaction tax
Analysis of how the current FTT proposals may impact the European market structure stocks under our coverage

	FTT area					
	BME (Spain)	Deutsche Boerse	Warsaw SE	London SE	ICAP	Tullett Prebon
	EUR mn	EUR mn	PLN mn	GBP mn	GBP mn	GBP mn
Cash revenues	197	137	125	145	325	213
FTT area as % clients/instruments	NA	NA	10%	15%*	20%	20%
FTT revenue impact	-30	-21	-2	-11	-10	-6
Derivative revenues	29	748	26	15	650	426
FTT area as % clients/instruments	NA	NA	10%	15%*	20%	20%
FTT revenue impact	-22	-561	-2	-9.5	-98	-64
Marginal cost:income	15%	10%	10%	15%	50%	60%
Cost offset	8	58	0	3	54	42
Other items (net)						
- Repo markets				-34		
- Stock lending		-40				
- ETFs		-9				
Total FTT impact on PBT	-43.9	-572.6	-3.5	-51.7	-53.6	-28.1
2014E PBT	196.6	1,128.0	157.2	351.4	332	109
% impact of FTT	-22%	-51%	-2%	-15%	-16%	-26%

Source: Goldman Sachs Research estimates.

Conclusion: A big impact, but manageable for most

Our scenario analysis implies an average reduction in pre-tax profits of 22% for the European exchanges and interdealer brokers under our coverage. This is before consideration of any mitigating actions by the groups, such as relocation. Although this average impact on pre-tax profits in our scenario analysis is severe, it is probably not an existential risk for most groups. The Spanish exchange has a solid a balance sheet, while London Stock Exchange has an increasingly diversified business model, for example.

Deutsche Börse is most exposed to the FTT proposals in our view

The significant contribution of derivatives to the group's earnings and the group's position in the FTT area mean that Deutsche Börse is likely to be more severely impacted by the proposed FTT than the other exchanges under our coverage. Indeed, our scenario analysis implies that potentially half of Deutsche Börse's pre-tax earnings would be at risk from the proposed FTT in its current form.

Although we would expect management actions to mitigate some of this impact, we see a risk that such a structural change in the group's earnings profile may have implications for the group's credit rating, and – potentially – implications for the credit rating of Deutsche Börse's Clearstream subsidiary. Management has stated on a number of occasions that Clearstream needs to maintain a high credit rating for operational reasons.

For these reasons we believe that Deutsche Börse is the most exposed group to the European Commission's FTT proposals in their current form.

FTT impact assessment: Asset managers

Contents

FTT impact assessment: Asset Managers

Asset managers: Potential impact of a Financial Transaction Tax

The impact on European fund managers could be material

We estimate that fund management activities in the FTT area would generate €11.3 bn pa, before considering any change in investor behaviour. Added to EFAMA's estimate for asset managers outside the FTT area, this implies that European fund managers will generate €17.0 bn in transaction tax pa, or half of the European Commission's expected revenue from the tax.

Our top-down analysis implies that investors based in FTT member countries could face an annual tax of 17-23 bp on their equity and bond portfolios. Our bottom-up analysis suggests that this tax will be borne disproportionately by retail investors (35 bp pa), owing to their shorter holding periods. To put this into perspective, this implies that the FTT would consume 14% of the principal investment of a 30 year-old regular saver by the time of retirement at 65.

Unlike other similar taxes, the proposed tax will be levied separately at each stage of the value chain; therefore, the risk to these forecasts is likely to the upside given the 'cascade effect'.

Negative for all European asset managers, worse for some

In its current form the FTT would have a negative effect on any asset manager with either clients or assets in one of the FTT countries. As a result we expect that even putative 'emerging market' asset managers such as Aberdeen would see a material adverse earnings impact from the current proposals.

Nonetheless, the structure of the tax would asymmetrically disadvantage asset managers based in the FTT area, which in our coverage universe would mean the three Italian asset managers Azimut, Banca Generali, and Mediolanum.

Exhibit 30: In our FTT scenario analysis, asset managers outside the FTT area could see an average 8% decline in PBT
Estimated PBT impact of a scenario in which 15% of AUM from FTT area investors, and 15% of AUM invested in the FTT area, is lost as a result of the FTT. Where the two overlap, we assume 25% of AUM is lost

					FTT area		
	Schroders	Aberdeen	Ashmore	GAM Holding	B.Generali	Azimut	Mediolanum
AUM from FTT area clients (Euro bn)	50.1	72.9	10.3	36.2	9.9	17.6	23.4
AUM invested in FTT area (Euro bn)	53.1	6.3	0.0	36.2	-	-	-
Loss of AUM due to FTT (Euro bn)**	15.5	11.9	1.5	10.9	2.5	4.4	5.8
Net revenue margin (bps)	57bps	50bps	68bps	30bps*	170bps	130bps	179bps
Marginal cost:income ratio (%)	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Forecast 2014 PBT (€ mn)	€593	€418	€310	€236	€204	€199	€403
Pro forma impact (%)	-10%	-10%	-2%	-10%	-14%	-20%	-18%

*We assume GAM loses lower margin PL funds. **estimate based on our scenario assumptions

Source: Goldman Sachs Research estimates.

What does the FTT hope to achieve, and how?

VAT relief acts as a de facto subsidy for European savers

The European Commission is of the view that the introduction of new taxes on financial transactions 'which take into account the VAT exemption of most financial services' are required in order to help the financial sector make a 'more substantial contribution to government finances'.

Value added tax (VAT) is a business-to-consumer tax that is levied at the end of the value chain. Business-to-business transactions in the middle of the value chain are not subject to VAT, and therefore derive no direct benefit from its omission. For this reason, the exemption of most financial transactions from VAT acts as a de facto subsidy on the end-user of financial services, such as retail investors and pension funds. Indeed, as the Commission itself notes 'the VAT exemption for the financial sector has the likely consequence that [...] the price of financial services for final (individual) users is lower than if VAT would be applied'.

In comparison to brokers, exchanges and interdealer brokers, asset managers are positioned comparatively near to the end of the financial value chain. In many cases their customers are the direct beneficiaries of this 'subsidy' for savers and therefore any change in this implied 'subsidy' could have profound effects on European asset managers.

Secondary objective aims to promote passive investing

A stated secondary objective of the FTT proposals is to modify the 'behaviour' of financial institutions. The Commission's technical fiche on pension funds appears to suggest that one such 'behavioral change' that it would like to see is greater penetration of passive or 'buy and hold' investment strategies, and that the FTT is a nudge in this direction. Indeed, the Commission's technical fiche uses the example of an actively managed pension fund that incurs an annual FTT charge of 40 bp, while a similar fund pursuing a passive investment strategy is likely to incur an annual FTT charge of only 4 bp.

This secondary objective therefore presents a direct challenge to the listed European fund managers we cover, which overwhelmingly pursue active fund management strategies.

There are potentially significant secondary effects of the FTT

Asset managers in the FTT area would be significantly disadvantaged

Although the proposed FTT would weigh on all European asset managers to some extent, we believe the impact would be asymmetric, with those asset managers inside the FTT area particularly adversely impacted:

- **Residence dictates tax liability:** Unlike existing transaction taxes in Europe, which are applied on the basis of where an instrument is issued, the proposed FTT would also apply on the basis of where the market participant is resident. This means, for example, that a French asset manager trading in Microsoft shares would be subject to a 10 bp tax on both sides of the trade (plus the cascading costs from higher up the value chain), whereas an asset manager based in Stockholm would not. The same logic would apply to any FX derivative that was taken out to manage the funds' currency exposure. All else being equal therefore, the Stockholm-based asset manager would generate superior investment returns.
- **A bifurcated single market:** As a result of this asymmetry, the FTT would very likely result in a bifurcation of performance, client demand and – ultimately – profitability between asset managers based inside and asset managers based outside the FTT zone. This would appear to run counter to the Commission's stated primary objective of ensuring that taxation of financial services avoids distorting the European single market.
- **Motivation to relocate:** The central role of residency in determining whether a group is liable for the FTT or not seems likely to create a 'push' factor for those asset management groups currently based in FTT countries, incentivizing them to consider relocating outside the FTT area.

The tax burden would fall most heavily on retail investors

Investors with short holding periods and/or products with high levels of portfolio turnover will be particularly impacted by the proposed FTT. Our analysis suggests that much of the burden of the FTT would fall on retail investors rather than institutional investors and – perhaps unsurprisingly – that those investors based in the FTT area would be particularly adversely impacted.

Even before cascade effects and indirect effects (wider spreads, etc.) are considered, we estimate that a typical retail investor from the Euro-11 area could expect to incur an annual FTT charge of 33 bp, while a similar institutional fund manager would incur 11 bp in tax. On this basis, a 30 year-old retail investor in the Euro-11 area who invested €1,000 a year until retirement at 65 could expect to see 14% of the principal investment consumed by the FTT. Once again, once the cascade effect of the tax is considered, the resulting tax burden would likely be two or three times greater.

Money market funds potentially uneconomic

Of all of the investment products provided by European fund managers, we believe that money market funds would be the most heavily impacted by the introduction of a FTT. This is because, as noted above, we believe the FTT will asymmetrically weigh on products with high levels of portfolio turnover and/or short investor holding periods – money market funds would suffer on both counts.

While money market funds account for only 18% of AUM in the 11 countries subject to the FTT (source: EFAMA) and a far smaller proportion of industry revenues, we estimate that they could be liable for as much as 52% of the tax due from the industry (based on current asset allocations). Based on comparatively conservative assumptions (three-month average holding period, and 3x secondary turnover each year) we estimate that a typical money market fund in the FTT area could incur a tax charge of 100 bp a year. With overnight EURIBOR currently at 8 bp this is likely to make money market funds uneconomic for many investors.

Adverse impact on fixed income investors

The introduction of the FTT in its current form would also have significant implications for fixed income investors. We highlight three of these below:

1. Pushing investors up the risk curve: For the same reason that the FTT would weigh heavily on money market funds, short-duration bond funds with high portfolio turnover and shorter-than-average holding periods are also likely to suffer under the FTT. The cost of the FTT would also consume a relatively higher proportion of the yield available on good-quality credit instruments and sovereign debt funds.

It seems likely therefore that the FTT would push investors further along the risk curve in search of higher-yielding fixed-income instruments where the impact of the FTT is proportionately lower. Such funds tend to provide fund managers with a higher revenue margin, and therefore many fund managers may see a positive mix shift as a result. Less positively however, such a flow of capital may further inflate what some market commentators (Source: FT) regard as a 'bubble' in some high-yield credit instruments.

2. Disincentivizes hedging: Unlike the existing transaction taxes in France and Italy, the proposed FTT would extend taxation to fixed income and FX derivatives. Although the current proposals are not entirely clear, it also appears that the posting and return of collateral for derivative contracts would also be deemed a taxable event. The European Commission expects derivative volumes to decline by 75% after the introduction of the FTT, creating associated liquidity costs for users.

Many fund managers use such derivatives for efficient portfolio management purposes, duration management and for managing foreign exchange exposures. We would expect the demand of such investors to be comparatively elastic however, given the comparatively large notional values involved and current low returns available. As such, we would expect use of these risk mitigation techniques to fall materially with the introduction of any FTT.

3. Encourages OTC instruments: One particularly important implication of the FTT in our view is that – contrary to other regulation such as EMIR – it incentives investors to use OTC instruments rather than their exchange-traded alternatives.

- **Avoiding the roll:** A fixed income investor seeking to hedge a portfolio could use an exchange traded future, but this would either expire or need to be rolled every three months – incurring an FTT liability each time. An investor using an OTC equivalent would not need to roll the contract and would avoid triggering an FTT liability each quarter.
- **Avoiding CCP margining:** Collateral transfers and margin payments (both initial & variation margin) are considered to be financial transactions for the purposes of the FTT, and therefore they constitute taxable events. By using an non-CCP cleared OTC instrument this element of the taxation on exchange traded futures could be avoided.

Potential impact on corporate governance

The proposed FTT may also have an impact on corporate governance in Europe. We identify three ways in which the tax could potentially impact corporate governance:

1. Potential for volumes to 'leak' into other products: The FTT may potentially encourage the use of alternative instruments such as financial spread-betting, especially among retail investors. Financial spread-betting is legally a gambling instrument, and therefore likely to be exempt from the financial transaction tax. With no transfer of legal ownership, the holder of a spread-betting position is not entitled to any voting rights – a feature that potentially has negative implications for corporate governance.

2. Problems of passive investment: As noted above, a secondary objective of the FTT appears to be to encourage investors to move towards more passive forms of investment management. Passive investment funds such as ETFs and trackers invest on a formulaic basis, buying certain stocks in certain sizes regardless of a group's track record of corporate governance.

3. Opportunity from buy & hold: Should the FTT encourage more 'buy & hold' management, then potentially, long-term corporate engagement would be improved. However, according to data from the UK Investment Management Association (IMA) 86% of the average UK fund managers' portfolio (by value) was held for at least one year, while 42% of stocks (by value) were held for at least five years. As such, it appears that many fund managers are already 'buying and holding' a core part of their portfolio, thus limiting the potential benefits for corporate governance from this initiative.

Investors in the FTT area will have fewer investment options

It also seems likely that investors in the FTT area will see a reduction in the range of investment options as a result of the tax:

1. Operational costs: Introduction of the FTT would create significant operational and technical hurdles for asset managers, compliance with which will incur material expense. For those asset management groups with comparably small interests in the FTT area, it may prove more profitable to simply stop offering investment services to investors in the FTT area rather than build the required infrastructure.

2. Investment isolation: As noted above, the FTT would also apply to investors in the FTT area who use derivatives to hedge their currency exposure. Because of this, we would expect investors within the scope of the FTT to favour Euro-denominated instruments (thus both avoiding FX risk and the tax on the currency hedge). As international investors are also likely to be incentivized not to invest in assets within the FTT area, we see the potential for FTT markets (and local investors) to become increasingly parochial and isolated from global markets.

3. Loss from short-selling: The European Securities and Markets Authority (ESMA) recently introduced rules to ensure that investors receive 100% of any profits generated from lending out stocks held in their portfolio. Although the Commission proposals exempt one 'leg' of the trade from the FTT, given that most stock lending generates only a high-single-digit basis point return, this appears to be another market that may find it difficult to withstand the additional burden of the proposed FTT. As a result, investors in the FTT area could lose the additional investment returns from this activity.

4. Inferior risk/return tradeoff: Modern Portfolio Theory implies that a reduction in efficient portfolio management techniques, a reduction in geographical diversification, a reduction in funds available to investors and an inability to benefit from lending stocks will together culminate in an inferior risk/return tradeoff for investors in the FTT area. In our view, this will likely lead to a material decline in demand for asset management services in the FTT area.

Passive investment in the FTT area also likely to suffer

Although a secondary objective of the Commission's proposals appears to be to promote passive investing, we note two areas in which the FTT may actually inhibit passive vehicles in the FTT area:

1. Increased tracking error: By increasing both the direct cost of trading (via the tax) and indirectly (via lower liquidity) we believe that the FTT will exacerbate the trade-off that passive funds already face between rebalancing portfolio to minimize tracking error, and avoiding the frictional costs of trading to minimize tracking error. For this reason, we would expect passive funds in the FTT to see an increase in tracking error with the introduction of the FTT.

2. €132 bn in ETFs may leave the FTT area: As highlighted in our recent report (*What a US$1.5 tn ETF sector could mean for European fund managers*, March 27, 2013), ETFs are one of the fastest growing areas of the European financial sector, with a five-year CAGR of +23%. Our analysis of Bloomberg data suggests that 466 of the 1,802 ETFs listed on European stock exchanges are domiciled in the FTT area. We would expect these ETFs, which account for €132 bn of assets in total, to consider redomiciling outside the FTT area for reasons of tax efficiency.

May discourage competition in fund management

Although the FTT is due to take effect from January 2014, it is not clear how collection of tax would work in practice. It is clear, however, that implementation of systems to measure and collect the tax would be complex. Under the Commission's proposals, electronic trades would have to pay the tax immediately, while other transactions would be required to pay the tax within three days.

Implementation of, and ongoing compliance with, the rules would therefore be expensive for any asset manager with exposure to the FTT area. As with previous onerous regulation, such as the US FATCA rules for example, we believe that by increasing the fixed cost base of asset managers, the FTT will asymmetrically impact smaller asset managers. This would have the effect of increasing the minimum efficient scale of the industry and raising the barriers to entry for new asset managers.

This net effect of the FTT is therefore likely to be to reduce competition in the fund management industry, helping the larger listed peers to generate economic rents (earnings above economically normal levels). Although asset management earnings may be significantly lower therefore, the valuation applied to these earnings may actually rise over the long run to reflect the higher barriers to entry in the industry (before consideration of any broader rise in the market cost of equity as a result of the FTT).

A potential €17.0 bn tax for EU asset managers and their clients

The FTT may raise €11.3 bn from FTT area fund managers

Under the current proposals, the FTT would raise tax revenue from the activities of FTT zone fund managers in two distinct respects:

1. Sales of units: Purchases of UCITS funds by investors are technically an act of primary issuance, and are therefore likely to be outside the scope of any transaction tax. Redemptions of funds, however, would be fully taxable at the 10 bp rate.

2. Portfolio turnover: The underlying transactions within any investment portfolio domiciled in the FTT area would also be subject to the tax, both on acquisition and disposals, at a rate of 10 bp.

Exhibit 31: We estimate that the asset management industry in the FTT area would generate €11.3 bn in tax
Assuming direct costs of the FTT only. Based on total AUM data for the 11 FTT countries (excl. Estonia, for which no data was available) and using Lipper FMI data on asset allocations.

Combined impact

2012	FTT (€mn)	% of FTT	Impact (bps)
Equity	1,879	17%	17.3bps
Bonds	2,024	18%	21.7bps
Balanced	1,180	10%	22.5bps
Other UCITS	371	3%	22.5bps
Money Market	5,863	52%	100.0bps
Total	11,317	100%	

Impact of FTT from underlying portfolio turnover

2012	AUM (€bn)	Portfolio turnover	FTT @ 10bps (€mn)	% of AUM	% of FTT
Equity	1,084	0.7x	1,518	33%	18%
Bonds	934	1.0x	1,868	28%	23%
Balanced	524	1.0x	1,049	16%	13%
Other UCITS	165	1.0x	329	5%	4%
Money Market	586	3.0x	3,518	18%	42%
Total	3,294	-	8,282	100%	100%

Impact of FTT from fund redemptions

2012	AUM (€bn)	Average holding period	FTT @ 10bps (€mn)	% of AUM	% of FTT
Equity	1,084	3.0yrs	361	33%	12%
Bonds	934	6.0yrs	156	28%	5%
Balanced	524	4.0yrs	131	16%	4%
Other UCITS	165	4.0yrs	41	5%	1%
Money Market	586	0.25yrs	2,345	18%	77%
Total	3,294	-	3,035	100%	100%

Source: EFAMA, Lipper FMI, Goldman Sachs Research estimates.

In Exhibit 31 we use a top-down approach to map these taxes onto the AUM of the 11 countries in the FTT area, which currently stands at €3.3 tn.

Excluding cascade and second-order effects, and before consideration of any potential mitigation, we estimate that the redemption of UCITS funds in the FTT area would generate annual tax revenues of €3.0 bn per annum. On the same basis, we estimate that portfolio turnover would generate tax revenues of approximately €8.3 bn. In sum, this implies that the activities of asset managers in the FTT area would generate annual transaction tax revenues of €11.3 bn.

The forecast tax burden is sensitive to our assumptions

The top-down model we use to assess the impact of the proposed FTT contains two key estimates:

1. Holding periods: Although gross redemption data from European asset managers provides an accurate guide to current holding periods, these holding periods will vary year-to-year depending on market conditions and investor mix. For this reason, we have sought to apply through-the-cycle holding periods of 3-6 years for all funds apart from money market funds, for which holding periods are significantly shorter. Increasing all holding periods by 10% would lead to a 2.0% decrease in the total estimated tax take.

2. Portfolio turnover: Even within asset classes, portfolio turnover varies significantly across products and strategies. We apply similar holding periods to those used by the European industry association, EFAMA, in its analysis of portfolio turnover.

Estimating the taxable turnover of European money market funds, however, is complicated by the fact that they purchase many instruments at issuance (which is exempt from the FTT). As a result of this, and the very high turnover of money market funds, the output of our analysis is especially sensitive to our estimate of money market turnover.

A 10% decrease in all portfolio turnover would lead to a 7.9% reduction in the estimated tax take.

Cascade effect would increase the impact of the tax two-fold or three-fold

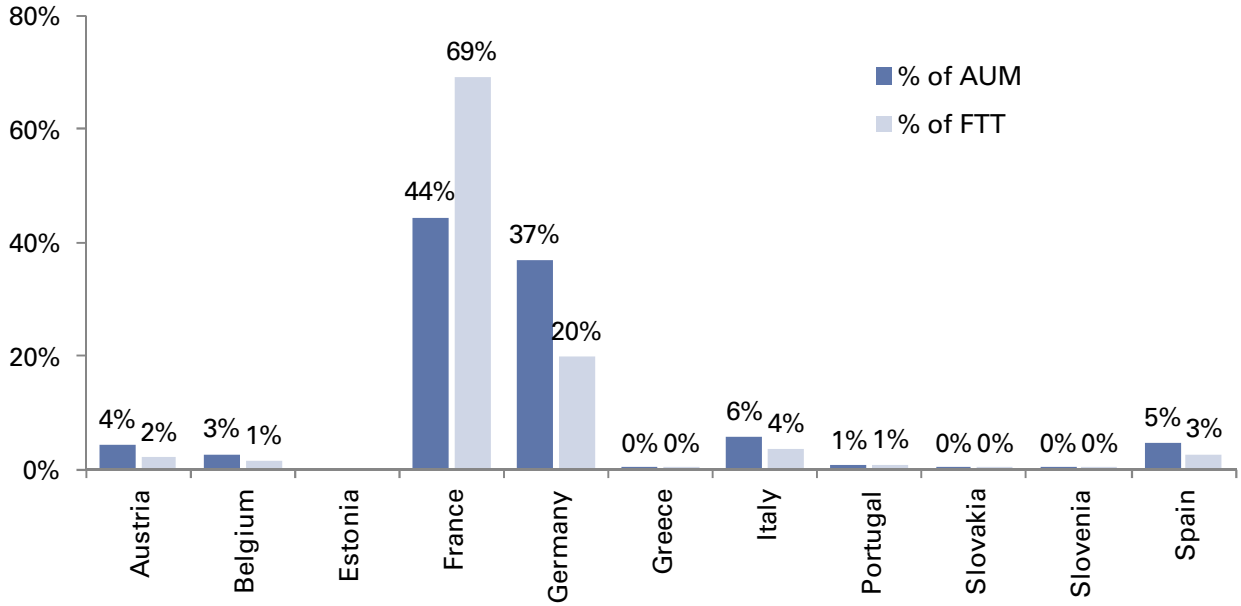
The estimate above includes the direct costs of the tax only. As noted, the FTT is likely to cascade along the value chain, such that the resulting tax burden is likely to be two or three times greater.

Asymmetric geographical burden of the tax

We blend data from the EFAMA with data from Lipper FMI, and plug it into the above model to estimate the potential spread of the tax burden across ten members of the FTT area (there is insufficient data to make estimates for Estonia).

Using this approach, we estimate that while Germany accounts for 37% of AUM across the ten countries, it would incur only 20% of the FTT tax burden. In contrast, the large proportion of assets held in money market funds by French investors (and the comparatively high tax burden on money market funds) means that, on our estimates, France would account for 69% of the tax burden, despite only holding 44% of AUM.

Exhibit 32: We estimate that only 20% of the FTT burden would fall on Germany, despite accounting for 37% of total AUM in EU-11
Share of Euro-11 AUM vs. estimated contribution to FTT



Source: EFAMA, Lipper FMI, Goldman Sachs Research estimates.

Calculating the tax impact on the rest of Europe is more difficult

European fund managers outside the FTT area will not escape the impact of the FTT either:

1. Sales of units to FTT area investors: Redemption funds by investors in the FTT area would be fully taxable at the 10 bp rate.

2. Portfolio turnover in FTT area stocks: Even for funds based outside the FTT area, any transaction in the portfolio that involved an asset from the FTT area, or involved an FTT area institution would also be subject to the tax, both on acquisition and disposals, at a rate of 10 bp.

Clearly, therefore, the impact on asset managers based outside the FTT area will depend upon the proportion of FTT area investors they service, and the proportion of trading they do in FTT area instruments. There is insufficient granularity in the publically available information for us to model this objectively. The European fund management industry association (EFAMA), however, has used proprietary data to estimate that the activities of fund management groups based in European countries outside of the FTT area will contribute €5.7 bn pa in tax.

European fund managers could generate €17.0 bn in FTT

Adding this to our previous estimate for asset managers in the FTT area implies that the activities of the European asset management industry would in total generate €17.0 bn pa in tax. This is before considering any mitigation or investor response to any tax, but also prior to consideration of any cascade effects.

Listed asset managers: FTT negative for all, but worse for some

Any asset manger with clients or AUM in the FTT area is impacted

Our top-down analysis illustrates that the proposed FTT could have a large potential impact on the European asset management industry. In order to identify some of the stock-specific implications, we examine how the tax may impact the listed European asset managers from a bottom-up perspective.

Exhibit 33: The impact of the FTT varies significantly between various asset managers, depending on the % of clients from the FTT area and the % of AUM that is invested in the FTT area
Analysis of impact of the proposed FTT on seven asset managers under our research coverage *denotes estimate

Combined impact of (1) and (2)

	Schroders					FTT area		
	Retail	Institutional	Aberdeen	Ashmore	GAM Holding	B.Generali	Azimut	Mediolanum
Implied total FTT (Euro mn)	69.9	37.3	25.4	1.8	59.7	15.8	28.2	37.4
FTT as % of total group AUM (bps)	8bps	3bps	1bps	0bps	6bps	16bps	16bps	16bps
Average net management fee	80bps	41bps	46bps	74bps	45bps	78bps	79bps	140bps
FTT as % of net management fee	10%	6%	3%	1%	14%	21%	20%	11%

(1) Tax on fund redemptions from investors in the FTT area

	Schroders					FTT area		
	Retail	Institutional	Aberdeen	Ashmore	GAM Holding	B.Generali	Azimut	Mediolanum
AUM (Euro bn)	85.0	146.0	220.9	49.0	95.3	9.9	17.6	23.4
% clients in FTT area	28%	18%	33%	21%	38%*	NA	NA	NA
Average holding period	2.1yrs	7.1yrs	4.4yrs	5.6yrs	4.0yrs*	5.0yrs*	5.0yrs*	5.0yrs*
Implied FTT (Euro mn)	11.3	3.7	16.6	1.8	9.1	2.0	3.5	4.7
Estimated FTT rate p.a. (bps)	4.8bps	1.4bps	2.3bps	1.8bps	2.5bps	2.0bps	2.0bps	2.0bps

(2) Tax on portfolio turnover of FTT area assets

	Schroders					FTT area		
	Retail	Institutional	Aberdeen	Ashmore	GAM Holding	B.Generali	Azimut	Mediolanum
AUM (Euro bn)	85.0	146.0	220.9	49.0	95.3	9.9	17.6	23.4
% assets in FTT area	23%	23%	3%	0%	38%*	NA	NA	NA
Portfolio turnover*	1.5x	0.5x	0.7x	0.7x	0.7x	0.7x	0.7x	0.7x
Implied FTT (Euro mn)	58.6	33.6	8.8	0.0	50.7	13.9	24.6	32.7
Estimated FTT rate p.a. (bps)	30.0bps	10.0bps	14.0bps	NA	14.0bps	14.0bps	14.0bps	14.0bps

Note: we exclude deposits and insurance from AUM for the Italian asset managers and private bank assets for Schroders. FTT area AUM are based on company disclosure of exposure to the Euro or Eurozone/Continental European assets, which is an imperfect proxy for the FTT area.

Source: Company data, Goldman Sachs Research estimates.

As Exhibit 33 illustrates, we estimate that the FTT on fund redemptions would typically cost investors from the FTT area around 2 bp pa. The greater granularity provided by Schroders enables us to conclude that this figure is closer to 5 bp for retail investors and closer to 1.4 bp for institutional investors.

The impact of the tax on portfolio turnover of FTT area assets would be much more material. We estimate an average FTT cost of 14 bp pa.

What this means for a typical investor in the FTT area

Our estimates suggest that the average retail investor based in the FTT area and investing in FTT area securities may incur an annual FTT charge equal to 35 bp. As Exhibit 34 illustrates, on this basis the FTT would consume 14% of the principal investment of a 30 year-old by the time of retirement at 65.

Exhibit 34: Based on our bottom-up analysis, we estimate that a 30 year-old investing €1,000 a year until retirement at 65 would pay 8.2% of the principal investment in FTT
Typical Euro-11 retail portfolio generating a 6% return pa

Year	Year 1	Year 2	Year 3	Year 4	...Year 34	Year 35
Cumulative investment	1,000	2,000	3,000	4,000	34,000	35,000
Cumulative investment	60	184	375	637	76,435	83,121
Total portfolio	1,060	2,184	3,375	4,637	110,435	118,121
Tax	4	7	11	15	367	392
Cumulative tax	4	11	22	37	4,483	4,875
FTT as % of cash invested						13.9%
FTT as % of closing portfolio						4.1%
FTT as % of returns						5.9%

Source: Goldman Sachs Research estimates.

Scenario analysis: What impact might the FTT have on profits?

In order to better understand how a European Financial Transaction Tax may impact the stocks under our coverage, we have constructed a scenario analysis.

The European Commission expects transaction volumes in cash instruments to decline by 15% as a result of the tax. In the absence of data on the price elasticity of European AUM, we assume that the FTT has a similar impact on AUM, i.e. that 15% of investors with funds that invest in the FTT area redeem their investment, as do 15% of those investors based in the FTT area. For those groups based in the FTT area (and therefore whose whole client base will pay tax on fund redemptions and portfolio turnover) we assume investors redeem 25% of AUM.

For fund managers outside of the FTT area there is some double counting (i.e. FTT area investors who invest in FTT area assets) for which we are unable to adjust.

Exhibit 35 shows the output of this analysis. By virtue of its long holding periods and because it invests outside of the FTT area, Ashmore would see only a very modest impact from the FTT in this scenario. Our analysis implies that the other fund managers based outside the FTT area (Schroders, Aberdeen and GAM Holding) could see a 10% reduction in PBT as a result of the FTT.

Exhibit 35: In our scenario, asset managers based inside the FTT area are most impacted by the tax
Estimated PBT impact of a scenario in which 15% of AUM from FTT area investors, and 15% of AUM invested in the FTT area, is lost as a result of the FTT. For FTT area asset managers we assume 25% of AUM is redeemed

					FTT area		
	Schroders	Aberdeen	Ashmore	GAM Holding	B.Generali	Azimut	Mediolanum
AUM from FTT area clients (Euro bn)	50.1	72.9	10.3	36.2	9.9	17.6	23.4
AUM invested in FTT area (Euro bn)	53.1	6.3	0.0	36.2	-	-	-
Loss of AUM due to FTT (Euro bn)**	15.5	11.9	1.5	10.9	2.5	4.4	5.8
Net revenue margin (bps)	57bps	50bps	68bps	30bps*	170bps	130bps	179bps
Marginal cost:income ratio (%)	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Forecast 2014 PBT (€ mn)	€593	€418	€310	€236	€204	€199	€403
Pro forma impact (%)	-10%	-10%	-2%	-10%	-14%	-20%	-18%

*we assume GAM Holdings disproportionately loses lower margin private label funds. ** estimate based on our scenario assumptions

Source: Goldman Sachs Research estimates.

Asset managers in the FTT area would be worst hit

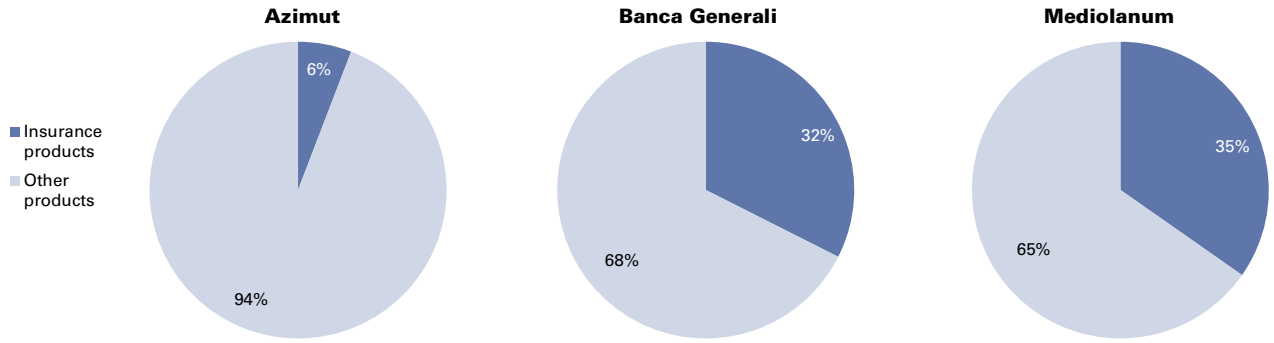
The three stocks that are most negatively impacted in our scenario analysis are the independent Italian asset managers Azimut, Banca Generali and Mediolanum, which would see a 14%-20% decline in pre-tax profits in our scenario:

1. FTT residency a large problem, and hard to circumvent short term: Being based in the FTT area puts Azimut, Mediolanum and Banca Generali at a disadvantage vs. asset managers based outside the FTT zone. The cost of the tax means that product returns would be lower than identical products based outside the Eurozone, while potential customers outside the FTT area would incur an additional 10 bp 'exit charge' when they redeem a product. Although some asset managers in the FTT area may choose to redomicile to avoid these costs, the three Italian asset managers under our coverage would likely find this difficult owing to the vertical integration of their distribution channels.

2. International ambitions may also suffer: Azimut currently has operations across a number of countries including Switzerland, China and Turkey, and is looking to expand in Brazil. For the reasons given above, the current broad definition of the tax may disadvantage groups such as Azimut in pursuing their international expansion.

3. Insurance exemption a potential opportunity: The Italian asset managers are not more negatively impacted by the current FTT proposals because all three groups distribute insurance products. Such products are exempt from the FTT, a feature that may see demand for such products increase relative to traditional asset management products. We expect that this exemption will provide Mediolanum and Banca Generali in particular with a degree of earnings mitigation.

Exhibit 36: Mediolanum and Banca Generali may benefit from the exclusion of insurance products from the FTT
Insurance products as a % of AUM



Source: Company data, Goldman Sachs Research.

FTT impact assessment: Insurance

Insurers: Less likely to be affected, but indirect impacts a concern

While European insurers fall within the scope of the European FTT, we believe that the proposals would have a significantly smaller direct impact on the sector compared with banks or exchanges. The overarching aim of the FTT appears to encourage long-term investing and insurers have always maintained that they are "buy and hold" investors. However, we believe the investment strategies of insurers could be altered by the FTT, which may result in weaker risk management and lower investment returns particularly for insurers domiciled in countries not signed up to FTT. Costs are likely to rise for insurers domiciled in countries that fall under the scope of the FTT and we expect this to be ultimately passed on to savers and pensioners. We also believe that the FTT could cause a decline in the asset prices and creditworthiness of other financial institutions, which could have a significant impact on the insurance sector.

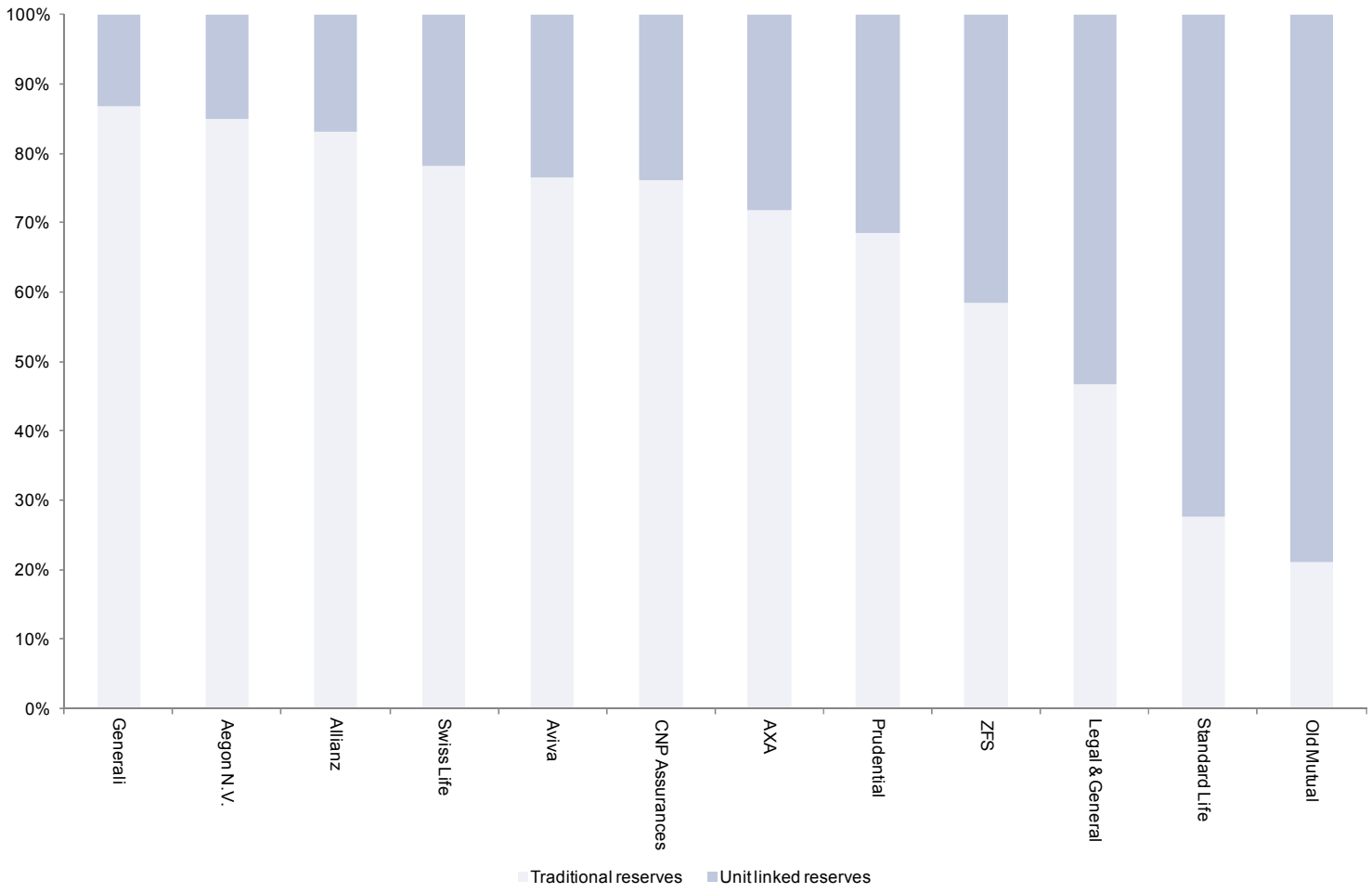
Insurers should either be able to pass on or absorb extra costs from the FTT

Insurers are asset-intensive businesses, so they will be affected by anything that has an impact on the cost of buying and selling assets. P&C insurers derive less of their revenues from investment income and are less impacted by asset-related issues. Life insurers typically manage assets on behalf of their customers by either offering an asset management style product in which investment decisions are borne by the policyholder and a fee is earned by the insurer, or by choosing the asset strategy and offering guarantees to the policyholder (spread business).

Regarding fee business, we believe that any transaction tax would be passed directly onto the policyholders. This is currently the practice with UK stamp duty, and therefore any FTT is likely to have a limited impact on insurer margins.

Regarding spread business, insurers may be more inclined to absorb higher transaction costs. However, as these are typically long-term products, insurers invest with a long time horizon and hold assets to maturity. Therefore, we do not anticipate a material impact on spread margins. Investment policies may change, particularly for insurers domiciled in countries outside the scope of the FTT, which we cover below.

Exhibit 37: Any extra charges from fee earning business are likely to be passed on to policyholders
% split of reserves for major European life insurers (FY2012)



Source: Company data, Goldman Sachs Research estimates.

The FTT could impact investment policy and risk management

Fundamentally, insurers seek to match the nature, currency and duration of their assets and liabilities. Insurers' liabilities are of relatively long duration, so insurers have often had to invest at the long end of the yield curve. Liabilities (particularly for life insurance products) are also fairly illiquid because policyholders cannot simply cash in their products, or are heavily penalized for doing so. Therefore, insurers can typically invest in illiquid investments, often earning a liquidity premium for doing so. Examples of such investment include commercial property, infrastructure and commercial mortgages. Asset trading is therefore relatively uncommon, partly because the velocity of an insurer's balance sheet is slow and there is little need to continually liquidate assets; in addition, various assets are not easily tradeable.

Historically, insurers' currency has also been closely matched. In other words, UK liabilities have been met with UK assets, which meant that any country-specific shocks impacted both sides of the balance sheet. However, following the introduction of the euro, insurers were able to match liabilities from a particular European country with assets originated in a different country without taking currency risk. This led to a tendency to match German liabilities with higher yielding Italian sovereign bonds. However, following impairments to Greek debt and heightened concerns over similar haircuts to other European sovereign bonds, insurers have generally altered portfolios so as to match not just the currency of the assets and liabilities, but the country and therefore political risk of both.

Insurers have also looked to international bonds as a source of diversification, hedging the currency risk using derivatives. For instance, a UK insurer with a large annuity book may buy emerging market debt for the yield pick-up, but hedge the currency risk with derivatives. We believe that the FTT will cause insurers to react differently, depending on their domicile:

Insurers domiciled in a country participating in the FTT

Insurers domiciled in Germany, France, Spain, Italy, Greece, Belgium, Portugal, Austria, Estonia, Slovenia or Slovakia would face extra costs when transacting in securities. This could result in more long-term investing and potentially greater investment in infrastructure, commercial property and other asset classes outside the scope of the FTT. Other investors may shun investments domiciled in those countries increasing their yield, which would improve returns to policyholders.

Insurers domiciled in a country not participating in the FTT

The proposed FTT would most likely increase the attractiveness of securities issued by countries that have not signed up to the agreement, such as the UK, Switzerland and Netherlands. Insurers in countries not participating in the FTT may concentrate their holdings in securities not subject to the FTT. This would have the potential to increase investment risks (by reducing diversification), as well as potentially earn a lower return for policyholders (if other investors employ a similar strategy).

Indirect impacts of the FTT could also be significant

As large investors in corporate credit and other risky assets, any negative impact on asset prices is likely to negatively affect the insurers. Any sweeping changes to banks and exchanges could bring their creditworthiness into question, impacting insurer asset prices. In such a scenario, the less asset-intensive P&C insurers would likely outperform life insurers, in our view, but on the whole, we would expect insurers to fare significantly better than banks and exchanges should the proposals for the FTT become law.

Main impact is on insurance owned third-party asset management businesses

A number of quoted European insurers own asset management businesses. We believe these would likely face the same pressures as the pure-play asset managers discussed in detail elsewhere in this report. In Exhibit 38, we have followed the same approach used in respect of the pure-play asset managers, with a core assumption of a loss of 15% of AUM from FTT area investors and 15% of AUM invested in the FTT area. Given that data is scant to non-existent, we view this as simply an indicative scenario analysis. However, it does suggest that as FTT area-focused asset management forms a relative small part of these insurers' business mix, the likely impact would be relatively small.

Exhibit 38: Scenario analysis: Estimated impact of FTT on insurance-owned asset managers appears relatively small
Scenario analysis of impact of FTT on insurance-owned asset manager and resultant impact to Group 2014E PBT

	Allianz	Standard Life	AXA	Pru (M&G)	L&G	AEGON	Delta Lloyd	Old Mutual
Currency	€	£	€	£	£	€	€	£
AuM FTT Clients (bn)	0	9	70	15	15	10	5	0
% Redemption	-15%	-15%	-15%	-15%	-15%	-15%	-15%	-15%
AuM Inv FTT area (bn)	331	9.1	50	10	10	10	5	0
% Redemption	-15%	-15%	-15%	-15%	-15%	-15%	-15%	-15%
Loss AuM due to FTT (bn)	-50	-3	-18	-4	-4	-3	-2	0
Net Revenue Margin (bps)	40	50	30	50	15	27	30	50
Marginal C/I Ratio	30%	30%	30%	30%	30%	30%	30%	30%
Loss PBT (mn)	-139	-10	-38	-13	-4	-6	-3	0
As % 2014E PBT	**-1.5%**	**-1.2%**	**-0.7%**	**-0.4%**	**-0.3%**	**-0.3%**	**-0.3%**	**0.0%**

Source: Company data, Goldman Sachs Research estimates.

Financial advisory disclosures

Goldman Sachs is acting as a financial advisor in connection with an announced strategic matter involving the following company or one of its affiliates: ING Groep N.v.

Goldman Sachs is acting as a financial advisor in connection with an announced strategic matter involving the following company or one of its affiliates: Assicurazioni Generali - Societa Per Azioni

Goldman Sachs is acting as a financial advisor in connection with an announced strategic matter involving the following company or one of its affiliates: Banco Bilbao Vizcaya Argentaria, Sociedad Anonima

Goldman Sachs is acting as a financial advisor in connection with an announced strategic matter involving the following company or one of its affiliates: Aviva Plc

Goldman Sachs is acting as a financial adviser to Barclays

Disclosure Appendix

Reg AC

We, Jernej Omahen, Chris Turner, CFA, Jean-Francois Neuez, Luca De Angelis, William Elderkin, Frederik Thomasen, Martin Leitgeb, CFA, Pawel Dziedzic and Ravi Tanna, hereby certify that all of the views expressed in this report accurately reflect our personal views about the subject company or companies and its or their securities. We also certify that no part of our compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

Investment Profile

The Goldman Sachs Investment Profile provides investment context for a security by comparing key attributes of that security to its peer group and market. The four key attributes depicted are: growth, returns, multiple and volatility. Growth, returns and multiple are indexed based on composites of several methodologies to determine the stocks percentile ranking within the region's coverage universe.

The precise calculation of each metric may vary depending on the fiscal year, industry and region but the standard approach is as follows:

Growth is a composite of next year's estimate over current year's estimate, e.g. EPS, EBITDA, Revenue. **Return** is a year one prospective aggregate of various return on capital measures, e.g. CROCI, ROACE, and ROE. **Multiple** is a composite of one-year forward valuation ratios, e.g. P/E, dividend yield, EV/FCF, EV/EBITDA, EV/DACF, Price/Book. **Volatility** is measured as trailing twelve-month volatility adjusted for dividends.

Quantum

Quantum is Goldman Sachs' proprietary database providing access to detailed financial statement histories, forecasts and ratios. It can be used for in-depth analysis of a single company, or to make comparisons between companies in different sectors and markets.

GS SUSTAIN

GS SUSTAIN is a global investment strategy aimed at long-term, long-only performance with a low turnover of ideas. The GS SUSTAIN focus list includes leaders our analysis shows to be well positioned to deliver long term outperformance through sustained competitive advantage and superior returns on capital relative to their global industry peers. Leaders are identified based on quantifiable analysis of three aspects of corporate performance: cash return on cash invested, industry positioning and management quality (the effectiveness of companies' management of the environmental, social and governance issues facing their industry).

Disclosures

Coverage group(s) of stocks by primary analyst(s)

Jernej Omahen: Europe-Pan-Euro Banks. Chris Turner, CFA: Europe-Diversified Financials. Jean-Francois Neuez: Europe-Pan-Euro Banks. William Elderkin: Europe-Insurance. Frederik Thomasen: Europe-Pan-Euro Banks. Martin Leitgeb, CFA: Europe-Pan-Euro Banks. Pawel Dziedzic: Europe-Pan-Euro Banks. Ravi Tanna: Europe-Insurance.

Europe-Diversified Financials: Aberdeen Asset Management, Ashmore Group, Azimut Holding, Banca Generali, Bolsas y Mercados Espanoles, Deutsche Boerse AG, GAM Holding Ltd., ICAP plc, London Stock Exchange, Man Group, Mediolanum, Moscow Exchange, Partners Group, Schroders, Tullett Prebon Plc, Warsaw Stock Exchange.

Europe-Insurance: AXA, Admiral Group Plc, Aegon N.V., Ageas SA/NV, Allianz SE, Amlin, Assicurazioni Generali, Aviva plc, Baloise, CNP Assurances, Catlin Group, Delta Lloyd, Direct Line Group, Euler Hermes, Fondiaria-Sai, Fondiaria-Sai (Savings), Gjensidige Forsikring ASA, Hannover Ruckversicherung, Helvetia Holding AG, Hiscox, Legal & General Group, Mapfre S.A., Munich Re (reg), Old Mutual plc, Powszechny Zaklad Ubezpieczen, Prudential Plc, RSA Insurance Group, Resolution Ltd., SCOR, Sampo, St. James's Place plc, Standard Life Plc, Swiss Life Holding, Swiss Re, Talanx AG, Topdanmark A/S, Tryg A/S, Unipol (Ordinary Shares), Unipol (Preference Shares), Vienna Insurance Group, Zurich Insurance Group.

Europe-Pan-Euro Banks: Alpha Bank, BBVA, BNP Paribas, BRE Bank, Banca Monte dei Paschi di Siena, Banca Popolare di Milano, Banco BPI, Banco Comercial Portugues, Banco Espirito Santo, Banco Popolare, Banco Popular Espanol, Banco Sabadell, Banco Santander, Banesto, Bank Handlowy, Bank Pekao, Bank of Cyprus, Bank of Ireland, Bank of Piraeus, Bankinter, Barclays plc, CaixaBank SA, Commerzbank AG, Credit Agricole SA, Credit Suisse, DNB, Danske Bank, Deutsche Bank, Dexia, EFG Eurobank, EFG International, Erste Bank, HSBC, ING Groep N.V., Intesa Sanpaolo, Julius Baer Group, KBC Group NV, Komercni Banka, Lloyds Banking Group Plc, National Bank of Greece, Natixis, Nordea, OTP Bank Plc, PKO BP, Raiffeisen Bank International, Royal Bank of Scotland, SEB, Societe Generale, Standard Chartered, Svenska Handelsbanken, Swedbank, UBI Banca, UBS, UniCredit, Vontobel.

Company-specific regulatory disclosures

Compendium report: please see disclosures at http://www.gs.com/research/hedge.html. Disclosures applicable to the companies included in this compendium can be found in the latest relevant published research

Distribution of ratings/investment banking relationships

Goldman Sachs Investment Research global coverage universe

	Rating Distribution			Investment Banking Relationships		
	Buy	Hold	Sell	Buy	Hold	Sell
Global	31%	54%	15%	49%	42%	36%

As of April 1, 2013, Goldman Sachs Global Investment Research had investment ratings on 3,492 equity securities. Goldman Sachs assigns stocks as Buys and Sells on various regional Investment Lists; stocks not so assigned are deemed Neutral. Such assignments equate to Buy, Hold and Sell for the purposes of the above disclosure required by NASD/NYSE rules. See 'Ratings, Coverage groups and views and related definitions' below.

Price target and rating history chart(s)

Compendium report: please see disclosures at http://www.gs.com/research/hedge.html. Disclosures applicable to the companies included in this compendium can be found in the latest relevant published research

Regulatory disclosures

Disclosures required by United States laws and regulations

See company-specific regulatory disclosures above for any of the following disclosures required as to companies referred to in this report: manager or co-manager in a pending transaction; 1% or other ownership; compensation for certain services; types of client relationships; managed/co-managed public offerings in prior periods; directorships; for equity securities, market making and/or specialist role. Goldman Sachs usually makes a market in fixed income securities of issuers discussed in this report and usually deals as a principal in these securities.

The following are additional required disclosures: **Ownership and material conflicts of interest:** Goldman Sachs policy prohibits its analysts, professionals reporting to analysts and members of their households from owning securities of any company in the analyst's area of coverage. **Analyst compensation:** Analysts are paid in part based on the profitability of Goldman Sachs, which includes investment banking revenues. **Analyst as officer or director:** Goldman Sachs policy prohibits its analysts, persons reporting to analysts or members of their households from serving as an officer, director, advisory board member or employee of any company in the analyst's area of coverage. **Non-U.S. Analysts:** Non-U.S. analysts may not be associated persons of Goldman, Sachs & Co. and therefore may not be subject to NASD Rule 2711/NYSE Rules 472 restrictions on communications with subject company, public appearances and trading securities held by the analysts.

Distribution of ratings: See the distribution of ratings disclosure above. **Price chart:** See the price chart, with changes of ratings and price targets in prior periods, above, or, if electronic format or if with respect to multiple companies which are the subject of this report, on the Goldman Sachs website at http://www.gs.com/research/hedge.html.

Additional disclosures required under the laws and regulations of jurisdictions other than the United States

The following disclosures are those required by the jurisdiction indicated, except to the extent already made above pursuant to United States laws and regulations. **Australia:** Goldman Sachs Australia Pty Ltd and its affiliates are not authorised deposit-taking institutions (as that term is defined in the Banking Act 1959 (Cth)) in Australia and do not provide banking services, nor carry on a banking business, in Australia. This research, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act, unless otherwise agreed by Goldman Sachs. **Brazil:** Disclosure information in relation to CVM Instruction 483 is available at http://www.gs.com/worldwide/brazil/area/gir/index.html. Where applicable, the Brazil-registered analyst primarily responsible for the content of this research report, as defined in Article 16 of CVM Instruction 483, is the first author named at the beginning of this report, unless indicated otherwise at the end of the

text. **Canada:** Goldman, Sachs & Co. has approved of, and agreed to take responsibility for, this research in Canada if and to the extent it relates to equity securities of Canadian issuers. Analysts may conduct site visits but are prohibited from accepting payment or reimbursement by the company of travel expenses for such visits. **Hong Kong:** Further information on the securities of covered companies referred to in this research may be obtained on request from Goldman Sachs (Asia) L.L.C. **India:** Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (India) Securities Private Limited; **Japan:** See below. **Korea:** Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (Asia) L.L.C., Seoul Branch. **New Zealand:** Goldman Sachs New Zealand Limited and its affiliates are neither "registered banks" nor "deposit takers" (as defined in the Reserve Bank of New Zealand Act 1989) in New Zealand. This research, and any access to it, is intended for "wholesale clients" (as defined in the Financial Advisers Act 2008) unless otherwise agreed by Goldman Sachs. **Russia:** Research reports distributed in the Russian Federation are not advertising as defined in the Russian legislation, but are information and analysis not having product promotion as their main purpose and do not provide appraisal within the meaning of the Russian legislation on appraisal activity. **Singapore:** Further information on the covered companies referred to in this research may be obtained from Goldman Sachs (Singapore) Pte. (Company Number: 198602165W). **Taiwan:** This material is for reference only and must not be reprinted without permission. Investors should carefully consider their own investment risk. Investment results are the responsibility of the individual investor. **United Kingdom:** Persons who would be categorized as retail clients in the United Kingdom, as such term is defined in the rules of the Financial Services Authority, should read this research in conjunction with prior Goldman Sachs research on the covered companies referred to herein and should refer to the risk warnings that have been sent to them by Goldman Sachs International. A copy of these risks warnings, and a glossary of certain financial terms used in this report, are available from Goldman Sachs International on request.

European Union: Disclosure information in relation to Article 4 (1) (d) and Article 6 (2) of the European Commission Directive 2003/126/EC is available at http://www.gs.com/disclosures/europeanpolicy.html which states the European Policy for Managing Conflicts of Interest in Connection with Investment Research.

Japan: Goldman Sachs Japan Co., Ltd. is a Financial Instrument Dealer registered with the Kanto Financial Bureau under registration number Kinsho 69, and a member of Japan Securities Dealers Association, Financial Futures Association of Japan and Type II Financial Instruments Firms Association. Sales and purchase of equities are subject to commission pre-determined with clients plus consumption tax. See company-specific disclosures as to any applicable disclosures required by Japanese stock exchanges, the Japanese Securities Dealers Association or the Japanese Securities Finance Company.

Ratings, coverage groups and views and related definitions

Buy (B), Neutral (N), Sell (S) -Analysts recommend stocks as Buys or Sells for inclusion on various regional Investment Lists. Being assigned a Buy or Sell on an Investment List is determined by a stock's return potential relative to its coverage group as described below. Any stock not assigned as a Buy or a Sell on an Investment List is deemed Neutral. Each regional Investment Review Committee manages various regional Investment Lists to a global guideline of 25%-35% of stocks as Buy and 10%-15% of stocks as Sell; however, the distribution of Buys and Sells in any particular coverage group may vary as determined by the regional Investment Review Committee. Regional Conviction Buy and Sell lists represent investment recommendations focused on either the size of the potential return or the likelihood of the realization of the return.

Return potential represents the price differential between the current share price and the price target expected during the time horizon associated with the price target. Price targets are required for all covered stocks. The return potential, price target and associated time horizon are stated in each report adding or reiterating an Investment List membership.

Coverage groups and views: A list of all stocks in each coverage group is available by primary analyst, stock and coverage group at http://www.gs.com/research/hedge.html. The analyst assigns one of the following coverage views which represents the analyst's investment outlook on the coverage group relative to the group's historical fundamentals and/or valuation. **Attractive (A).** The investment outlook over the following 12 months is favorable relative to the coverage group's historical fundamentals and/or valuation. **Neutral (N).** The investment outlook over the following 12 months is neutral relative to the coverage group's historical fundamentals and/or valuation. **Cautious (C).** The investment outlook over the following 12 months is unfavorable relative to the coverage group's historical fundamentals and/or valuation.

Not Rated (NR). The investment rating and target price have been removed pursuant to Goldman Sachs policy when Goldman Sachs is acting in an advisory capacity in a merger or strategic transaction involving this company and in certain other circumstances. **Rating Suspended (RS).** Goldman Sachs Research has suspended the investment rating and price target for this stock, because there is not a sufficient fundamental basis for determining, or there are legal, regulatory or policy constraints around publishing, an investment rating or target. The previous investment rating and price target, if any, are no longer in effect for this stock and should not be relied upon. **Coverage Suspended (CS).** Goldman Sachs has suspended coverage of this company. **Not Covered (NC).** Goldman Sachs does not cover this company. **Not Available or Not Applicable (NA).** The information is not available for display or is not applicable. **Not Meaningful (NM).** The information is not meaningful and is therefore excluded.

Global product; distributing entities

The Global Investment Research Division of Goldman Sachs produces and distributes research products for clients of Goldman Sachs on a global basis. Analysts based in Goldman Sachs offices around the world produce equity research on industries and companies, and research on macroeconomics, currencies, commodities and portfolio strategy. This research is disseminated in Australia by Goldman Sachs Australia Pty Ltd (ABN 21 006 797 897); in Brazil by Goldman Sachs do Brasil Corretora de Títulos e Valores Mobiliários S.A.; in Canada by Goldman, Sachs & Co. regarding Canadian equities and by Goldman, Sachs & Co. (all other research); in Hong Kong by Goldman Sachs (Asia) L.L.C.; in India by Goldman Sachs (India) Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Seoul Branch; in New Zealand by Goldman Sachs New Zealand Limited; in Russia by OOO Goldman Sachs; in Singapore by Goldman Sachs (Singapore) Pte. (Company Number: 198602165W); and in the United States of America by Goldman, Sachs & Co. Goldman Sachs International has approved this research in connection with its distribution in the United Kingdom and European Union.

European Union: Goldman Sachs International, authorized and regulated by the Financial Services Authority, has approved this research in connection with its distribution in the European Union and United Kingdom; Goldman Sachs AG and Goldman Sachs International Zweigniederlassung Frankfurt, regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht, may also distribute research in Germany.

General disclosures

This research is for our clients only. Other than disclosures relating to Goldman Sachs, this research is based on current public information that we consider reliable, but we do not represent it is accurate or complete, and it should not be relied on as such. We seek to update our research as appropriate, but various regulations may prevent us from doing so. Other than certain industry reports published on a periodic basis, the large majority of reports are published at irregular intervals as appropriate in the analyst's judgment.

Goldman Sachs conducts a global full-service, integrated investment banking, investment management, and brokerage business. We have investment banking and other business relationships with a substantial percentage of the companies covered by our Global Investment Research Division. Goldman, Sachs & Co., the United States broker dealer, is a member of SIPC (http://www.sipc.org).

Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and our proprietary trading desks that reflect opinions that are contrary to the opinions expressed in this research. Our asset management area, our proprietary trading desks and investing businesses may make investment decisions that are inconsistent with the recommendations or views expressed in this research.

The analysts named in this report may have from time to time discussed with our clients, including Goldman Sachs salespersons and traders, or may discuss in this report, trading strategies that reference catalysts or events that may have a near-term impact on the market price of the equity securities discussed in this report, which impact may be directionally counter to the analysts' published price target expectations for such stocks. Any such trading strategies are distinct from and do not affect the analysts' fundamental equity rating for such stocks, which rating reflects a stock's return potential relative to its coverage group as described herein.

We and our affiliates, officers, directors, and employees, excluding equity and credit analysts, will from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives, if any, referred to in this research.

This research is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice. The price and value of investments referred to in this research and the income from them may fluctuate. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Fluctuations in exchange rates could have adverse effects on the value or price of, or income derived from, certain investments.

Certain transactions, including those involving futures, options, and other derivatives, give rise to substantial risk and are not suitable for all investors. Investors should review current options disclosure documents which are available from Goldman Sachs sales representatives or at http://www.theocc.com/about/publications/character-risks.jsp. Transaction costs may be significant in option strategies calling for multiple purchase and sales of options such as spreads. Supporting documentation will be supplied upon request.

In producing research reports, members of the Global Investment Research Division of Goldman Sachs Australia may attend site visits and other meetings hosted by the issuers the subject of its research reports. In some instances the costs of such site visits or meetings may be met in part or in whole by the issuers concerned if Goldman Sachs Australia considers it is appropriate and reasonable in the specific circumstances relating to the site visit or meeting.

All research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client websites. Not all research content is redistributed to our clients or available to third-party aggregators, nor is Goldman Sachs responsible for the redistribution of our research by third party aggregators. For all research available on a particular stock, please contact your sales representative or go to http://360.gs.com.

Disclosure information is also available at http://www.gs.com/research/hedge.html or from Research Compliance, 200 West Street, New York, NY 10282.