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The future of the European repo market

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Keynote Address

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Dear ladies and gentlemen,

It is a great pleasure to be here to share some thoughts on the important topic of the future of the European repo market.

The crisis has taught us that, while one does not need to go back in history to understand modern physics, the theory of economics is not strong enough that we can dispose of a historical approach. So to address the future let me start with the past. SLIDE 2 And the past of the repo market is a remarkable one.

Let me start by looking at the role of the repo market during the crisis. This is illustrated by the following table, which is my favourite piece of empirical evidence in the 115 pages of the chapter of the book that Tuomas Välimäki and I wrote on the implementation of monetary policy in the €-area . SLIDE 3

Change in euro money market turnover and increase in Eurosystem balance sheet (2008 – 2011)

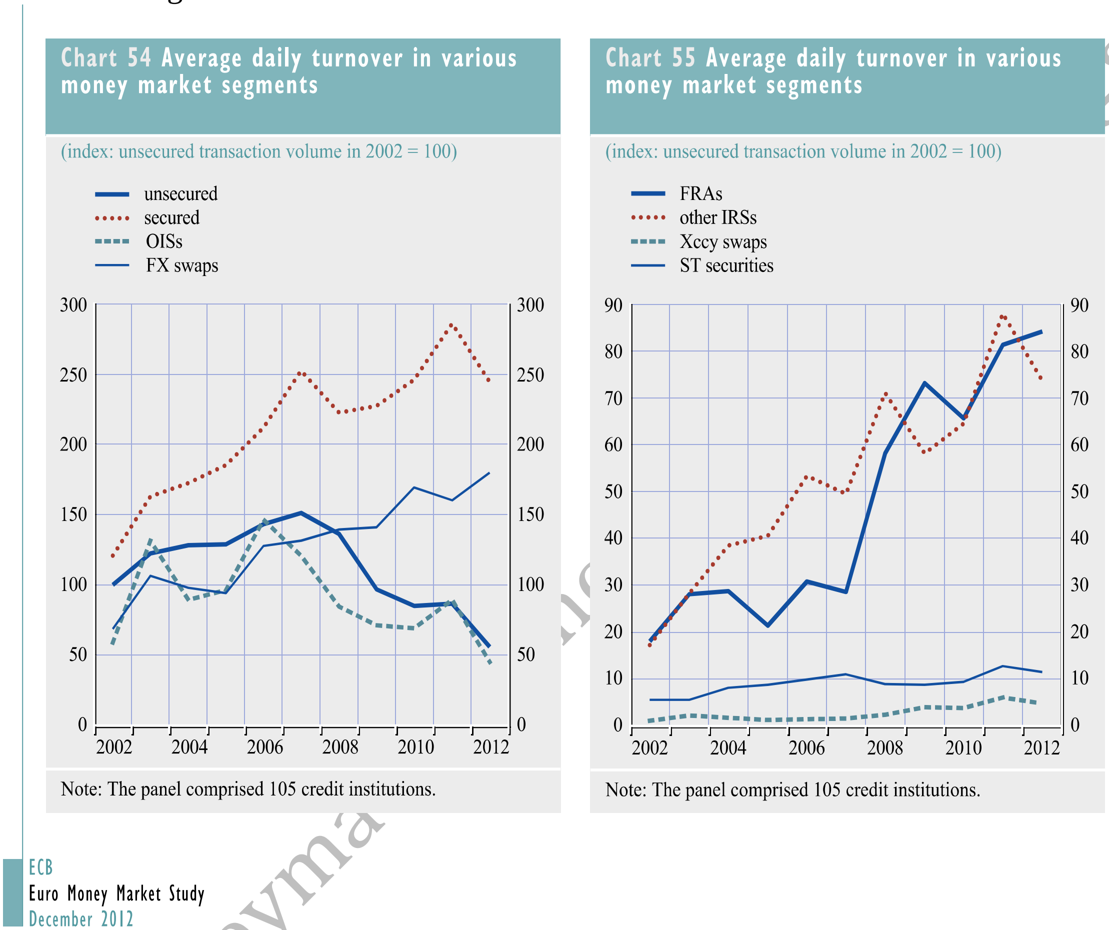
Reduction in unsecured turnover (bn)	Increase in secured turnover (bn)	Net reduction of turnover (bn)	Increase in Eurosystem balance sheet (bn)	Substitution between Eurosystem and market intermediation (%)
(1)	(2)	(3) = (1) – (2)	(4)	(5) = (4) / (3)
327	212	115	113	98

The table illustrates in column (1) the reduction in the turnover in the unsecured interbank market brought about by credit and liquidity risk during the crisis, about 330 billion euro. The effects of this reduced interbank intermediation on the financial sector and then on the real economy would have been disastrous, as it would have inevitably led to bank failures, an even more precipitous fall of credit and money aggregates and dramatic economic dislocations. The damages were reduced by two developments: the increase in the turnover in the repo market in column (2) and the increased intermediation on the books of the ECB, in column (3), which together compensated, as shown in column (4), one for one the reduction of

[1] I wish to thank Conception Alonso for useful comments on a draft of this speech. The responsibility for the speech is mine only.

turnover in the unsecured segment, column (5). The overall interpretation Tuomas and I gave of the action of the ECB during the crisis is that it attenuated its effects by bringing on its book the intermediation that the impaired private financial market was no longer able to carry out, at least at a reasonable price. The evidence in the table shows that the substitution effort of the central bank would have had to be three times larger if the repo market would have not substituted two thirds of the reduction of the unsecured segment. Evidently, I do not imply that the repo market did twice as much as the ECB to forestall the impact of the crisis, but definitely the burden on the central bank would have been heavier if the repo market had not expanded as it did.

It should be noticed that the substitution of the unsecured by the repo market was accelerated but did not start with the crisis. SLIDE 4The left panel of the following chart of the latest Money Market Study of the ECB shows the trend increase of the repo market with respect to the unsecured segment since shortly after the beginning of monetary union: while the repo market grew by a factor of 2.5 between 2002 and 2012, the unsecured segment about halved over the same time.



The 2012 version of the Money Market Study of the ECB published for the first time estimated volumes of the various segments of the money market and these data show SLIDE 5 that, whatever estimates one uses, by last year the secured market was about four times as large as the unsecured segment. Another way to make the same point is to notice that, always quoting the ECB Money Market Study: "*Although the unsecured segment started off as the most representative segment in 2000, with a share of 36%, its share subsequently fell to only 8% in the second quarter of 2012.*"

By stressing the growth of the repo market I do not imply either that there were no excesses in this market, especially during the boom years, or that all what happened there was consistent with financial stability. I just want to underline two quantitative points about the past:

1. If the repo market wouldn´t have grown as it did, the crisis that followed the demise of Lehman Brothers would have been, at least in Europe, even more damaging or the burden on the ECB to attenuate its effects would have been even heavier,
2. The repo market has grown to become by far the most important segment of the money market, gaining weight in particular in relation to the unsecured segment.

Table 6 Aggregate euro money market survey volumes for 2012

(EUR millions)

	Constant panel	Total panel
Unsecured	**94,443**	**127,805**
lending	32,373	52,840
borrowing	62,070	74,965
Secured	**414,359**	**446,505**
lending	178,399	192,257
borrowing	235,960	254,248
Derivatives	**657,363**	**810,715**
OIS	76,516	100,322
FX swaps	305,185	391,074
IRS	124,940	150,144
Xccy swaps	7,992	12,862
FRA	142,730	156,313
Outright transactions	**19,510**	**23,244**
TOTAL	**1,185 ,675**	**1,408,270**

Let me now turn to the present time SLIDE 6 and specifically to two more qualitative points, having to do with the attitude of regulators towards the repo market. Both points come from Basel and show recognition of the role played by the repo market.

The first point is derived from the treatment of secured borrowing with respect of unsecured funding in the new regulations prepared by the Basel Committee on Banking Supervision. As you know, these foresee changes in capital requirements and, for the first time, introduce liquidity regulations. Even if it is hard to draw clear conclusion with regard to the overall impact of the LCR on the secured interbank market, the bottom line is that secured borrowing is significantly better treated than unsecured one. Indeed it is recognised, in the measurement of the Liquidity Cover Ratio, that there is less stability in unsecured borrowing (as illustrated by the assigned run-off rates) than in secured one and if second-layer assets are repoed out there is no limit to the share of the High Quality Liquid Assets that can be satisfied by liquidity obtained against them.

Of course, this will necessarily further weigh on the unsecured interbank market, leading many to foresee that this will basically be limited to the shortest maturities, thus reinforcing a long term trend. The role of the secured segment would then be further enhanced.

The second point is derived from a paper recently published by the Market Committee, under the Chairmanship of my former colleague Hiroshi Nakaso[2], looking at the LIBOR-EURIBOR problem from a central bank perspective. This paper stresses the need to develop reference rates quasi immune from credit risk and concludes that: "*…the use of reference rates may have become too concentrated on rates based on unsecured interbank transactions, and having reference rates that are based on (near) credit risk free rates – and thus are less affected by swings in bank credit and other risks – could be an important complement to existing reference rates. Prime candidates are overnight interest rates (including OIS rates) and rates derived from GC repo markets.*"

This conclusion is not surprising if we look again at the chart above: the markets from which to derive new reference rates are exactly those which recorded the highest trend growth over the last decade or so: the repo and the swap markets. The Report also notices that *"banks have increased their reliance on secured wholesale funding due to regulatory and market efforts to reduce and more actively manage counterparty credit risk exposures."*

Let me now come to the future. SLIDE 7 In this perspective I would like to cover two issues: the availability of collateral and the impact of the Financial Transaction Tax (FTT).

The availability of collateral is of course a crucial issue: there is no point in preaching the virtues

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[2] *Towards better reference rate practices: a central bank perspective,* A report by a Working Group established by the BIS Economic Consultative Committee (ECC), March 2013.

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of the repo market if there is insufficient collateral to feed it. Many attempts have been made to estimate demand and supply of collateral to identify possible gaps. This is not the direction I want to take here, the perspective I want to take is the one that considers ways to shift upwards the supply of collateral. May be because of my past at the ECB, what intrigues me is what determines the border between what is and what is not used as collateral and how that border can be moved. SLIDE 8 I think the tools to "move the border" and make available as collateral assets which were not usable beforehand belong to two main categories: improvements in the quality of the assets and improvements in risk management techniques.

I can indulge into something of a conflict of interest in taking as an example of action aiming at improving the quality of assets what is being done in the PCS (Primary Collateralised Securities) initiative, of which I am the Chair. PCS is trying to improve the quality of asset backed securities, especially in the dimensions of simplicity, transparency and liquidity, so that they can help bridge the gap between a deleveraging banking sector and a fledgling financial market in funding the European economy. An intermediate target of this endeavour is to facilitate the use of ABS as collateral, with central banks but also in the private market. If PCS will be successful, as I trust it will be, a large and potentially much larger pool of collateral will again be available for repo transactions. My confidence in the success of the initiative rests on two considerations: first, the success of a similar initiative in the commercial paper segment, the so called STEP (Short Term European Paper) label, and the promising start of a similar move in the covered bond market, thanks to the efforts of the European Covered Bond Council; second, the conviction that Asset Backed Securities are a clever contrivance that does not deserve the bad name that it got during the crisis, mostly for developments that took place on the other side of the Atlantic.

When it comes to improvements in risk management techniques, I think any asset has a certain collateral value, even if well below its face value. An appropriate articulation of haircuts and other tools can make this collateral value available for the repo market, thus lessening the risk of a lack of collateral. I am particularly intrigued by the potential of a portfolio approach to collateral management. Indeed, I have in mind the big regret I had when I was at the ECB, where this approach was not possible. Indeed the central bank has to accept any quantity of any piece of collateral that is in its list of eligible assets, and it cannot choose the quantities that would fit a portfolio approach. This approach is, instead, available to a private institution that can thus exploit the same risk reducing effect that comes from diversifying a portfolio of securities, by appropriately choosing the shares of the different assets it accepts as collateral. The potency of this approach would be further enhanced by an active market for collateral swaps, whereby each agent could modulate the assets it accepts and uses as collateral.

The issue about the FFT is a delicate one SLIDE 9 and I have no pretence to settle it here. And I do not seem to be the only one having unsettled thoughts here: press reports indicate that even the 11 countries of the European Union which have decided to introduce the FTT are rethinking some critical aspects of the tax. There are, still, two points I would like to make.

The first point I would like to make is that I believe there are taxes to be applied in the financial sphere that produce revenue without causing, as all other taxes do, welfare losses. These are so called Pigovian taxes, from the English economist Pigou, which make market agents internalize some negative spillovers. A clear case in this respect was made by Enrico Perotti and Javier Suarez[3]

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[3] *A Pigovian Approach To Liquidity Regulation*, Enrico C Perotti and Javier Suarez, Discussion Paper No. 8271 March 2011, Centre for Economic Policy Research.

proposing to complement, or even substitute, quantitative liquidity regulation like the LCR with a tax on short-term borrowing. More generally, I think the succession of boom-bust cycles narrated by Kindleberger and Aliber and measured in all possible dimensions by Reinhart and Rogoff clearly shows what we had forgotten during the Great Moderation, i.e. that market economies are the most efficient economic model but they, and particularly their financial sector, are subject to recurrent instability phenomena, occasionally growing into fully fledged crises. And I believe that carefully crafted taxes on some financial activities can reduce the intensity and/or the frequency of crises. In a way, I believe that taxes have the potential to be used as macro-prudential tools.

The second point I would like to make about the FFT is that it is not obvious to me that all its consequences have been fully understood, in particular as regards its impact on the functioning of the repo market. While I am willing to change my mind, I am therefore not convinced that the FTT belongs to the category of Pigovian taxes and I would like to see a thorough examination of its cost relative to the revenue it can generate. SLIDE 10 In particular I do not understand why the FFT would tax secured interbank borrowing and not unsecured one. We have seen that the repo market has helped avoid an even bigger dislocation in the money market, that it has become much more important than the unsecured segment, that it is being favoured by bank liquidity regulation and seen as a possible source of reference rates, immune from some of the weaknesses revealed by LIBOR and EURIBOR. What is the consistency of a tax that hits specifically the form of interbank borrowing with these characteristics?

Of course, the disincentive impact on secured borrowing with respect to the unsecured one will depend on the size of the tax, on the spread between unsecured and secured borrowing and on the elasticities of supply and demand of secured and unsecured borrowing. We know what is, for the time being, the proposed size of the tax for financial institutions: 10 bp to be paid on each leg of the transaction and we can further assume for simplicity that the equilibrium spread between unsecured and secured lending when there is no FTT is 10 bp for all maturities. However, since I have no idea of the relevant elasticities, it is not possible to figure out what would be the new equilibrium with the FTT. Still, if we assume that the borrower and the lender each pay 10 bp, the borrower will not put up collateral to borrow secured if she can borrow at the same cost unsecured, at least for any maturity up to 1 year. If the spread between unsecured and secured lending was twice as high, the possible break-even for the fixed FTT per transaction would be reached at the six months maturity and so on. In general, the viable maturity of secured lending would depend on the spread between the two forms of lending and the maturity at which the repo market would dry out would change over time. The history does not end here, however, because it is not clear that, for the reasons mentioned above, there would be a vibrant unsecured interbank market either. So the conclusion could be a dry up of the interbank market, secured or unsecured, which cannot be a desirable outcome. Interbank borrowing would hen be substituted by borrowing and lending from and to the central bank, just because this is a way to elude the FTT. We have seen above that, during the crisis, central bank intermediation complemented private sector intermediation impaired by credit and liquidity risk. The FTT could transform this crisis related phenomenon in a permanent one. There would be a damage for the overall functionality of the financial system and little revenue for the public coffers.

My conclusions are easy to summarize: SLIDE 11

1. The growth of the repo market has avoided even more of a dislocation of the money market during the crisis, thus lessening the burden on the ECB to avoid that this would translate in even more acute economic consequences,
2. The repo market has achieved brisk trend growth since the launch of the euro, such that it

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now dwarfs in importance the unsecured market,

3. Banking and liquidity regulation is favouring the growth of the repo market with respect to the unsecured interbank market,
4. The repo market is seen by central banks as a possible source of reference rates alternative to LIBOR and EURIBOR,
5. SLIDE 12 There are tools that the industry could pursue to increase the availability of collateral for repo operations,
6. Well targeted taxes on some financial activities can kill two birds with one stone, raising revenue and remedying negative externalities,

The proposed FFT doesn't seem to belong to this kind of taxes as it would tax repo interbank lending but not unsecured one, leading to a dry-up of repo lending on shorter maturities and possibly to a severe dry up of the entire money market, to be offset by central bank intermediation.

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