

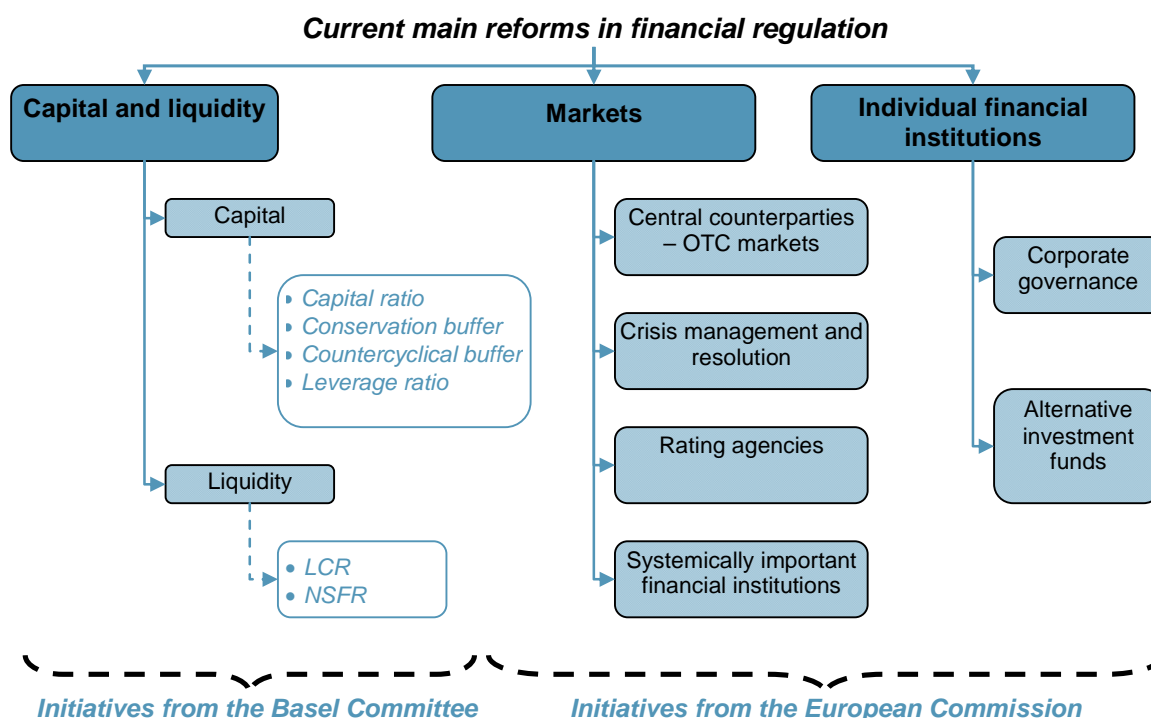
Yves Mersch: Basel III and liquidity surveillance in Luxembourg – building an operational systemic and micro-prudential framework

Speech by Mr Yves Mersch, Governor of the Central Bank of Luxembourg, at the General Assembly of “The Luxembourg Bankers’ Association”, Luxembourg, 27 April 2011.

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Ladies and Gentlemen,

I would like to thank the ABBL General Assembly organizers’ for inviting me to share with you some thoughts on the challenging question regarding the recent Basel III liquidity regulation proposals, their potential impact for the Luxembourg banking system, and how those changes are integrated by the BCL within its mandate for liquidity surveillance. Let me say upfront that liquidity surveillance has to be put in the broader perspective of the increasing key role of central banks in financial stability and macroprudential policymaking. The recent financial crisis has highlighted the need to go beyond a purely micro approach to financial regulation and supervision. The policy debate and proposed changes in regulation and supervision are focusing in particular on developing a macroprudential framework, on constructing macroprudential tools and on reflecting upon their usage, their relationship with other policy areas such as monetary policy, microprudential, fiscal to competition, their implementation and their effectiveness. In Europe, beyond changes in the architecture, there is a number of major planned reforms in financial regulation; as you can see on the slide in front of you (taken from the eighth Financial Stability Review of the BCL to be presented tomorrow) the spectrum of those changes is vast. It covers capital and liquidity regulatory frameworks, financial institutions, as well as markets and markets infrastructures. Our task today refers to the important pillar of liquidity surveillance. Note, however, that all these prospective changes are taking place within the context of evolving national supervisory frameworks. I am convinced that no matter how those mandates finish being structured across countries, central banks, by their unique role in monetary policy and settlement and payment systems oversight, ought to have a clear mandate in financial stability and a key role in macroprudential policy. One of the alleged strengths of our country has been its capacity to rapidly adapt, and often even lead, key policy and structural developments around the world. Given the large proportion of countries that have already given their central banks a clear mandate in financial stability and in macroprudential policy formulation, implementation and coordination, our challenge is clear. Already in 2010, the BCL has provided legislative proposals to the Executive branch in this respect as well as what concerns a regulative regime.



Given the role of liquidity in the recent crisis, an international consensus on liquidity regulation is emerging and has been assigned high priority among regulators and supervisors.

Let me start by making some remarks on the background of ongoing efforts directed towards forging a consensus view for the future Basel III framework. As you know, Governors of national central banks (NCBs) along with Heads of Supervision authorities, albeit without Luxembourg given the country's current institutional framework, have been working in order to finalize a definition of liquidity that will permit regulators to minimize system-level distortions through the penalization of those banks holding assets with poorly structured liquidity profiles. As observed during the crisis, illiquid assets played a central and significant role in the aggravation of the turmoil. In fact, the "illiquidity" phase of the crisis was particularly acute as the speed with which assets became illiquid led to a significant negative impact on the ability of banks to have access to funding. Now, one naive way of addressing such systemic liquidity problems would be through the imposition of elevated liquidity requirements – spread equally – across all institutions with the central bank playing the essential role of liquidity provider. However, a model such as this one runs the risk that all institutions may, during a crisis, exhaust their liquidity requirements simultaneously leading to a systemic crisis. This is not an effective approach to regulation. So what is the alternative? To date, policy-makers have not yet reached a final consensus on a suitable macro-prudential framework able to safeguard against systemic liquidity risk. This is why work on liquidity regulation is viewed by the Basel Committee in Basel (CGFS, FSB) as being of central importance going forward. So, today I shall discuss the proposed Basel III liquidity ratios and their impact on our country, while taking advantage of this opportunity to let you know how we envision liquidity surveillance, what we have done, and what we plan to do in the near future.

The Basel III regulations will provide regulators with standard empirical measures of liquidity risk providing them with a toolkit that can help to mitigate funding and market liquidity risk.

Central banks are deeply involved with liquidity management at the macroeconomic level and are recognized as the *de facto* emergency liquidity providers during times of crisis. In its current form, the Basel III definition of liquidity relies on two particular measures that have been proposed in the context of adopting a new global liquidity standard. As you surely know by now, these are the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR). It is broadly recognized that these measures of liquidity should be designed so that, from a macro-prudential perspective, they can be used as possible tools to help alleviating and mitigating a rise in systemic liquidity risk. They should help increase the banks' liquidity buffers and lower maturity risk transformation, which in turn should make them more resistant against the transmission and amplification of liquidity shocks. In particular, there are two types of risk that need to be targeted. These are market liquidity risk and funding liquidity risk.

Market liquidity risk results from firms being unable to engage in quick and efficient sales of assets, a desirable property of efficiently functioning financial markets. In an illiquid market, asset sales may be hindered thereby adversely impacting the price of the asset. Funding liquidity risk, on the other hand, may result in firms being unable to meet their expected cash flow requirements over the long or short-term. This can adversely impact a firm's ability to access funding, particularly on short notice. Regulators recognized that both types of risk lead to market inefficiencies and thus result in undesirable implications for financial firms and, ultimately, the real economy. You can therefore see that quantitative liquidity measures such as the LCR and the NSFR, while based on a well established tradition on liquidity risk management *theory*, are a welcome innovation from a regulatory perspective given that – for the first time – they provide regulators with the capacity to introduce and harmonize standard measures in liquidity risk management *practice*. Since these empirical measures will be central to the new Basel liquidity standards, I believe it would be advisable for me to spend some time discussing each indicator in turn.

The LCR will be used to help mitigating short-term liquidity stress thereby allowing financial institutions to maintain smooth access to short-term funding requirements.

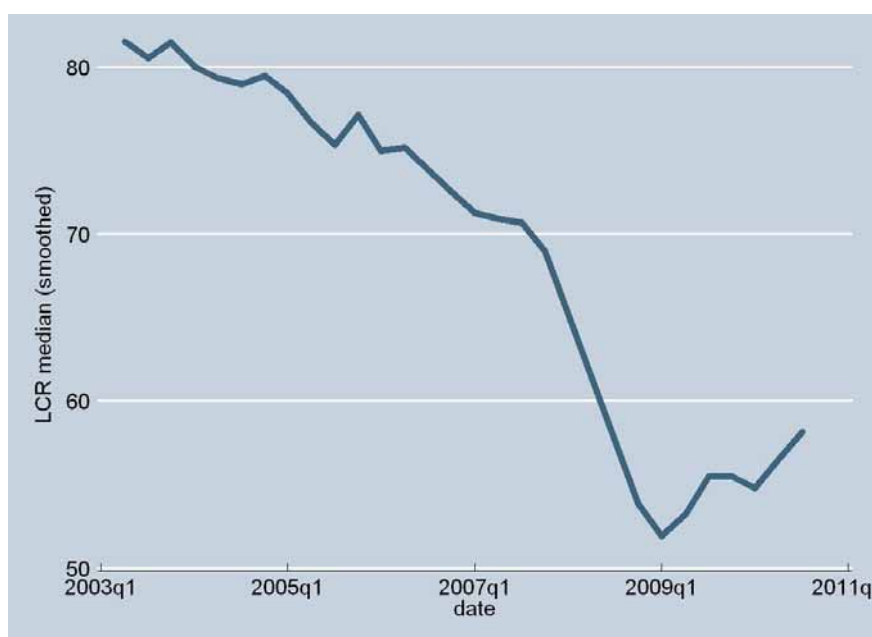
Let me begin with the LCR. It is the current consensus of the Basel Committee that the LCR should be introduced after an observation or trial period thereby providing a window of opportunity during which any refinements to the measure could be introduced. From a technical perspective, the LCR is a short-term measure of liquidity which is specifically intended to ensure that financial firms can continue to access near-term liquidity needs in an efficient manner. In principle, this should make certain that banks have a sufficient quantity of liquid assets so as to be able to withstand up to a month-long period of sustained and severe liquidity stress.

For illustrative purposes, let us consider what would have been the evolution of the LCR in the context of Luxembourg's financial sector. While the Banque centrale du Luxembourg (BCL) has not yet formally adopted this measure in its role as a liquidity supervisor of the Luxembourg financial system, it is developing the framework necessary for the implementation of Basel III. I will describe its main components later.

In an internal study conducted by the BCL, the evolution of the LCR was evaluated based on a sample of banks that excludes less-relevant branches and covers the period spanning from 2003:Q1 until 2010:Q4.

Figure 1

The evolution of the LCR for Luxembourg's banks, 2003q1 – 2010q4



Source: BCL calculations.

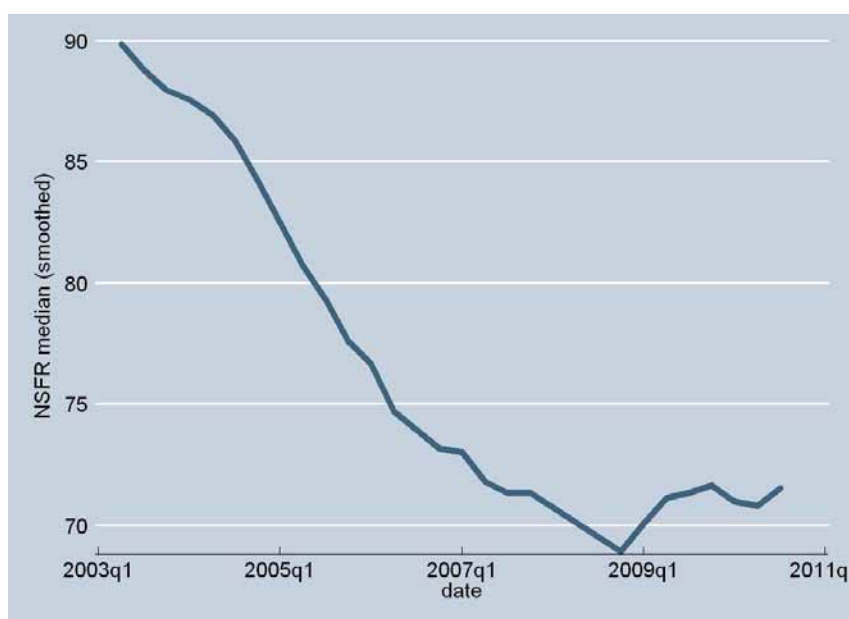
You can observe the evolution of the LCR for this period in the accompanying figure. It was found that the median of the LCR decreased from roughly 82% in 2003:Q1 to a minimum of 52% in 2009:Q1. Since then it has been increasing almost consistently until the present time. One possible interpretation of this behavior for the period until 2009:Q1 is that banks were reducing their holdings of liquid assets. However, since the end of the crisis, financial institutions have been holding increasing amounts of liquid assets which represents the beginning of the re-stabilization of the liquidity conditions in the domestic financial markets.

The NSFR will help to enhance the medium to long-term funding needs of banks thereby mitigating liquidity runs.

Let me now turn to the second of the two proposed liquidity measures, the NSFR. In contrast to the LCR, the NSFR is designed as a medium- to long-term measure of liquidity intended to mitigate any future liquidity runs and, subsequently avoid any possible knock-on effects of a systemic liquidity crisis; like firms' default, for example. In fact, the NSFR addresses the issue of maturity mismatch between a bank's assets and liabilities. It is important to make clear that the NSFR has not been designed to play the role of an early warning indicator (EWI) of liquidity difficulties. Indeed, if one were to apply the NSFR to the period leading up to the recent crisis, the NSFR would have revealed to be an inconsistent indicator of future liquidity stress. This results from the inherent difficulties of attempting to separate liquidity from solvency.

Figure 2

**The evolution of the NSFR for
Luxembourg's banks, 2003q1 – 2010q4**



Source: BCL calculations.

As part of the same internal study I alluded to earlier, the NSFR was evaluated over the period from 2003:Q1 to 2010:Q4 using the same sample of banks as for the LCR. If you look at the figure displaying the evolution of the NSFR before you, you can see that, on average, the NSFR declined continuously from a median of 90% in the first quarter of 2003 to a median of 67% at the end of 2008. Since that time, the NSFR has slowly started to recover. Its decline until 2008 can be mainly attributed to a faster increase in total assets in comparison to capital as well as to an increase in wholesale funding from banks and non-financial corporations (NFCs). These results for the NSFR in Luxembourg are broadly similar to the results calculated by the International Monetary Fund (IMF) for Europe.

For the NSFR, I should also mention that this ratio has been the subject of a study conducted by the Bank for International Settlements (BIS) and entitled “*BASEL III: Long-term impact on economic performance and fluctuations*”¹. While a slight negative effect on output is not disputed, the authors – in fact, Mr. L. Clerc from the Banque de France will actually participate in our Financial Stability Review presentation tomorrow – conclude that the adoption of tighter liquidity requirements leads to an approximate reduction in output volatility by 1 percent. Overall this suggests that prudent liquidity controls would have a beneficial effect for the real economy.

¹ P. Angelini, L. Clerc, V. Curdia, L. Gambacorta, A. Gerali, A. Locarno, R. Motto, W. Roeger, S. Van den Heuvel and J. Vlcek. “BASEL III: Long-term impact on economic performance and fluctuations”. *Bank for International Settlements*, BIS Working Papers No. 338, February 2011.

The calibration of the LCR and the NSFR will be critical to ensuring the liquidity and funding stability of banks, but further research will be required.

Although the members of the Basel Committee have not yet achieved a final consensus on the exact structure of an operational liquidity management framework, the proposed new standards for liquidity risk management are a welcome development. In combination with a more robust and efficient supervisory landscape, the proposed Basel III recommendations should help to bolster liquidity risk management practices in the financial sector. This will have an overall welfare-enhancing effect on the real economy and will help to ensure the stable provision and access to liquidity and funding between financial institutions. In addition to reducing the risk of a rapid drying up of liquidity, this will aid considerably in mitigating the risk of excessive interconnectedness in the financial system by encouraging banks to reduce their common exposures.

As we have seen, these are important ways in which well-calibrated LCR and NSFR can serve to enhance liquidity and preserve access to stable sources of funding. However, despite some initial empirical work and theoretical studies, neither the LCR nor NSFR has been implemented within the context of an operational supervisory framework yet. This both highlights and elevates the need for further quantitative impact analyses and related studies in order to ensure that, from a financial stability perspective, there is a reasonable and justifiable calibration underlying the LCR and NSFR for supervisory frameworks. In this context, policy-makers can be confident that any calibration is accurate and will not result in banks being restricted either in their ability to manage short and long-term liquidity or in their ability to undertake the maturity transformation activities which are vital to their financial intermediary's role in the economy. This will also lead to a reduction in the cost of financial intermediation. It is for these reasons that regulators must strive towards striking a balance between efficient – but not overly restrictive – regulation and a set of rules that do not result in negative consequences for financial stability. We intend to maintain our dialogue with assertiveness in this respect and hope that Luxembourg's representation at international level can be improved through a clear assignment of representatives.

Part II

How the BCL envisions and implements liquidity surveillance

The 2008 BCL mandate to monitor the liquidity of markets and market operators recognizes central banks' unique role in the surveillance of systemic liquidity risk. The crisis demonstrated that liquidity risk can emerge quickly. The manner in which liquidity risk materializes and is transmitted is determined by the nature of funding instruments and linkages among financial institutions, the degree of leverage of market operators, as well as their reactions to emerging stresses. Policy responses to the crisis must, at a minimum, enhance institutions' liquidity risk management and information available to measure and track systemic liquidity risk. The task is complicated because the assessment of liquidity risk at the systemic level is often susceptible of a fallacy of composition given that the viability of banks' individual approaches to liquidity risk will depend upon the strategies being pursued by other market operators. For instance, if banks have a great deal of interconnectedness via the interbank market, a liquidity shock impact will be relatively larger than if their interconnectedness was lower. In addition, if banks' business models were diverse, the impact of a liquidity shock would be relatively smaller than if banks' activities were concentrated on just one business line. The 2008 Law, in giving to the BCL the mandate to monitor markets and market operators' liquidity, acknowledged the necessity of liquidity surveillance in Luxembourg. On this capacity, the BCL has issued regulations, such as the

BCL regulation 2009/4 requesting banks to apply the BCBS “Principles for Sound Liquidity Risk Management and Supervision”. The Bank actively participates in the shaping of the Basel III framework for liquidity risk measurement, standards and monitoring. Taking due account of current regulatory developments, the BCL intends to publish further instructions to market participants on liquidity management before the end of this year.

In the same way the BCL changed its architecture to comply with its liquidity surveillance mandate, it will also adapt to its unavoidable role in macroprudential policymaking in Luxembourg. Following the 2008 new mandate on liquidity surveillance, the BCL adapted its internal structure and resources so as to ensure that the Luxembourg market and its financial actors are constantly subject to analytical and quantitative scrutiny so as minimize systemic liquidity risk in the Luxembourg financial industry. The BCL has increased technical cooperation with regulators at the national and international level and is active in committees and working groups that develop regulations, practices, standards, as well as measures and monitoring tools to improve the financial sector’s ability to absorb liquidity shocks arising from financial and economic stress of various sources. This encompasses not only Luxembourg recent participation in its second IMF FSAP exercise, but also in EBA-led stress tests and BIS study groups. But this is only one leg, albeit crucial, of the unavoidable role of the BCL in macroprudential policymaking in Luxembourg. As the contours of a macroprudential policy framework take shape, the BCL will need a clear mandate on financial stability and a prominent role in macroprudential policymaking, whatever shape the framework ends up taking. But this is just the beginning of major changes to come in the near future. Given their role in monetary policy, central banks monitor markets and economic and financial developments that have a bearing on policies designed to reduce procyclical risks, a key objective of macroprudential policies. Similarly, given their role in settlement and payment systems oversight, central banks have developed a unique expertise in systemic risk analysis, inescapable element of macroprudential measures to reduce the probability of default of individual financial institutions. From a governance viewpoint, central banks have the right type of incentives to contribute to the effectiveness of macroprudential policies because failure in this area is costly for them, and eventually, for their hard-earned independence.

Liquidity risk surveillance requires monitoring liquidity risk pricing both at the macro- and at the micro-level. Observers (e.g., Borio and Drehmann) have shown that financial markets have a tendency to misprice risk over time. This was certainly the case in the run-up to the crisis. However, it is less widely recognized that banks also had severe pitfalls in their models for pricing liquidity internally, which resulted in an under-pricing of liquidity risk and compounded the gravity of the crisis. There is no single best indicator that captures systemic liquidity risk. This fact stresses the need to monitor a wide range of indicators and, unavoidably, to use informed judgment to assess liquidity risk. It is necessary to complement analysis such as the one described above with information on factors that history tells us that are, in one way or another, associated with liquidity stress and that inextricably link systemic with firm-level liquidity risk. I think in particular about high leverage levels and degrees of maturity transformation that rely heavily on short-term funding. A difficulty is that the crisis highlighted that some of those standard indicators tend to perform poorly or to suggest a lower level of vulnerability than it is actually the case. For example, when risk premium is low, financial institutions are encouraged to increase their leverage as their bets tend to look relatively less risky. In addition, haircuts on collateral tend to fall consistently with this view. This way, liquidity risk accumulates, and a change in market sentiment suffices to lead to forced asset sales on banks’ leveraged positions. Also, observing changes in collateralized lending practices and haircut levels are crucial indicators for assessing liquidity risk pricing, but this information tends to be viewed as proprietary by major market operators. At the

micro-level, financial institutions are being required to enhance their funds-transfer pricing processes, which will be part of the liquidity management requirements I alluded earlier and that the BCL will announce in the coming months.

The BCL is developing an operational framework for systemic and micro-prudential liquidity surveillance. As I have just illustrated, traditional tools for monitoring liquidity risk, while necessary, proved to be insufficient in the run-up to the crisis. The task of a liquidity risk supervisor is therefore not simple. The approach taken at the BCL strives to integrate the multiple facets of liquidity risk. However, to avoid the temptation to “look at everything”, the BCL approach is risk based. There is already convincing theoretical and empirical evidence that not only size, but also the degree of interconnectedness of banks via the interbank market, for example or the evolution of non-core liabilities constitutes good proxies for institutions’ systemic risk. These characteristics, as well as the relevance of a given institution for the key role of the Central Bank in preserving financial stability, determine the set of financial institutions that are more often and more intensely monitored – classified in terms of their degree of systemic importance. A key qualitative component of liquidity surveillance in the BCL is the assessment of banks’ liquidity risk management frameworks. As painfully learned from the crisis, this should be the first-line bulwark to defend an institution against liquidity risk. Particular emphasis is being laid on issues such as sound governance both at the banking group and at the local level; the definition of management risk tolerance level; the set of monitoring tools institutions use for assessing their liquidity risk; the robustness of stress tests scenarios and the extent to which they reflect Luxembourg idiosyncrasies; the size and composition of local liquidity buffers; the internal consistency of banks’ contingency funding plans and where applicable; intra-day liquidity management. In addition, the BCL also pays attention to the soundness of the business model and the balance sheet structure of local credit institutions and in particular to possible liquidity risks that are being transferred from foreign-based banking groups to local subsidiaries. In this regard, some degree of liquidity management at the local level plays a significant role in the BCL liquidity risk assessment of banks, and it must be subject to its approval. Finally, the BCL pays particular importance at assessing whether banks’ internal pricing of liquidity within the institution and among group member duly reflects liquidity risk. But even these tools and procedures are not enough.

The BCL liquidity surveillance framework includes a combination of qualitative and quantitative elements. On-site visits are an important component of the BCL monitoring framework in order to assess business models and the liquidity situation and the risk management framework of credit institutions. In the absence of a formal MoU, the BCL surveillance visits are nevertheless coordinated and conducted with the *Commission de surveillance du secteur financier*. Since 2009, 14 on-site visits have been performed, and a similar number is expected to take place over the coming year. Another pillar of the BCL liquidity framework is off-site surveillance. While structural liquidity risk may be monitored and analyzed through information provided by financial institutions (prudential and statistical reporting requirements), by the micro-prudential approach or even by market intelligence, the BCL endeavors to have timely cash-flow based liquidity projections from market participants on a short-term basis. At the moment, 45 financial institutions which are important from a financial stability and a monetary policy perspective, provide a forward-looking daily liquidity reporting that includes a five-day forecast. The forward-looking nature of indicators is at a premium given the sudden realization of liquidity risk. This is the reason for the Bank’s analysis and close interaction with the industry in all aspects regarding the two liquidity ratios of Basel III and the monitoring tools proposed such as maturity ladder reporting, funding concentration, and the availability of unencumbered assets. Another key in-house liquidity monitoring tool compares every bank’s liquidity position using two different scores: one that

compares a bank's liquidity position across peer banks and another that compares a bank's liquidity over time based on 21 different risk factors. The tool mainly helps identifying banks with weaker liquidity positions and streamlining monitoring tasks. The framework is also useful to draw inferences about the general liquidity trends within the Luxembourg banking sector for the purpose of ensuring financial stability. The framework integrates on- and off-balance sheet data and market and macroeconomic information. Finally, the BCL uses other indicators for analyzing the liquidity situation of banks at a micro-level. They include micro- and macro-prudential indicators, albeit of a backward- or coincident-nature, such as loan-to-deposit ratios, liquidity ratios, banks' data on funding structure by maturity and geographical distribution, portfolio analysis, inter-bank and intra-group activity information, and data on banks' participation in payment systems.

Liquidity surveillance and EU financial stability frameworks are still built on a national basis, but surveillance frameworks are evolving. Each EU national central bank is the LLR to financial institutions domiciled in its territory with the obligation of informing the ECB. This situation implies that host countries are in theory the providers of ELA to subsidiaries and branches, but do not have access to supervisory information about branches, and thus, have no way of assessing the risks involved in the ELA operations they undertake. Basel III still proposes the application of regulations on a consolidated basis. This means that branches located in Luxembourg should be supervised by the home supervisor. This is clearly problematic for Luxembourg since some branches are relatively large and systemically-relevant, and have to be monitored. Also there is a tendency for groups to run their subsidiaries like branches which inevitably leads to conflicts of jurisdictions. The challenge for BCL risk-based liquidity surveillance is to take account of the activities and the liquidity risk profile at the group level. A major consequence of this state of affairs is that the distinction between liquidity and solvency, and the ensuing impact on the sharing of the costs of the operation, remain opaque. On the other hand, home-country authorities may delay providing information or taking crisis-management actions to avoid capital losses, reputational effects or political backlashes. So the home authority does not always have the incentive to keep small-country host authorities informed in an acceptable way. In turn, host country authorities may seek to retain as much intervention authority as possible. The EU level MoUs signed in 2005 and 2008, being voluntary in nature, did not help much. As a result, several Colleges of Supervisors and Cross-border Stability Groups are being put in place to alleviate the remaining tension between home-country lead responsibility for integrated supervision of LCBGs and the host country responsibility for financial stability. The BCL currently participates in several Colleges of Supervisors and Cross-border Financial Stability Groups. Additionally, bilateral arrangements with other home supervisory authorities and/or regular exchanges of views with representatives from banks' head offices take place in order to keep abreast of developments at the group level and to raise potential concerns with regards to the situation at the domestic level.

Basel III is work in progress, and one-size-fits-all is incompatible with the richness of Luxembourg business models. The final contours of the Basel III framework are still to be made precise. It is already clear, however, that the framework is not yet well suited to cover the diversity of banks' business models that characterize the industry in Luxembourg. The BCL is involved in technical discussions to strike the right balance between efficient liquidity surveillance and competitive and robust banks. Discussions cover, for example, the possibility of recognizing some stable funding in the period over the one month to which the proposed LCR applies and the period over one year to which the proposed NSFR applies. Investment funds' deposits are so far not considered as a reliable funding source within the LCR – except those having a proven operational relationship – and are not considered as available source of funding in the NSFR. Another feature under discussion is the asymmetric

treatment of the loss of funding in covered bonds, and the covered pool inflow which is not considered as unencumbered, and thus cannot be included within the stock of highly liquid assets. This situation makes it quite difficult to respect the LCR for certain business models. These two issues are particularly relevant for custodian banks and banks mostly involved in covered bonds issuance, respectively, but they are not the only ones under consideration.

The road map is complex, but the way is clear. I have already alluded to the results of the top-down analysis conducted by the BCL on the new liquidity standards in the first part of my talk. This analysis is currently being complemented through a bottom-up approach instrumented by means of a joint survey of the BCL and the CSSF with a representative sample of domestic credit institutions covering a large share of total assets. Without going into the details of this survey, the results of which will be presented and discussed at the occasion of an ABBL conference scheduled to take place on 24th May, it is already clear that Luxembourg banking sector does on aggregate fall short of the required standards at the current juncture. I draw five preliminary lessons from these results: first, the BCL working at home with the industry and abroad with standard-setting entities, needs monitoring the implementation of the upcoming liquidity standards during the observation period, and especially the LCR. Second, it seems almost unavoidable that the new standards will induce certain banks to adjust their business models in order to comply with the new agreed pricing of liquidity risk components and offer products with more stable or more fee-based income. Third, as mentioned above, the BCL will use the survey and its internal studies during the upcoming review and calibration process at the international level in order to flag those issues that are considered to unduly penalize sound business models. Fourth, contrasting and comparing the top-down and the bottom-up approach is a rich source of information that the BCL intends to use for refining national regulation taking into account current and future qualitative and quantitative liquidity requirements and for designing reporting requirements. Finally, the BCL foresees a continued and increased focus on on-site visits and complementing the daily liquidity reporting in the near future by other requirements following the implementation of Basel III as a clear way of strengthening liquidity surveillance and boosting the robustness of Luxembourg banks.

Concluding remarks

Let me conclude with a few final remarks. When times are good, there is tendency to feel that there is too much regulation. When times turn bad, everyone wonders why there was not enough regulation in place to prevent bad states of the world to materialize. Regulators and supervisors experience thus a perennial need to justify their role and actions. Certainly, no regulation is perfect. It is especially difficult to develop a regulation that is conceptually broad enough to generate a level playing field, and it is at the same time flexible enough to take national specificities into account and to dampen potential negative effects on the real economy. Basel III regulations strive to fulfill these requirements but, as I reflected during this talk, more work is still needed. The BCL is actively contributing to this task through its participation all along the development of the Basel III liquidity standards.

From the banking industry perspective, the crisis and the ongoing regulatory changes are an opportunity to enhance liquidity management and the pricing of liquidity risk and take up new challenges within the boundaries of the new regulations. In particular, the paramount role of high quality liquid assets within Basel III are a call to market operators to review their business models, their products and funding sources with the aim of building even stronger institutions.

Thank you for your attention.