

Regulating Liquidity Risks within “Institutional Protection Schemes”*

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Abstract

During an early phase of the financial crisis (2007), many financial institutions—in spite of adequate capital levels—faced heavy difficulties because they didn't manage their liquidity profile in a prudent manner. Suddenly the crisis reminded the respective sector on the importance of liquidity to the proper functioning of financial markets. In front of the times of crisis, asset markets were broad and deep, funding was readily available at low cost. The quick change in market conditions showed how fast liquidity can dry up, and that illiquidity can endure for an extended period of time. The banks faced severe stress, which required actions by central banks to—one the one hand—keep alive both the functioning of capital and money markets and—on the other hand—support individual banks or banking groups, which lost their most important funding sources. The impact of a liquidity crisis broadly differs among jurisdiction, markets and concrete market participants. Empirically banks, which were very reliant on interbank funding and closely connected to other financial institutions, suffered during the crisis more than e.g. banks with a business model in favour of funding by retail deposits and holding sufficient Liquidity buffers. Especially in Austria and Germany, there is a phenomenon rising of so called “Institutional Protection Schemes” (in the following: “IPS”). The establishment of an IPS means the foundation of a “contractual or statutory liability arrangement which protects those institutions and in particular ensures their liquidity and solvency to avoid bankruptcy where necessary” (Article 113 para 7 CRR). Currently it seems that a huge part of Austrian banks (about 800 institutions in total) will apply for a membership in an IPS. Given that banks within the same IPS are strongly connected and the role of an IPS is to ensure the ongoing solvency and liquidity of its member institutions, such banking networks may create special needs for liquidity risk management and supervision. This paper deals with the question whether IPS' are sufficiently regulated by CRR and CRD IV, focusing on the topic liquidity and liquidity risk. As mentioned, the basic notion of Basel III focuses on banking groups, not on banking networks and by no means on IPS. This raises the question whether the scope and content of the European regulations regarding liquidity risk deals with networks of banks, especially IPS, in an appropriate manner.

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Keywords

Liquidity, Liquidity Risk, Basel, IPS, Institutional Protection Schemes, Rabobank, CRR, Financial Regulation, Banks

1. Introduction

“Liquidity is the lifeblood of financial institutions”

(Harris, 2013: p. 179)

“Liquidity [...] it is merely the oil greasing the wheels of the financial system, so that they function frictionless and costless. Nevertheless, smooth periods do not last for ever.”

(Nikolaou, 2009: p. 43)

The financial crisis unveiled specific weaknesses of the functioning of financial markets and the risk management of its most crucial participants—financial intermediaries, mainly credit institutions. Especially the drying up of unsecured interbank lending markets disclosed the strong mutual dependence and interconnectedness of financial institutions, having the consequence of contagion risk and potential domino-effects in global markets.

Although a lot of banks have sufficiently implemented preparations in order to avoid to get hit by a severe crisis scenario, most banks predominantly build up capital buffers and underestimated the probably central risk of the heart of banking—liquidity risk. When liquidity is cheap (low interest/lending rates) banks create incentives to search for higher yield, decreasing their costly liquidity buffers and consequently increasing the entire systemic risks. Cheap funding sources do have the effect that liquidity risks get underestimated and therefore not priced, which has the effect of further risk-concealing of assets and funding sources. Particularly interbank lending is a major source of funding, and thus funding risk.

In order to avoid future crisis, global actors and standard-setters, such as the (former) G20 and Banking Committee of Banking Supervision (BCBS), decided to strengthen financial regulators. This package of new standards, named “Basel III”, was also introduced by the European legislator via a respective regulation (CRR) and a directive (CRD IV). One of the most crucial regulation issues in CRR and CRD IV is the topic of liquidity and liquidity risk.

Usually, global standards in banking regulation addresses banking groups, meaning a structure of a (controlling) parent entity and subordinated entities (subsidiaries). Also Basel III focuses on the regulation of banking groups.

However, especially in Austria, Germany and Spain, the majority of credit institutions are not part of a banking group. Those banks often are part of a so called decentralized sector, meaning that plenty of smaller banks are holding participations in one bigger (central)-institution (non-technically a subsidiary of many parents). The idea of such structures is to maintain autonomous and independent on solo-bank level to the greatest possible extent.

Generally CRR and CRD IV consider such models of banking networks, concretely (and most important) in the type of an Institutional Protection Scheme (IPS). According to the CRR an IPS is a “contractual or statutory liability arrangement which protects those institutions and in particular ensures their liquidity and solvency to avoid bankruptcy where necessary.” (Art 113 para 7 CRR), established by a broad number of institutions with a predominantly homogeneous business profile. IPS’ seems attractive to smaller banks because they may stay independent to a large extent and thus, additionally, gain big privileges in banking regulation.

The paper deals with the question whether IPS’ are sufficiently regulated by CRR and CRD IV, focusing on the topic liquidity and liquidity risk. As mentioned, the basic notion of Basel III focuses on banking groups, not on banking networks and by no means on IPS.¹ This raises the question whether the scope and content of the European regulations regarding liquidity risk deals with networks of banks, especially IPS, in an appropriate manner. Note that the issue of the regulation of decentralized sectors and of IPS’ is highly political. However, this paper does not elaborate an analysis of the ongoing political debate and lobbying concerns.

Thus, the paper on hand explains the approach of the European legislator of “Regulating Liquidity Risks

¹The BCBS do not even know the terminus “IPS”. The establishment of IPS therefore is in fact a European idea.

within ‘*Institutional Protection Schemes*’”. From a structural perspective, this paper provides an overview about the basic notion of the Basel-Accord and its European implementation. In order to better understand the issue of liquidity regulation, this paper also grants an analysis of the specific categories of liquidity and liquidity risk. Central elements of the paper are the definition and further explanation of the specific structure and connected regulatory privileges concerning Institutional Protection Schemes and the mapping of the main issues of European liquidity regulation, including pillar I (CRR), pillar II (CRD IV) and systemic liquidity regulation opportunities, as well as supervisory powers referring to liquidity regulation and systemic risk.

2. Overview: Liquidity Regulation under “Basel III”

Today’s banking supervision is mainly driven by globally agreed standards. In order to better understand the current framework of European regulatory legislation, especially regarding liquidity regulation, the following achievements describe the evolution of the Basel Accord and underline the origin of the liquidity regulation stated now in CRR.

2.1. The Basel Accord

The term *Basel Accord* can be defined as the comprehensive documentation of recommendations and standards issued by the *Basel Committee of Banking Supervision* (BCBS). The BCBS is the most important standard-setter in the field of prudential banking supervision on a global level. The primary objective of the BCBS’ recommendations is to strengthen banking regulation as well as to enhance supervisory cooperation in order to support financial stability (Charter of the BCBS, 1 ff). Established in 1974, the BCBS published a comprehensive set of proposals within the framework of banking supervision (Larson, 2011: p. 5), the most crucial recommendations were disclosed under the notation “Basel I” (BCBS, 1988), “Basel II” (BCBS, 2004) and finally “Basel III” (BCBS, 2010).

Within the framework of Basel I, the notion of a minimum capital requirements (8%) calculated via (credit risk) risk-weighted assets was introduced (BCBS, 1998: p. 14). Basel II further developed the notion of Basel I (Nowak, 2011: p. 22), particularly through complementing the existing framework (BCBS, 2004: p. 3 ff) by a second (Internal Capital Adequacy/Supervisory Review Process) and third pillar (market discipline; Larson 2011: p. 15). Under pillar III, institution has to disclose most important facts about their risk situation and methods of calculation (BCBS, 2004: p. 175 ff; Blundell-Wignall/Atkinson, 2010: p. 2). In contradiction to *pillar I* (capital requirements) the requirements according to *pillar II* (BCBS, 2004: p. 158 ff) provides more flexibility to the supervised entities (Internal Capital Adequacy) and the regulator (Supervisory Review Process). While *pillar I* generally requires the same set of minimum standards to all institutions (e.g. minimum capital of 8%), *pillar II* forces institutions to a higher self-assessment of risks and coverage (e.g. “ICAAP”), supervised on ongoing basis by the regulator (SREP—Supervisory Review Process).

All three pillars have been reviewed and complemented since 2006. The latest developments within the Basel Accord are called “Basel III” (Larson, 2011: p. 2). Among others, as a lesson learned from the financial crisis (Nowak, 2011: p. 10), the issue of liquidity risk was broadly integrated in all three pillars of the Basel Accord (BCBS, 2011: p. 8 ff).

However, the recommendations issued by the BCBS are not legally binding (Larson, 2011: p. 6). Thus in Europe, the implementation of the Basel Accord follows the standard procedure of legislation according to Art 114 TFEU.

2.2. The Financial Crisis—Basel III

The global financial crisis, which first rose in the US, hit the European economy and the financial intermediates to a large extent. Politicians as well as regulators reacted in many ways, particularly in the area of adapting the respective—but yet not harmonized—banking regulations. In 2009 the BCBS unveiled its proposals for a material adoption of the Basel Accord-framework (Nowak, 2011: p. 4) with the aim of “strengthening the resilience of the banking sector” (“Basel III”) and comprehensive recommendations regarding to Liquidity risk management for banks. In succession the G20-leaders decided in 2010:

“We endorsed the landmark agreement reached by the BCBS on the new bank capital and liquidity framework, which increases the resilience of the global banking system by raising the quality, quantity and in-

ternational consistency of bank capital and liquidity, constrains the build-up of leverage and maturity mismatches, and introduces capital buffers above the minimum requirements that can be drawn upon in bad times” (G-20, 2010: p. 7).

The Basel III-recommendations include a comprehensive set of adjusted and new provisions (Nowak, 2011: p. 22 ff) particularly regarding *capital* (stricter definition of eligible capital instruments, new composition of the eligible capital basis), *capital buffers* (introduction of a buffer-regime including a capital conservation buffer, a countercyclical buffer and a buffer concerning SIFIs—Systemically Important Financial Institutions)², *internal governance and remuneration* (fit & properness of the management body, oversight of remuneration policies), *leverage* (introduction of a leverage ratio to minimize pro-cyclical effects), *systemic risks* (introduction of a SIFI-regime and respective supervisory measures to address systemic risks) and *liquidity* (introduction of two liquidity ratios).

2.3. Liquidity Regulation under Basel III

Indeed the necessity of sound liquidity risk management did not appear during the crisis of 2007/8 at first. Given that maturity transformation, and therefore liquidity risk, lies at the core of banking risks, the BCBS early underlined the importance in the supervision of this specific issue (BCBS, 1992). Over the years the BCBS’ recommendations referring to liquidity risk management became more comprehensive and granular (see particularly BCBS, 2000; BCBS, 2008). Thus the supervision of liquidity risks under *pillar II* were agreed on global level (“Basel 2.5”; BCBS, 2008a; BCBS, 2008b). In Europe, the *Committee of European Banking Supervisors* (CEBS) adopted this idea, issuing *Recommendations on Liquidity Risk Management* (CEBS, 2008) for the European banking market. After two further guidelines, namely the *Guidelines on Liquidity Buffers & Survival Periods* (CEBS, 2009), the *Guidelines on Liquidity Cost Benefit Allocation* (CEBS 2010) and the second adoption of the CRD (*Directive 2009/111/EC-“CRD II”*) the notion of liquidity risk as *pillar II-risk* was implemented through the EEA.

In additional precision to the adoptions mentioned above, the BCBS extended its liquidity framework by developing two minimum standards for short-term and funding liquidity. These two standards have been developed to reach two separate—but complementary—aims. The first objective is to enhance short-term resilience of a bank’s liquidity risk profile by ensuring that it has sufficient high quality liquid assets (HQLA) to *survive* a significant one-month-stress scenario (Blundell-Wignall/Atkinson, 2010: p. 17): The so called “Liquidity Coverage Ratio” (LCR).

The second goal is to strengthen resilience over a one-year-time horizon by establishing additional incentives for banks to fund their activities with more stable sources of funding (Blundell-Wignall/Atkinson, 2010: p. 18): This is the “Net Stable Funding Ratio” (NSFR). This latter ratio has been developed to provide a sustainable maturity structure of assets and liabilities. In July 2011 the European Commission proposed to implement Basel III via two legal acts: The Capital Requirements Regulation (“CRR”), including the LCR and the NSFR (Pillar I), and the adopted Capital Requirements Directive (*Directive 2013/36/EU-“CRD IV”*), including adjusted provisions regarding to liquidity risk management (*Pillar II*). By the 1st of January 2014 the new liquidity regulations entered into force.

3. Definitions of “Liquidity” and “Liquidity Risk”

In terms of banking regulation, it must be concretely clear which specific risk is regulated by which kind of measures or ratio in order to effectively address problems in an early stage. Thus in the following, the terms liquidity and liquidity risk should be defined and further distinguished.

3.1. Basics

Defining the terms *Liquidity* and *Liquidity risk* is not an easy task. In contrast to other types of financial risks (e.g. market risk, credit risk, systemic risk, etc.) there is no common and straight legal definition on European level concerning liquidity or liquidity risk. However, specific provisions in CRD IV and CRR are determining requirements to credit institutions referring to manage liquidity risk. In order to better understand these issues. Further information and proposals for definitions could be found in the literature.

²Note that in Europe, the European legislator introduced a fourth buffer—The *systemic risk buffer* (Art 133 CRD IV).

In general the idea of liquidity refers to the “ability of an economic agent, to exchange his or her existing wealth for goods and services or for other assets” (Nikolaou, 2009: p. 10). So in first, *liquidity* should be understood as a concept of *flows* (and not *stock*), second on the ability to realize this flows (make assets to cash for example). Consequently *liquidity risk* normally is based in a situation where there is no or limited opportunity (or only with inappropriate cost) to realize flows.

According to Nikolaou (2009) three types of liquidity, and therefore liquidity risks, should be differentiated: **central bank liquidity**, **market liquidity** and **funding liquidity** (Nikolaou, 2009: p. 10). In order to focus more on liquidity regulation under Basel III in reaction to the current financial crisis, it makes sense to concentrate on this clear tripartite categorisation and argue which are the main elements of these types of liquidity and finally assess what are the key risk drivers and how these risks are linked. In the following some recent literature (e.g. Nikolaou, 2009; Bervas, 2009) and classic definitions (Hicks, 1936; Keynes, 1936) will be explained and highlighted.

3.2. Central Bank Liquidity (Risk)

Because of its specific importance for the financial system it should be expressed that the mandate of central banks to provide the financial market with sufficient liquidity in line with its concrete policy stance can be seen as the origin of modern notions of liquidity and liquidity risk. Without the existence of *base money* (*M-zero* does include banknotes in circulation and credit institutions reserves with the central bank, liability-side of the central bank’s balance-sheet; OECD, 1971; p. 109) there would be no currency, therefore no liquidity and consequently no liquidity risk in the financial market (Affinito, 2013; p. 4). Thus there is a fundamental reliance of credit institutions to the central bank (Bindseil, 2013; p. 4; Berrospide, 2013; p. 8) because of the inherent *liquidity deficit* in financial markets, arising from the need for banknotes and the minimum reserve requirement in line with monetary policy (Nikolaou, 2009; p. 12). Liquidity is provided by the central bank via open market operations (asset-side of the central bank’s balance sheet), in order to approximate the lending rates in the (short-term) interbank-market to the concrete target policy rate (Nikolaou, 2009; p. 12).

Central bank liquidity risk is a very special case, particularly rare in industrialized countries. From the perspective of the lender of first and last resort as the monopoly of liquidity provision, a central bank formally cannot be *illiquid* in a narrow sense. The only way a central bank could be *illiquid in a broader sense* would be situation where there is no (more) demand on domestic currency (e.g. hyperinflation, exchange rate crisis) and therefore the central bank cannot fulfil its mandate in ensuring price stability. However, focussing on the pure *ability* to provide liquidity there is no limitation to the central bank even in these cases (Nikolaou, 2009: p. 16).

3.3. Market Liquidity (Risk)

In common *market liquidity* is defined as the “ability to trade an asset at short notice at low cost and with little impact on its price” (Nikolaou, 2009: p. 14). In more basic terms, assets may be considered as liquid if they are easily and immediately convertible into cash with little or no loss of value (EBA, 2013a: p. 15).

Obviously the quality of liquidity of diverse assets differs in a very broad range and among various dimensions, which means that liquidity is a relative concept (Bervas, 2009: p. 64; Keynes, 1936: p. 86) and therefore difficult to measure and quantify. Generally market liquidity usually is measured under the notion of different dimensions, e.g. tightness, market depth and resilience (Bervas, 2009: p. 65). *Tightness* measures the cost of a reversal of position at short notice for a standard amount (tightness of the bid-ask-spread; CEBS, 2009: p. 24), *market depth* corresponds to the volume of transactions that may be immediately executed without slippage of best limit prices, and *resilience* represents the velocity in which prices revert to their equilibrium level following a random shock in the transaction flow (Bervas, 2009: p. 65). More concretely EBA measured the liquidity of different asset classes under a broad set of methods, i.e. price impact, bid/ask-spread, trading volume and turnover, zero-trading day and volatility (EBA, 2013a: p. 15ff).

Consequently *market liquidity risk* is the risk of “not being able to immediately liquidate or hedge a position at current market price” (Bervas, 2006: p. 64). The liquidation of assets in short notice is not only important for banks which speculate with different asset- or currency-classes. Given that every business bank—because of its role as liquidity transformation intermediary—has a certain degree of liquidity risk, sufficient market liquidity can minimise funding stress, e.g. via generating additional liquidity out of assets in order to meet obligations when they come due. Therefore having sufficient market-liquid assets in the portfolio (Keynes, 1936: p. 86) is

crucial for banks in order to decrease *funding* liquidity risks.

In the financial market, market liquidity risk should be priced in order to cover the underlying risks, namely *asa cost* or a *premium* of a specific asset or asset class (Hicks, 1936: p. 164). The higher the market liquidity risk, the larger should be the premium. Therefore the price of an asset reflects, among other parameters, liquidity costs, which are the symptom of liquidity risk (Nikolaou, 2009: p. 19). Given that a serious liquidity stress scenario is a very rare situation, in practice market liquidity risk is usually underestimated and therefore not adequately priced by the concerned market participants.

It should also be noted that market liquidity risk empirically shows the nature of having effects across different markets (region) and types of market (e.g. equities, bonds). Thus the liquidity of an asset can immediately change under various scenarios, i.e. fire sales of big asset amounts by other market participant (decrease of price), down-rating of the debt-issuer (decrease of credit quality), new rules and regulations (Liquidity buffer or collateral-basket *non-eligibility*), psychological effects (Keynes, 1936: p. 86) etc. On these grounds it could be concluded that market liquidity risk is strongly linked with systemic risks in general.

Mostly relevant referring to liquidity regulation in the banking sector are two types of market liquidity: liquidity in the interbank market (liquidity is being traded among banks) and liquidity in the asset market (assets are being traded among financial agents; Nikolaou, 2009: p. 15). Both types have been addressed by the new liquidity rules arising from Basel III.

3.4. Funding Liquidity (Risk)

Funding liquidity is the “ability to fund increases in assets and meet obligations as they come due” (BCBS 2008a: p. 2; Keynes, 1936: p. 59). In other words an institution is liquid “as long as inflows are bigger or at least equal to outflows (Nikolaou, 2009: p. 13). Mainsources of funding liquidity are funds from the depositors (sight or term deposits), the market (via the liquidation of assets or respectively selling, repurchasing, securitisation of assets), the interbank market (secured and unsecured) or the respective central bank (open market operations). Empirically the stableness of such funds broadly differs. Whereas retail deposits remain—even in times of stress (excluding the extreme scenario of a “bank run”; Shin, 2008: p. 4 ff)—usually for a long term, deposits granted by financial institutions are highly liquid and leave the bank very soon in a stress scenario. In the recent crisis for example, the drying up of the interbank market in 2007/2008 generated a systemic funding risk in consequence.

Following these assumptions *funding liquidity risk* is the “inability of a financial intermediary to service their liabilities as they fall due” (Nikolaou, 2009: p. 17). Credit institutions are strongly dependent from (more or less) stable funding sources, such as retail deposits and the secured interbank market. In situations when depositors worry about the solvency or liquidity of the respective credit institution, funding sources may suddenly may got lost: Retail clients claim their deposits back (“bank run”; Shin, 2008: p. 4 ff) or do not roll-over, partner-banks cut off liquidity and credit lines, etc.

Given that the potential sources of funding liquidity are very heterogeneous and differ in their risk-averseness, the measurement of funding liquidity risk is challenging. Usually three types of metrics are used to measure funding liquidity risk (Nikolaou, 2009: p. 17): static balance sheet analysis (simple point-in-time backward looking approach), dynamic stress testing techniques (dynamic break down of inflows and outflows) and scenario analysis (complex assumption of different idiosyncratic, market and combined stress-scenarios).

Sometimes funding liquidity risk is designated as *consequential risk* because it usually follows the impact of other sources of banking risk, such as market risk (Matz/Neu, 2007: p. 4). As example, the raising of funds via the liquidation of assets suffers in times of market uncertainties when prices cannot be calculated transparently and big market participants leaving the market, letting the entire price-level of assets decrease.

3.5. Interim Conclusion

As *liquidity* is declared as the “lifeblood of financial institutions” (Harris, 2013: p. 179), so equally liquidity risks are endogenous to banking business (Nikolaou, 2009: p. 23). Nevertheless in smoothly functioning financial markets liquidity stress is a rare scenario, which typically leads to the underestimation and lack of pricing of liquidity risks by market participants. The possible categorization in three different types of liquidity and liquidity risk shows that liquidity depends on the concrete perspective, task and business model of the financial intermediary. While a central bank—as a monopolist of liquidity naturally immune against typical liquidity stress—

provides a certain amount of liquidity that should balance demand and supply of liquidity, credit institutions, which gains profit via maturity transformation (taking short-term deposits and lending on long-term), may ensure the efficient allocation of liquidity resources within the market. Market liquidity itself guarantees the (re-)distribution of liquidity, e.g. via securitisation of (illiquid) loans.

The different types of liquidity risks are closely linked (Affinito, 2013: p. 3). As we have seen above, market and funding liquidity are strongly connected, even their specific risks. Even the sources of liquidity risk are diverse: e.g. fire sales of assets may lead to market disruptions and the drying up of market liquidity, and therefore increases funding risk. Reputational risks can lead to the drain of huge amounts of deposits, which may lead to fire sales in order to generate liquidity from assets. In liquidity-belongings a vicious circle of lacks of confidence may head to a systemic crisis, as seen in the years 2007-2009.

In general we may acknowledge that in incomplete markets, liquidity risks basically arise from the asymmetry of information between market participants (Nikolaou, 2009: p. 11). In the cases of market liquidity risks, business partners may have different views about the concrete pricing of an asset or portfolio, which market-wide leads to bigger bid-ask-spreads (CEBS, 2009: p. 24), higher volatility and decreasing liquidity of such assets. Furthermore funding stress also can be triggered by information asymmetry, *i.e.* when rumours damage the reputation of a still solvent bank which potentially leads to a bank run.

4. Institutional Protection Schemes (“IPS”)

Institutional Protection Schemes (IPS) were mentioned in numerous provisions of the CRR. In 2006 originally established by the European legislator in order to harmonize the roles of conventional banking groups with *de-centralized sectors* within the framework of the calculation of risk weighted exposure amounts (Standardized Credit-Risk Approach; see Art 111 CRR et seqq), the importance of IPS are heavily increasing via CRR.

In the following it should be explained what type of banking network IPS’ exactly are, what are the requirements to legally establish an IPS, which legal and consequences arise with the permission by the competent authority and finally, what could be specific liquidity risks within IPS.

The following achievements should be read within the assumption that institutions which are willing to establish an IPS really and freely decide to enter an IPS as a—in contrast to banking groups and networks according to Art 10 CRR—relatively *weak connection* between institutions in order to stay autonomous to a high extent. This assumption is necessary in order to underline the specific differences between IPS’, banking groups and networks according to Art 10 CRR. This assumption is highly realistic because the supervisory approval according to Art 10 CRR does trigger much more privileges to the connected entities, e.g. an automatic capital- and solvency-waiver. So if member-institutions would agree with more strict rules, such in the case of Art 10 CRR, there won’t be a reason to apply a permission concerning Art 113 para 7 CRR (IPS), because the sample of privileges under Art 10 CRR is much broader. Consequently this paper claims that IPS-members attempt to stay as autonomous as possible under the IPS-framework (see Chapter 4.4).

4.1. Characterization

Within the framework of CRR, the term “IPS” (Art 113 para 7 CRR) is legally defined. According to Art 113 para 7 CRR an IPS is a

“Contractual or statutory liability arrangement which protects those institutions and in particular ensures their liquidity and solvency to avoid bankruptcy where necessary.” (Art 113 para 7 CRR).

The definition of an IPS clearly states the aim of the respective establishment, namely the financial protection of its members against insolvency and illiquidity (Blume, 2007: p. 98). As well as banking groups or other types of bank-networks, an IPS is not a legal entity but a civil law-arrangement between specific financial undertakings in order to mutually protect each other from financial stress situations (Stern, 2013: p. 207 ff). Although not explicitly mentioned in CRR, the provision of Art 113 para 7 CRR presumes the existence of a legal entity, which is ongoing responsible for the regulations referring to the established IPS (in the following: *consolidating entity*; Stern, 2013: p. 208), e.g. providing an IPS-risk-review (Art 113 para 7 point d CRR) and a consolidated report (Art 113 para 7 point e CRR). The being of a consolidating entity is also mentioned in Art 8 para 4 second sentence CRR (“Liquidity-Waiver”).

In addition to the closing of a liability arrangement, the establishment of an IPS finally depends on a prior

permission granted by competent authorities according to Art 113 para 7 CRR. The requirements under which circumstances the respective competent authority is allowed to grant permission, are listed in the sub-paragraphs of Art 113 para 7 CRR and shall be explained in the following.

4.2. Requirements for the Establishment of an IPS

Art 113 para 7 CRR presents the legal requirements for the establishment of an IPS. The wording “competent authorities are empowered to grant provision” (Art 113 para 7 CRR) may let us assume that Art 113 para 7 points (a) to (i) CRR are minimum standards for the establishment of an IPS, and certain discretion is granted to competent authorities within the approval procedure framework (PRA, 2014).

4.2.1. Potential Members of an IPS (Art 113 Para 6 Point a and d, Para 7 Point a and h)

The Membership in an IPS is limited to undertakings which are an

“institution, a financial holding company or a mixed financial holding company, financial institution, asset management company or ancillary services undertaking subject to appropriate prudential requirements” (Art 113 para 6 point a, para 7 point a).

The sample of undertakings follows those categories of counterparties for which a zero-percent weighting within the framework of the Standardized Credit-Risk Approach (Art 111 CRR ff) can be granted. In practice the most usual participants of an IPS are institutions according to Art 4 No 3 CRR (credit institution or investment firm) and financial institutions according to Art 4 No 26 CRR (e.g. leasing companies, payment institution, financial holdings etc. See Annex I CRD IV).³

In further limitation of the IPS-membership only domestic undertakings can join an IPS (Art 113 para 6 point d, para 7 point a CRR). Therefore, IPS never can be established cross-border. Note that this does not hinder an indirect cross-border reference, *i.e.* if an IPS-member is a part of a cross-border banking group (e.g. parent institution or subsidiary is located in other EEA- or Non-EEA-state).

Finally, Art 113 para 7 point h CRR states that the IPS “shall be based on a broad membership of credit institutions of a predominantly homogeneous business profile” (Art 113 para 7 point h CRR). Point h apparently underlines the importance of banks being members of an IPS. Without a *broad membership* of credit institutions an IPS cannot be established. The term *broad membership* is not legally defined. Even it is not clear, to what extent a *predominantly homogeneous business profile* is sufficient in order to establish an IPS (Blume, 2007: p. 113 ff). Considering the aim of an IPS in order to protect its members from financial stress situations, a broad membership should ensure the diversification of individual risks and increase the common capital base on IPS-level. A predominantly homogeneous business profile of IPS-members has the advantage of (probably) more coherent risk measuring metrics on IPS-level, having in mind that the IPS-members generally faces similar financial risks (Blume, 2007: p. 113). Therefore the inclusion of a cross-border active investment bank within an IPS established by a small sample of conventional retail banks, generally is not approvable. Given that the IPS has only to be *predominantly* (and not fully) homogeneous, the bigger the sample of banks in the IPS gets, the more *variance* can be accepted by the competent authority (Stern, 2013: p. 207).

On the other hand, the requirement of a predominantly homogeneous business profiles accepts the likely correlation of risks within the IPS. Such correlating risks should be included in the risk management on IPS-level, as well as diversification factors.

4.2.2. Liability Arrangement

The members of an IPS have to establish a “contractual or statutory liability arrangement which protects those institutions and in particular ensures their liquidity and solvency to avoid bankruptcy where necessary.” (Art 113 para 7 CRR). From a contract-law perspective, such liability arrangements should be categorized as a *continuing obligation contract*. With exception of point fleg.cit, the CRR does not provide more concrete requirements about the content and conditions of the liability arrangement. Particularly Art 113 para 7 CRR does not determine the specific point of time or trigger-event in which cases a support in order to ensure liquidity and solvency to avoid bankruptcy is necessary (*IPS-trigger-event*).

³Note that potential Members of an IPS always have to be subject to appropriate prudential requirements. The supervision of financial institutions (Art 4 No 26 CRR) broadly differs within the EEA. Leasing companies in Austria, for example, are not subject to the supervision of the Austrian Financial Market Authority.

Art 113 para 7 point f CRR states that “members of the institutional protection scheme are obliged to give advance notice of at least 24 months if they wish to end the institutional protection scheme” (*withdrawal-provision*; Art 113 para 7 point f CRR). The respective withdrawal-provision should avoid situations in which well capitalized banks worry about the solvency of other IPS-members and therefore would like to exit the IPS before the risks are realized and the well-capitalized bank would be faced by claims in order to transfer own funds or liquidity to the struggling bank (Blume, 2007: p. 109). From the opposite perspective, the withdrawal-provision should provide sufficient time to the remaining IPS-members in order to adjust the weakened IPS and its level of capital and liquidity. The being of a withdrawal-provision may let assume that IPS-members can also be dismissed from the IPS-membership within the same timeframe. This setting may arise when IPS-members breach fundamental provisions of the liability arrangement and therefore jeopardize the survival of the entire IPS.⁴

The CRR does neither fix any concretization about the extent of protection measures, nor specifications about trigger-moments (Blume, 2007: p. 102), especially when protection is finally necessary to avoid bankruptcy (*early-intervention*). Particularly questionable is, whether the arrangement has to include an unlimited right for each participant to claim for protection in a financial stress situation. Such unlimited rights might lead to unintended moral hazard incentives, because individual risks are covered by fully mutualized own funds or liquidity buffers. Such incentives may create an inappropriately increase of individual risk appetite (*search for yield*) in order to gain more individual profit, collateralized by IPS-funds. To avoid inappropriate moral hazard, supervisors usually accept the limitation of such liability arrangements to a certain extent (limited right to be supported), for example referring to concrete levels of supplementary payments by the IPS-members (e.g. maximum payments are calculated on individual capital floors⁵) or individual risk-based payments on membership (e.g. calculation on risk-weighted assets). The right of protection can also be contractually conditioned on individual behaviour of the IPS-member, e.g. consideration of IPS-wide risk limitation (i.e. specific large exposure rules). Note that an unlimited right to claim protection could like lead to increased contagion risk within the IPS (Blume, 2007: p. 99) and would jeopardize the general aim of an IPS, namely the protection of members concerning the risks of insolvency and illiquidity.

However, even limited rights and potential payments in the case of a solvency or liquidity stress situation may hit an IPS and its members very hard. It should be underlined that an insolvency or illiquidity case within an IPS questions the efficiency of the respective IPS. In such situations competent authorities have to decide whether the granted permission must be rejected or not. Given the legal and economic consequences of the establishment of an IPS (see Chapter 4.3) such supervisory decisions are usually very tough.

4.2.3. Readily Available Funds (Art 113 Para 6 Point e, Para 7 Point a and b CRR)

The liability arrangement has to ensure that “the institutional protection scheme is able to grant support necessary under its commitment from funds readily available to it” (Art 113 para 7 point b CRR) and that within the IPS “there is no current or foreseen material practical or legal impediment to the prompt transfer of own funds or repayment of liabilities from the counterparty to the institution” (Art 113 para 6 point e CRR). Both requirements are highly imprecise and practically difficult to proof. In each case, funds are used in order to protect other IPS-members. While para 6 point e *leg.cit* require a general free-flow of funds between IPS-members, para 7 point b *par.cit* directly address a certain time horizon in which funds are transferable (“readily available”). The requirement concerning the avoidance of legal impediments (para 6 point e *par.cit*) could only be met if the liability arrangement is sufficiently transparent in ruling issues when own funds and liquidity has to be transferred (*triggers*). Furthermore the liability arrangement shall not include any provision that contradicts other contractual agreements between the IPS-members, such as contracts referring to the shifting of profits or cash pooling. Legal impediments can also arise from specific supervisory requirements, e.g. stricter regulations concerning concentration risks and large exposures. Material practical impediments may evolve from different sources, e.g. insufficient IT-support (Stern, 2013: p. 5). A generally low level of capital within an IPS does in any case let assume material practical impediments concerning the prompt transfer of own funds. Similarly insufficient liquidity buffers on solo-basis creates practical impediments in order to transfer liquidity.

⁴See for example and the requirement of “corresponding possibilities to take influence”. Ongoing breaches of the liability arrangement may let the competent authority assume, that the corresponding possibilities to take influence were not sufficiently effective.

⁵Note that this method of calculation might create moral hazard tricky too. IPS-members who are well capitalized would be hit more than less capitalized members, which may create incentives to downside capital levels.

Funds should only be considered as always readily available if the IPS have an exclusively access to funds dedicated to the aims of the respective IPS, namely the protection against bankruptcy of IPS-members (Stern, 2013: p. 4). In the end the IPS should have an own pool of assets and funding sources, provided by the IPS-members *ex-ante* (IPS-membership-fee). Given that IPS' are not legal entities, the pool should be administrated by a specialized entity including an IPS-committee, which might be composited of representatives and risk-managers of the IPS-members. In order to avoid conflicts of interest such committees need strict *governance*-rules (Stern, 2013: p. 5).

4.2.4. Risk Management (Art 113 Para 7 Point c, d and i CRR)

Art 113 para 7 point c requires that the IPS

“disposes of suitable and uniformly stipulated systems for the monitoring and classification of risk, which gives a complete overview of the risk situations of all the individual members and the institutional protection scheme as a whole, with corresponding possibilities to take influence” (Art 113 para 7 point c CRR).

In more abstract words, an IPS needs own risk management tools (Blume, 2007: p. 102 ff). The requirement to establish an IPS-risk management shows that the IPS shall not only operate in bankruptcy-cases but in preventive ways to avoid insolvency and illiquidity. Given that risk management requirements are a part of the Basel Pillar II-concept (Art 74 CRD IV et seqq), the minimum standards for risk management in banking groups should also be valid for IPS' (see i.e. the Austrian implementation of Art 86 CRD IV et seqq via § 3 and § 12 KI-RMV), namely for the responsible *consolidating entity*. However, in CRD IV IPS' are not explicitly mentioned in this regards.

Such risk management tools shall include opportunities for measuring financial risks on solo- and consolidated basis comprehensively. In addition the IPS “conducts its own risk review which is communicated to the individual members” (Art 113 para 7 point d CRR). Though a comprehensive monitoring of risks is crucial, an IPS also needs certain *possibilities to take influence* on individual members in order to minimize risks on IPS-level e.g. via setting of individual risk limitations. The wording “possibilities to take influence” is very soft, letting assume that such possibilities according to Art 113 para 7 CRR are not equal to the possibility to issue *instructions* to the management of institution according to Art 10 CRR (Rabobank; Stern, 2013: Footnote 11). So *taking influence* pursuant to Art 113 para 7 point c CRR can only be effective if certain sanctions were announced, e.g. penalty payments or finally dismissing the IPS-membership.

Finally, competent authorities have to monitor the performing of the IPS-risk management on an annual basis (Art 113 para 7 point I CRR), e.g. via on-site-inspections. Given that a functioning risk management is approval requirement, material deficits in the risk-management can lead to the supervisory rejection of the permission.

4.2.5. Consolidation/Aggregation (Art 113 Para 7 Point e and g CRR)

Similarly to banking groups even IPS shall publish an annual financial report. However, in contrast to banking groups an IPS can choose whether it issues a *consolidated* or *aggregated* report (Art 113 para 7 point e). Both reports have to include the balance sheet, the profit-and-loss account, the situation report and the risk report, concerning the IPS as a whole (Blume, 2007: p. 105). While consolidation rules are broadly anchored in legal provision (see Art 11 CRR ff), there are no harmonized rules regarding aggregation, which probably might lead to problems in comparing the financial figures of different IPS'. Whatever type of report the IPS has chosen, a multiple gearing⁶ of own funds must be avoided (Art 113 para 7 point g CRR).

4.3. Regulatory Consequences Regarding the Establishment of an IPS

Members of an established IPS may obtain a broad amount of regulatory privileges, which can be listed as follows.

4.3.1. Waiver on the Calculation of Risk Weighted Exposure Amounts within the IPS (Art 113 Para 7 Crr)

Art 113 para 7 CRR is the central provision regarding the establishment of an IPS. Under the CRR-credit risk standardized approach (Art 111 CRR ff), institutions has to assign their exposures to specific exposure classes in

⁶Multiple gearing means the multiple use of elements eligible for the calculation of own funds in order to increase own funds on consolidated basis virtually, but not in practice and therefore disclose a wrong picture of the capital situation of the banking group.

order to calculate their concrete risk weighting. Generally exposures against other institution shall be weighted according to Art 119 CRR ff (minimum 20%). Within an IPS, members have the right to do not apply those weightings and instead of that, apply a 0%-percent weight, assuming that such exposures need not to be covered by own funds (Blume, 2007: p. 92).

4.3.2. Waiver from Specific Deduction Requirements (Art 49 Para 3 CRR)

According to the general CRR-own funds-approach, capital holdings in other institutions shall be deducted in order to minimize inappropriate contagion risk among the financial market participants (see Dellinger/Burger/Puhm, 2011: p. 143 ff). In addition to the IPS-permission, institutions can seek approval in order to be waived from own funds deduction requirements within the IPS (Art 49 para 3 CRR). Permission may be granted by the competent authorities if the IPS ensures an appropriate own funds-level on consolidated basis according to Art 92 CRR et seqq, and guarantees that the multiple use of own funds-elements is eliminated (Art 49 para 3 point v CRR).

4.3.3. Recognition of Minority Interest Arising Within the Cross-Guarantee Scheme (Art 84 para 6 CRR)

Under the CRR, minority interest within banking groups⁷ cannot fully be included in the consolidated calculation of own funds. The own funds regime assumes that such minority holdings are not sufficiently suitable in order to absorb losses in times of crisis (Recital 38 CRR). In the special case that an IPS is a banking group at the same time⁸, the CRR allows the recognition of minority interest within a *cross-guarantee scheme* according to Art 4 No 127 CRR. In addition to the requirements in order to establish an IPS, the membership in across-guarantee scheme cannot be withdrawn for a time horizon of ten years (“voluntary exit of a subsidiary”; Art 4 No 127 point g CRR; Stern, 2013: p. 6). Furthermore the competent authority is explicitly empowered to prohibit an exit of a subsidiary from the cross-guarantee scheme (Art 4 No 127 point h CRR).

4.3.4. Waiver on Large Exposures (Art 400 Para 1 Point f CRR)

Art 395 CRR sets limits to large exposures in order to minimize concentration risks. Generally an institution shall not incur an exposure “to a client or group of connected clients the value of which exceeds 25% of its eligible capital” (Art 395 para 1 CRR). According to Art 400 para 1 point f CRR members of an IPS are waived from large exposure limits within the same IPS (Jergitsch/Motter/Siegl, 2010: p. 46).

4.3.5. Liquidity (Art 8 Para 4 and 5, Art 416 Para 1 Point f, Art 422 Para 3 and 8, Art 425 Para 4 CRR)

The liquidity regulations under the CRR mention the establishment of an IPS in many provisions. With the most serious consequences it should be underlined that members of an IPS, equally to subsidiaries in a banking group, can seek approval in order to be waived from the liquidity requirements on solo basis (“Liquidity-Waiver”; Art 8 para 4 CRR). Requirements to receive a liquidity-waiver are the fulfilment of the liquidity requirements according to Part 6 CRR (LCR, NSFR) on a consolidated basis, a sufficient level of liquidity including a free transfer of liquidity among IPS-members, and finally a guarantee that there are no practical or legal impediments to move liquidity within the IPS (Art 8 para 4 point a-d CRR).⁹

In the case that a liquidity-waiver according to Art 8 para 4 CRR is granted, the competent authorities may also decide to waive these privileged institutions from the liquidity risk-management requirements according to Art 86 CRD IV et seqq on solo basis (Art 8 para 5 CRR). Although not explicitly mentioned in CRR, it could be assumed from a systemic view (see Waiver-requirements in Art 10 CRR) that there has to be instruction rights in favour of the consolidating entity in order to monitor and limit liquidity risks centrally (Stern, 2013: p. 3).

Note that if approved by the competent authority, the regulator allows the respective credit institution to carry on business, even maturity transformation as a key element of banking business (BCBS, 2008a: p. 2), without quantitative (LCR, NSFR; Art 8 para 4 CRR) or qualitative (liquidity risk management; Art 8 para 5 CRR) li-

⁷According to Art 4 No 128 CRR “‘minority interest’ means the amount of Common Equity Tier 1 capital of a subsidiary of an institution that is attributable to natural or legal persons other than those included in the prudential scope of consolidation of the institution” (Art 4 No 128 CRR).

⁸See the provisions regarding cross-guarantee schemes in Art 4 No 127 CRR.

⁹In the favour of a banking group, a liquidity-waiver can also be granted on cross-border basis (Art 8 para 3 CRR), if there is an agreement between the competent authorities (home and host). Note that an IPS never can be established on cross-border basis (Art 113 para 6 lit a, para 7 lit a CRR).

quidity regulations on solo basis (Stern, 2013: p. 6).

If no waiver on solo-basis is granted, institutions may ask the regulator in order to formally recognize their specific business model and respective liquidity risk, for instance via the approval of privileged treatment of inflows (Art 425 para 1 or 4 CRR) or outflows (Art 422 para 8 CRR).

Art 425 para 1 first and second sentence CRR (75%-cap-waiver) states that as a general rule, institutions shall only report *capped liquidity inflows* to the competent authorities. *Capped* inflows are inflows limited to 75% of outflows (Art 425 para 1 first and second sentence CRR).¹⁰ Some specific inflows are exempted from the cap by the CRR. Most important to mention is the exemption of interbank deposits within banking groups according to Art 113 para 6 CRR (zero-percent-weighting) and IPS. The European legislator assumes, according to Art 113 para 6 point e, para 7 point a and b CRR, that—in this cases—are no legal or practical impediments for the free transfer of liquidity.

In addition to explicit CRR-exemptions, according to Art 425 para 1 last sentence CRR the competent authorities have the power to waive this cap in full or partially in favour of banking groups. Paradoxically this 75%-cap-waiver-procedure is not applicable for IPS. As a result, all inflows within IPS, with the exemption of interbank deposits and inflows explicitly mentioned in CRR (e.g. inflows from specific mortgage lending or promotional loans), shall always be capped by the reporting entity (BCBS, 2013: p. 34).

Art 425 para 4 CRR enable competent authorities to grant a privileged treatment of inflows regarding credit or liquidity facilities within IPS and banking groups (Stern, 2013: p. 4). As a general rule, the liquidity reporting of facilities follows an asymmetric approach, concrete manifested as 0%-inflow to the liquidity-receiver (“buyer” of facility; Art 425 para 2 point g CRR) but 100%-outflow to the liquidity provider (Art 424 para 5 CRR).¹¹ By way of derogation of the stated treatment and with permission granted by the competent authority, institutions may report higher liquidity inflows from credit or liquidity facilities if the institution can ensure that there are “reasons to expect a higher inflow even under a combined market and idiosyncratic stress of the provider” (Art 425 para 4 point a CRR). In practice, such evidence is hard to adduce, particularly for institutions which never were really hit by a liquidity stress event and therefore have no practical experience with a stress-scenario.

One more requirement according to Art 425 para 4 CRR is remarkable: In order to get an approval for privileged liquidity inflow treatment, the liquidity provider has to apply (diverging from Art 422, 423 or 424 CRR) a corresponding symmetric or more conservative outflow from the facility. As a result this means that the permission of the privileged treatment according to Art 425 para 4 CRR does also depend on the reporting behaviour of the counterparty(!)

Inversely Art 422 para 8 CRR states a privileged treatment for *other outflows* that do not fall under Art 422 para 1 to 5 CRR (Art 422 para 7 CRR). Notably Art 422 para 1 to 5 CRR does mention the most important liquidity outflows, e.g. secured lending and capital market-driven transactions (0% - 100%), depositor in order to obtain clearing, custody or cash management (5% - 25%), outflows from the legal or statutory minimum deposit within an IPS (25% - 100%), excluding additional outflows from derivative contracts (Art 423 CRR) and credit or liquidity facilities (Art 424 CRR). Therefore it is questionable, which *other* outflows Art 22 para 7 CRR really means. Most important outflows which are not mentioned in Art 422 to 422 CRR are outflows from unsecured lending (BCBS, 2014: p. 27).

In practice it is likely that the permission according to Art 422 para 8 CRR will be addressed overwhelmingly for unsecured lending outflow issues.

Finally, Art 416 para 1 point f CRR recognizes

“legal or statutory minimum deposits with the central credit institution and other statutory or contractually available liquid funding from the central credit institution or institutions that are members of the network referred to in Article 113(7), or eligible for the waiver provided in Article 10, to the extent that this funding is not collateralised by liquid assets” (Art 416 para 1 point f CRR)

as a potential category of HQLA. Given the fundamental Basel-approach of minimizing interbank-dependence (IMF, 2013: p. 16), the Recognition of such interbank deposits or other interbank-funding sources as HQLA is astonishing and will be discussed in Chapter 6.2.

¹⁰The cap of liquidity inflows has the aim of forcing institutions to hold a minimum amount of liquid assets in their liquidity buffer according to LCR-definitions. Without a legal cap, it would be possible for some institutions to fulfil the LCR-requirement without holding liquid assets.

¹¹Note that the concrete inflow/outflow-rates will be determined by the European Commission according to Art 509 CRR.

4.3.6. Internal Governance (Art 91 CRD IV)

Beyond the capital and liquidity regulations according to CRR, the CRD IV introduced specific regulations referring to the internal governance of credit institutions. Beside qualitative requirements concerning the effectiveness of the credit institutions organisation (Art 88 CRD IV), the *fitness and properness* of the management body (Art 91 para 7 CRD IV) and the avoidance of conflicts of interest (Art 88 para 1 CRD IV), Art 91 para 1 CRD IV states that “all members of the management body shall commit sufficient time to perform their functions in the institution” (Art 91 para 1 CRD IV) and limits the number of executive and non-executive directorship in a quantitative way (Art 91 para 3 CRD IV).¹² By derogation of this limits, members of the management body within IPS or banking groups may count all their (executive or non-executive) directorships within the IPS as one single directorship (Stern, 2013: p. 7). Notwithstanding this derogation it should be noted that in any case members of the management body has to commit sufficient time to perform their functions (Art 91 para 2 CRD IV).

4.3.7. Clearing

The EMIR¹³ sets

“clearing and bilateral risk-management requirements for over-the-counter (‘OTC’) derivative contracts, reporting requirements for derivative contracts and uniform requirements for the performance of activities of central counterparties (‘CCPs’) and trade repositories” (Art 1 para 1 EMIR).

according to Art 4 para 1 EMIR financial counterparties shall basically clear all OTC derivative contracts. Among other transactions, *intragroup transactions* corresponding to Art 3 EMIR are exempted from the clearing obligations (Art 4 para 2 EMIR), while Art 3 para 3 point b EMIR recognizes transaction between members within the same IPS as intergroup transactions and there waive members of an IPS from clearing obligations (Stern, 2013: p. 7).¹⁴

4.4. Differences to Banking Groups or Networks According to Art 10 CRR

In conventional banking groups one or more institutions are controlled by a parent institution, namely a parent credit institution, a financial holding or mixed financial holding company (Art 11 CRR ff). In its role as parent institution the controlling company has significant influence over the subordinated entities, e.g. via the power to nominate one or more members of the management board and, reciprocally, the power to revoke such nomination. More strictly the *central institution* of a network according to Art 10 CRR (*credit institutions permanently affiliated to a central body*) has the power to issue concrete instructions against the credit institutions permanently affiliated (Stern, 2013: p. 2013). Therefore subordinated and permanently affiliated institutions regularly have strongly limited autonomy concerning their business strategies and decisions. Contrary to this, members of an IPS stay autonomous to a large extent (Stern, 2013: pp. 211-213). As mentioned above, the risk management system of IPS just has to ensure that there are *certain possibilities to take influence* on individual members. From a systemic view, such possibilities to take influence cannot have the same quality as instructions according to Art 10 para 1 CRR, because permanently affiliated credit institutions, in return, are waived from banking regulations, reconciling the fact of limited independence.¹⁵

As a result, IPS’ are not networks of banks which were centrally and governed and controlled like banking groups or networks according to Art 10 CRR. The power of the consolidating entity is limited to monitor the member’s activities and taking influence, not issuing instructions, when members are likely to breach the terms of the respective liability arrangement or other aims of the IPS.

Equally to banking networks according to Art 10 CRR, IPS’ has to ensure the ongoing solvency and liquidity of its members. This point is a major difference to banking groups, where the parent institution usually does not have an obligation to protect the subordinated entities¹⁶ and, in the last resort, may write-off the assets book

¹²According to Art 91 para 3 CRD IV members of the management board can hold directorships only in two possible combinations in maximum: one executive directorship with two non-executive directorships or four non-executive directorships.

¹³EMIR—European Market Infrastructure Regulation: Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories (OJ L 201, 27.7.2012, pp. 1-59).

¹⁴Please note that Art 11 EMIR states special requirements concerning risk-mitigation techniques for OTC derivative contracts not cleared by a central counterparty CCP.

¹⁵Note that the requirement to issue instructions against another entity is a key element in order to get a waiver from prudential requirements.

¹⁶Note that the permission in order to get a “solvency waiver” according to Art 7 CRR usually requires that the parent institution guarantees the commitments entered into by the subsidiary (Art 7 para 1 lit b CRR).

value of the subsidiary.

In contradiction to banking groups and banking networks according to Art 10 CRR (*Rabobank*; Stern, 2013: Footnote 11), IPS' are not directly addressed by European regulations. While banking groups and banking networks according to Art 10 CRR are required to fulfil banking regulations, such as requirements concerning own funds, large exposures, liquidity, leverage and disclosure (parts 2 to 8 CRR), on a consolidated basis (Art 10 para 1, Art 11 para 1 and 3 CRR), IPS' do not have to meet any specific CRR-requirements (pillar I and III) on a consolidated level (Stern, 2013: p. 8). Even in CRD IV (pillar II), IPS are not explicitly mentioned.¹⁷

Given the aim of the establishment of an IPS to protect members from financial hazard, its respective regulatory consequences, and further the concrete requirement in Art 113 para 7 point e and g CRR (consolidated or aggregated financial report), the decision of the European legislator not to extend regulations referring capital and liquidity to IPS is remarkable and hard to understand from a prudential perspective.

4.5. Specific Issues of Liquidity Risks within IPS'

Given that an IPS, equally to a *banking group*, is not a legal entity and therefore has no assets or liabilities, an IPS *itself* never can be hit by liquidity risks. So the debate about liquidity risks within an IPS always addresses the members of an IPS, which naturally are banks with a predominantly homogeneous business profile (Art 113 para 7 point h CRR), and particularly the *consolidating entity* as—in most cases—*responsible* institution.¹⁸

As discussed above, the connection of liquidity risk and banking business is inextricable. Every IPS-member has certain funding needs and therefore has to face liquidity risks, at any time on solo basis, even though different shape. Special challenges may occur to the *consolidating entity* as responsible unit in order to protect the members of the IPS.

Considering the aim of an IPS, namely ensuring the solvency and liquidity of its members at any time in order to avoid bankruptcy (Art 113 para 7 CRR), an extraordinary situation occur: Numerous credit institutions commit themselves to *protect* other members, concretely fund them (via transfer of own funds or liquidity), if necessary to avoid bankruptcy of the latter. Generally, a big figure of participating institutions may ensure a certain level of risk-diversification which can minimize the specific risk to each single participant. In a perfect world, funds can be transferred to the entity where most liquidity is needed, and may balance the demand within the entire IPS. However, the financial crisis has shown how quickly liquidity may dry up, even between strongly connected entities. In a stress-scenario, the risk of becoming illiquid always concerns the solo-entity as a legal person, therefore enhance incentives to hoard liquidity (Berrospide, 2013: p. 4) when funding is most needed by other struggling entities, even IPS-members.

So the relationships within an IPS can be seen from, at minimum, two perspectives: From the IPS-perspective (members of the IPS which are potentially asked for support) and the struggling institution-perspective (member who may ask for support). Irrespective of the economic situation of the respective IPS-member (e.g. current level of capital and liquidity, profitability, risk appetite, etc.), every struggling IPS-member has the formal legal right to ask for IPS-support if it is necessary to avoid bankruptcy. This may generate a moral hazard-situation within the IPS, because every member recognizes its legal right to ask for support at any time if necessary. As mentioned above, the holding of liquid assets is expensive for banks, because such assets regularly are yielding low. The expectation of IPS-support may create incentives to members to hold more high yielding assets rather than highly liquid assets in their portfolio in order to increase their profitability, but simultaneously increase their liquidity risk on solo basis and consequently elevate the liquidity risk of the entire IPS because of a minimized counterbalancing capacity (liquidity buffer) on IPS-level.

Anyway, the IPS-members have to acknowledge that they may suffer a liquidity outflow if another IPS-member struggles and become likely to fail (*IPS-perspective*). Depending on the concrete internal structure of the respective IPS, such outflows were manifested either as balance-sheet item (liability, e.g. *membership payment* to an IPS-liquidity buffer on consolidated level), off-balance-sheet items (contingent liability, e.g. *guarantee*) or both (e.g. in a situation when the IPS-liquidity buffer on consolidated level is insufficient big or liquid to take measures against the respective liquidity stress-scenario, the IPS-liability agreement may claim additional contributions in order to refill the liquidity buffer). From this view, IPS-members are not only vulnerable be-

¹⁷The CRD IV requirements also focus on banks on solo-basis and banking groups. Notably the Austrian implementation of the CRD IV-risk management requirements explicitly requires IPS' to establish risk management systems according to Art 74 ff CRD IV (§ 3 KI-RMV).

¹⁸For instance Art 416 para 1 lit f CRR assumes that the *central institution* of an IPS (or other banking network) plays a major role referring to liquidity pooling, e.g. via taking and administrating the statutory minimum deposit from network-members.

cause of their own liquidity risk but also being potentially directly hit by a liquidity stress-scenario which arises from another IPS-member. Such liquidity risks normally has to be priced, e.g. via shifting the costs of holding a liquidity buffer (opportunity costs) or via calculating a fee referring to the use of a liquidity facility. Within an IPS, the pricing of such liquidity risks does only play a subordinated role because of the fundamental aims of the IPS in order to avoid illiquidity of the IPS-members. Consequently liquidity risk should be centrally monitored and consistently priced within an IPS (see Art 113 para 7 point c CRR in connection with Art 86 para 1 CRD IV) in order to avoid underestimation of liquidity risks. It should be underlined that such centralization of liquidity risk management should not lead to situation whereas IPS-members fully give up their responsibilities in order to limit liquidity risks. Particularly it should be avoided that the consolidating entity (or the central institution) has to play the role as a *lender of last resort within the IPS*.¹⁹

Notably an IPS-trigger-event may create additional contagion risk within the IPS (BCBS, 2008: p. 17). This contagion risk may also be amplified by the fact that IPS-members are active within a predominantly homogeneous business model (Art 113 para 7 point h CRR), which means that IPS-members face correlation risks to a greater extent (e.g. second round effects from a *credit crunch*, O’Grady, 2008).

In order to protect one or more members, and bringing them back to adequate levels of capital and liquidity, the supporting members were weakened by the trigger-event. Such weakening may activate a new IPS-trigger-event as second round-effect, starting a vicious circle of decreasing support-opportunities and increased probability of new trigger-events. At the end, the economic and legal survival of the entire IPS would be jeopardized.

So obviously one single extraordinary event can trigger disastrous consequences and may heavily hit an IPS and its members. Therefore it seems that the establishment of an IPS’ creates a specific type of systemic liquidity risk. Single IPS-members may endanger the existence of the whole IPS, particularly in the case if they are “too big” or “too embedded/to interconnected” (Espinosa-Vega, 2009; BCBS, 2014: p. 1) to fail.

4.6. Interim Conclusion

The achievements above presented a brief overview about the notion and structure of IPS’, including the differences to conventional banking groups, the regulatory privileges for IPS and the specific liquidity risks within this network. It also shows the extraordinary complexity of such banking networks which constitutes challenges to both, participating members of the IPS, and the regulator. Naturally the role of the regulator is not limited to the granting of the final permission to establish an IPS. On the one hand, the risk management systems of IPS’ have to be audited on an annual basis. On the other hand, and more awkward, it is questionable how supervisors should behave in the case of IPS-trigger-events, especially if the IPS-funds are not appropriate to ensure liquidity and solvency at any time.

Given the broad number of regulatory privileges to the members of an IPS, the withdrawal of the IPS-permission can hit the whole banking network very hard. In most cases the own fund requirement would suddenly increase because of the abolition of privileges referring to deduction, minority interest and large exposures. Furthermore a potential liquidity-waiver to the members has to be retreated by regulator, given that an IPS is the fundamental requirement for a waiver-approval. Considering that an IPS includes a broad number of credit institutions, the withdrawal of the IPS-permission may also generate huge exogenous effects to other market participants, particularly increasing their risk weight of assets because of potential down-rating or, in the case of insolvency of an IPS-member, asset write-offs, which may start a new exo- or endogenous vicious circle.

So both sides, IPS-members and regulators, should avoid—as far as possible—the withdrawal of an IPS-permission in order to minimize systemic risks in the financial sector. From this perspective it can be assumed that sufficient liquidity regulation of IPS’ are crucial in order to ensure stability to the financial market as a whole. The following chapters should elaborate the most important issues of liquidity risk regulation under the CRR and the CRD IV referring to the specific risk within IPS’.

5. CRD IV: Requirements on Liquidity Risk Management

Requirements for risk management are an elemental part of the Basel Pillar II-approach (internal capital adequacy, supervisory review process). In essence, under *Pillar II*, credit institutions have to sufficiently measure, monitor, limit and cover their banking risks (ICAAP, risk management, ILAAP). The competent authorities are responsible for the ongoing supervision of the banks risk management mechanism.

¹⁹As mentioned above, only official central banks has the characteristic of being *immune* against liquidity stress.

Since the second adoption of the CRD via *CRD II* (Directive 2009/EU) credit institutions are required to fulfil specific minimum standards referring to their liquidity risk management. The basic notion for the Annex V No 14 - 22 CRD (Liquidity Risk Management) was established by the BIS-paper *Principles for Sound Liquidity Risk Management and Supervision* (BCBS, 2008b).

Under CRD IV, the requirements were integrated into Art 86 CRD IV. Therefore the minimum requirements on liquidity risk management still demand transposition into national law. However, considering the European focus on this paper, the following achievements concentrate on the minimum standards anchored in CRD IV, not on their respective national transpositions.

5.1. Legal Basics & Scope

According to Art 74 para 1 and 2 CRD IV credit institutions shall have

“[...] robust governance arrangements, which include a clear organisational structure with well-defined, transparent and consistent lines of responsibility, effective processes to identify, manage, monitor and report the risks they are or might be exposed to, adequate internal control mechanisms, including sound administration and accounting procedures, and remuneration policies and practices that are consistent with and promote sound and effective risk management” (Art 74 para 1 CRD IV).

Thus Art 74 CRD IV is the fundamental requirement regarding the implementation of risk management mechanisms within credit institutions. As a general principle, the risk management function of a credit institution has to be “comprehensive and proportionate to the nature, scale and complexity of the risks inherent in the business model and the institution’s activities” (Art 74 para 2 CRD IV). This *proportionality approach* should meet concerns regarding the differences in—among others—business models, sizes of balance sheets and specific risk exposure.

Concrete specifications of the content and processes of risk management were anchored in Art 76 to 95 CRD IV, which include the *technical criteria concerning the organisation and treatment of risks* (Art 76 CRD IV et seqq), particularly regarding to internal approaches for calculating own funds requirements (Art 77 CRD IV), the treatment of Credit and counterparty risk (Art 79 CRD IV), Concentration risk (Art 81 CRD IV), Market risk (Art 83 CRD IV) and Liquidity risk (Art 86 CRD IV). Further concretisation of the CRD IV-risk management requirements has to be provided by EBA via Guidelines (Art 74 para 3 CRD IV).²⁰ In the context of liquidity risk management, CEBS (as the predecessor of EBA, Art 8 para 1 point 1 EBA-R) have already issued two crucial Guidelines. First, the *CEBS Guidelines on Liquidity Buffers & Survival Periods* (CEBS, 2009) and second, the *CEBS Guidelines on Liquidity Cost Benefit Allocation* (CEBS, 2010). Both Guidelines are still valid. According to Art 16 para 3 EBA-R supervisors and credit institutions have to comply with Guidelines issued by CEBA/EBA or, in the case of non-compliance, shall inform the concerned regulator in order to state the reasons for non-compliance (Art 16 para 3 EBA-R).²¹ Therefore the named Guidelines are important in order to interpret the requirements coming from Art 86 CRD IV.

Basically all institutions have to fulfil the minimum standards for risk management both on solo and group level (Art 109 CRD IV). However Art 109 para 1 CRD IV states that competent authorities are allowed to waive the respective risk management requirements on solo-level when Art 7 CRR (“Solvency-Waiver”) applies.

Remarkably Art 109 para 1 CRD IV speaks of the entire (Title VII Chapter 2) *Section II* CRD IV which includes the technical criteria for the treatment of all significant types of banking risks, including liquidity risk. The inclusion of a waiver referring to liquidity risk management requirements in linkage with the *Solvency-Waiver* seems systemically irrational. On the one hand, the notion of Basel III (and its implementation via CRR and CRD IV) assumes that liquidity risks cannot be fully captured by own funds requirements (BCBS, 2008b: p.6), on the other hand the opportunity to waive liquidity risk management requirements was explicitly fixed in Art 8 para 5 CRR, connected to the provisions concerning the *Liquidity-Waiver* (Art 8 CRR). The crucial dif-

²⁰Note that the respective mandate for EBA to issue guidelines does not have a deadline. Considering the EBA-working program for 2014 (<http://www.eba.europa.eu/about-us/work-programme/current-work-programme>), which shows a priority of “2” for this task, an issuance of such guidelines in 2014 is not very likely.

²¹Note that non-compliance finally shall be disclosed by the competent authority. So the sanctioning of the non-compliance to CEBS/EBA-Guidelines primary was established as a type of Pillar III-“measure”. Only if the non-compliance also includes a breach of formal risk management requirements, the authority has to set conventional Pillar II-measures, such the claim in order to enhance risk management systems (art 104 para 1 point b CRD IV) or *capital add-on* (Art 104 para 1 point a CRD IV). However, note that Pillar II-measures can also include additional disclosure-requirements (Art 104 para 1 point l CRD IV).

ference between Art 109 para 1 CRD IV, which refers to Art 7 CRR, and Art 8 para 5 CRR is the possible scope of application. While Art 7 CRR affects only banking groups, Art 8 CRR also concerns IPS'.²²

5.2. Minimum Standards Concerning Liquidity Risk Management

While most Pillar II-regulations in CRD IV (i.e. credit risk, market risk, etc) are (naturally²³) vague formulated, the provisions regarding liquidity risk management are extensive and concrete. Moreover, the respective wording of CRD IV addresses the competent authorities as responsible supervisor to ensure compliance of the supervised entities with regulatory standards, and do not directly concern credit institutions. Only via transposition of CRD IV into national law the credit institutions were required to comply.²⁴ The following achievements highlight the specific provisions listed in Art 86 CRD IV (*Liquidity risk*).

5.2.1. Liquidity Risk Policy and Strategy (Para 1, 2 and 7)

Institutions are required to have

“robust strategies, policies, processes and systems for the identification, measurement, management and monitoring of liquidity risk over an appropriate set of time horizons, including intraday, so as to ensure that institutions maintain adequate levels of liquidity buffers” (Art 86 para 1 CRD IV).

These strategies have to take into account all business lines, currencies, branches and legal entities (Art 86 para 1 CRD IV; CEBS, 2009: 11 para 42).

The committed risk tolerance has to be communicated to all relevant business *lines* (Art 86 para 2 last sentence CRD IV), which clearly illustrates that limitations of liquidity risks (as outflow from the entire institutions *risk appetite approach*, CEBS, 2009: p. 3) directly concerns the business divisions of an institution, not only internal control mechanisms. In order to effectively communicate the banks risk appetite, a liquidity risk management mechanism always shall include concrete limits of liquidity risk and risk mitigation tools (Art 86 para 7 CRD IV; CEBS, 2009: p. 22 para 9).

Following the general *proportionality-approach* (CEBS, 2009: p. 6 para 14), the liquidity risk management systems shall be proportionate to the “complexity, risk profile, scope of operation of the institutions and risk tolerance set by the management body and reflect the institution’s importance in each Member State in which it carries out business” (Art 86 para 2 CRD IV; CEBS, 2009: p. 18).

The minimum standards underline the importance of a functioning systems concerning the allocation of liquidity costs, benefits and risks (Art 86 para 1 last sentence CRD IV; CEBS, 2010a).

5.2.2. Liquidity Buffer (Para 1, 2 and 6)

The liquidity risk management mechanisms has to “ensure that institutions maintain adequate levels of liquidity buffers” (Art 86 para 1 CRD IV). The *CEBS Guidelines on Liquidity Buffers & Survival Periods* (CEBS, 2009) defines the term liquidity buffer as follows: “A liquidity buffer is defined as the short end of the counterbalancing capacity under a ‘planned stress’ view” (CEBS, 2009: para 4)²⁵. Thus, a liquidity buffer has to ensure that the institution is able to withstand a liquidity stress for a period of at least one month without changing their business models (CEBS, 2009: p. 3 para 1). In order to fulfil this task, a buffer has always to be of sufficient size (certain amount of liquid assets) and available in a very short period of time to meet the stress scenario within the *survival periods* (CEBS, 2009: p. 3 para 37). Therefore, the calculation and set-up of the liquidity buffer always have to consider the results of internal (Art 86 para 9 CRD IV) and external (e.g. EBA-stress-test) stress-testing.

Concerning the quality of the buffer, institutions have to ensure that the composition of the buffer is of sufficient liquidity. Therefore only assets which provide the characteristics of high liquidity shall be included in the liquidity buffer, including the holding of collateral immediately available for central bank funding (Art 86 para 11 CRD IV). All liquid assets must be available at any time within the survival period and quickly transferable

²²Note that the permanently affiliated institutions within a network according to Art 10 CRR are waived automatically from risk management requirements. The compliance with these requirements has to be met by the central/consolidating institution (Art 21 para 2 CRD IV).

²³Note that in contradiction to Pillar I-provisions (capital requirements) the Pillar II-provisions should provide a high degree of flexibility to the supervised entities. Such flexibility in Pillar I is only possible within the framework of internal models (see Part 3 CRR).

²⁴See i.e. the Austrian (KI-RMV) and German transposition (§ 11 KWG, Liquiditätsverordnung, MaRisk) of CRD IV-Pillar II-requirements.

²⁵See also CEBS, 2009, Guideline 1: “A liquidity buffer represents available liquidity, covering the additional need for liquidity that may arise over a defined short period of time under stress conditions.”

between concerned entities (CEBS, 2009: p. 22).

However, the basic decision of which types of assets or asset-categories are included in the buffer lies, following the general flexible concept of the *pillar II-approach*, in the responsibility of each institution. In a second step, competent authorities have the duty to monitor and supervise the composition, size and calculation-method of banks liquidity buffers (*Li-SREP*; EBA, 2013b), and take action/measures (Art 104 and 105 CRD IV), if the liquidity buffer of the institution seems too small or insufficiently composed.

According to the general scope of liquidity risk management requirements, a liquidity buffer has to be hold both on solo and consolidated level (CEBS, 2009: p. 18). Thus the parent entity is responsible for the sufficiency of the liquidity buffer on group level. In group-context, especially in cases of cross-border groups, institutions shall account to “existing legal, regulatory and operational limitations to potential transfers of liquidity and unencumbered assets amongst entities, both within and outside the European Economic Area” (Art 86 para 6 CRD IV).

5.2.3. Monitoring of Funding and Asset Positions (Para 4, 5 and 6)

A functioning liquidity risk management has to ensure that the bank always has an effective overview about its concrete liquidity situation. In this matter banks has to monitor and manage all funding and asset positions (CEBS, 2009: p. 10 para 33). Given that liquidity management is a *concept of flows*, the respective processes shall include all significant “current and projected material cash-flows in and arising from assets, liabilities, off-balance-sheet items, including contingent liabilities and the possible impact of reputational risk” (Art 86 para 4 CRD IV). One of the most important issues concerning the management of funding positions lies in the appropriate diversification of funding sources (CEBS, 2009: p. 17 para 67).

On the asset-side, according to the requirements concerning the liquidity buffer, liquid assets must be quickly available at any time, even in stress-situations. In this regard, institutions shall always be aware about potential legal of practical impediments referring to the transfer of liquid assets, particularly in the cross-border-context (Art 86 para 5 and 6 CRD IV).

Furthermore institutions shall, in order to generate additional liquidity in stress-situations via secured inter-bank-lending, distinguish between pledged and unencumbered assets (Art 86 para 5 CRD IV).²⁶

5.2.4. Stress-Testing and Liquidity Recovery Plans (Para 8 to 11)

Every liquidity risk management system shall include sufficient stress-testing methods (CEBS, 2009: p. 11 ff). Possible methodologies of stress-testing and proposals for adverse situations, which should be taken into account, are recommended both in the *CEBS Guidelines on Stress Testing* (CEBS, 2010b) and *CEBS Guidelines on Liquidity Buffers & Survival Periods* (CEBS, 2009). In general, institutions shall consider the “potential impact of institution-specific, market-wide and combined alternative scenarios” (Art 86 para 9 CRD IV), both in different time horizons and varying degrees of stress assumptions.

As a lesson learned from the financial crisis, institutions shall particularly include off-balance sheet liabilities, e.g. in favour of special purpose vehicles (SPV; Art 86 para 8 CRD IV). The stress-testing results should be reflected in the composition and size of the institutions liquidity buffer. Consequently, both instruments are closely linked.

In addition, institutions have to implement effective liquidity recovery plans (contingency funding plans—CEBS, 2009: p. 21), considering the results of the stress-tests (Art 86 para 10 CRD IV). Recovery plans shall include the processes concerning the banks activities within the stress-period in order to restore liquidity, e.g. the generation of liquidity via liquidation or repurchasing of high liquid assets (Art 86 para 11 CRD IV).

5.2.5. Excursus: Systemic Responsibility (Para 3)

Since the implementation of CRD IV, the requirements concerning liquidity risk managements were complemented by a provision concerning bank’s *systemic responsibility* in liquidity risk issues. Institutions shall have “liquidity risk profiles that are consistent with and, not in excess of, those required for a well-functioning and robust system” (Art 86 para 3 CRD IV). Irrespective of the difficulty to operationalize such requirements, this provision seems, from a *pillar II-conceptual* perspective, *systemically irrational*. Pillar II-requirements basically

²⁶In the financial crisis unsecured interbank-lending stopped completely. Consequently the pledging of assets of the asset-side of bank’s balance sheets increased, which minimizes future funding opportunities and jeopardizes the quality of liquidity of the assets included in the liquidity buffer.

should address idiosyncratic risks, not risks that are generated itself by the respective bank to other institutions. However, according to this provision competent authorities “shall monitor developments in relation to liquidity risk profiles, for example product design and volumes, risk management, funding policies and funding concentrations” (Art 86 para 3 CRD IV) and take action when the financial stability is probably jeopardized, e.g. via Art 104 and 105 CRD IV (supervisory powers).

5.3. IPS: Evaluation of the Requirements and Challenges

In CRD IV the specific structure of IPS’ is not directly addressed by the requirements on liquidity risk management according to Art 86 CRD IV. The scope of CRD IV first includes basically all institutions on solo-level. In addition the CRD IV explicitly states that the minimum standards should also be fulfilled on consolidated basis, which means banking groups and networks according to Art 10 CRR. Both structures are required to comply with the CRR and CRD IV on a consolidated level. Although IPS’s may choose to report the financial numbers in a consolidated or aggregated manner, IPS’s fundamentally are not explicitly required to comply with e.g. capital-, large exposure or liquidity-provisions. However, the institutions within IPS have to comply with liquidity requirements on solo-level, unless a waiver is granted.

Given the mandatory provisions in order to establish an IPS’, particularly Art 113 para 7 point c CRR, an IPS needs own risk management tools in order to monitor the risks of both, the member-institutions on solo-level and the IPS as a whole. From a teleological perspective, the minimum standards of risk management according to Art 74 CRD IV ff may also require IPS’, more concretely the *consolidating entity*, to comply with the respective provisions in CRD IV.²⁷

However, in contrast to banking groups and networks according to Art 10 CRR an IPS’ neither has a dominant influence (such as the parent institution against subordinate institutions) nor the power to issue effective orders against the member-institutions. Art 113 para 7 point c CRR only claims certain *possibilities to take influence*.

Obviously and consequently there are certain potential problems and impediments to implement a functioning liquidity risk management within IPS’. First, one notion of the establishment of an IPS’ is maintaining the basic autonomy of member-institutions. The management of liquidity and liquidity risk belongs to the core elements of banking in each institution, thus *external* monitoring or limitation of the institutions risk appetite jeopardizes the heart of autonomy. In contrast to banking groups and networks according to Art 10 CRR the consolidating entity is a relatively weak actor in order to govern the IPS-members or the IPS as a whole. No real enforce-power is granted to the consolidating entity within IPS except the weak formulation “*certain possibilities to take influence*” (Art 113 para 7 point c CRR).

More concrete it seems that some requirements of liquidity risk management might probably not work within IPS’ effectively. For example the IPS’-limitation of liquidity risk appetite directly effects the banks opportunity on solo-level of gaining profits from high yielding (and therefore high risky) assets. As well the IPS’-liquidity risk strategies and policies can be interpreted in different ways on solo-level, even stress-test results and recovery planning. Furthermore the funds-transfer-pricing of banks are very different, which jeopardizes the comparability of the cost benefit allocation on IPS’-level. Probable impediments to measure the IPS’-liquidity risk may also arise from different interpretations in reporting and notification-requirements. Note that an IPS may not have one similar reporting scheme but different reporting channels and centralized mapping of figures. Therefore the central monitoring of funding and assets could be very complex, particularly in short time horizons (e.g. in the issue of intra-day-liquidity risk management). Comparability and timely measurements of liquidity risks are particularly important in order to calculate the liquidity buffer on IPS-level.

Given the high autonomy of IPS-member-banks the implementation of a functioning centralized liquidity risk management seems problematical. In the light of the large extent of legal consequences, particularly privileges (!) arising from an IPS-membership, the CRD IV-requirements on liquidity risk management do not fully cover the specific relations between IPS-members, especially with the consolidating entity.

6. CRR: Liquidity Ratios

As a further reaction of the financial market turbulences since 2007, the BCBS published its ideas concerning

²⁷See the Austrian implementation of the scope of Art 74 CRD IV in § 2 KI-RMV. § 2 KI-RMV explicitly requires IPS’ to comply with risk management provisions.

the implementation of two new quantitative Liquidity Standards (BCBS, 2010), the Liquidity Coverage Ratio (“LCR”) and the Net Stable Funding Ratio (“NSFR”). Both ratios were broadly discussed over the last few years, leading to certain adjustments in the calibration of LCR (BCBS, 2013) and NSFR (BCBS, 2014) on Basel-level. In the European context, the European legislator included both liquidity ratios in Part 6 CRR. After further recalibration-work by the European Commission and the EBA, the LCR shall come into force with January 2015 (Art 460 para 2 CRR), the NSFR with 2018 at the earliest (Art 510 para 3 CRR; BCBS, 2014: p. 2). In contrast to the liquidity risk *management* requirements (see Chapter 5), both LCR and NSFR are instruments under the Basel *pillar I-approach*, meaning that all institutions are basically required, notwithstanding specific business models or institutions size, to fulfil these minimum standards under *maximum harmonization*. Thus the principle of *proportionality* does not play a big role under pillar I.

6.1. Legal Basis & Scope

The liquidity standard requirements were integrated in Part 6 CRR. Title I *leg.cit* regulates specific definitions for liquidity concerns (Art 411 CRR), as well as the *Liquidity coverage requirement* (Art 412 CRR), the requirement on *Stable Funding* (Art 413 CRR) and concrete consequences in the case of non-compliance with liquidity requirements (Art 414 CRR). Title II *par.cit* determines liquidity reporting requirements and the structure of the LCR, including requirements on high quality liquid assets and liquidity flows (Art 415 - 426 CRR). Title III *par.cit* states the structure of the NSFR (Art 427 and 428 CRR). It should be noted that neither the LCR was finally introduced by CRR, nor the NSFR. CRR clearly states that Title II and III do only apply for reporting purposes (Art 412 para 4 CRR, Art 413 para 3 CRR), until a binding liquidity coverage requirement is introduced (Art 460 para 1, 510 para 3 CRR). Thus, further legal acts are necessary to introduce final versions of LCR and NSFR in a binding manner. Concerning the LCR, the European Commission is mandated via Art 460 to introduce and specify the liquidity coverage requirement by a delegated act. In order to finally introduce the NSFR, a legal proposal according to Art 509 para 3 CRR is required (see recital 112 CRR).

Underlining the concrete scope of the liquidity standards according to Part 1 and 6 CRR, the regulation requires institutions to fulfil the respective minimum standards on both solo-(Art 6 para 4 CRR) and consolidated level (Art 11 para 3 CRR), unless a Waiver according to Art 8 CRR or Art 10 CRR (Art 11 para 4 CRR) was granted. In contrast to the own fund requirements, where *parent institutions in a member state* (Art 11 para 1 CRR, Art 4 No 28 CRR) shall comply with the respective provisions, the required compliance referring to liquidity on consolidated basis is basically addressed to *EU parent institutions* (Art 11 para 3 CRR, Art 4 No 26 CRR). Concretely this means that domestic parent institutions, which are subsidiaries (Art 4 No 16 CRR) of an *EU parent institution* are not required to meet the liquidity requirements on (sub-) consolidated basis. Note that there are no specific requirements for IPS to comply with liquidity standards on *IPS-level*.

6.2. Liquidity Coverage Ratio—LCR

Fundamentally, the LCR should ensure that institutions always hold sufficient high quality liquid assets (HQLA) to meet their liabilities, manifested by netted outflows (net outflows = gross outflows minus gross inflows) during a 30-day stress horizon (Art 412 para 1 CRR). So the LCR should depict the short-term resilience of the respective institutions liquidity risk profile (BCBS, 2013: p. 1).

6.2.1. Stress-Scenario

The underlining stress-scenario, mainly crystalized by given haircuts in HQLA and run-off-factors in outflows, was stated in the light of experiences within the financial crisis. The concrete LCR-stress-scenario displays, among other factors, a

“significant downgrade of the institution’s public credit rating, a partial loss of deposits, a loss of unsecured wholesale funding, a significant increase in secured funding haircuts, and increases in derivative collateral calls and substantial calls on contractual and noncontractual off-balance sheet exposures, including committed credit and liquidity facilities” (BCBS, 2011: p. 9).

Considering the concrete provisions, the LCR-scenario does not reflect a *worst case scenario*, such as a bank-run (BCBS, 2013: p. 6). However, it assumes serious stress-conditions under which institutions have to ma-

noeuvre during the stress-period of 30 days.

6.2.2. Liquidity Coverage Requirement

In consequence to the structure of the LCR, the respective *Liquidity Coverage Requirement* rules that

“Institutions shall hold liquid assets, the sum of the values of which covers the liquidity outflows less the liquidity inflows under stressed conditions so as to ensure that institutions maintain levels of liquidity buffers which are adequate to face any possible imbalance between liquidity inflows and outflows under gravely stressed conditions over a period of thirty days” (Art 412 para 1 CRR).

Graphically, the LCR can be seen as follow:

$$\frac{\text{Stock of HQLA}}{\text{Total net cash outflows over the next 30 calendar days}} \geq 100\%$$

Source: (BCBS, 2013: p. 7).

According to Art 460 para 2 CRR, the *Liquidity Coverage Requirement* will be phased in until the 2018, beginning with 60% (2015) and ending with 100% ([2018] Art 460 para 2 CRR; see the diverging timetable in BCBS [2013], 2). Symbolically this phasing-in of the LCR is remarkable, meaning that institutions are not required to be 100%-liquid under the pillar I-approach until 2018. Before January 2015, the LCR does only apply to reporting requirements in order to enable the EBA (see e.g. Art 509 CRR) and the European Commission (see e.g. Art 460 CRR) to, on the one hand observe and on the other hand finalize the delegated act introducing the LCR as binding ratio (BCBS, 2013: p. 2).

In cases where institution do not meet the required level of *Liquidity Coverage* Art 414 CRR states that the concerned institution

“shall immediately notify the competent authorities and shall submit without undue delay to the competent authorities a plan for the timely restoration of compliance with Article 412 or Article 413(1). Until compliance has been restored, the institution shall report the items referred to in Title II or Title III, as appropriate, daily by the end of each business day unless the competent authority authorises a lower reporting frequency and a longer reporting delay” (Art 414 CRR).

Consequently the sanctioning mechanism of a real liquidity bottleneck does not require to formally hold nor to increase liquid assets (!)²⁸ during the stress-period (BCBS, 2013: p. 4) but to disclose the planned (recovery plan) or actual (daily reporting) adjustment of the institutions liquidity risk profile (see also BCBS, 2013: p. 11).

6.2.3. High Quality Liquid Assets (HQLA; Art 416-419 CRR)

The numerator of the LCR shall be exclusively composed of HQLA (BCBS, 2013: p. 7). Similarly to the liquidity buffer under the pillar II-approach (see Chapter 5), the numerator in the LCR reflects the assets which shall be available at any time during the respective stress-horizon. HQLA shall be, among other elements, a type of asset listed in one of the categories in Art 416 para 1 CRR (see below), unencumbered (e.g. not already used for collateralization purposes; BCBS, 2013: p. 7), simple and sufficient transparent in terms of pricing (in contradiction to e.g. structured products) and listed on a recognised exchange or tradable on approved repurchase markets (see Art 416 para 3 CRR; BCBS, 2013: p. 7 et seqq). Assets which were issued by market participants from the financial sector (Art 416 para 2 point c CRR, excluding certain bank-issued covered bonds; BCBS, 2013: p. 13 et seqq) or by entities within the same banking group (Art 416 para 3 point b CRR) are generally excluded from the LCR-numerator and not eligible for counterbalancing purposes under pillar I.

Further requirements on the eligibility of HQLA were listed in Art 417 CRR. Among other operational elements, HQLA always has to be managed and monitored by a liquidity risk management unit (Art 417 point c CRR), appropriately diversified (Art 417 point a CRR) and legally and practically readily available at any time during the next 30 days to be liquidated (Art 417 point b CRR).

As mentioned above, Art 416 para 1 CRR categorizes six specific types of HQLA:

²⁸Obviously the requirement of increasing HQLA in a stress-period is counterproductive. At last, institutions may use their liquid assets to meet their obligations under stressed circumstances (Art 412 para 3 CRR), which means naturally decreasing HQLA for the stress period.

- cash and exposures to central banks (point a)
- *other* transferable assets that are of *extremely high* liquidity and credit quality (point b)
- transferable assets representing claims on or guaranteed by public entities (e.g. central government of a member state, central banks, International Monetary Fund, European Stability Mechanism; point c)
- transferable assets that are of *high* liquidity and credit quality (point d)
- standby credit facilities granted by central banks within the scope of monetary policy (point e)
- legal or statutory *minimum deposits with the central credit institution and other statutory or contractually available liquid funding* from the central credit institution or institutions that are members of the network referred to in Article 113(7), or eligible for the waiver provided in Article 10, to the extent that this funding is not collateralised by liquid assets (point f).

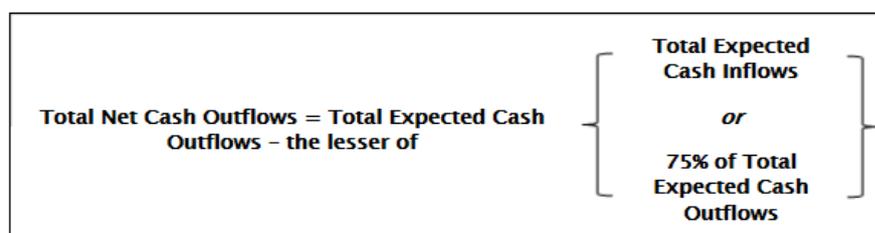
Only HQLA which can be subsumed under one of the categories below, are eligible for the LCR-numerator as liquidity buffer. Notably these categories are very heterogeneous in notion and substance.

Fundamentally, the LCR creates incentives to fund public sector entities (central bank, central government; [Blundell-Wignall/Atkinson, 2010: p. 19](#)) as well as entities which are closely linked to the public sector (IMF, ESM). Thus the LCR generally assumes that there always will be solvent and liquid public *lenders of last resort* (see the issue in Chapter 3). More cryptic, point b and d recognizes *other transferable assets that are of extremely high or high liquidity and credit quality*. In a respective analysis, the EBA proposed certain factors and thresholds in order to enable institutions and regulators to calculate the *quality of liquidity* for those asset-classes ([EBA, 2013a](#)). In consideration of Art 509 para 3 CRR the EBA argues that useful indicators to measure liquidity in a simple and transparent way are *issuer, currency, minimum issue size, credit rating and time to maturity* (see the examples in [EBA, 2013a: p. 22 et seqq.](#))²⁹

Particularly remarkable are the categories listed in Art 416 para 1 point e (facilities) and f (minimum deposits) CRR. Originally both asset-classes neither were part of the Basel-LCR ([BCBS, 2010](#)), nor proposed by the European Commission ([COM, 2011](#)). Given the entire LCR-approach, the inclusion of those complementing asset-classes in the liquidity framework as probable HQLA is surprising. Concerning central bank facilities, it should be mentioned that one aim of the LCR is to minimize the dependence on central banks, not to create incentives to regulatory fund institutions via public facilities. Referring to *minimum deposits and other funding instruments* within an IPS (Art 113 para 7 CRR) or other networks (e.g. Art 10 CRR), Art 416 para 1 point f CRR ignores the basic LCR-notion of decreasing overwhelming interbank dependence and interconnection through recognizing bank-liabilities (deposits and other funding) as HQLA (see e.g. Art 416 para 2 CRR; [BCBS, 2008: p. 10](#); [BCBS, 2011: p. 9](#); [IMF, 2013: p. 16](#)).

6.2.4. Liquidity Net Cash Outflows (Art 420-425 CRR)

The overall notion of the LCR is to cover expected net cash outflows with HQLA in order to withstand a 30-day stress period ([BCBS, 2013: p. 20](#)). The term *liquidity net cash outflow* reflects the function of gross liquidity outflows minus gross liquidity inflows, both positions weighted in the sense of Art 420-425 CRR (Haircuts and run-off-factors). In order to avoid situations where a bank fulfils its liquidity coverage requirement only through a high amount of inflows and merely none HQLA, the LCR does require to *cap* (limit) liquidity inflows (Art 425 para 1 second sentence CRR). Concretely the LCR-inflow-cap is calculated via the total amount of gross liquidity outflows: In the end only 75% of gross liquidity outflows can be reported as liquidity inflows ([BCBS, 2013: p. 34](#)).



Source: [Harvard Law School \(2013\)](#)

²⁹Other factors, such as minimum trade volume of the assets, minimum outstanding volume of the assets, transparent pricing and post-trade information, proven record of price stability, average volume traded and average trade size, maximum bid/ask spread, minimum turnover ratio, are crucial too, but more difficult to observe (data-availability) and to compare over different asset-classes ([EBA, 2013a: p. 17 et seqq.](#))

Inflows from deposits within IPS and privileged banking groups (zero-weighting according to Art 113 para 6 CRR) are automatically exempted from the 75%-cap (Art 425 para 1 third sentence CRR). Thus the LCR assumes that in line with an approval concerning Art 113 para 6 or 7 CRR, required HQLA can be fully substituted by interbank liquidity inflows. Given the general stress-assumption of the LCR, e.g. increased risk between financial intermediaries (BCBS, 2013: p. 36 ff), this is remarkable.

Both, the run-off-factors of liquidity outflows and the haircuts on liquidity inflows were specified in Part 6 CRR. Generally the LCR differentiates the run-off factors and haircuts depending on the type of liquidity flow (e.g. deposit, secured lending, credit or liquidity facility) and the respective counterparty (retail, wholesale, financial institution, public entity).

According to Art 420 CRR liquidity outflows are arising from (among others).

- Retail deposits (Art 421 CRR)
- Interbank funding, capital market-driven transactions and deposits in connection with clearing, custody or cash management (Art 422 CRR)
- Derivate business (Art 423 CRR)
- Liquidity and credit facilities

Art 420-424 CRR state specific outflow-rates for each outflow-(sub)-class. As a general premise, the LCR *privileges* outflows to entities not involved in professional financial business (e.g. retail, SME; Art 421 CRR) or outflows in connection with a specific established relationship or increased service dependence (e.g. clearing, custody or cash management; Art 422 para 3 point a, point c CRR). For example, most liquidity outflows to retail clients have run-off-factors of 0, 5 or 10% (Art 421 para 1 and 5 CRR). Liquidity run-off to non-financial wholesale clients are weighted with 40% (Art 422 para 5 CRR), while outflows to financial institutions are set with up to 100% (e.g. unsecured lending; Art 422 para 2 point b CRR). Concerning the minimum reserve within IPS (see 6.2.3), the LCR consequently assumes a 100%-outflow from the central institution to the deposit placing members of the IPS (Art 422 para 3 CRR). Given that HQLA always must be freely available, the run-off-factor of 100% is feasible in order to sufficiently reflect the nature of the interbank deposit as *highly liquid on the liability side*. In cases where deposit placing institutions do not report their respective deposits as HQLA, the central institution only has to suffer a 25% outflow-factor. From the deposit placing IPS-member, the interbank deposit do neither count as HQLA nor as inflow according to Art 425 CRR (*asymmetrical treatment*).

Furthermore Art 423 CRR sets specific rules concerning additional outflows arising from derivative contracts, e.g. outflows of collateral in order to meet margin calls (Art 423 para 1 CRR). Finally Art 424 CRR anchor provisions referring the treatment of credit and liquidity facilities. In line with the general assumption of the LCR (see above), liquidity or credit lines granted to SME shall be reported with a low run-off-factor (5% - 10%; Art 424 para 2-4 CRR) while committed facilities to financial institutions shall be reported with high run-off-factors (up to 100%; Art 424 para 1 and 5 CRR).

While Art 420-424 CRR set complex rules regarding liquidity outflows, capped liquidity inflows are specified in Art 425 CRR (see BCBS, 2013: p. 34). Similarly and complementary to the concept of liquidity outflows, inflows depend on the type of inflow (retail loan, bank facility) and the kind of counterparty (retail, SME, bank, public entity). Notably the LCR hereby underlines the asymmetric treatment of liquidity flows. While liquidity providing entities suffer a 100%-outflow from a committed liquidity facility (Art 424 para 1 CRR), the demanding entity shall not report liquidity inflows arising from the same facility (Art 425 para 2 point g CRR).

In order to provide more flexibility to the LCR as pillar I-instrument, some approval procedures regarding liquidity out- and inflows were integrated in Art 420-425 CRR. Most alleviations requires the membership in a banking group, an IPS or a network according to Art 10 CRR or Art 400 para 2 point d CRR. For instance, Art 422 para 8 CRR is granting power to the competent authority to permit a lower run-off-factor to liabilities that do not fall under Art 422 para 7 CRR. Due to the negative definition of Art 422 para 7 CRR, it is still unclear which liquidity outflows are concretely falling under the approval opportunity according to Art. 422 para 8 CRR. Most outflows from banking business seems covered by Art 420-424 CRR.³⁰ Expected inflows from facilities can be increased via the approval according to Art 425 para 4 CRR. Even here, the membership to an IPS is required to request an authority's permission.

³⁰It can be argued that, lacking explicit mentioning in Art 422 CRR, unsecured interbank lending and outflows from credit and liquidity facilities may fall under Art 422 para 7 CRR. From a structural perspective, this argument should be repelled: run-off-factors from unsecured lending are regulated via Art 422 para 2 in an indirect way (100% over the value of HQLA) and exemptions from facilities are ruled in Art 424 CRR in an exhaustive manner.

6.3. Net Stable Funding Ratio—NSFR

The *Net Stable Funding Ratio* was integrated in Part 6 CRR in order to

“complement the LCR and reinforce other supervisory efforts by promoting structural changes in the liquidity risk profiles of institutions away from short-term funding mismatches and toward more stable, longer-term funding of assets and business activities” (BCBS, 2010: p. 25; see recital 111 and 112 CRR).

Note that still there is no legal requirement to comply with the NSFR in a pillar I-sense (recital 111 CRR). Given that the NSFR will be recalibrated over the next years and shall not be binding before 2018 (BCBS, 2014: p. 2), the NSFR is limited to reporting requirements (recital 111 and 112 CRR). However, under pillar II, credit institution has to consider Art 413 CRR (stable funding) from 1. January 2016 (see Chapter 6.3.1).

6.3.1. Requirement on Stable Funding (Art 413 CRR)

Art 413 para 1 CRR requires that “Institutions [...] ensure that long term obligations are adequately met with a diversity of stable funding instruments under both normal and stressed conditions” (Art 413 para 1 CRR; BCBS, 2014: p. 1). Similarly to the *Liquidity Coverage Requirement* (see 6.2.2) there is no binding integration in pillar I until the final introduction of NSFR (Art 510 para 3 CRR). While the LCR has to be integrated in pillar I in the year 2015 (Art 460 para 2 CRR), regarding to the NSFR a concrete legal proposal still has to be made by the end of the year 2016 (Art 510 para 3 CRR). However, under pillar II credit institutions has to implement effective risk management tools in order to limit funding liquidity risks and ensure stable funding. Art 413 para 1 CRR enters into force with January 2016 (Art 521 para 2 point b CRR).

6.3.2. Net Stable Funding Ratio (Art 427, 428 CRR)

Besides the LCR as a ratio which measures the short-term resilience of banks liquidity risk profile, the *Net Stable Funding Ratio* (NSFR) should be used to calculate the stress-situation concerning medium and long-term funding of assets and banking activities (BCBS, 2010: p. 25). The NSFR compares *available stable funding* with the *requirement of stable funding* in the light of a one year stressed time-horizon (BCBS, 2014: p. 2).

$\frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}} > 100\%$
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Source: (BCBS, 2010: p. 25).

According to 427 CRR, *available stable funding* (ASF) is defined with the sum of capital instruments, most retail deposits, deposits arising from an operational relationship and other liabilities (Art 427 para 1 CRR). Items *requiring stable funding* (RSF; Art 428 CRR) are all classic banking activities, as well as equity and commodities (gold, other metal), derivatives and undrawn committed facilities (Art 428 para 1 CRR). ASF and RSF shall be reported according to their maturity in five buckets: <3 months, >3 <6 months, >6 <9 months, >9 <12 months and >12 months (Art 427 para 2 CRR, Art 428 para 2 CRR; see *bucket-approach* in BCBS, 2014: p. 2).

6.4. IPS: Evaluation of the Requirements and Challenges

IPS’ are not directly addressed by the liquidity regulations under pillar I, concretely LCR and NSFR. In contradiction to the consolidating entity in a banking group (Art 11 para 3 CRR) or a network according to Art 10 CRR (Art 10 para 1 point b CRR) the consolidating entity in an IPS is fundamentally not required to comply with Part 6 CRR on IPS-level. Only in the case of the permission of a liquidity-waiver according to Art 8 para 4 CRR the consolidating entity would be directly addressed by CRR (Art 8 para 1 point a CRR).

From the perspective of IPS-members, the CRR-liquidity regulation provides certain opportunities to ease the burden of compliance with liquidity standards, e.g. the exemption of IPS-interbank-deposits from the 75%-inflow-cap and specific approval-procedures concerning inflow & outflow-rates. Most extensive privilege to IPS is the opportunity of being waived from Part 6 CRR in full (Art 8 para 4 CRR). In such a case, liquidity requirements can only be monitored by the competent authorities on (aggregated or consolidated) IPS-level.

Equally to the challenges under pillar II it should be noted that within IPS there is relatively low power given to the consolidating entity in order to ensure sufficient levels of liquidity. Particularly the lack of power to give orders to IPS-members (see Art 10 CRR in contradiction) is limiting the room to manoeuvre for the consolidat-

ing entity.

Most notable concerning the usage of the LCR as liquidity ratio within IPS is the categorization of the minimum reserve (“IPS-interbank-deposit”) and other funding instruments as HQLA. In contradiction to the general assumption of the LCR, deposits within IPS’ shall be—according to Art 416 para 1 point f CRR—eligible for the liquidity buffer under pillar I as HQLA, and not as inflow at last, like other interbank deposits (Art 425 para 1 CRR). The categorization of the minimum reserve is also structurally remarkable: On the one hand, the minimum reserve shall be reported as HQLA, on the other hand inflows from IPS-deposits are automatically exempted from the inflow-cap and therefore substituting HQLA, which creates a certain double-counting privilege. Furthermore the eligibility of *other statutory or contractually available liquid funding* may be read as an opportunity to integrate—among others—credit- and liquidity facilities as HQLA within IPS.

Thus in extreme cases, IPS-members may report deposits placed in the central institution up to the contractual minimum reserve limit and, if committed, liquidity facilities up to their maximum amount as HQLA (Art 416 para 1 point f CRR). Spill-over inflows (e.g. deposits in excess of minimum reserve) within IPS can also be reported in full because of the exemption from the 75%-cap (Art 425 para 1 CRR). The LCR therefore creates incentives to increase liquidity dependence from the consolidating entity or the central institution, consequently increasing contagion risk within the IPS (see also BCBS, 2008: p. 17). A necessary back-stop can be found in Art 417 point a CRR, which requires credit institutions to diversify their assets in the liquidity buffer. However, this rule cannot generally prohibit IPS-members to report their minimum liquidity reserve as HQLA.

As a result, the fundamental LCR-approach which attempts to further avoid an overwhelming linkage between the financial market participants, was not consequently implemented through the different models of banking networks. While the consolidating entities in banking groups and networks according to Art 10 CRR may present powers to effectively govern and monitor liquidity risks in the member-institutions, the consolidating entity within an IPS is limited to certain possibilities to take influence.

7. Supervisory Powers and Sanctions Regarding Liquidity

A further major aim of the implementation of Basel III via CRD IV and CRR was to provide competent authorities more instruments, tools and opportunities to sanction significant breaches of European law in order to ensure financial stability on micro- and macro-prudential level (recital 40 and 49 CRD IV).

7.1. Legal Basis & Scope

Both supervisory measures and sanctions were integrated in CRD IV, leaving the member states room to manoeuvre in order to implement the rules in line with national procedure laws. Art 102 para 1 CRD IV requires competent authorities to act when the institution does not meet the requirements of CRD IV or CRR or the competent authorities have evidence that the institution *is likely to breach* the requirements of the mentioned laws within the following 12 months.³¹

The regulators powers to set measures according to CRD IV are colourful. Art 104 CRD IV empowers the competent authorities to set measures regarding—among others—own funds, large exposures, risk management, remuneration (Art 104 para 1 CRD IV), liquidity (Art 104 para 1 point k CRD IV, Art 105 CRD IV) and disclosure (Art 104 para 1 point l, Art 106 CRD IV). Therefore CRD IV enables the competent authorities to act and intervene directly at the heart of banking activities.

Referring to measures concerning liquidity risk, Art 104 para 1 point k CRD IV the competent authority may “impose specific liquidity requirements, including restrictions on maturity mismatches between assets and liabilities” (Art 104 para 1 point k CRD IV) and therefore providing the regulator with a high amount of flexibility in order to decrease the liquidity risk profile of an institution. In addition Art 105 CRD IV states that competent authorities are empowered to set specific liquidity requirements when an institution particularly creates “systemic liquidity risk that threatens the integrity of the financial markets of the Member State concerned” (Art 105 point d CRD IV).

Naturally the sanctioning of breaches regarding liquidity regulation should primarily have pre-emptive character (see the discussion above concerning Art 414 CRR). Consequently Art 66 para 1 point j CRR requires the sanctioning of institutions which “repeatedly or persistently fails to hold liquid assets in breach of Article 412 of

³¹Notably this provision should strengthen the competent authorities in order to set measures for prevention purposes. However, given the non-definition of a sufficient *likelihood of breaches*, an administrative practice still has to be created, just as well judicial leading cases.

Regulation (EU) No 575/2013” (Art 66 para 1 point j CRR). In the case of regulatory breaches, the administrative penalties can be set up to 10 % of “the total annual net turnover including the gross income consisting of interest receivable and similar income” (legal person) or up to EUR 5,000,000 (natural person; Art 66 para 2 point c and d CRD IV).

7.2. IPS: Evaluation

As long as no waiver according to Art 8 CRR is granted to the IPS-members, all supervisory measures and sanctions may be set against concerned institutions in cases of regulatory breaches. By granting a liquidity-waiver, only the consolidating institution may be addressed by regulatory measures or sanctions. The consolidating entity is responsible for the behaviour of IPS-members which naturally influence the liquidity risk profile of the IPS. So addressing the consolidating entity with the requirement of liquidity recovery on consolidating level is just the first step. Given the dependence of the consolidating entity from the behaviour of the IPS-members on solo-level and, probably even as problematic, the lack of comprehensive powers to exactly control govern the liquidity risk profile of the IPS-members, competent authorities may finally end up with discussing the functioning of the entire IPS and may decide about a withdrawal of the permission according to Art 113 para 7 CRR.

8. Macro-Prudential Components of Liquidity Regulation within IPS

Given the broad membership of credit institutions with predominantly homogenous business profile (Art 113 para 7 point h CRR) an IPS may create inappropriate systemic risk to the entire financial market. As follows it should be noted what instruments regulators may use to address such risks.

8.1. Background & Legal Basis

Fundamentally the European implementation of Basel III follows a *maximum harmonization*-approach which means that it is prohibited to member states to set stricter rules to institutions than required in CRD IV or CRR. The European legislator’s idea in this regard is to minimize opportunities of arbitrage between jurisdictions. However, in the light of specific systemic risks which cannot be addressed by instruments listed in CRR or CRD IV (Art 458 para 2 point c CRR), the CRR provides via Art 458 CRR a legal opportunity to set further *national* provisions in a more flexible way. Within this *flexibility-framework*, *designated authorities* (Art 458 para 1 CRR)³² are allowed to introduce specific provision regarding own funds, leverage, large exposures and liquidity when a “macro-prudential or systemic risk identified at the level of a member state” (Art 458 CRR).

The European procedure to activate the *flexibility-framework* according to Art 458 CRR is very complex and burdensome. Among other factors, the designated authority has to sufficiently reason why the respective systemic risk cannot be addressed by the instruments provided by CRD IV and CRR, and why therefore national instruments would be more effectively (Art 458 para 2 point c CRR). Given the broad portfolio of regulatory instruments (see chapter 7) such national justification seems tough. Furthermore the planned national measures must be communicated to the European Parliament, the Council, the European Commission, the ESRB and the EBA (Art 458 para 2 CRR).

Only in cases when the European Commission do not legally provide a European solution, which is conferred on the Council, to address the identified systemic risk (Art 458 para 4 CRR), the designated authority has the permission to set the proposed measures on national level, up to a time horizon of two years (Art 458 para 4 CRR).

8.2. IPS: Systemic Risk

As well as institutions on solo-level, the specific structure of an IPS may create particular systemic risks to the financial markets. Considering that IPS’ are *systems* themselves (in the sense of a network of institutions) such structures are bearing systemic risk internally, and given that financial markets do not have the characteristics of a *closed system* (BCBS, 2010: p. 1), risks within an IPS, especially contagion risk (BCBS, 2008: p. 17 et seqq), may spread to external actors, e.g. banking groups or networks of banks. As mentioned above, a certain level of

³²Note that the term designated authority does not automatically cover the competent authority. Regarding systemic risks CRD IV and CRR allows member states to mandate authorities other than the competent authority responsible for microprudential banking supervision. In the case of Austria, the FMA is both competent and designated authority (§ 22 para 2 BWG).

liquidity risk on solo level can create lifted liquidity risk on systemic level. To a greater extent IPS may contribute to both, increased financial stability or turmoil. Therefore in jurisdictions where a high number of institutions or systemically relevant institutions are part of an IPS, the designated authority should consider the specific relationship of the IPS internally and what negative externalities could be created in line with an IPS'-default or liquidity bottleneck.

9. Conclusion

Based on the achievements above, the regulation of Institutional Protection Schemes (IPS) referring to liquidity risks seems incomplete and inconsistent. The notion of the Basel III-liquidity regulation, among other elements, concretely decreasing overwhelming dependency on interbank business and funding reliance, cannot be sufficiently fulfilled within IPS'. On the one hand, the structure and regulatory recognition of IPS' provide certain incentives to participating member institutions to increase liquidity risks, knowing that the safety network of the protection scheme is forced by the regulator (and the regulation itself) to support the institution when liquidity risks came into effect. On the other hand, the consolidating institution as the controlling entity within the IPS regularly will not have the necessary powers to effectively limit endo- and exogenous banking risks.

Starting with the different categories of liquidity and liquidity risk (Chapter 3), all major risk factors are applicable and must be managed by the IPS and its member-institutions. However, an IPS itself—as a contractual agreement (and not as a legal entity)—cannot be hit by a liquidity shock. Thus all members of the IPS are vulnerable by liquidity bottlenecks from both, market and funding liquidity. In addition, systemic liquidity risks may also arise within a protection scheme. Chapter 4 unveiled the specific model of IPS', underlining that consolidating entities do not have powers to instruct IPS-members in order to adjust business particularly decrease liquidity risks. Especially concerning liquidity, an opportunity to act in short time is very important to the IPS-members, particularly to the consolidating entity as responsible institution in the IPS. The fact of predominantly homogenous business profiles does also amplify the risk of correlation risks, and therefore direct and indirect contingency within the IPS.

In Chapter 5 the paper explained the liquidity regulation under pillar II, stated in CRD IV. Most remarkable of all, IPS' are not directly addressed by the regulations under CRD IV. However, IPS-members, provided that there is not waiver granted by the competent authority, have to comply with CRD IV. Nevertheless, particularly given the specific governance and controlling mechanisms within an IPS, there is no traceable reason not to include IPS' directly within the pillar II-framework.

So from a pure CRD IV-perspective, there is no requirement for IPS neither to calculate stress-tests and implement contingency plans, nor to hold a liquidity buffer on consolidated level. Just in connection with Art 113 para 7 point c CRR regulators may argue to require IPS' for such important liquidity measures.

Under Chapter 6, the paper provided a mapping of the new liquidity ratios (LCR, NSFR) on IPS', crystalizing the application of pillar I to IPS' and its members. Especially remarkable in this concern is the regulatory recognition of the liquidity minimum reserve as HQLA under the LCR (Art 416 para 1 point f CRR) and the automatic 75%-cap-waiver of interbank deposit within IPS. Both privileges create incentives to stream liquidity to (and through) the central institution, irrespective of the investment of those funding by the central institution. For instance, although the central institution may invest in high-yielding, illiquid assets on consolidated level, the IPS-members may regulatory assume the deposit as HQLA. Similarly the automatic 75%-cap-waiver also creates the hoarding of assets in one central institution, consequently increasing concentration and—of course—contagion risk within the entire IPS. Ultimately in cases where no waiver is granted to the IPS-members, there is not even a liquidity-reporting requirement to IPS.

Chapter 7 disclosed the problems for regulators to address IPS' as supervised entities because of the lack of direct IPS-liquidity-regulation. So supervisory powers regarding liquidity regulation may only be addressed by challenging the IPS-permission as a whole. Having in mind the potential consequences of the withdrawal of the permission (e.g. abolition of the privileges, resulting in higher capital and liquidity requirements), this step is a tough decision to the supervisor in the light of decreasing systemic risks. Finally Chapter 8 dealt with the question of flexibility and systemic risk. Depending on the concrete arrangement a sample of IPS-members, if risks are not fully covered and monitored, the model of IPS' may create a specific type of systemic contagion risk.

Summing up, the current liquidity regulation of IPS' seems to be not sufficient in order to comply with the original notion of Basel III, decreasing contagion risk and creating incentives for better and sound liquidity management. In contrast to that, CRR and CRD IV create a lot of regulatory privileges for IPS' which are not

being equalized by increased supervision or risk management. The European banking legislation overreaches the existence and establishment of banks in the decentralized sector, ignoring that such sectors may also create big systemic risks, particularly in the case of close networks or guarantee-schemes like IPS'. Heavy regulatory privileges, such as stated in CRR and CRD IV, should be justified by strong regulations on other elements (e.g. compliance with standards on consolidated IPS-level) or empirical evidence of risk-decreasing issues, not in ignoring specific risks in decentralized sectors.

In further development of banking regulation, the European legislator should better synchronize the regulation of different banking networks (banking groups, networks according to Art 10 CRR, IPS), disclose the specific disparities and after that provide specific privileges, not the other way round. Otherwise, legislation enables supervised entities to manoeuvre and arbitrage between the respective models, gaining inappropriate privileges from the regulation.

References

- Affinito (2013). *Affinito Massimiliano (2013). Central Bank Refinancing, Interbank Markets and the Hypothesis of Liquidity Hoarding: Evidence from a Euro-Area Banking System*. ECB Working Paper Series, No. 1607.
- BCBS (1988). *International Convergence of Capital Measurement and Capital Standards*. Basel: BIS.
- BCBS (1992). *A Framework for Measuring and Managing Liquidity*. Basel: BIS.
- BCBS (2000). *Sound Practices for Managing Liquidity in Banking Organisations*. Basel: BIS.
- BCBS (2004). *Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework*. Basel: BIS.
- BCBS (2008a). *Liquidity Risk: Management and Supervisory Challenges*. Basel: BIS.
- BCBS (2008b). *Principles for Sound Liquidity Risk Management and Supervision*. Basel: BIS.
- BCBS (2010). *Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring*. Basel: BIS.
- BCBS (2011). *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems—Revised Version June 2011*. Basel: BIS.
- BCBS (2013). *Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools*. Basel: BIS.
- BCBS (2014). *Consultative Document, Basel III: The Net Stable Funding Ratio*. Basel: BIS.
- Berrospeide (2013). *Bank Liquidity Hoarding and the Financial Crisis: An Empirical Evaluation, Finance and Economics Discussion Series Divisions of Research & Statistics and Monetary Affairs*. Washington DC: Federal Reserve Board.
- Bervas, A. (2009). Market Liquidity and Its Incorporation into Risk Management, Banque de France, Financial Stability Review No. 8.
- Bindseil, U. (2013). *No. 1610: Central Bank Collateral, Asset Fire Sales, Regulation and Liquidity*. ECB Working Paper Series.
- Blume, M. (2007). 22a BWG, Dellinger, Bankwesengesetz—BWG Kommentar, Wien.
- Blundell-Wignall, A., & Atkinson, P. (2010). Thinking beyond Basel III: Necessary Solutions for Capital and Liquidity. *OECD Journal: Financial Market Trends, 2010*, 1-23.
- CEBS (2008). *CEBS's Recommendations on Liquidity Risk Management*. London.
- CEBS (2009). *Guidelines on Liquidity Buffers & Survival Periods*. London.
- CEBS (2010a). *CEBS Guidelines on Liquidity Cost Benefit Allocation*. London.
- CEBS (2010b). *CEBS Guidelines on Stress Testing*. London.
- COM (2011). European Commission, Proposal for a Regulation of the European Parliament and of the Council on Prudential Requirements for Credit Institutions and Investment Firms (Text with EEA Relevance)/COM/2011/0452 Final-COD/2011/0202.
- CRD II Directive 2009/111/EC of the European Parliament and the Council of 16 September 2009 Amending Directives 2006/48/EC, 2006/49/EC and 2007/64/EC as Regards Banks Affiliated to Central Institutions, Certain Own Funds Items, Large Exposures, Supervisory Arrangements, and Crisis Management.
- CRD IV Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on Access to the Activity of Credit Institutions and the Prudential Supervision of Credit Institutions and Investment Firms, Amending Directive 2002/87/EC and Repealing Directives 2006/48/EC and 2006/49/EC.
- Dellinger, M., Burger, F., & Puhm, S. (2011). 23 BWG, Dellinger, Bankwesengesetz—BWG Kommentar, Wien.
- EBA (2013a). *Report on Appropriate Uniform Definitions of Extremely High Quality Liquid Assets (Extremely HQLA) and*

- High Quality Liquid Assets (HQLA) and on Operational Requirements for Liquid Assets under Article 509(3) and (5)*. London: CRR.
- EBA (2013b). *Discussion Paper—Draft Methodology for Assessment of Liquidity and Funding Risk under SREP (EBA/DP/2013/04)*. London.
- Espinosa-Vega, M. (2009). *IMF: Prevent Institutions Becoming Too Connected to Fail, Survey Magazine: IMF Research*. Washington DC.
- G-20 (2010). *The Seoul Summi Document—Framework for Strong, Sustainable and Balanced Growth*. Seoul.
- Harris, E. S. (2013). *Ben Bernanke's Fed: The Federal Reserve after Greenspan*. Boston, MA: Harvard Business Press.
- Harvard Law School (2013). The Harvard Law School Forum on Corporate Governance and Financial Regulation. Basel Committee Revises Basel III Liquidity Coverage Ratio, HBS.
- Hicks, J. R. (1936). *Value and Capital—An Inquiry into Some Fundamental Principles of Economic Theory*. Oxford: Oxford University Press.
- IMF (2013). *Addressing Interconnectedness: Concepts and Prudential Tools*. IMF Working Paper, WP/13/199.
- Jergitsch, Motter, & Siegl (2010). 27 BWG, Dellinger, Bankwesengesetz—BWG Kommentar, Wien.
- Keynes, J. M. (1936). *The General Theory of Employment, Interest and Money*. London.
- Larson, J. (2011). *The Basel Accords*. Iowa City, IO: University of Iowa College of Law Center for International Finance and Development.
- Matz, L., & Neu, P. (2007). *Liquidity Risk Measurement and Management: A Practitioner's Guide to Global Best Practices*. Singapore City: J Wiley.
- Nikolaou, K. (2009). *Liquidity (Risk) Concepts—Definitions and Interactions*. ECB Working Paper Series No. 1008.
- Nowak, R. A. (2011). *How Effective Is Global Financial Regulation? The Basel Accords' Role in Mitigating Banking Crises*. Durham, NC: Duke University.
- O'Grady, S. (2008). *Credit Crunch: "It's Just the End of the Beginning"*. London: The Independent.
- OECD (1971). *OECD Economic Outlook, Ausgaben 9-16*. Saint Paul, MN: University of Minnesota.
- PRA: Prudential Regulation Authority—Bank of England (2014). *Applying for a CRR Permission*. London.
- Shin, H. S. (2008). *Reflections on Modern Bank Runs: A Case Study of Northern Rock*. Princeton, NJ: Princeton University.
- Stern, T. (2013). Zur Bedeutung institutsbezogener Sicherungssysteme, ZFR 2013, 206, Wien.

Abbreviations

BCBS: Basel Committee on Banking Supervision
BIS: Bank for International Settlements
BWG: Bankwesengesetz
CCP: Central Counterparty
CEBS: Committee of European Banking Supervisors
CRR: Capital Requirements Regulation
CRD: Capital Requirements Directive
EBA: European Banking Authority
ECB: European Central Bank
EEA: European Economic Area
EMIR: European Market Infrastructure Regulation
ESM: European Stability Mechanism
HQLA: High Quality Liquid Assets
ICAAP: Internal Capital Adequacy Assessment Process
ILAAP: Internal Liquidity Adequacy Assessment Process
IMF: International Monetary Fund
IPS: Institutional Protection Scheme
KI-RMV: Kreditinstitute-Risikomanagement-Verordnung
OTC: Over-the-Counter
SIFI: Systemically Important Financial Institution
SME: Small and Medium Sized Enterprise
SPV: Special Purpose Vehicle
SREP: Supervisory Review Evaluation Process
TFEU: Treaty on the Functioning of the European Union

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