# Report on the principles for implementing ALA options in Switzerland

21 November 2016

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# 1    Introduction

In its rules text for the Liquidity Coverage Ratio (LCR)[1], the Basel Committee on Banking Supervision (BCBS) defined three different exceptions for countries with an insufficient supply of high quality liquid assets (HQLA) in their domestic currency. These are referred to as "Alternative Liquidity Approaches 1-3" (ALA options 1-3) in the Basel terminology, para. 55 ff.).[2]

According to current evaluations, the following sections show why the Swiss market has an insufficient supply of HQLA to meet the LCR requirements in Swiss Francs (excluding the current high levels of banks' sight deposits with the Swiss National Bank (SNB)). This circumstance makes it impossible for all the banks affected to build up and maintain the required holdings of HQLA in an interest rate environment which is returning to normal (again). ALA options were therefore introduced in Switzerland at the same time as the LCR so as not to restrict the monetary policy options available to the SNB.

Article 17 of the Liquidity Ordinance (LiqO), in conjunction with margin nos. 299 ff. of FINMA Circular 2015/2 "Liquidity risks – banks", regulates the Swiss implementation of these exceptions. ALA options 2 and 3 of the Basel rules text most closely reflect the situation in Switzerland and were chosen accordingly.[3] Under these rules, banks are permitted to include additional HQLA in foreign currencies when calculating the LCR (ALA option 2, Art. 17 para. 1 LiqO). Banks which for operational reasons hold no HQLA in foreign currencies are allowed to hold a larger share of Level 2 assets in Swiss francs to cover the net asset outflow in Swiss francs than is permitted under Article 17a para. 2 LiqO (option 3, Art. 17 para. 2). This option is restricted to domestic-oriented banks without significant business in foreign currencies so that these banks are not forced to hold foreign currency liquid assets to meet the LCR requirements. Only banks which do not have appropriate processes

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[1] See http://www.bis.org/publ/bcbs238.pdf.

[2] "ALA options" are restricted exclusively to a shortage of HQLA in the domestic currency (i.e. Swiss francs in Switzerland). Any shortage of HQLA outside Switzerland is not considered in the Swiss implementation.

[3] The reasons for choosing these ALA options can be found in the explanatory report from the Federal Department of Finance (FDF) on the revision of the Liquidity Ordinance (link: http://www.news.admin.ch/NSBSubscriber/message/attachments/33489.pdf) and in FINMA's explanatory report on the revision of FINMA Circular 15/2 (link: https://www.finma.ch/de/~/media/finma/importiertedokumente/regulierung/anhoerungen/04-rundschreiben-liquiditaetsrisiken/eb-rs-liquiditaet-banken.pdf?la=de).

for managing foreign currency risks can include a larger share of Level 2 assets.[4]

## 2    Demand for HQLA

The demand for HQLA in Switzerland caused by the LCR (LiqO Art. 12ff.) is determined by the net cash outflow (cash outflows minus cash inflows) in Swiss francs (CHF), i.e. without in and outflows in foreign currencies, calculated according to the 30 calendar days stress scenario. For the whole banking sector, the net cash outflow fluctuated in the range from CHF 277bn and CHF 313bn since the LCR was introduced at the beginning of 2015 (Figure 1). For the analyses presented in this report CHF 300bn net cash outflow in CHF are considered as an appropriate estimate.
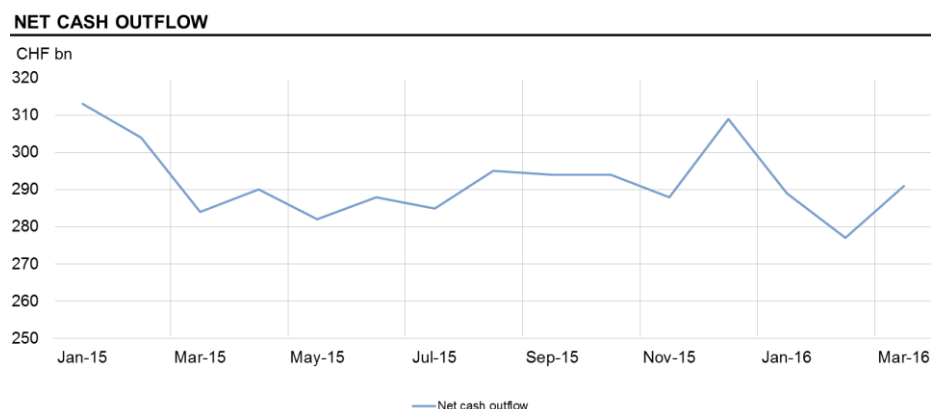
**NET CASH OUTFLOW**



Source: Finma, SNB

Figure 1: Net cash outflow in LCR CHF since introduction of the LCR

## 3    Supply of non-central bank cash HQLA

To give an overview of the outstanding HQLA denominated in CHF, securities eligible in SNB's monetary policy operations are considered. Since 2015, the set of SNB eligible securities has been a subset of HQLA due to alignment of SNB eligible securities with HQLA. Differences should be

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[4] Banks are not permitted to combine additional HQLA under ALA option 2 and ALA option 3 (FINMA Circ. 15/2, margin no. 301).

insignificant (for example for SNB eligible securities a minimum issuance size of CHF 100 m is required).

In view of the fact that the SNB adjusted its collateral policy, the SNB has classified all SNB eligible collateral in accordance with the HQLA criteria since March 2014 onwards.[5] The subsequent figures thus show the correct HQLA classification after March 2014, while the classification before March 2014 is a proxy. Securities labelled with "Public" are securities issued by governments and supranational institutions, while securities labelled as "Private" are securities which are issued by the two Swiss mortgage bond institutions (Pfandbriefbank/Pfandbriefzentrale), corporates and banks.

Figure 2 shows that the outstanding value of HQLA in CHF has decreased over time with lower government debt outstanding. As of March 2016, the outstanding volume of Level 1 securities was at CHF 142bn. The outstanding volume of Level 2a securities stood at CHF 170bn.



**OUTSTANDING VOLUME OF CHF SECURITIES**
Grouped by rating (pre-April 2014) and HQLA classification (post-April 2014)
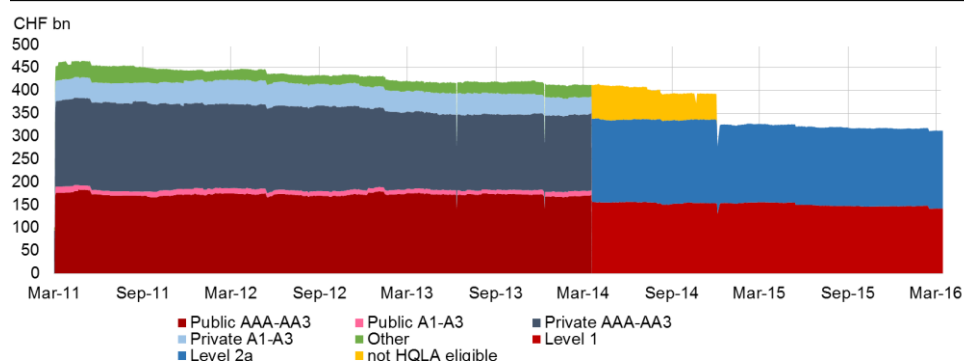
Source: SNB

Figure 2: Outstanding volume of CHF securities by rating and HQLA classification

Within the set of CHF denominated Level 1 securities, there are two categories of issuers which include issuers of public sector debt (government and cantonal debt[6]) as well as supranational issuers (see Figure 3). Issuers of Level 2a securities include Swiss Pfandbriefe (mortgage bonds), covered bonds, corporate debt as well as lower-rated

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[5] The term "Level 1" refers to all HQLA that are considered to be most liquid as defined in Article 15a LiqO. The term "Level 2" refers to all HQLA that have a high liquidity value as defined in Article 15b LiqO. Level 2 HQLA is further divided into "Level 2a" and "Level 2b" HQLA.

[6] Cantons are states/provinces in Switzerland, i.e. local government.

government, cantonal and supranational debt in addition to issuances by municipalities. While Swiss government debt has decreased over the past few years, Swiss Pfandbriefe have increased (see Figure 4).

**OUTSTANDING VOLUME OF CHF HQLA SECURITIES**

SNB eligible securities, only CHF denominated Level 1 securities
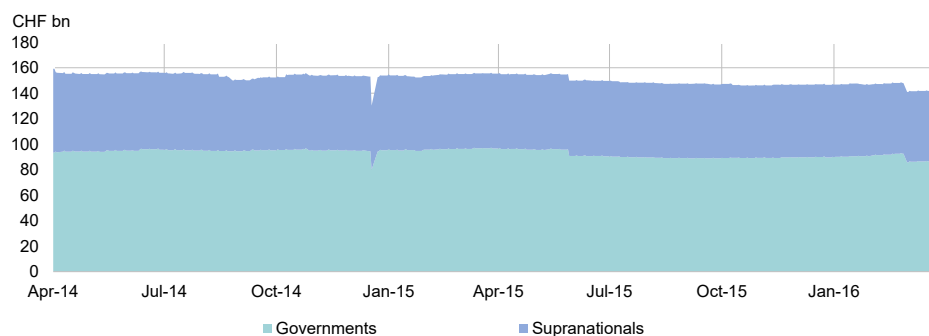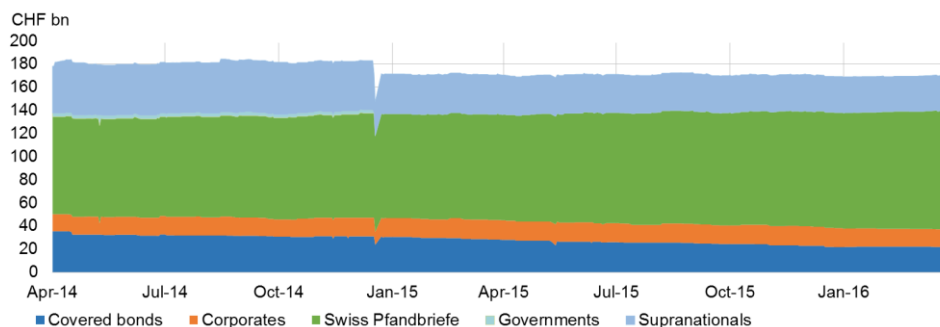


Source: SNB

Figure 3: Outstanding volume of CHF Level 1 securities

**OUTSTANDING VOLUME OF CHF HQLA SECURITIES**

SNB eligible securities, only CHF denominated Level 2a securities



Source: SNB

Figure 4: Outstanding volume of CHF Level 2a securities

With respect to future developments, there are no indications (e.g. government deficit at federal level and/or the general trends) which point towards an increase in CHF HQLA in the next three to five years. In the case of government debt, the so-called Swiss debt brake, a structural deficit rule, limits government deficits and thus hinders a significant increase in

government debt outstanding. Based on the current trend and the structural factors, it is even more likely that there will be a further reduction.

With respect to Level 2b securities, only equities of the Swiss Market Index (SMI) which are not issued by a financial institution can be considered as Level 2b assets in accordance with Article 15b para. 5 in conjunction with margin no. 133 ff. FINMA Circ. 15/2. The SMI consists of the 20 largest exchange-traded equities, of which six are financial institutions (UBS, Credit Suisse, Julius Bär, Zurich, Swiss Re, Swiss Life). Total SMI market capitalization adds up to roughly CHF 1,000bn (see Figure 5) of which 150bn are attributable to financial institutions.

**FREE FLOAT MARKET CAPITALISATION SMI INDEX**



**Source:** Bloomberg, SNB

Figure 5: SMI Market capitalization

To summarize, the current stock of HQLA denominated in CHF consists of:

| Asset | Volume |
|---|---|
| Level 1 | CHF 140bn |
| Level 2a | CHF 170bn |
| Level 2b | CHF 850bn |

Table 1: Current stock of HQLA denominated in CHF

For Level 1 and Level 2a securities, as mentioned above, no supply increase is expected. The future projection of Level 2b securities clearly depends on the performance of the stock market. Due to the fact that the net cash outflow may be covered by a maximum of 40% Level 2 HQLA, of which the

Level 2b HQLA may cover a maximum of 15% of the net cash outflows (based on the total supply of HQLA), it is obvious that the supply of Level 1 HQLA is the binding restriction.

## 4 Major factors influencing supply and demand for HQLA and the shortage in HQLA

While on the one hand up to now there has been no shortage in HQLA due to the fact that reserves at the Swiss National Bank have increased tremendously as shown in this section, on the other hand, it will be impossible for the banks to hold all of the HQLA described in section 3, as there are other investors competing for those assets.

HQLA demand from other investors

Figure 6 below shows that non-banks hold a significant amount of Swiss government debt. Under the assumption that the holding structure of Swiss government debt is representative for Level 1 assets in Switzerland, this indicates that the portion which can be held by banks is unlikely to exceed one third (i.e. the actual 8% plus the 19% acquired by foreign investors since 2010 plus an additional 6% from other investors), which would already correspond to more than four times the actual level.

**HOLDERS OF SWISS GOVERNMENT BONDS**
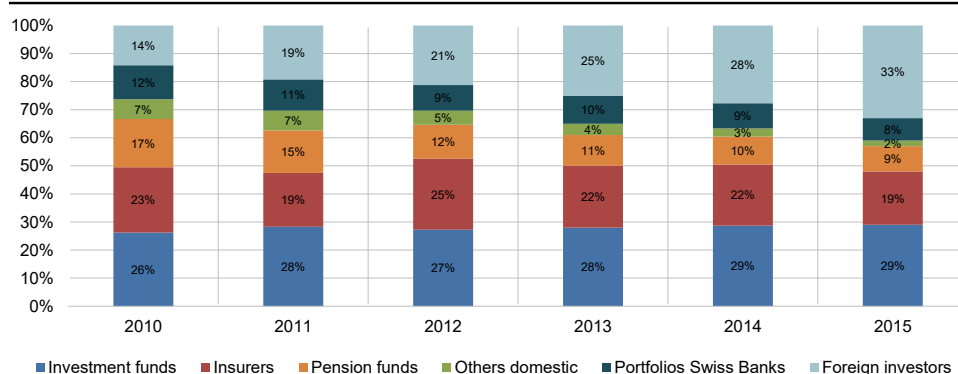


Source: SNB

Figure 6: Holders of Swiss Government Bonds, 2010 – 2015

Possible changes in the supply of HQLA due to monetary policy

As a result of monetary policy measures to counter the strength of the CHF, central bank reserves (reserves) held by banks with the SNB have increased considerably from approximately CHF 5bn to CHF 470bn at the end of 2015. The increase in reserve holdings corresponds to a net creation of Level 1 assets. Figures 7 and 8 illustrate the development of the SNB's balance sheet.

As a result of unconventional monetary policy measures since 2009 to counter the strength of the CHF, central bank reserves (reserves) held by banks with the SNB have increased considerably from approximately CHF 5bn to CHF 470bn at the end of 2015. The increase in reserve holdings corresponds to a net creation of Level 1 assets, as it is the result of purchases of foreign currencies and not, as is the case for quantitative easing, the purchase of domestic assets (mostly public debt) via a creation of reserves (essentially a swap of HQLA) (see Figures 7 to 9).

As a consequence, there is an excess supply of HQLA denominated in CHF when taking into account reserve balances with the SNB. This is also reflected in the banks' LCR reporting, which indicates that a considerable part of HQLA is held in the form of reserves.



THE SNB'S ASSETS

CHF bn

Legend: Gold and claims from gold transactions; Foreign currency investments; Claims from CHF repo transactions; Claims from USD repo transactions; Swap transactions against CHF; CHF securities; Loan to stabilisation fund; Other assets
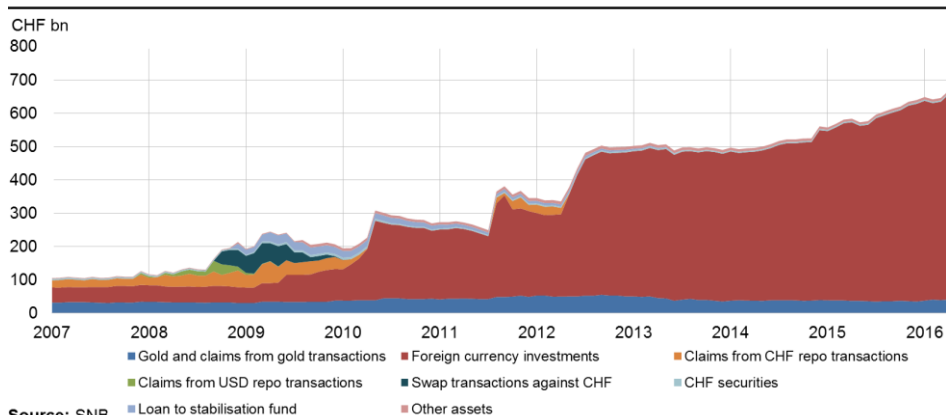
Source: SNB

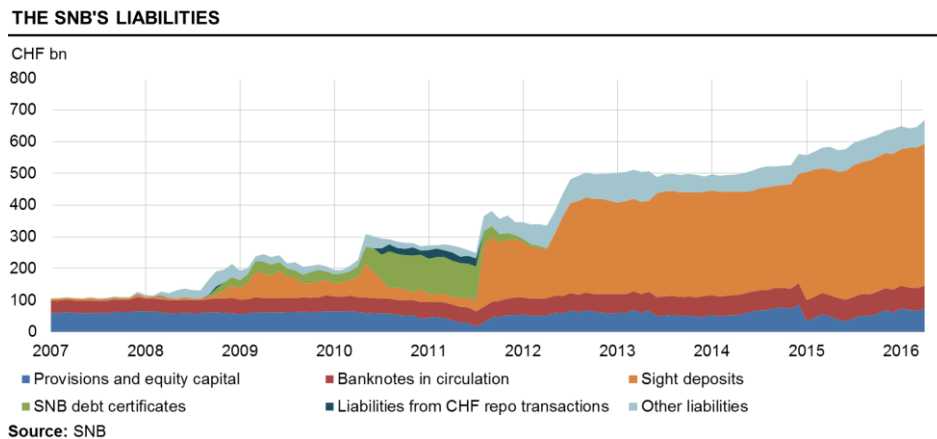Figure 7: Development of the SNB's assets

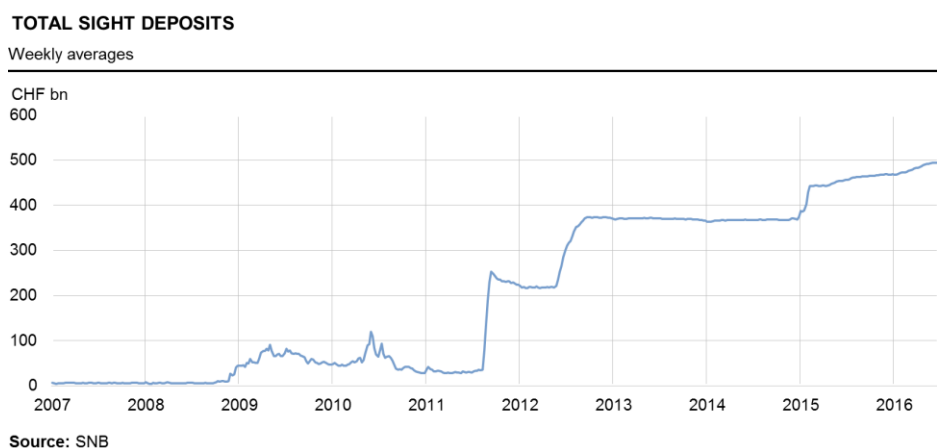Figure 8: Development of the SNB's liabilities



Figure 9: Development of reserves held at the SNB

To ensure that Switzerland's monetary policy is not restricted by the required HQLA holdings of banks, the ALA options were calibrated based on the assumption of a reversal of the situation, which means that central bank reserves at the SNB are the minimum reserve size requirement (which cannot be considered as HQLA) and accordingly a decrease of roughly CHF 460bn.[7]

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[7] Depending on the choice of instrument(s) the SNB would deploy to lift interest rates in an environment with excess reserves, the impact on the stock of HQLA differs in which case a reversal to the pre-crisis level of reserves is assumed.

This decrease in central bank reserves would go hand in hand with a decrease in the banks' liabilities. Accordingly the net cash outflow impact on the HQLA shortage depends on the assumption which liabilities would decrease.

Due to a high level of uncertainty, the following analysis (see Figure 10) is based on three scenarios. Scenario A assumes 25% of the deposits being overnight and 75% having a maturity of three months which become due distributed equally over time. Accordingly one third of the three months deposits would fall due within the next 30 days. Furthermore, it is assumed that 75% of the deposits stem from non-operational wholesale counterparties (LCR outflow rate 40%) and 25% from non-operational financial institutions (LCR outflow rate 100%). The average outflow rate of the deposits would accordingly add up to 27.5%. If reserves decreased by CHF 395bn (the actual excess in comparison to the minimum reserves held by the banks which are part of the LCR reporting), the net cash outflow would decrease accordingly by CHF 108.6bn. Finally, there would be a remaining gap of CHF 121.4bn. As the assumption of the change in deposits is very sensitive with regard to the assumption of the maturity and the types of depositors/counterparties, scenarios B and C rely on more conservative parameters. The most conservative scenario C assumes an average outflow rate of 47% and would lead to a reduction in the net outflow of 62% in comparison to the CHF 300bn outflow in the current situation. But even this assumption would still result in a HQLA gap of CHF 44.6bn, which is roughly 60% of the HQLA available for banks assuming they are able to hold 30% of the overall Level 1 assets (in comparison to 8% in Figure 6 which are currently owned by banks). Compared to the remaining net outflow, this would mean that the banks are not able to cover 39% of the net outflow with CHF-HQLA in the most positive scenario and 63% in the worst scenario.

| Availabe L1 and L2 assets | Volume | portion available for banks | Volume for LCR (L2 caps considered) |
|---|---|---|---|
| Level 1 assets | 140 | 30% | 42.0 |
| Level 2a asstes | 170 | 40% | 28.0 |
| Level 2b assets | 850 | | 0 |
| **Total L1 and L2 assets available for banks** | | | **70.0** |

| Current situation | |
|---|---|
| Net outflow | 300 |
| Availbale L1 and L2 except SNB cash | 70.0 |
| SNB Cash | 408 |
| o/w assumed reduction of SNB Cash | 395 |

| Scenario | | A | B | C |
|---|---|---|---|---|
| matu-rity | portion sight | 25% | 50% | 60% |
| | portion 3 months deposits | 75% | 40% | 40% |
| | portion 1 year deposits | 0% | 10% | 0% |
| counter-party | portion non stable retail | 0% | 10% | 20% |
| | portion non operational wholesale | 75% | 50% | 30% |
| | portion non operational FI | 25% | 40% | 50% |
| **Average outflow rate** | | **27.50%** | **39.14%** | **46.93%** |
| Change in net outflow in bn. | | -108.6 | -154.6 | -185.4 |
| **New net outflow in bn.** | | **191.4** | **145.4** | **114.6** |
| corresponding relative reduction of net outflow | | 36% | 52% | 62% |
| **remaining HQLA Gap** (total L1 and L2 minus net outflow) | | **121.4** | **75.4** | **44.6** |
| HQLA Gap as percentage of net outflow | | 63% | 52% | 39% |

Figure 10: HQLA gap after reduction in reserves

Due to a decrease in central bank reserves, the HQLA gap will even be greater if it is taken into account that several banks which are not affected by the inflow cap[8] at the moment would then be subject to the inflow cap. Up to now only inflows between CHF 3bn and CHF 8bn have not been considered due to the inflow cap. If the total outflows of roughly CHF 470bn (inflows are around CHF 170bn) decrease between 109bn (scenario A) and 185bn (scenario C), it will be almost impossible for the banks to ensure that the impact of the inflow cap will not significantly exceed the current level of around CHF 5bn. Accordingly the HQLA gap would further increase further owing to this impact.

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[8] Due to the inflow cap, only 75% of the outflows can be covered by inflows. The remaining 25% have to be covered by HQLA.

# 5 Implementation of the ALA options

In the Swiss implementation, as explained in chapter 1, ALA option 3 only applies to small banks without foreign currency operations. Since these institutions do not fall within the scope of the BCBS's international regulatory requirements and have little influence on the shortage of HQLA in the market, ALA option 3 is not discussed in any greater detail here. It is governed by margin nos. 315-320 of FINMA Circular 15/02.

ALA option 2 is enabled through Article 17 LiqO and defined in detail in margin nos. 303-314 of FINMA Circular 15/02. Under margin no. 303, the inclusion of foreign currency HQLA to cover the net cash outflow in Swiss francs is limited to securities denominated in the four major foreign currencies (i.e. pound sterling, euro, yen and US dollar) and securities denominated in other important currencies (i.e. Danish krone, Norwegian krone, Swedish krone and Singapore dollar).

An additional haircut – to reflect foreign currency risks – is applied to foreign currency HQLA which are used to cover the net cash outflow in Swiss francs and which exceed a threshold of 25% (measured in terms of the net cash outflow in Swiss francs). This applies firstly to Level 1 HQLA denominated in the major foreign currencies, then to Level 1 HQLA denominated in all other eligible foreign currencies, and finally in the same order to Level 2a HQLA. HQLA denominated in the major foreign currencies, as defined in margin no. 303, receive an additional 8% haircut. HQLA denominated in all other eligible foreign currencies, as defined in margin no. 303, receive an additional 10% haircut. The haircuts are defined in line with Annex 2 of the Basel rules text.

Foreign currency HQLA which are used to cover the net cash outflow in Swiss francs can be included up to a maximum of 40% of the net cash outflow in Swiss francs. This upper limit applies after application of the prescribed haircuts. The eligible foreign currency HQLA are limited to Level 1 HQLA and Level 2a HQLA.

Given an LCR requirement of 100%, the maximum coverage of 40% of the net cash outflow means that 60% of the net cash outflow must be covered using HQLA in CHF. As explained in section 4, it is assumed that the maximum HQLA in CHF the banks can provide is just under CHF 90bn. This implies that the foreign currency HQLA would be limited to the equivalent of CHF 60bn, which is between the HQLA deficit of scenario B and scenario C in section 4.

The selected implementation option therefore seems to leave sufficient pressure on the market to build up HQLA in CHF, but should also give the SNB sufficient scope to implement its monetary policy irrespective of LCR considerations.

As shown above, there will be a shortage in CHF HQLA as soon as the monetary policy normalizes. The ALA Options have been calibrated in a way, that there is still sufficient pressure for the market to build up additional HQLA . Nevertheless, due to the ALA options applied, SNB can perform monetary policy independent from LCR requirements. The necessity to implement the ALA options in advance was given, as quick changes in all processes involved cannot be implemented in due course, when the monetary policy changes.