

Institutional Research Flash

Credit Update Switzerland

Swiss Pfandbrief – Rock solid

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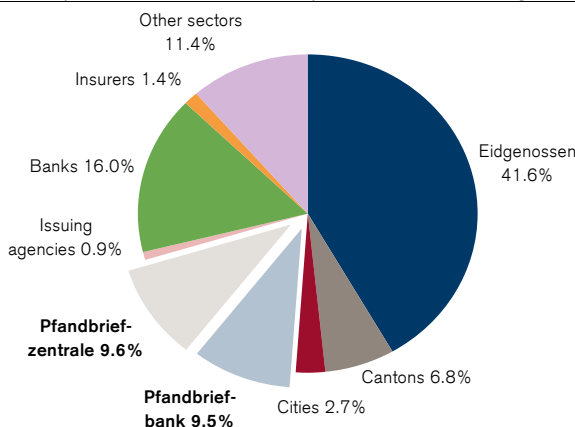
An important segment of the CHF domestic bond market

Swiss Pfandbriefe are, after Swiss government bonds, the largest and most liquid segment of the CHF domestic bond market, accounting for 19.2% of all listed domestic bonds at end-May 2008 (see Figure 1). As illustrated in Figure 2, the volume of Swiss Pfandbriefe outstanding has expanded sharply over the past 20 years, which led to improved liquidity in the secondary market. The launch of the Swiss Pfandbrief Index (Figure 5) in 2002 increased transparency further. This index is calculated on a daily basis by the SWX Swiss Exchange and shows the price and performance development of the underlying synthetic bonds. In contrast to other European covered bond markets where trading has almost come to a standstill in H2 2007 in view of the financial market turbulences, Swiss Pfandbriefe remained liquid throughout this period and spreads held more or less steady (Figure 6).

While issuance activity during 2007 was relatively muted

Figure 1

Listed domestic CHF bonds by sector (end-May 2008: CHF 231.1 bn par value outstanding)



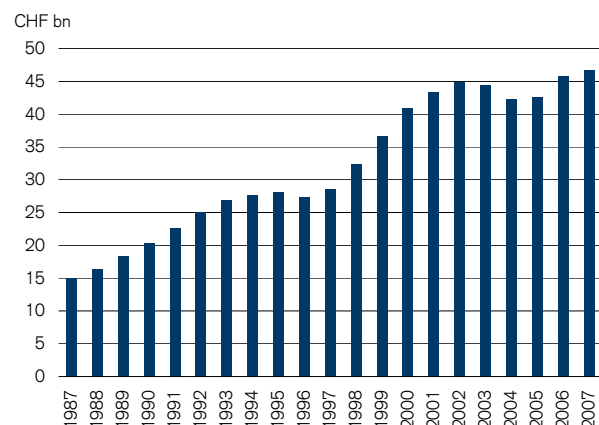
Source: SWX Monthly Report May 2008, Credit Suisse

Highlights

- After Swiss government bonds, Swiss Pfandbriefe are the largest and most liquid segment of the CHF domestic bond market.
- Swiss Pfandbriefe are standardized secured fixed-rate debt securities, collateralized by first lien mortgage loans. Given their high quality, Swiss Pfandbriefe are eligible as collateral for repo transactions with the Swiss National Bank. Swiss Pfandbriefe are rated Aaa, Stable by Moody's.
- In contrast to other European countries, only two institutions are authorized to issue Pfandbriefe in Switzerland, namely the Pfandbriefbank schweizerischer Hypothekarinstitute and the Pfandbriefzentrale der schweizerischen Kantonalbanken.

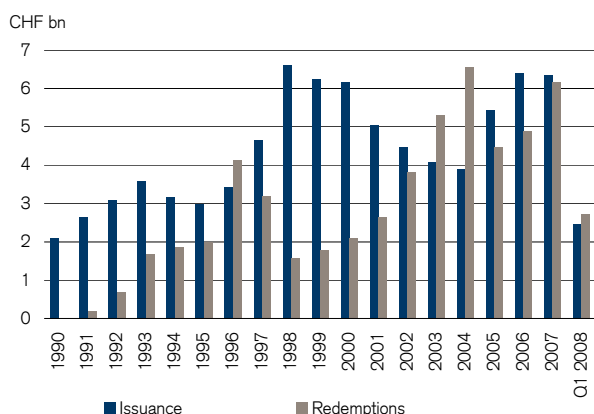
Figure 2

Total Swiss Pfandbriefe outstanding (both listed and private placements)



Source: SNB (Bankenstatistisches Monatsheft May 2008), Credit Suisse

Figure 3
Swiss Pfandbrief issuance activity
(both listed and private placements)

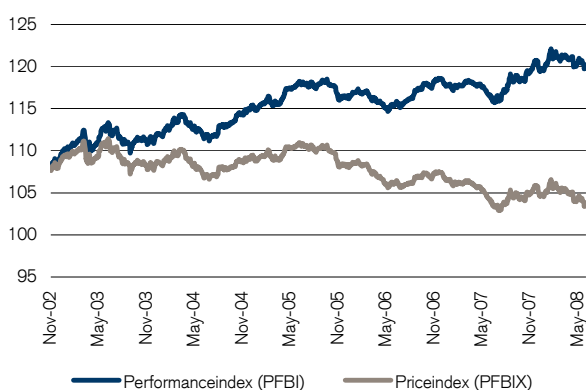


Source: SNB (Statistisches Monatsheft May 2008), Credit Suisse

with net issuance of only CHF 0.2 bn versus CHF 1.5 bn in 2006 (Figure 3), it has picked up in 2008. Issuance volume year-to-date has already reached CHF 4.9 bn (of which Pfandbriefbank schweizerischer Hypothekarinstitute CHF 3.2 bn and Pfandbriefzentrale der schweizerischen Kantonalbanken CHF 1.7 bn), accounting for about 51.6% of domestic CHF issuance (excluding Swiss government bonds). Issuance has been triggered on the one hand by the rediscovery of the Swiss Pfandbrief by Swiss banks as a low cost and efficient means to refinance mortgage lending activities ("supply kick"), and on the other hand, by investors' flight to high-quality, liquid bonds and the lack of alternatives given the low capital market activity by the public sector.

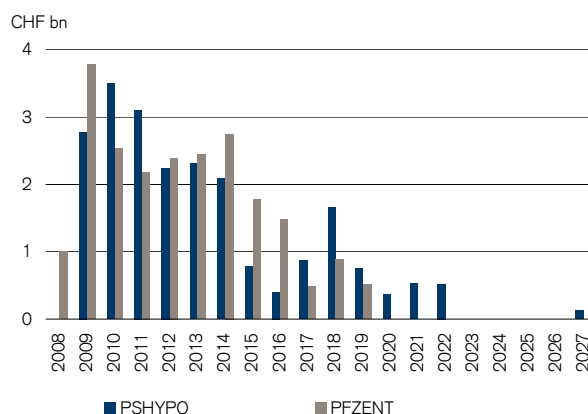
Given the numerous legal regulations governing them, Swiss Pfandbriefe are among the safest investments. Moody's rates the Swiss Pfandbriefe issued by both the Pfandbriefbank and Pfandbriefzentrale "Aaa, Stable". The rating agency points to the strong legal framework under which these two institutions operate as well as the specific characteristics of the Swiss Pfandbriefe (i.e., high quality of collateral underpinning loans to member banks, over-collateralization, large and diver-

Figure 5
Swiss Pfandbrief Index



Source: Bloomberg, Credit Suisse

Figure 4
Listed Swiss Pfandbriefe – Maturity breakdown
(end-May 2008: CHF 44.3 bn par value outstanding)



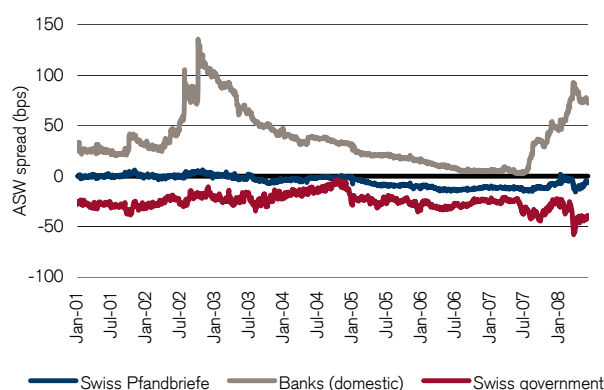
Source: SWX Monthly Report May 2008, Credit Suisse

sified pool of borrowers, legislation permitting the segregation of asset pools in situations of stress at member banks, thereby preventing the disruption of cash flows from the pools), which result in a negligible expected loss for investors.

Looking at the outstanding Swiss Pfandbriefe in greater detail, there were 89 Swiss Pfandbriefe with a total nominal value of CHF 44.3 bn listed on the SWX at end-May 2008, of which CHF 22.0 bn were issued by the Pfandbriefbank (48 issues) and CHF 22.3 bn (41) by the Pfandbriefzentrale. Swiss Pfandbriefe tend to be smaller than those in other European markets, and so-called Jumbo Pfandbriefe (par value of at least CHF 1 bn) play only a minor role. This can be partly explained by the multi-tranche approach by the Pfandbrief institutions to achieve better distribution across maturities. Maturities of Swiss Pfandbriefe range from 2 to 20 years (Figure 4). The issue size and duration is largely dependent on the refinancing demand from Swiss banks or requests by investors.

Aside from listed Swiss Pfandbriefe, the two Pfandbrief institutions have also sizeable private placements outstanding. Further details can be found at the back of this report.

Figure 6
ASW spread development by segment



Source: Credit Suisse – Liquid Swiss Index (LSI)

Fundamentals of Swiss Pfandbriefe

In general, Swiss Pfandbriefe (literally "letters of pledge") are standardized secured fixed-rate debt securities, collateralized by first lien mortgage loans. Maturities range from 2–20 years. Swiss Pfandbriefe are eligible as collateral for repo transactions with the Swiss National Bank.

Strong legal framework

The Swiss Pfandbrief system was given its present form by the Federal Pfandbrief Act in force since 1931 (Pfandbriefgesetz PfG), complemented by the Pfandbriefverordnung (Pfv). In contrast to other European countries, only two institutions are authorized to issue Pfandbriefe in Switzerland, namely the Pfandbriefzentrale der schweizerischen Kantonalbanken (the Pfandbrief institution for Swiss cantonal banks) and the Pfandbriefbank schweizerischer Hypothekarinstitute (the Pfandbrief institution acting for all other mortgage lenders in Switzerland). The scope of business activity at these two institutions is limited to the issuance of Swiss Pfandbriefe, the granting of Pfandbrief loans to their member as well as non-member banks against collateral ("specialized banking principle"), the investment of own assets and other short-term banking activities required to carry out aforementioned tasks. Neither of the two institutions has a general banking license. Both institutions are supervised by the Swiss Federal Banking Commission.

Swiss Pfandbriefe are subject to strict regulation. The maturity and repayment profile of a Swiss Pfandbrief must match that of the underlying collateralized mortgage loans to banks (balance and cover principles). This eliminates the duration and interest rate risks (no currency risk as cover assets and Swiss Pfandbriefe must be in CHF). Early repayment of loans is permissible only if Swiss Pfandbriefe of the same series are delivered in lieu of cash. The loans must be covered at all times with domestic pledged collateral, and any shortfall must be compensated with mortgages (PfG would also allow cash or listed bonds issued by the federal government, cantons or municipalities with a haircut; however, this is not used in practice). The mortgages in the cover pool must be listed in a cover register ("Pfandregister"), but are still held and managed by the banks themselves (but monitored by the Pfandbrief

institutions). This is in contrast to mortgage-backed securities, where, through securitization, mortgage loans are removed from a bank's balance sheet. The mortgages included in the cover pool must be physically separated from other mortgages. The Pfandbriefbank highlighted that it thoroughly checks the eligibility of cover assets in a multi-step approach. Further, banks are required by law to replace impaired assets in the cover pool and also to increase the collateral if the interest income on the underlying mortgages is below the interest expense on the loan.

Based on the PfG, eligible assets for the cover pool are mortgages on real estate and land (excluding property whose value diminishes with exploitation such as mines and quarries) and Swiss Pfandbriefe secured on aforementioned assets. In Switzerland, the cover pool is largely made up of residential properties, whose default rates are considerably lower than those for mortgages on commercial properties. The maximum statutory loan-to-mortgageable value ratio is 2/3 applied on conservatively calculated underlying values (fair market value or "Verkehrswert" for residential property; capitalized earnings value or "Ertragswert" for multifamily homes). For all other real estate, the loan-to-mortgageable value ratio is 1/2. Further, mortgages in the cover pool are spread across Switzerland, which largely eliminates geographical cluster risk. On top of the already cautiously calculated cover assets, the two Pfandbrief institutions also require a higher degree of over-collateralization (OC) than required by law (PfG: 0% OC). At the Pfandbriefbank, pledged eligible mortgages must exceed the amount of loans by 3%, while the Pfandbriefzentrale requires 10% OC for member loans¹. This OC is relatively high, in our view, considering the fact that mortgages are repaid partly over time while the value of the pledged title remains unchanged and the property value increases.

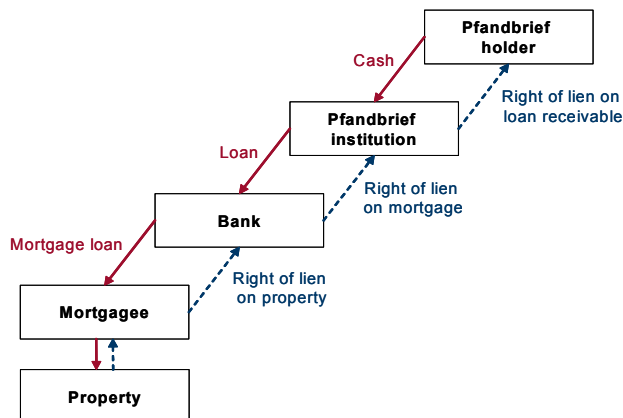
High security for Swiss Pfandbrief investors

Swiss Pfandbrief investors benefit from a chain of safety provisions, whereby obligations arising from Pfandbrief loans are backed not only by the underlying real estate mortgages (see Figure 7), but also by the mortgagee, the member banks with all their assets, and the Pfandbrief institution itself.

Should a debtor bank of a Pfandbrief institution become insolvent, Swiss Pfandbrief investors and the Pfandbrief institution would have a direct preferential claim on the registered collateral backing the loan ("bankruptcy remoteness"), while other creditors could only lay claim to the cover pool once the claims of the Swiss Pfandbrief creditors were satisfied in full. As banks are required to redress insufficient collateral by placing new real estate mortgages into the cover pool, neither of the two Swiss Pfandbrief institutions has ever suffered a loss. It is also worth highlighting that the opening of bankruptcy proceedings cannot delay payments (both interest and principal) on Pfandbrief loans.

In the highly unlikely scenario that a Pfandbrief institution were to become insolvent, its liquid assets (primarily invested in high quality securities eligible as collateral with the Swiss National Bank) would be the first to be liquidated. As long as the cover pool is not substantially defective, the Swiss Pfandbriefe would continue to perform normally.

Figure 7
Collateralization provisions in the Swiss Pfandbrief model



Source: Credit Suisse

¹ We understand that these rates are different because the Pfandbriefbank has a centralized cover pool system and the Pfandbriefzentrale a decentralized one.

Pfandbriefbank schweizerischer Hypothekarinstitute

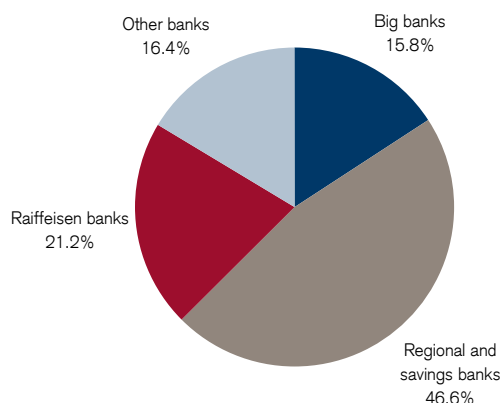
In accordance with the regulations stipulated in the Federal Pfandbrief Act (PfG), the Pfandbriefbank's purpose is to provide cost-efficient funding to its member banks to partially refinance their mortgage lending activities.

The Pfandbriefbank has a diversified ownership structure; at end-2007, 240 banks were members of the Pfandbriefbank (end-2006: 237). Its membership is primarily composed of regional, savings and Raiffeisen banks, but also includes the two big banks and other mortgage institutions (see Figure 8). Member banks with voting rights exceeding 5% at end-2007 were Migrosbank (11.5%), Valiant Bank (11.0%), Neue Aargauer Bank (9.7%), Credit Suisse (9.3%), Raiffeisen Switzerland (7.2%) and UBS (6.5%). Any Swiss bank is eligible to become a member and shareholder in Pfandbriefbank, provided it is headquartered in Switzerland and Swiss mortgages account for at least 60% of the balance sheet, although the latter condition is at the discretion of the Pfandbriefbank. Accordingly, Pfandbriefbank has amended its by-laws and accepts as members Swiss banks whose mortgage loans account for at least 10% of their balance sheet.

Swiss Pfandbriefe outstanding totaled CHF 24.6 bn at end-2007 (+6.6% YoY), accounting for 95.7% of total assets. The institution's Pfandbrief investors benefit from a diversified pool of collateralized mortgage loans, spread across the whole of Switzerland. Residential properties constitute 90% of the cover assets (i.e. 55% single-family homes and condominiums, 35% multi-family homes) and 10% commercial properties. As illustrated in Figure 10, the Pfandbriefbank issued Swiss Pfandbriefe totaling CHF 3.2 bn and redeemed securities worth CHF 2.4 bn during 2007. Loans were extended to 238 banks. According to the Pfandbriefbank, it has a historical default rate of 0%, i.e. neither the Pfandbriefbank nor any Swiss Pfandbrief investor has suffered a loss since its foundation in 1931.

The Pfandbriefbank held substantial liquid assets of CHF

Figure 8
Ownership structure (end-2007)

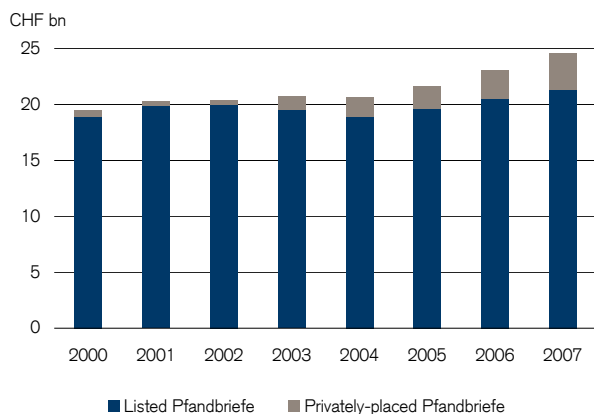


Source: Pfandbriefbank, Credit Suisse

726 m at end-2007 (accounting for 2.8% of total assets), largely invested in high-quality securities eligible as collateral for repo transactions with the Swiss National Bank. These liquid assets constitute a substantial reserve cushion and ensure the Pfandbriefbank a steady flow of income for financing its general business expenses.

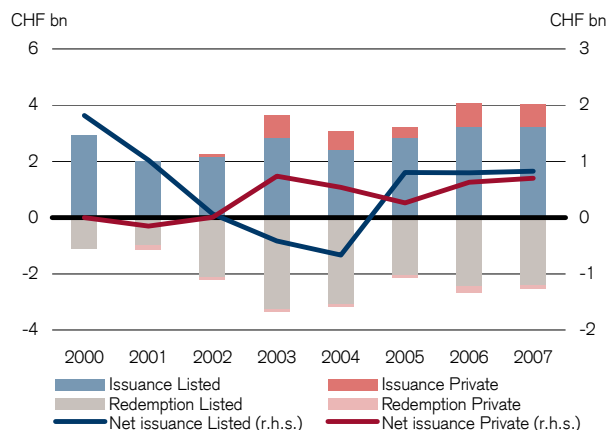
The share capital stood at CHF 300 m at end-2007, of which CHF 111 m was paid up (increased to CHF 132 m as per 15 May 2008). The institution's member banks underwrite certificates of obligation for the unpaid portion of the capital, allowing it to be credited to 75% as available capital. Eligible capital totaled CHF 659 m, compared to required capital of CHF 501 m, resulting in an equity coverage ratio of 131.6%. The equity/liability ratio stood at 2.6%, exceeding the legally required minimum level of 2%.

Figure 9
PSHYPO: Outstanding Swiss Pfandbriefe



Source: Pfandbriefbank, Credit Suisse

Figure 10
PSHYPO: Swiss Pfandbrief issuance activity



Source: Pfandbriefbank, Credit Suisse

Table 1: Pfandbriefbank schweizerischer Hypothekarinstitute – Key figures (CHF m)								
(Financial year end: 31 December)	2000	2001	2002	2003	2004	2005	2006	2007
Income statement								
Interest earned on Pfandbrief loans	805.9	829.1	796.9	748.3	690.0	665.6	672.8	675.3
Interest paid on Pfandbrief securities	-796.6	-819.1	-786.7	-737.9	-679.0	-653.6	-659.9	-661.5
Gross income from Pfandbrief operations	9.3	10.0	10.2	10.5	11.0	12.0	13.0	13.8
<i>Gross margin</i>	<i>1.2%</i>	<i>1.2%</i>	<i>1.3%</i>	<i>1.4%</i>	<i>1.6%</i>	<i>1.8%</i>	<i>1.9%</i>	<i>2.0%</i>
Interest reduction	0.0	0.0	0.0	-4.0	-4.0	-4.0	-8.0	-4.0
Issuance expenses	-4.9	-0.4	-0.4	-0.6	-0.5	-0.5	-0.5	-0.5
Commission expenses	-3.4	-3.5	-3.9	-3.7	-4.1	-6.7	-2.0	-1.0
Net income from Pfandbrief operations	1.0	6.1	5.9	2.2	2.4	0.9	2.5	8.3
<i>Net margin</i>	<i>0.1%</i>	<i>0.7%</i>	<i>0.7%</i>	<i>0.3%</i>	<i>0.3%</i>	<i>0.1%</i>	<i>0.4%</i>	<i>1.2%</i>
Net interest income from liquid assets	27.1	26.6	26.1	24.5	23.3	21.8	21.7	22.3
Depreciation and appreciation of liquid assets	-1.0	-2.8	-3.0	-3.3	-3.0	-3.0	-3.1	0.1
Income from liquid assets	26.1	23.8	23.2	21.2	20.4	18.9	18.7	22.4
<i>as a % of average liquid assets</i>	<i>4.3%</i>	<i>3.7%</i>	<i>3.5%</i>	<i>3.2%</i>	<i>3.1%</i>	<i>2.8%</i>	<i>2.7%</i>	<i>3.1%</i>
Other operating income	0.9	5.3	0.3	0.1	0.1	2.6	0.3	0.1
Operating expenses	-2.2	-2.0	-1.8	-2.0	-2.0	-2.1	-2.4	-2.1
Extraordinary income/expenses	0.0	0.5	0.143	0.0	0.4	0.1	0.3	0.0
Net profit	25.8	33.7	27.7	21.6	21.3	20.4	19.3	28.9
Balance sheet								
Total assets	20,523.5	21,432.4	21,487.3	21,787.3	21,636.8	22,738.4	24,194.2	25,738.3
Pfandbrief collateral	19,472.5	20,342.0	20,410.0	20,735.0	20,606.0	21,670.0	23,096.0	24,619.0
<i>as % of total assets</i>	<i>94.9%</i>	<i>94.9%</i>	<i>95.0%</i>	<i>95.2%</i>	<i>95.2%</i>	<i>95.3%</i>	<i>95.5%</i>	<i>95.7%</i>
Liquid assets	626.1	674.9	660.7	664.3	650.8	691.8	712.3	725.9
<i>as % of total assets</i>	<i>3.1%</i>	<i>3.1%</i>	<i>3.1%</i>	<i>3.0%</i>	<i>3.0%</i>	<i>3.0%</i>	<i>2.9%</i>	<i>2.8%</i>
Non paid-in capital	210.0	210.0	210.0	189.0	189.0	189.0	189.0	189.0
<i>as % of total assets</i>	<i>1.0%</i>	<i>1.0%</i>	<i>1.0%</i>	<i>0.9%</i>	<i>0.9%</i>	<i>0.8%</i>	<i>0.8%</i>	<i>0.7%</i>
Available equity	514.1	562.1	586.1	586.6	602.3	621.4	635.4	658.7
Necessary equity	398.7	416.2	416.9	423.0	419.7	441.4	470.2	500.6
<i>Equity coverage ratio</i>	<i>129.0%</i>	<i>135.0%</i>	<i>140.6%</i>	<i>138.7%</i>	<i>143.5%</i>	<i>140.8%</i>	<i>135.1%</i>	<i>131.6%</i>

Source: Pfandbriefbank, Credit Suisse

Pfandbriefzentrale der schweizerischen Kantonalbanken

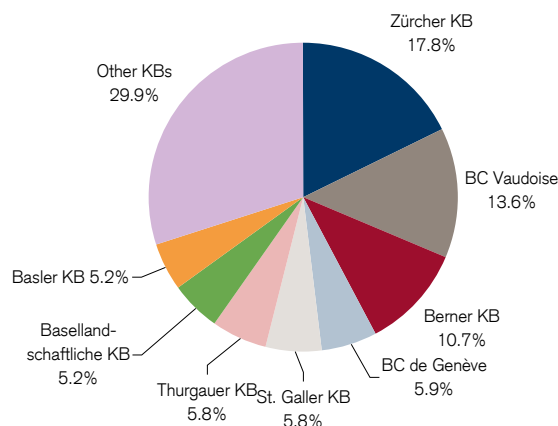
The Pfandbriefzentrale's purpose is to provide cost-efficient funding to Swiss cantonal banks to partially refinance their mortgage lending activities. The Pfandbriefzentrale has fully outsourced its operations under a management contract to the Zürcher Kantonalbank.

Owners and members of the Pfandbriefzentrale are the 24 Swiss cantonal banks (see Figure 11). Cantonal banks are public-sector banks majority-owned by the canton in which they are incorporated (statutory minimum ownership of at least one-third of capital and voting rights). Most cantonal banks (except Banque Cantonale Vaudoise, Banque Cantonale de Genève and – since 2006 – Berner Kantonalbank) benefit from a deficiency guarantee extended by their canton, providing additional security.

Holders of Swiss Pfandbriefe issued by the Pfandbriefzentrale benefit from a diversified pool of collateralized mortgage loans, predominantly residential real estate, that encompass the whole of Switzerland. Pfandbrief securities outstanding totaled CHF 22.9 bn at end-March 2008 (-5.1% YoY), accounting for 94.6% of total assets. During 2007/08, the Pfandbriefzentrale issued Swiss Pfandbriefe totaling CHF 2.7 bn (2006/07: CHF 3.9 bn) and redeemed CHF 4.0 bn (CHF 3.2 bn). The largest borrowers in terms of their share of outstanding issuance volume at end-March 2008 were Banque Cantonale Vaudoise (17.1%), Zürcher Kantonalbank (15.7%), Banque Cantonale de Genève (9.9%), Luzerner Kantonalbank (7.6%) and Thurgauer Kantonalbank (6.7%), accounting for approximately 57% of the aggregate issuance volume, while the remaining had individual shares of about 5% and less.

The Pfandbriefzentrale has a sizeable pool of liquid assets, accounting for 1.8% of total assets and providing it with a steady income stream to finance its activities and increase equity reserves. It primarily consists of direct mortgage loans of CHF 155 m and high-quality bonds worth CHF 270 m.

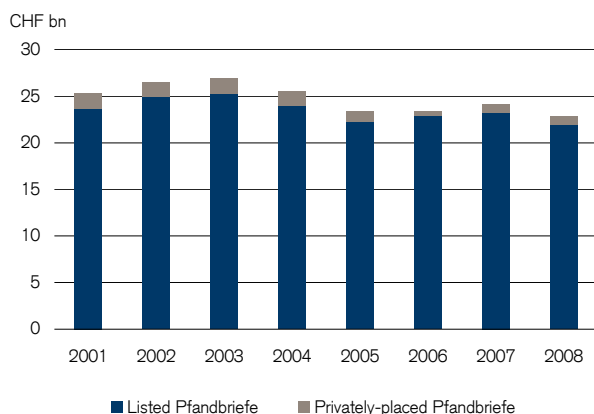
Figure 11
Ownership structure (end-March 2008)



Source: Pfandbriefzentrale, Credit Suisse

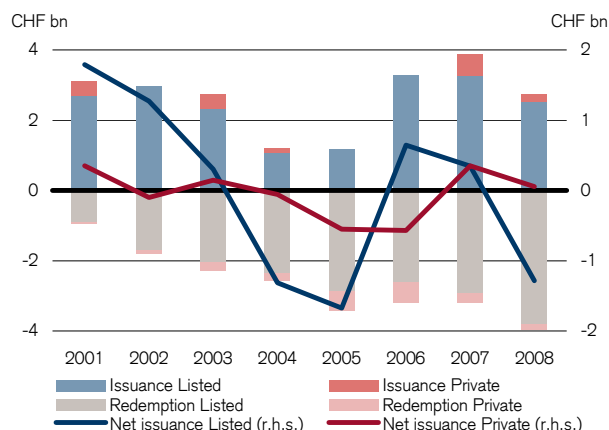
The Pfandbriefzentrale's share capital stood at CHF 825 m end of March 2008, of which CHF 165 m was paid up. The institution's member banks underwrite certificates of obligation for the unpaid portion of the capital, allowing it to be credited to 75% as available capital. Eligible capital totaled CHF 790 m, compared to required capital of CHF 465 m, resulting in an equity coverage ratio of 169.8%. The equity/liability ratio stood at 3.4%, exceeding the legally required minimum level of 2%.

Figure 12
PFZENT: Outstanding Swiss Pfandbriefe



All figures as per 31 March
Source: Pfandbriefzentrale, Credit Suisse

Figure 13
PFZENT: Swiss Pfandbrief issuance activity



All figures as per 31 March
Source: Pfandbriefzentrale, Credit Suisse

Table 2: Pfandbriefzentrale der schweizerischen Kantonalbanken – Key figures (CHF m)								
(Financial year end: 31 March)	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Income statement								
Interest earned on Pfandbrief loans	1,101.5	1,123.8	1,093.6	1,025.2	898.4	809.2	800.8	750.4
Interest paid on Pfandbrief securities	-1,101.5	-1,123.8	-1,093.6	-1,025.2	-898.4	-809.2	-800.8	-750.4
Gross income from Pfandbrief operations	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Gross margin</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>
Interest reduction								
Issuance expenses	-6.1	-5.3	-5.6	-5.7	-5.2	-5.1	-5.3	-4.9
Commission expenses	-5.9	-6.9	-6.7	-6.7	-5.9	-5.4	-5.5	-5.3
Net income from Pfandbrief operations	-12.0	-12.3	-12.3	-12.3	-11.1	-10.4	-10.8	-10.3
<i>Net margin</i>	<i>-1.1%</i>	<i>-1.1%</i>	<i>-1.1%</i>	<i>-1.2%</i>	<i>-1.2%</i>	<i>-1.3%</i>	<i>-1.3%</i>	<i>-1.4%</i>
Net interest income from liquid assets	23.0	23.3	20.8	18.4	17.3	16.1	15.2	15.0
Depreciation and appreciation of liquid assets	-0.6	-1.6	-0.6	-0.6	-0.6	0.0	0.0	0.0
Income from liquid assets	22.4	21.7	20.3	17.8	16.8	16.1	15.2	15.0
<i>as a % of average liquid assets</i>	<i>4.3%</i>	<i>3.8%</i>	<i>3.6%</i>	<i>3.3%</i>	<i>3.2%</i>	<i>3.3%</i>	<i>3.2%</i>	<i>3.3%</i>
Other operating income	0.0	1.2	0.8	0.0	0.1	0.2	0.0	0.3
Operating expenses	-2.1	-2.6	-2.2	-2.0	-2.0	-1.9	-2.0	-1.9
Extraordinary income/expenses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net profit	8.3	8.1	6.6	3.5	3.8	3.9	2.5	3.1
Balance sheet								
Total assets	26,887.8	28,037.6	28,465.1	27,031.5	24,768.6	24,791.7	25,495.1	24,206.3
Pfandbrief collateral	25,340.0	26,510.0	26,963.0	25,593.0	23,368.0	23,443.0	24,139.0	22,909.0
<i>as % of total assets</i>	<i>94.2%</i>	<i>94.6%</i>	<i>94.7%</i>	<i>94.7%</i>	<i>94.3%</i>	<i>94.6%</i>	<i>94.7%</i>	<i>94.6%</i>
Liquid assets	571.7	561.9	554.1	529.2	508.7	477.5	482.7	438.0
<i>as % of total assets</i>	<i>2.1%</i>	<i>2.0%</i>	<i>1.9%</i>	<i>2.0%</i>	<i>2.1%</i>	<i>1.9%</i>	<i>1.9%</i>	<i>1.8%</i>
Non paid-in capital	660.0	660.0	660.0	660.0	660.0	660.0	660.0	660.0
<i>as % of total assets</i>	<i>2.5%</i>	<i>2.4%</i>	<i>2.3%</i>	<i>2.4%</i>	<i>2.7%</i>	<i>2.7%</i>	<i>2.6%</i>	<i>2.7%</i>
Available equity	788.0	787.8	789.4	789.6	790.1	790.7	789.9	789.7
Necessary equity	518.7	541.7	550.2	521.5	476.3	476.7	490.8	465.0
<i>Equity coverage ratio</i>	<i>151.9%</i>	<i>145.4%</i>	<i>143.5%</i>	<i>151.4%</i>	<i>165.9%</i>	<i>165.9%</i>	<i>160.9%</i>	<i>169.8%</i>

Source: Pfandbriefzentrale, Credit Suisse

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Guide to analysis

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AA:	Obligor's capacity to meet its financial commitments is very strong
A:	Obligor's capacity to meet its financial commitments is strong
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its obligations

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