

8050 Zurich, 31 January 2019, 1730, MM

## Pfandbriefbank Pool

31 December 2018, semi-annual publication (since June 2012), unaudited

### 1 Pfandbriefbank

#### 1.1 Contact address

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#### 1.2 Rating

Rating agency Moody's Investors Service Ltd, London  
Issuance rating Aaa (since 2002, last issuer rating report dated 19 July 2018, ratings per ISIN are published shortly after issuance)

#### 1.3 Business model

Pfandbriefbank

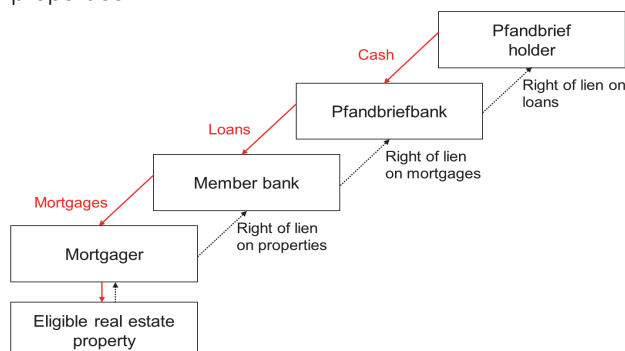
- Founded 1930, incorporated 1931
- Based on Pfandbrief act, which came into effect in 1930
- Special institute with limited scope (issuance of Swiss Pfandbriefe, loans to member banks and investment of own funds)
- No currency risk, no maturity mismatch, no interest rate risk
- Swiss Federal Council authorises bylaws and valuation regulations and nominates one member of the board of directors
- Swiss Financial Market Supervisory Authority (FINMA) supervises Pfandbriefbank and its member banks

Cover pool

- Regulated by law (not only a private agreement)
- Only first-class mortgages in Swiss francs (CHF) on properties located in Switzerland are eligible
- Cover value of each member bank's cover pool must be at least 108 % of the bank's liabilities to Pfandbriefbank
- Loan to value 41 % (by law limited at max. 66 2/3 % for residential properties or lower for other property types)
- More than 99 % of the underlying properties are residential
- Pfandbriefbank supervises eligibility and overcollateralisation daily
- Member bank legally obliged to increase coverage in case of insufficient overcollateralisation and to replace impaired or non-performing loans
- Approximately 12 % of Swiss mortgages refinanced through Swiss Pfandbriefe
- Pfandbriefbank values the cover value of a mortgage independently
- Mortgages stay on balance sheet of member bank
- Unique historical track: No loss since 1931

Investors' fourfold security

1. The capital of Pfandbriefbank, 2. the capital of the member banks, 3. the capital of the proprietors of the real estate property and 4. the market value of the real estate properties.



#### 1.4 Planned events

Issuances 05/02, 04/03, 01/04, 10/05, 04/06 and 23/07/2019  
General meeting 29/05/2019

## 2 Swiss Economics

### 2.1 General

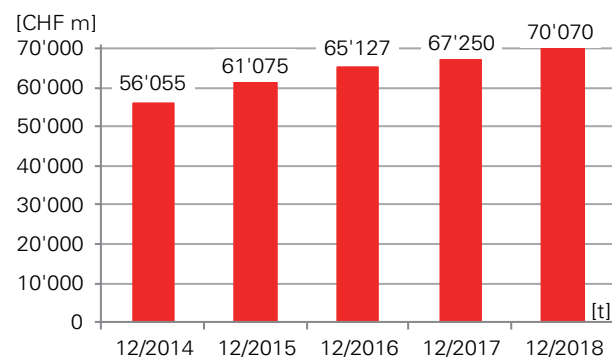
	Source, units	12/2018	12/2017	12/2016	12/2015
Gross domestic product (GDP)	SNB, CHF bn	not available yet	669	660	654
Unemployment rate	Seco, Ø %	2.6	3.2	3.3	3.2
Eidgenossen (Gov), 10Y rate	SNB, %	-0.15	-0.10	-0.14	-0.04

### 2.2 Mortgage market

Mortgage volume of banks	SNB, CHF bn	(10/2018) 1'017	988	962	938
Swiss Pfandbriefe <sup>1</sup>	CHF bn	125	119	113	104
SWX IAZI Price Indices					
Private Real Estate	CH0030532342	184	182	178	173
Investment Real Estate	CH0030532391	183	178	168	168

## 3 Market

### 3.1 Pfandbriefbank - Outstanding Pfandbriefe

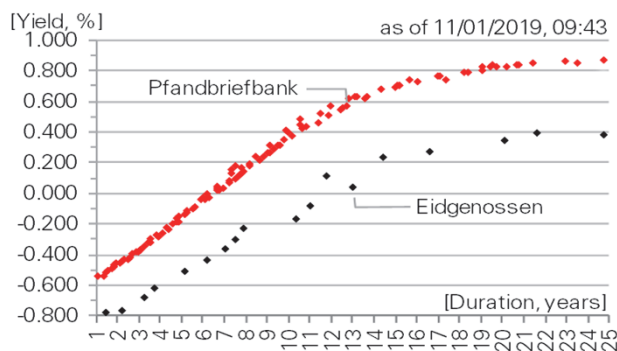


Source: Pfandbriefbank, semi-annual reports

In 2018 Pfandbriefbank issued Swiss Pfandbriefe of CHF 8'021 m. CHF 5'201 m matured. Net growth amounts to CHF 2'820 m.

The three joint lead banks responsible for our primary market issuances are Credit Suisse AG (in charge), UBS AG and Raiffeisen Schweiz Genossenschaft.

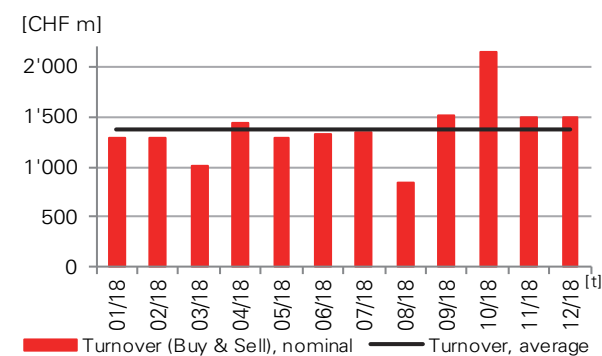
### 3.2 Pfandbriefbank - Yield per ISIN



Source: SIX Swiss Exchange AG

Pfandbriefbank's yield curve has a high density and supports portfolio duration adjustments in primary or secondary market.

### 3.3 Pfandbriefbank - Traded nominal volumes on secondary market



Source: SIX Swiss Exchange AG

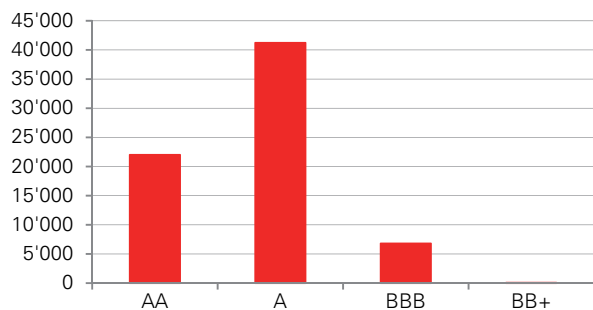
The joint lead banks are requested to organise the market making in the secondary market at SIX Swiss Exchange AG. For the last 12 months average monthly nominal turnover exceeded CHF 1'370 m (min/median/max: CHF 842 m/CHF 1'335 m/CHF 2'151 m).

## 4 Maturity structure

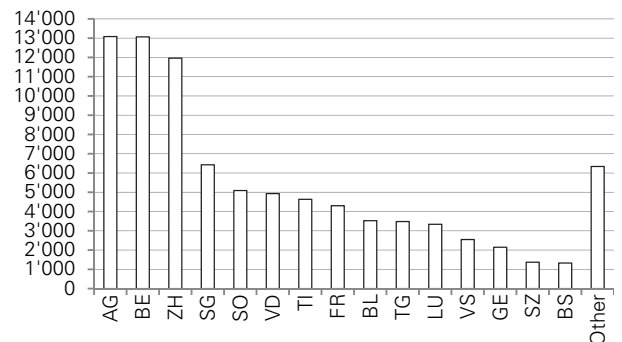
Contractual Cashflows		Maturity Buckets (in years)					
		Total	≤ 1y	> 1y and ≤ 5y	> 5y and ≤ 10y	> 10y and ≤ 15y	> 15y
31/12/2018							
CHF m (A/L denominated in CHF)		Total					
Assets (stylised)		72'098					
thereof	Loans to member banks	70'070	5'330	21'746	22'430	9'795	10'769
	Bonds	1'292	179	271	582	260	0
	- thereof SNB GC Basket	1'292					
	- thereof pledged	0					
	Share capital not paid in	504	504				
Liabilities (stylised)		-72'098					
thereof	Swiss Pfandbriefe	-70'070	-5'330	-21'746	-22'430	-9'795	-10'769
	Equity	-1'633					
Net total			683	271	582	260	0

## 5 Pool - Summary

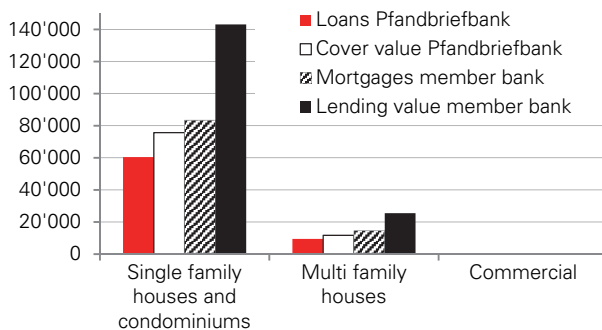
### 5.1 Loans to member banks (CHF m)



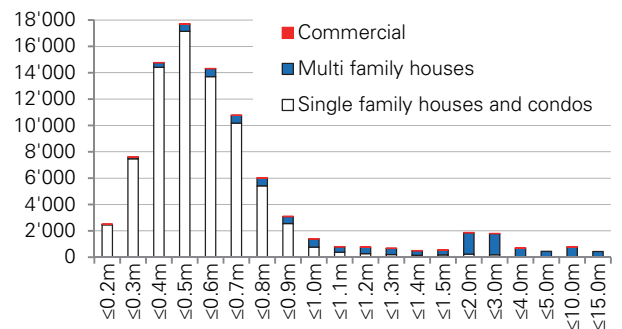
### 5.2 Cover value by region (CHF m, only CH eligible)



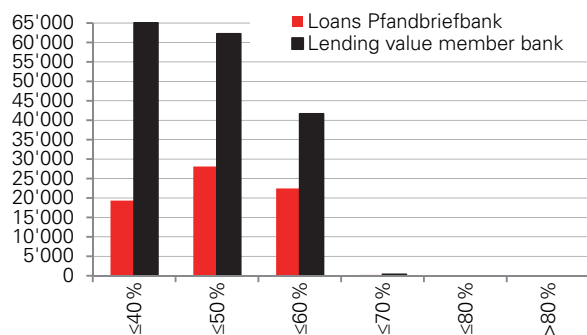
### 5.3 Property type (CHF m)



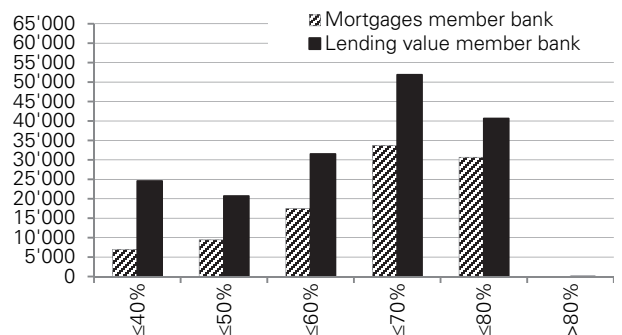
### 5.4 Cover value by size (CHF m)



### 5.5 Loan LTV (CHF m) <sup>2</sup>



### 5.6 Mortgage LTV member bank (CHF m) <sup>3</sup>



## 6 Pool - Details

Criteria for eligible cover pool assets	Pfandbriefbank				Member bank				Cover objects	
	Loans <sup>4</sup>		Cover value <sup>5</sup>		Mortgages <sup>6</sup>		Lending value <sup>7</sup>		Number	%
	CHF m	%	CHF m	%	CHF m	%	CHF m	%		

### 6.1 Loans to member banks <sup>8</sup>

Rating <sup>9</sup>	CHF m	%	CHF m	%	CHF m	%	CHF m	%	Number	%
AA	21'996	31	28'159	32	31'841	32	52'828	31	55'152	30
A	41'216	59	50'481	58	56'200	57	98'105	58	113'277	61
BBB	6'794	10	8'826	10	10'163	10	18'091	11	17'285	9
BB+ <sup>10</sup>	64	0	96	0	106	0	176	0	274	0
Total <sup>11</sup>	70'070	100	87'561	100	98'310	100	169'200	100	185'988	100

Loan size total	CHF m	CHF m	%	CHF m	%	CHF m	%	CHF m	%	Number	%
269 bank(s)	≤ 200	20'209	29	25'891	30	29'236	30	49'553	29	51'586	28
22	≤ 400	5'792	8	7'146	8	8'045	8	13'602	8	15'566	8
6	≤ 600	2'927	4	3'969	5	4'574	5	7'731	5	7'576	4
2	≤ 800	1'408	2	1'713	2	2'108	2	3'718	2	2'703	1
2	≤ 1'000	1'795	3	2'134	2	2'352	2	4'497	3	3'946	2
8	> 1'000	37'939	54	46'708	53	51'995	53	90'099	53	104'611	56
Total		70'070	100	87'561	100	98'310	100	169'200	100	185'988	100

### 6.2 Region (only Switzerland eligible)

BE	10'741	15	13'065	15	14'742	15	24'956	15	30'568	16
AG	10'724	15	13'083	15	14'336	15	24'415	14	30'298	16
ZH	9'183	13	11'962	14	13'507	14	24'949	15	21'487	12
SG	5'138	7	6'425	7	7'203	7	12'201	7	13'658	7
SO	4'195	6	5'092	6	5'743	6	9'265	5	11'460	6
VD	3'916	6	4'930	6	5'588	6	9'693	6	9'480	5
FR	3'481	5	4'301	5	4'755	5	7'705	5	9'708	5
TI	3'431	5	4'635	5	5'259	5	9'148	5	9'726	5
BL	2'806	4	3'525	4	3'914	4	6'922	4	7'016	4
TG	2'772	4	3'479	4	3'875	4	6'367	4	7'156	4
LU	2'726	4	3'337	4	3'734	4	6'258	4	6'762	4
VS	2'056	3	2'546	3	2'872	3	4'892	3	6'678	4
GE	1'671	2	2'148	2	2'537	3	4'814	3	3'374	2
SZ	1'090	2	1'368	2	1'535	2	2'811	2	2'380	1
BS	1'051	1	1'327	2	1'536	2	2'791	2	2'109	1
Other cantons, each < 1.4 %	5'088	7	6'339	7	7'172	7	12'014	7	14'128	8
Total	70'070	100	87'561	100	98'310	100	169'200	100	185'988	100

### 6.3 Property type <sup>12, 13, 14</sup>

Overview	CHF m	%	CHF m	%	CHF m	%	CHF m	%	Number	%
Residential										
Single family houses and condominiums <sup>15</sup>	60'463	86	75'679	86	83'446	85	143'118	85	174'931	94
Multi family houses	9'462	14	11'708	13	14'564	15	25'506	15	10'832	6
Total residential	69'926	100	87'387	100	98'009	100	168'624	100	185'763	100
Commercial	144	0	174	0	300	0	576	0	225	0
Total	70'070	100	87'561	100	98'310	100	169'200	100	185'988	100

Criteria for eligible cover pool assets	Pfandbriefbank		Member bank				Cover objects	
	Cover value <sup>5</sup>		Mortgages <sup>6</sup>		Lending value <sup>7</sup>		Number	%
	CHF m	%	CHF m	%	CHF m	%		

#### 6.4 Property type by size <sup>12, 13, 14</sup>

<b>Residential: Single family houses and condominiums</b>									
Cover value Pfandbriefbank	≤ 200'000	2'457	3	2'601	3	8'704	5	15'764	8
	≤ 300'000	7'470	9	7'878	8	16'277	10	28'283	15
	≤ 400'000	14'410	16	15'460	16	26'983	16	40'286	22
	≤ 500'000	17'142	20	18'601	19	30'204	18	37'819	20
	≤ 600'000	13'705	16	14'972	15	23'476	14	24'909	13
	≤ 700'000	10'177	12	11'383	12	17'481	10	15'610	8
	≤ 800'000	5'415	6	6'354	6	9'804	6	7'266	4
	≤ 900'000	2'555	3	3'106	3	4'806	3	3'013	2
	≤ 1'000'000	764	1	969	1	1'665	1	797	0
	≤ 1'100'000	377	0	486	0	796	0	357	0
	≤ 1'200'000	269	0	342	0	578	0	233	0
	≤ 1'300'000	199	0	251	0	429	0	159	0
	≤ 1'400'000	147	0	185	0	312	0	108	0
	≤ 1'500'000	173	0	245	0	431	0	117	0
	≤ 2'000'000	234	0	290	0	523	0	134	0
	≤ 2'500'000	185	0	324	0	648	0	76	0
	≤ 3'000'000	0	0	0	0	0	0	0	0
Total		75'679	86	83'446	85	143'118	85	174'931	94
Average as per cover object		0.433		0.477		0.818			
<b>Residential: Multi family houses</b>									
Cover value Pfandbriefbank	≤ 1'000'000	4'041	5	4'876	5	9'425	6	7'076	4
	≤ 2'000'000	3'719	4	4'535	5	7'626	5	2'648	1
	≤ 3'000'000	1'601	2	1'994	2	3'238	2	659	0
	≤ 4'000'000	688	1	882	1	1'415	1	199	0
	≤ 5'000'000	449	1	587	1	956	1	101	0
	≤ 10'000'000	777	1	1'012	1	1'692	1	115	0
	≤ 15'000'000	433	0	678	1	1'154	1	34	0
	≤ 20'000'000	0	0	0	0	0	0	0	0
	≤ 25'000'000	0	0	0	0	0	0	0	0
Total		11'708	13	14'564	15	25'506	15	10'832	6
Average as per cover object		1.081		1.345		2.355			
<b>Commercial</b>									
Cover value Pfandbriefbank	≤ 1'000'000	83	0	141	0	284	0	175	0
	≤ 2'000'000	55	0	92	0	174	0	39	0
	≤ 3'000'000	20	0	35	0	66	0	8	0
	≤ 4'000'000	6	0	12	0	21	0	2	0
	≤ 5'000'000	0	0	0	0	0	0	0	0
	≤ 10'000'000	10	0	21	0	31	0	1	0
	≤ 15'000'000	0	0	0	0	0	0	0	0
	≤ 20'000'000	0	0	0	0	0	0	0	0
	≤ 25'000'000	0	0	0	0	0	0	0	0
Total		174	0	300	0	576	0	225	0
Average as per cover object		0.774		1.334		2.562			
Total		87'561	100	98'310	100	169'200	100	185'988	100

Criteria for eligible cover pool assets	Pfandbriefbank				Member bank				Cover objects	
	Loans <sup>4</sup>		Cover value <sup>5</sup>		Mortgages <sup>6</sup>		Lending value <sup>7</sup>		Number	%
	CHF m	%	CHF m	%	CHF m	%	CHF m	%		

### 6.5 Loan to lending value (loan LTV)<sup>2</sup>

> 0 % to ≤ 40 %	19'331	28	25'385	29	29'618	30	65'037	38	58'604	32
> 40 % to ≤ 50 %	28'098	40	35'127	40	39'447	40	62'212	37	68'168	37
> 50 % to ≤ 60 %	22'443	32	26'831	31	29'004	30	41'623	25	58'722	32
> 60 % to ≤ 70 %	198	0	219	0	240	0	328	0	494	0
> 70 % to ≤ 80 %	0	0	0	0	0	0	0	0	0	0
> 80 %	0	0	0	0	0	0	0	0	0	0
Total	70'070	100	87'561	100	98'310	100	169'200	100	185'988	100
Overcollateralisation		100		125		140		241		
LTV <sup>16</sup>		41		52		58		100		

### 6.6 Cover value to lending value (cover value LTV)<sup>17</sup>

> 0 % to ≤ 40 %	6'705	10	8'458	10	9'883	10	29'467	17	26'475	14
> 40 % to ≤ 50 %	13'380	19	16'865	19	19'958	20	36'347	21	31'712	17
> 50 % to ≤ 60 %	23'415	33	29'234	33	32'913	33	52'434	31	55'067	30
> 60 % to ≤ 70 %	26'570	38	33'005	38	35'556	36	50'952	30	72'734	39
> 70 % to ≤ 80 %	0	0	0	0	0	0	0	0	0	0
> 80 %	0	0	0	0	0	0	0	0	0	0
Total	70'070	100	87'561	100	98'310	100	169'200	100	185'988	100

### 6.7 Mortgage to lending value (mortgage LTV member bank)<sup>3</sup>

> 0 % to ≤ 40 %	5'484	8	6'902	8	6'977	7	24'541	15	24'013	13
> 40 % to ≤ 50 %	7'346	10	9'216	11	9'441	10	20'684	12	21'745	12
> 50 % to ≤ 60 %	13'321	19	16'672	19	17'483	18	31'491	19	34'656	19
> 60 % to ≤ 70 %	24'427	35	30'477	35	33'740	34	51'870	31	59'169	32
> 70 % to ≤ 80 %	19'492	28	24'293	28	30'667	31	40'613	24	46'403	25
> 80 % <sup>18</sup>	0	0	1	0	1	0	1	0	2	0
Total	70'070	100	87'561	100	98'310	100	169'200	100	185'988	100

### 6.8 Energy efficiency

Certified as energy efficient (e.g. Minergie)	1214	1	1427	1	2332	1	2047	1
Not certified as energy efficient	8'001	9	9'409	10	16'650	10	14'065	8
No data provided	78'346	89	87'474	89	150'218	89	169'876	91
Total	87'561	100	98'310	100	169'200	100	185'988	100

- <sup>1</sup> Including private placements as per annual reports of Pfandbrief institutes
- <sup>2</sup> Ratio: Loan Pfandbriefbank divided by lending value member bank
- <sup>3</sup> Ratio: Mortgage member bank divided by lending value member bank
- <sup>4</sup> Loans from Pfandbriefbank to member banks at nominal value
- <sup>5</sup> Eligibility and value of cover objects determined by Pfandbriefbank independently from member bank based on Pfandbrief act and valuation regulations.
- <sup>6</sup> Mortgage nominal value in the balance sheet of member bank
- <sup>7</sup> Lending value of cover objects set up by member bank to determine maximum mortgage
- <sup>8</sup> There are 309 banks with outstanding loans from Pfandbriefbank.
- <sup>9</sup> Rating by 1. Moody's, 2. S&P, 3. Fitch, 4. independent third party bank rating. According to Moody's bank rating methodology dated 16 March 2015 the Moody's bank deposit rating is selected before Moody's senior unsecured rating, where available.
- <sup>10</sup> BB+ rated member banks must have 120 % collateralisation. Their average outstanding loan amounts to CHF 64 m. Member banks with rating better than BB+ must have 108 % collateralisation.
- <sup>11</sup> Loans of CHF 70'070 m are covered by the cover value determined by Pfandbriefbank of CHF 87'561 m for eligible mortgages of CHF 98'310 m with a lending value set up by member banks of CHF 169'200 m (185'988 objects).
- <sup>12</sup> The maximum cover value Pfandbriefbank for single family houses is CHF 2.5 m, for condominiums CHF 1.5 m, for multi family houses and commercial properties CHF 15 m.
- <sup>13</sup> Single family houses and condominiums larger than CHF 1.5 m, multi family houses larger than CHF 3 m and commercial properties larger than CHF 1.2 m are reviewed by the cover pool committee.
- <sup>14</sup> Selected single family houses and condominiums, multi family houses larger than CHF 5 m (CHF 3 m, if older than 20 years) and commercial properties larger than CHF 2.5 m (CHF 2 m, if older than 20 years) are visited on-site by the cover pool committee.
- <sup>15</sup> Properties with occupancy type 'vacation' are immaterial (loans of CHF 93 m or 0.1 % of total).
- <sup>16</sup> If loans are 100, the lending value of member banks amounts to 241. In other words: the overall loan to value is 41 %.
- <sup>17</sup> Ratio: Cover value Pfandbriefbank divided by lending value member bank
- <sup>18</sup> Mortgages with mortgage LTV member bank > 80 % are considered as ETPs (exception to policy). ETPs can be covered by additional collateral, which is not pledged to Pfandbriefbank, but to member bank only.

## 7 Investment Risks

For consulting refer to your Swiss bank, which will evaluate your individual risk profile and advise you according to your needs. They also will inform you directly about restrictions.

## 8 Disclaimer

The content of this publication is for informational purposes only and shall not be construed as constituting a solicitation, an offer or a recommendation with respect to the purchase or sale of the "Swiss Pfandbriefe". Moreover, this publication is neither a prospectus in terms of art. 652a and art. 1156 CO (Swiss Code of Obligations, SR 220) nor a simplified prospectus pursuant to art. 5 para. 2 CISA (Collective Investment Schemes Act, SR 951.31). No investment decisions, or other kinds of decisions should be reached solely on the basis of information from this publication. Further information, such as the base prospectus for the listing on the SIX Swiss Exchange, can be requested from the "Pfandbriefbank".

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