A French Secondary Mortgage Facility: Caisse de Refinancement Hypothécaire

by Loïc Chiquier

By contrast with specialized conduits, secondary mortgage facilities (SMF) facilitate the integration of housing finance in capital markets through a better risk-allocation between primary lenders and institutional investors. More abundant, stable and cheaper flows of private resources can be channeled to housing. Private or publicly owned centralized institutions may appear as a necessary intermediary step to guarantee capital market investors an efficient selection and standardization of risks, as well as larger and more regular issuance of liquid securities. Variants exist according to mortgage and capital markets. Two operational categories exist:

1. Purchasers of portfolios from retail lenders, creating a secondary market with a balance-sheet transfer of loans, passing some related risks from originators to investors. The transfer is funded by issued securities (bonds collateralized or not, eventually pass-through securities if the securitization is possible). Default risks usually are not passed to the final investors of securities, and are assumed by the facility or retained by originators through recourse purchases. Cash-flow risks are initially absorbed by the facility but may be passed to investors through issuance of pass-through securities. Examples: Fannie Mae in the United States, Home Mortgage Bank in Trinidad, a proposed SMF in Palestine.

2. Lenders which act as a liquidity facility to primary institutions, with loans backed by mortgage portfolios, funded by issued bonds or borrowed external refinancing lines. In this variant, the default risk remains with the originator but the facility can offer a variety of loan terms to meet primary lender liquidity and cash-flow needs. Examples: U.S. Federal Home Loan Banks, Swiss Central Mortgage Banks, Jordanian Mortgage Refinance Corporation.

The Caisse de Refinancement Hypothécaire (CRH) represents an example of a simple liquidity facility. It has operated since 1985 on a developed mortgage market as a private institution. It represents an alternative funding solution to decentralized mortgage bonds and deposit savings. As a founding source it now also competes with securitization for specialized lenders and with cheap household savings for mutual and universal banks.

Institutional and operational lessons can be drawn from the experience of the CRH for other SMF projects in developing and transition economies.

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CAPITAL MARKETS AND HOUSING FINANCE IN FRANCE BEFORE CRH

Until the 1960s French mortgage finance was dominated by Crédit Foncier de France (CFF), which issued mortgage bonds according to the Law of 1852. CFF’s position was ambiguous, as it competed as a private lender but was assigned public missions (including the monopolistic distribution of state-sponsored subsidized loans). During the liberalization of capital markets, CFF became regulated and supervised as were other institutions but was still classified as a Specialized Financial Institution. Its rating implicitly benefited from a state guarantee that became explicit in 1995 when CFF suffered a crisis.

At CRH’s creation in 1985 CFF’s market share represented 12%–15% of the overall mortgage market, whereas deposit banks already made 50% of the total production. CFF has been one of the largest bond issuers (net stock over 300 billion Fr. or 10% of government securities). Despite its decline, CFF has been a reference for housing finance actors active in capital markets, including CRH. CFF’s crisis occurred in 1995. It is now in a condition of virtual bankruptcy and requires a prompt re-capitalization by new investors. This first European case for a mortgage bank to become bankrupt was caused by:

- A counter-cyclical exposure to risky
property loans related to a difficult switch from former state-aided loans;

- Improper governance and operation principles related to the deterioration of a formerly secure mortgage banking culture (multiplication of opaque uncontrolled subsidiaries, drift from core residential business, no external register of matching identified loans, lack of appropriate controls or conservative appraisals, etc.)

Historically the French mortgage markets have been regulated and segmented, resulting in constrained liquidity until the 1980s financial liberalization. Some earlier reforms since the 1980s tried to enlarge the housing finance sector through the following:

1. State subsidies for the mobilization of contractual housing savings in 1965, which are still funding many housing loans (by contract and by re-investment of excess flows in mortgage loans, thus making lending cheaper for large network banks).

2. A decentralized secondary mortgage market (Marché Hypothécaire [MH]) was also created in 1986. Primary lenders could issue longer term promissory mortgage notes. These were bullet bonds, which did not pass through flows from mortgage loans but were collateralized by identified loans. MH did enable new specialized banks to enter mortgage lending by giving them access to long-term funding at reasonable rates.

The due balance of notes should always be matched by a sufficient balance of mortgage loans, and the average interest rate and residual maturity of pledged loans should also exceed those of notes.

- Mortgage loans must conform to a maximum initial loan-to-value (80% normally, sometimes 90%).

- Mortgage loans can only finance housing investments (not commercial property) and must be first-rank mortgages not more than two months of payment in arrears.

- Should loans become insufficient (amortized or lost eligibility), the collateral pool should be retilted.

- Pledged loans cannot be sold or used as guarantee to a third-party.

- Should a bank fail to service its notes, investors can transfer the whole portfolio of pledged loans with all related advantages and guarantees, without any formality or delay. The reference date for the collateralization remains the date of the issued note (even for further refilling loans).

- The list of backing loans must be regularly updated to CFF's control. CFF was even delegated larger supervisory powers over MH until 1988 (when this role was taken by Commission Bancaire) including:

1. Qualification of banks authorized to issue notes on MH;

2. Control of the rules applied to MH particularly on the pledged portfolios;

3. Reports and proposals to financial authorities about any regulatory change.

This system enabled primary lenders to tap long-term funding from institutional investors in a regulated financial environment. Investors were large financial institutions (for example, Caisse Nationale du Crédit Agricole or Caisse des Dépôts et Consignations). MH inter-banking functioning was stressed in March 1986 by the exclusion of non-banking investors from MH and encouragement of banks to buy CRH's bonds after its creation.

Eligible loans to MH grew in nominal terms after 1974 (by 16% on average), but still less than total housing loans. In 1986 they represented 25% of eligible housing loans versus 50% in 1971. MH's regulation did not change as fast as new types of housing loans. The mobilization (proportion of pledged loans on MH) also declined, from 33% in 1978 to 25% in 1985. A break-down of circulating notes in 1984 revealed only 17% of notes with an initial maturity of more than 10 years (13% in 1986), whereas 49% had a term below five years. At best the average initial term of notes topped 6.5 years; this was already shorter than the average loan duration.

MH met a successful initial phase, but its efficiency as a funding tool gradually declined because of the poor liquidity of its bonds, shorter term funding, and growing tensions between investing deposit banks and borrowing specialized lenders. For these latter, the individual signature of each issuer became more significant than the mortgage-backing mechanism.

Rate Declines and Prepayment Problems

A serious blow occurred during the 1984–1987 period. The prior period (1980–1983) corresponded to high interest rates on fixed-rate loans. In 1984 and 1985 French banks faced painful prepayment waves when rates declined. Some banks then needed to prepay their issued promissory notes with
limited penalty fees.³ Some investors in MH reacted adversely and withdrew, MH's inter-banking structure worsened the reaction: some deposit banks were funding specialized banks through MH but also competing as primary lenders in a more competitive market.

MH improved the French housing finance system but did not succeed in developing secondary mortgage markets.

The Minister of Finance ordered CFF to make proposals "to develop long-term liquid funds from capital markets in order to improve the stability of the housing finance system and reduce the cost of mortgage credits." The report proposed pass-through securities issued by an agency which could pool loans and issue collateralized bonds or MBS (if off-balance-sheet finance were desired). Other elements taken into account were:

- Capital markets were considered as not mature enough to buy securities other than bonds.
- Banks were unwilling to sell their loans since they had no capital adequacy concern and were achieving attractive margins.
- MH showed that individual access of lenders to capital markets produced poor results; centralized bodies would offer a secure intermediation between primary lenders and institutional investors. Larger amounts of diversified loans would also back larger bonds issued at a lower cost of funds.

CREATION OF CRH

The Articles 12 and 13 of the Law N°85-695 of 07/11/85 amended the prior Law in order to permit the creation of intermediary centralized bodies, which could exclusively issue bonds in exchange for similar amounts of MH's notes purchased from primary lenders.

They are regularly supervised (by Law N°84-46 of 01/24/84) by Commission Bancaire which is also responsible for MH's supervision. Since 1988 CFF has been a simple echo-chamber by receiving from lenders duplicate listings of their pledged loans to check the overall matching and publish statistics.

CRH was the unique resulting institution, but there is no legal restriction on entry by others. Its statutes as a joint-stock company were registered in October 1985. Its initial members were four rather specialized banks: Comptoir des Entrepreneurs, Union du Crédit pour le Bâtiment, Banque La Hénin, Sovac Immobilier.

CRH's mechanisms are made transparent through its Statutes and Internal Regulation (both annexed in yearly report), which have been approved by shareholders.⁴

Its objectives are very restricted. CRH can only issue bonds and buy corresponding promissory notes; this is far more restricted than a mortgage bank. CRH cannot issue any other debt or collect any deposits besides its bonds. It cannot take cash-flow-transformation risk. Only tax and social security claims, which would be infinitesimal sums given its seven employees, are privileged creditors in the unlikely case of CRH's bankruptcy. CRH functions as a transparent intermediary and a mutual tapping tool for Participating Mortgage Lenders (PMLs). PMLs must be CRH's shareholders.

Equity Issues

Its equity is financed by PMLs pro-rata to their debt exposure. There is a yearly adjustment of capital through exchanged shares, and a continuous adjustment of Tier-2 equity by subordinated loans from PMLs to CRH. Part of the rate is paid so as to maintain CRH's capital adequacy ratio.

CRH's paid-in capital has been 500 million Fr. since 1993 (initially set at 100 million Fr. until 1991). Equity is 790.4 million Fr. on 12/31/96 for a capital adequacy ratio of 8.36%. Yet CRH's loans to PMLs are only 10% risk-weighted in order to reduce PMLs' equity contribution to CRH, as the use of CRH's loans requires PMLs to invest more equity into CRH (on average about 0.34% of their pledged portfolio in addition to their minimum usual 4% capital adequacy). This situation makes CRH less attractive than securitization as far as equity is concerned. CRH's bonds are asymmetrically 20% risk-weighted for investors.

Since 1996 a callable equity advance can be requested by CRH from all PMLs, up to 3% of each debt exposure. This sum is treated off balance-sheet and would secure the servicing of CRH's bonds, should any insolvent PML fail to repay CRH, until the pledged portfolio would be transferred and generate sufficient flows. This callable sum was 2.67 billion Fr. at 12/31/96. It could cover the servicing of the portfolio for a period but may not replace the bullet capital of large bonds. This move was a remarkable advance in a climate of more competing banks. It was made necessary to justify the security of CRH's bonds and possibly to compensate for an unclear transfer process of pledged loans. It would have to be paid within 48 hours to eliminate any short-term liquidity risk, as PMLs are contractually due to repay CRH's loans two days before CRH's bond servicing.

CRH must transform its purchased promissory notes into bonds of the same terms, amounts and rate. It keeps no margin (it is nonprofit-oriented and supposed not to be exposed to any risk); it charges uniform rates to PMLs independent of the PML's
individual condition. Reciprocally, PMLs are held collectively responsible for CRH.

Activity Restrictions

CRH’s activities are restricted to:

- Qualifying a bank as eligible after a financial analysis. CRH’s policy consists of accepting many members even if the imposition of later refinancing ceilings or extra pledged loans is required.

- Regularly screening demands from PMLs according to financial capacities and eligible loans.

- Limiting CRH’s exposure according to banking risks and the quality of pledged portfolios, through negotiating a certain degree of over-collateralization.

- Issuing Corresponding bonds and funding the proceeds into loans to PMLs.

- Controlling pledged portfolios through checking updated lists and completing random on-site inspections of PMLs, followed by corrective measures.

- Collecting equity from members in normal and extraordinary situations.

- Applying, if necessary, planned collateral recovery procedures. (This is still untested.)

CRH Structure

CRH’s main internal bodies are its Council and its Executive Directors.

The Council is active and has 12 members (fair representation of 36 PMLs). It takes decisions on CRH’s mechanisms, member’s eligibility and respective granted loans. It is assisted by a Risk Committee (restricted and technically oriented) which plays key preparatory and technical supporting roles.

Directors are limited to a President and a General Director appointed for six years. They must be trusted as neutral, prudent and dedicated to CRH’s mutual funding. They must find a narrow path for CRH’s sake, despite conflicting interests among PMLs, as there is no external non-PML moderating presence at the Council. The Director is involved in regular and confidential relations with each PML. CRH’s existence depends on his unique position leading a very limited staff.

CRH has designed a system of dilution of voting powers in order to limit possible control by one or a few major borrowers. (The absolute individual maximum is 15.4%) Although CRH’s initial sponsors were specialized banks, its current structure is dominated by larger universal banks. Five of them now control more than 50% of the votes. This trend will be furthered in 1998, as the very first CRH loans to specialized banks fully amortized in December 1997, and the few new loans made in 1997 went to mutual banks.

CRH faces a problem of risk-concentration regulation. As it does not purchase portfolios, its direct lending exposure is made of large loans to PMLs which exceed usual large risk standards (credit exposure on a borrower individually below 40% and in total below 800% of equity). As CRH is a funding vehicle, it cannot meet such limits and thus is granted a delay to find redressing solutions. (Note: there is no possible formal legal exemption.)

Financial Performance

Almost all—98%—of CRH’s assets are loans to PMLs, which are perfectly hedged by issued bonds with symmetric cash flows. CRH keeps no margin or fee. Bond issuance fees (about 0.10%–0.15% spread) are accounted as expenditures by borrowing PMLs.

CRH’s equity is optimized for capital adequacy purposes. It is invested in riskless short-term monetary securities. Resulting incomes largely cover CRH’s operational non-financial cost, which is equivalent to 0.007% spread on the bond stock. CRH is a light and cheap structure. This funding vehicle is made to operate efficiently at low costs, not to make profits to PMLs’ detriment.

Its own specific criteria of performance are:

- A tight spread of its bonds over government securities (0.16% in 1996, which is equivalent to a AA+ rating).

- Availability and matching of CRH’s bonds to identified needs of PMLs.

- Minimum equity investment from PMLs in their funding of CRH.

Bond Policy

Bond issuance has been standardized as much as possible in order to familiarize investors. Bonds are:

Single-bullet structure (more familiar to institutional French investors).

Non-callable since MHS’s crisis of 1987. Since 1994 PMLs can cancel CRH’s loans by exchanging them with related CRH-bonds purchased on secondary markets. This option was limited to 10% of total debt in 1994 but raised to 25% in 1995 and 35% in 1996. Approximately 3.5% of CRH’s portfolio was thus prepaid at the end of 1996 (2.18 billion Fr. during 1996 or 2.5% of its stock, which is still less than prepayment rates). This was little used in 1997 (0.24 billion).
12-year-term (average of 11.1 years, but 10.6 years for the private bonds issued since 1988 and more recently some 8-year term bonds).

Fixed-rate (for 96% of the total at 12/31/96). Only two floating-rate bonds were issued (one in 1989 for 3.9 billionFr. at PiB0R 3 months–0.15%) but the other bond was actually swapped to fixed rate. CRH maintained its conservative policy despite critics (e.g., specialized lenders) desiring more variable-rate loans. Other PMLs viewed CRH only as a liquidity tool; they can hedge related interest-rate risks by derivatives.

CRH’s spread over equivalent Treasuries has remained stable between 0.15% and 0.25%. No time series is available, but the trend would be declining. Its bonds traded in 1996 at 0.18% and in 1997 at 0.24%. (All French bonds traded at higher spreads at the end of 1997 in the context of much lower rates.) Similar spreads are obtained by large universal banks like BNP but specialized lenders fund at higher spreads (e.g., 38 bp in 1996). CRH remains attractive to them although some actually rely more on other funding tools like securitization.

Table 1. CRH Bond Turnover Rates

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<tr>
<th>Year</th>
<th>1994</th>
<th>1995</th>
<th>1996</th>
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<tbody>
<tr>
<td>With state guarantee</td>
<td>162%</td>
<td>112%</td>
<td>101%</td>
</tr>
<tr>
<td>Without state guarantee</td>
<td>64%</td>
<td>68%</td>
<td>68%</td>
</tr>
<tr>
<td>Weighted total</td>
<td>107%</td>
<td>88%</td>
<td>82%</td>
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Large issued amounts for liquidity purposes. CRH designed its bond issues to pool them according to similar patterns to facilitate larger lines to be traded on secondary markets. Thirteen lines are traded for an average amount of 6.8 billion Fr., corresponding to 74 bonds of an average 1.24 billion Fr. One line (18.3 billion Fr.) is still the largest non-government traded pool. The liquidity of CRH’s lines have remained decent despite a slow decline, investors having less appetite for CRH’s old lines than before because they now offer small residual terms.

Bonds are issued through a syndicated bidding process. This more competitive procedure replaced the former issuance through Banque de France.

CRH’s securities are purchased by institutional investors, which consider them as attractive because:
1. CRH’s mutual equity, no-risk policy, over-collateralized pledged portfolio.
2. Minimum yield over Treasuries for an attractive 20% risk-weighting.
3. Eligible investments to the excess treasury from contractual housing savings.
4. Possibility of selling as brokers CRH’s papers among large clients or subsidiaries.
5. CRH’s bonds are also treated as an eligible guarantee for advance funding from Banque de France.

CRH’s Declining Presence on the Capital Markets

At 12/31/96 the net stock of bonds outstanding was 88.7 billion Fr. The net stock declined to 78.6 billion Fr. at 12/31/1997, reflecting the repayment of some bullet bonds (12 billion Fr.) and only 2 billion Fr. of new bonds issued in 1997. In January 1998 1.2 billion Fr. were issued. Despite few emissions since 1994, CRH’s stock looked significant because of its single-bullet long-term bonds, but the decline now becomes more visible. The average residual term of CRH’s lines has fallen to four years.

CRH has been far less used in recent years because of a slow down in the mortgage market until 1996 and the presence of attractive alternative funding solutions (stable savings, prepaid loans, back-up lines, securitization).

SECURITY ENHANCEMENTS OF CRH

Initial State Guarantee Replaced After Three Years

A state guarantee was initially granted to CRH subject to its maintaining the quality of pledged loans by either: (a) loan-to-value ratios capped at 66% (instead of 80%); or (b) more pledged loans through a minimum 125% collateralization.

The guarantee was a start-up sunset measure applied during only the first three years. These guaranteed bonds represented 41% of total CRH-issued bonds in December 1997.

After termination of the guarantee in 1998, CRH decided to maintain a minimum 125% over-collateralization in order to keep an excellent credibility on markets. This was not a legal requirement but a corporate decision.

In case of any PML’s insolvency, the over-collateralization cushion is reassuring for investors, as it would pay for the extra costs of a transfer process (audit + servicing + resale). Investors also considered CRH’s improved mutual signature, as larger universal banks entered CRH; good liquidity, thanks to a growing stock of CRH’s traded large lines; and growing familiarity with CRH’s transparent and zero-risk-oriented functioning.

Strict Regulations Over Pledged Mortgage Loans

Credit contracts should mention the possible cession to CRH. Experts believe this is
useless. PMLs found it difficult to include in old contracts. This may reflect doubts on CRH's privilege in case of a PML's bankruptcy.

The minimum initial maturity is set at 10 years. The maximum term is set at 20 years (up to 25 years for some PC loans).

Since 1988 variable-rate loans have been eligible provided they are not revised more often than once a year and that the resulting maturity remains in the 10- to 20-year range. Effective rates must be mentioned.

Only first-rank mortgages are eligible, despite innovative credit enhancement and mortgage insurance solutions—for example, Crédit-Logement which is also run as a mutual institution for and by PMLs. (Editor's note: See the article in this issue of HFI, "Housing Credit in France: Main Aspects and Recent Changes," by Claude Taffin.) Second-rank mortgages are also rejected even for low loan-to-value ratios, perhaps due to their negative image.

Eligible loans must record loan-to-value ratios below 80% at their origination, excluding loans whose current LTV may later fall. The average actual loan-to-value ratios of pledged loans may be small. Given all elements (amortization pattern, age of portfolio, LTV limit, over-collateralization), the value of collateral mortgages pledged for CRH represents more than 200% of its loans.

The 80% limit is raised to 90% for social loans; PAP-loans are state-guaranteed but not Prêts Conventionnels. Loans to first-time owners also are capped at 90%. Equity can include soft loans. These exemptions, which create more risk, reflect housing policy objectives more than SMF's financial rationales.

The framework has not been modified over the years because of an administrative regulatory environment. Pledged portfolios must protect investors under adverse environments, and decision-makers want to take time before measuring the impact of changing primary markets and accordingly revising MH's regulation. Some of these rules were also designed to be consistent with other public housing programs. CRH has faced internal problems to get a consensus about such changes among the diverging interests of various PMLs.

Now at least part of this framework looks financially obsolete. At least one specialized bank complained about the fact it could not pledge more eligible loans. The reform is supported by a declining percentage of eligible loans (from 25.1% in 1993 to 19.5% in 1995). MH's strict criteria could be modernized. This reform could be made consistent with another one required for mortgage bonds, although not going as far as including risky commercial property loans.

**CRH's Over-Collateralization Policy**

Each PML should be inspected at least every two years. The number and identity of selected loans is determined by a statistical random formula. Once selected, a credit is to be controlled in any case by on-site visits.

In 1995 and 1996, 7% of inspected loans were found ineligible because of wrong terms, excessive declared balances and inadequate internal systems (for example, inability to extract mortgage titles rapidly). Inspected PMLs receive an individual report indicating a global ineligibility ratio applied to the whole pledged portfolio as an additional pledge, or buy-back of CRH's bonds. No PML has refused this penalty. If one were to do so, CRH would stop granting new loans, disclose the issue to the Council, thus creating a negative banking reputation, and transfer the whole portfolio.

Procedures do work but at the price of large over-collateralization requirements. Larger banks consider that corrections are more costly than pledging more loans to CRH. Specialized banks are more sensitive, as the over-collateralization raises their overall costs of funds in a context of declining margins.

CRH also applies a conservative prepayment rate to adjust its over-collateralization ratio in order to always keep sufficient credit balances to hedge single-bullet bonds, even if no new loans were pledged. This conservative approach worsens the average over-collateralization, which varies between 145% and 155%.

PMLs face more problems using CRH funds when they enter a cycle of lower production of new loans, when the duration of their pledged loans becomes shorter than expected and when their proportion of eligible loans declines. CRH has not offered them counter-cyclical offsets during contractionary credit periods.

**OVERALL ESTIMATION OF RISKS**

Investors are protected by (a) a strong signature effect from co-guarantor PMLs and (b) a conservative but untested over-collateralization practice. CRH is bankruptcy-remote, as it could become insolvent only if simultaneously—a most unlikely event—several PMLs became insolvent and the transfer of pledged loans encountered practical difficulties while mortgage markets were damaged by falling house prices and sky-rocketing defaults.

In case of serious difficulties, a worst-case scenario would be some delays to service bonds and the suspension of any new lending operations. Given its light structure, CRH could easily be terminated. This event could weaken the availability of housing finance instruments and produce negative systemic effects.
Table 2. Strengths and Weaknesses of CRH

<table>
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<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>Secure and simple procedures</td>
<td>Untested back-up (no stress test)</td>
</tr>
<tr>
<td>Protective legal framework from MH</td>
<td>Opacity of CRH towards each PML</td>
</tr>
<tr>
<td>Transparent ultra-specialized institution</td>
<td>Low adaptation to changing context</td>
</tr>
<tr>
<td>Mutual equity</td>
<td>Declining importance to paralysis</td>
</tr>
<tr>
<td>Conservative over-collateralization</td>
<td></td>
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<tr>
<td>Internal inspection (less reliance on external supervision)</td>
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</table>

Doubts still affect CRH's capacity to maintain the servicing of a transferred portfolio. One PML (Compotir des Entrepreneurs) faced temporary financial trouble in 1993, and CRH raised this possibility but eventually did not apply it. CRH may auction or sell a servicing among good professionals at a reasonable price, provided that the insolvent PML kept reliable data and minimum standardized proper procedures. A convention between CRH and PMLs could be signed, insuring the presence of such standards. But some PMLs were reportedly hostile to the related costs. This may become a serious obstacle.

From a risk-adverse investor's perspective CRH has the following strengths and weaknesses.

The main impacts on CRH's members are reduced liquidity risks; unchanged cash-flow and credit risks; reduced capital market financing costs, both through a limited funding spread and lower issuance fees through scale effects; and additional small equity requirements, plus viable off-balance-sheet advances.

**CRH FUNDING OVER THE BUSINESS CYCLE**

Net credit production of French banks collapsed after 1991 during a credit-crunch cycle, following a prosperous phase since 1985 which accompanied CRH's creation. Production has revived since 1996 thanks to lower rates, but net stocks are affected by prepayments. Eligible loans to CRH have declined since 1985. Mobilization ratios (pledged notes as a percentage of eligible loans) reflect CRH's use, and declined from 26.8% in 1986 to 17.3% in 1992 before stabilizing at 19%-22%.

CRH is cyclical with the evolution of mortgage business. During the expanding cycle of housing loans, its portfolio rose until CRH began to be marginally used in 1994. CRH did issue new bonds during 1996 (3.45 billion Fr.), but net stocks hardly changed because of prepayment options exercised by some PMLs (2.2 billion Fr.). The trend was hardly better in 1997 (0.24 billion only prepaid, but only 2 billion issued).

During its expanding cycle, CRH's nominal portfolio rose relatively less than overall housing loans. This reflects a systemic decline of secondary mortgage markets despite CRH's replacement of the MH (94.3% by 1996). CRH's portfolio represents 3.9% of housing loans, which is even lower than the 5.9% of a declining MH in 1985. This percentage was 3.4% at the end of 1997. CRH has not developed a secondary mortgage market.

Average trends do not reflect individual situations, which are less comfortable for specialized lenders with more pledged loans. General and mutual banks (equal market shares for a total of 85%) can tap other stable and cheap retail liabilities, and have consequently used CRH less and show very low mobilization ratios.

The development of CRH during the second half of the 1980s was due to universal banks, although they used CRH less than alternative funding. CRH is just one of several useful funding sources. In 1997 CNCA and Crédit Mutuel were the main users of CRH, because their net treasury from contractual savings was less abundant to fund their new mortgages (Editor's note: See Taffin article, cited above, for an explanation of contractual savings.)

From 1985 to 1990 specialized banks lost much of their market share, from 20% to 10%. As a result, CRH's capital changed. At the end of December 1996, three groups of PMLs showed these percentages of capital and votes in CRH:

Table 3. Groups of PMLs at 12/31/1996

<table>
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<tr>
<th>Capital</th>
<th>Votes</th>
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<tbody>
<tr>
<td>Initial four founding specialized banks</td>
<td>27%</td>
</tr>
<tr>
<td>Five largest universal banks</td>
<td>58%</td>
</tr>
<tr>
<td>Other 27 banks</td>
<td>15%</td>
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This evolution was probably more pronounced at the end of 1997 as the bonds of CRH that were amortized were funding specialized lenders, while the new bonds issued by CRH in 1996 and 1997 funded universal banks.

Universal banks now control CRH's destiny. They feel reluctant to reform CRH toward an
easier funding of specialized banks. The mutual signature effect may appear as strong as over-collateralization for CRH: as universal banks mostly support this signature, they find little motivation to cross-subsidize smaller banks.

CRH records 36 shareholders representing most of the total production of eligible loans. CRH is therefore not a closed cartel. But members have not much used CRH other than the previous nine main banks. Some new primary lenders have not joined CRH.

Universal Banks

Caisse Nationale du Crédit Agricole (CNCA) as of year-end 1996 represents 26.4% of CRH's loans and capital, and 14.4% of votes, which probably increased in 1997. Yet this exposure only represents 8% of its mortgage portfolio. Its net use of CRH has been moderate. CNCA benefits from a better signature than CRH on the capital markets. CNCA contemplates continued limited refunding through CRH to reduce its own direct total market exposure. It also likes to place CRH's bonds among subsidiaries and clients.

Other universal banks (Banque Nationale de Paris, Société Générale, Crédit Lyonnais) have nearly stopped using CRH since 1996 (Crédit Mutuel in 1997). Although they declared they were satisfied with CRH as a funding tool, they expressed no commitments about CRH's future. One bank quoted sufficient stable and cheap resources of its own (deposits, insurance life premiums, contractual housing savings) and its capacity to directly access capital markets at comparable prices.

Specialized Banks

Among the initial founders only UCB is still a major member, with 14% of capital and 13.5% of votes in 1996; but it has stopped using CRH since 1990 because of its rigid rules and a saturated eligible portfolio. Other institutions represent about 3.5%–5.5% each of CRH's capital. They have virtually stopped participating in CRH's emissions since 1990 because:

- Cyclic factors as smaller banks faced worsened financial situations with consequent CRH tightening.
- Structural factors affecting the quantity of loans (credit crunch and prepayment flows) and ineligibility of recent housing loans for a CRH which is rather dominated by deposit banks. Specialized lenders are more innovative than universal banks, which rely more on FRM funded by contractual saving excess treasury.
- Concurrent development of alternative funding techniques, including (a) lines from mother shareholder financial institutions; (b) flow recycling from amortized and prepaid loans; inter-banking short-term markets funding a production of ARM's; recent growth of securitization, providing long-term funds and capital relief. CDE and UCB started in 1994 and were followed in 1997 by La Henin and Sovac.

As specialized lenders regain some market shares, CRH is facing a critical phase as to whether it will lose these clients. As the market strengthens, a key question is whether lenders will increase their use of CRH or increasingly turn to securitization. CRH must compete against MBS which provide a better solution to their cash-flow needs.

MBS in France must be rated and most of the pioneer issues were designed to obtain a AAA by internal credit enhancement. MBS are a form of long-term funding, with a better matching of flows, less over-collateralization than CRH and better management of capital adequacy. However, MBS are new and have achieved limited market acceptance to date which may imply sacrifices to obtain a good rating, including higher yields requested by investors (reported spreads at 0.4%) and large all-in initial transactions costs (agents, rating, swaps, legal work).

Two Scenarios for CRH's Near-term Future

1. If the mortgage market recovers, both CRH and MBS could develop.
2. Otherwise, CRH may need strategic reforms to avoid its wind-down.

In order to keep its competitiveness, CRH must proceed with a series of reforms. CRH prepared a number of legal reforms that are being debated with financial authorities. Additional reforms could include:

- Modernization of MFH's eligibility framework and the relaxation of some over-collateralization rules.
- Modernization of MFH's supervision, with a larger role played by CRH and CFF.
- Technical solutions for CRH's risk-concentration and risk-weighting issues.
- Rating by an international Agency.
- Closer analysis of funding needs, potentials of pledged portfolios, and issuance of diversified bonds (with various terms, including more medium ones, more floating rates and perhaps callable bonds) in order to better match cash-flow needs, despite CRH's restricted tasks and limited means.
- Qualify MBS as eligible collateral. PMLs could prepare MBS pools and decide to sell them or pledge them to CRH.
- Obtain the qualification of CRH bonds as mortgage bonds according to EC's de-
finition with advantages for investors and international European recognition.

- Examine a possible second CRH for specialized lenders, despite weaker equity.

- Examine the possible creation of a separate pass-through conduit which would price more cash-flow risks of PMLs and pass most of them to investors by MBS or callable bonds. Operations, skills, costs and risks would be different than current ones, and would be justified for a modified, diversified equity structure and profit-driven policy. MBS may also need a standardizing central agency.

CONCLUDING LESSONS FOR EMERGING COUNTRIES

CRH has been a light and efficient SMF which has during less than a decade partially revived secondary mortgage markets and helped specialized lenders to safely develop their operations. Its robustness and transparency are credible among investors. It carries very few financial risks (only agent PMLs' risks backed by mortgage portfolios). It is mainly affected by business risks which in the present market may lead to paralysis and gradual liquidation.

Its security is mainly based on the prior legal framework of MH, and simple, secure and transparent mechanisms, including standard residential mortgage loans, over-collateralization, legal privilege over PMLs bankruptcy, and perfect matching imposed between loans and bonds.

CRH’s mutual banking equity and pledged portfolios look efficient and inexpensive (costs, equity, skills, reliable data) for countries of emerging bond and mortgage markets. Its development can rapidly occur without an explicit or implicit state guarantee.

Some minimum legal credibility must still be perceived for mortgage collateral. Excessive over-collateralization also reduces refinancing volumes to primary lenders and raises their cost of funds. The standardization of pledged credits and issued bonds should not become too rigid. An organization like CRH does not require a large concentration of human capital. One or two key executives are necessary, but they are sufficient.

Pure secondary mortgage markets (purchase of loans) require more equity and risk-control skills. The separation of the liquidity-risk function from other risks often looks like a reasonable first step. A central private structure helps to issue larger amounts of liquid bonds and spread equity efforts through more banks. Its management was well balanced between the interests of bondholders and of PMLs. But CRH found it hard to work with diverging PML groups.

It played an interesting stabilization role during a transition phase of growing mortgage markets. But it should not be seen as an exclusive or permanent funding solution. It is more naturally used by smaller banks and enlarges the lending competition. In inflationary conditions, single-bullet bonds are less of an issue than deferred interests.

A liquidity facility can lead to some degree the development of the market because it is not as dependent on standardization and performance information as securitization. However, all good organizations must adapt to a changing environment. CRH has been too conservative in recent years but is hopefully adjusting its functioning after improving its main refinancing and backing procedures. Since 1994 CRH may have missed one financial evolution: it can now either speed up its reforms or just let its decline take over.

NOTES

1 Some facilities, like Cagamas in Malaysia, correspond to a mixed situation as the purchasing institution requires originators to buy loans back after a given period and to assume meanwhile all default risks, but still is paid through portfolio cash flows.

2 Should a mortgage bank fail to service its bonds, investors are transferred by privilege over any bankruptcy a sufficient portfolio of mortgage loans (permanent matching of stocks and flows). Mortgage banks are often made specialized for a supposed better expertise and transparency. Most of them have become subsidiaries of universal banks. Fourteen EC countries have been developing variants of mortgage bonds, which funded on average 20% of mortgage loans, but with much larger proportions in Germany and Denmark. In France the eligible loans for CFF’s bonds are first-rank mortgage estate loans, or benefiting from a public guarantee, with loan-to-value ratios below 60% after an appraisal. Unlike German banks, no external trustee is responsible for the key matching between banking loans and bonds.

3 The fee was equivalent to 1% per residual year after some delays. This was less than the corresponding credit prepayment risks, as client’s up-front prepayment fee is legally capped at 3% of the prepaid balance, which is by and large insufficient to cover some rate losses. For example, since 1995 to 1997 interest rates have declined by 2.5%, for an average term of 12 years.

4 By a Resolution of its Council (October 1995) and General Assembly (February 1996). This represents an important and recent effort from the current Executive Board to make CRH’s operations more transparent and effective. It has been annexed in the last yearly financial reports.
5 Some PMLs may make more use of this option, for example, to pay less taxes on their prepayment fees when they can find cheaper refinancing liabilities.

6 CRH was applying in 1996 a yearly 6% ratio. This exceeds prepayment ratios observed during the difficult 1996 year, namely 2.2% of prepaid loans, 2.3% of refinanced loans in a different PML, 2.2% of restructured loans in the same PML, with a large proportion which should keep their eligibility to CRH. In any event, CRH's hypothesis is more than conservative when applied over 10 years or more.

7 CRH has never been rated, as its bonds were rather purchased by domestic investors. A rating may not be required on domestic markets if there is a prudential framework, although it may become necessary later. In CRH's case, an attractive AAA-rating may require additional work, including an agreement between CRH and all PMLs about some minimum standards as to the respective servicing of loans, in order to make a potential transfer workable in case of a PML's insolvency.