The Feasibility of a Regional Secondary Mortgage Facility in Central America

by Michael J. Lea

INTRODUCTION

This article is based on a larger report prepared by Cardiff Consulting Services on the feasibility of establishing a secondary mortgage market facility in the Central American region.[1] Although many countries are examining the feasibility of such institutions, this approach is unique in that the facility (referred to as a Secondary Mortgage Facility, or SMF) would operate cross-border. The SMF would be a privately owned, for-profit wholesale (second tier) institution that would purchase and/or rediscount mortgage loans originated by primary market lenders in the region. It would raise funds through debt issuance on both a domestic and international basis. The purpose of the institution is to increase the flow of funds to housing in the region by providing an affordable supply of long-term finance. A related benefit of the company is the enhanced development of long-term debt markets throughout the entire region.

This article focuses on the rationale for such an institution in Central America, the role and structure of the SMF, its possible sources and uses of funds, and the risks it would be subject to in the region. The discussion is meant to be illustrative of the issues the creators of secondary market institutions operating in a cross-border context would have to take into account.

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Housing Shortage

Numerous studies have documented the existence of a severe housing shortage throughout Central America.[2] Housing shortages can arise for a number of reasons, including shortages in land or controls on building which create high house prices, high rates of local in-migration that overwhelm the capacity of local developers to produce housing, natural disasters and a lack of financing for construction or purchase of housing. To varying degrees all of these factors operate in Central America. This report focuses on the lack of housing finance as a major contributor to the housing shortages. It is important to recognize, however, that reforms in the housing finance system must be accompanied by policies encouraging flexibility in housing construction and land development in order to avoid the potential inflationary impact of increases in housing finance.

Funding Shortage

There is a demonstrable lack of mortgage finance in Central America. Historically, lenders in Central American countries lack the resources, incentives and/or the risk management capabilities to provide long-term loans for housing. All countries in Central America have mortgage debt-to-GDP ratios of less than 3%. This contrasts with ratios of 4% to 10% in a number of Latin American countries (e.g., Brazil, Columbia, Chile, Mexico), 40% or more in many European countries, and over 50% in the U.S.[3]

There are a number of reasons why domestic financial institutions may not supply sufficient credit for housing. A major obstacle to the provision of mortgage loans is their long-term nature.[4] Housing is a large scale, durable good producing benefits over a long period of time. To be affordable to the borrower, mortgage loans should have relatively long maturities (e.g., 15 years or more). Almost all mortgage loans currently available in Central America have maturities of 10 years or less.

Why don't Central American lenders provide long-term loans? One reason is the lack of long-term resources in the local economies. Political instability throughout the 1980s not only reduced savings rates (for example, through capital outflows from the region) but also created a short-term mentality on the part of savers who did not want to risk tying up their funds in long-term investments. Savings rates in the region are variable but generally lag behind other Latin American countries and certainly those of East Asia (Table 1).

As the political environment has stabilized in the 1990s, however, domestic savings rates

Table 1. Gross Domestic Savings as a % of Gross Domestic Product

Country	*1989*	*1993*
Argentina	18.7	17.2
Chile	22.7	21.4
Columbia	18.0	19.0
Costa Rica	17.3	15.9
El Salvador	5.2	0.5
Guatemala	8.4	7.4
Honduras	15.6	20.1
Mexico	18.6	14.8
Panama	14.4	23.3

Source: United Nations

are increasing, particularly in Honduras and El Salvador. There is also evidence of a large volume of capital being repatriated, particularly in El Salvador. Several countries are reforming their pension and contractual savings systems which could increase the supply of long-term funds.

Even if long-term savings exist, they may not be accessible to mortgage lenders. Most funding for housing finance in Central America comes from depository institutions. The provision of long-term credit can present liquidity and cash flow problems for such lenders. They are subject to liquidity risk if they fund long-term loans with short-term deposits. Cash flow risk arises due to uncertainty with respect to inflation, real interest rates and exchange rates, and encompasses interest rate and prepayment risk. Because of these risks, depository institutions are often unwilling to provide long-term loans, even if they have a stable and growing deposit base.

ROLE OF A SECONDARY MORTAGE FACILITY

The purpose of the SMF would be to provide competitively priced long-term funds to primary mortgage lenders throughout Central America. Through its activities, it could expand the supply of mortgage credit available to borrowers in the region and stimulate the development of local capital markets. It can do so by acting as a conduit between the suppliers of long-term funds (both domestic and international) and providers of long-term loans for housing.

Figure 1 illustrates how the SMF would operate. As a wholesale, second-tier institution, it would serve as an intermediary between primary market lenders (banks and savings institutions) and the capital markets (domestic and global institutional investors). It would raise funds through the sale of bonds to such investors and make funds available to primary market lenders (PMLs) through collateralized loans or the purchase of mortgages.

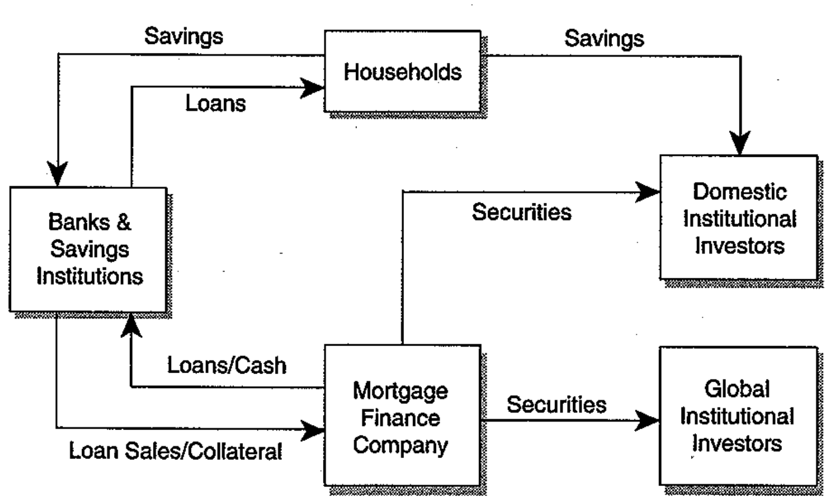
Through its activities the SMF could expand the supply of long-term funds available to Central American mortgage lenders, increasing the resources available for housing, improving the affordability of such funds and reducing the funding risk faced by lenders.

Structure

The SMF would be created as a wholesale, second-tier financial institution. This structure would allow it to operate on an efficient (low-cost) basis by avoiding the high overhead associated with retail borrowing and lending. It would be a simple institution for creditors to assess, and it would not compete directly with its potential clients. As a limited purpose institution, it could develop the expertise necessary to manage foreign exchange and funding risk effectively.

The SMF could be organized as an off-shore company so that it could minimize its domestic and international tax liability. Its international debt issuance and asset-liability management activities could be conducted in its off-shore location. Operations within a country could be

Figure 1. Housing Finance with a Mortgage Finance Company



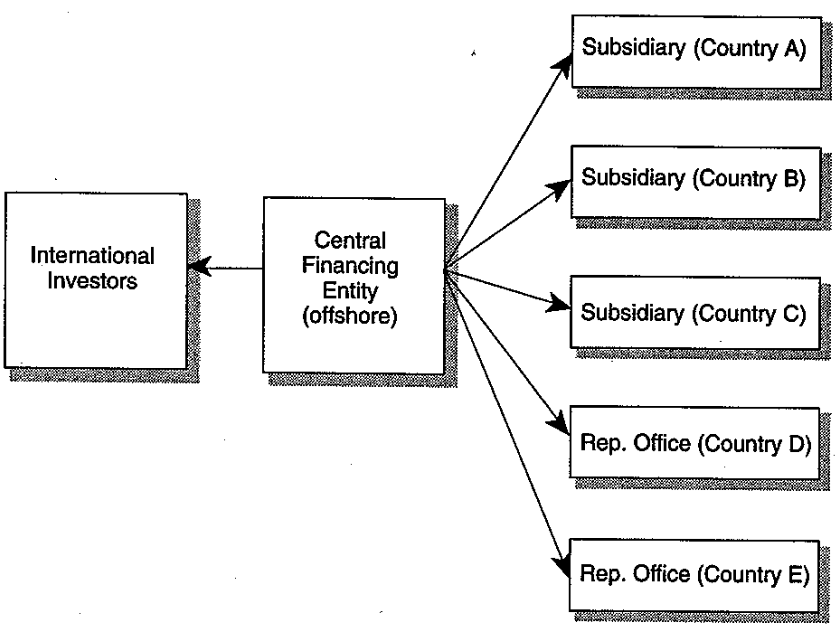
directed through locally organized special purpose corporations controlled by a central financing entity. The use of subsidiaries for the operations within each country would provide greater flexibility in obtaining domestic equity and bond financing and allow for the independent development of markets, while still providing the advantage of access to a central financing facility. One possible model of the organization of the SMF is shown in Figure 2.

The operations of the SMF within each country could be conducted through a domestic subsidiary organized in each country; except that in the early stages of the SMF, limited activities might be conducted within a country directly from the SMF's off-shore location or through a representative office or correspondent bank. Operating through domestic subsidiaries would afford the SMF a number of advantages:

- Ability to raise capital at both the central and local level;
- Flexibility in issuing domestic obligations;
- Currency hedging at either the subsidiary or central level; and
- Flexibility in structuring funding and lending activities in the most tax-advantaged way.

In general, underwriting and lending operations would be conducted at the local subsidiary level through local personnel familiar with the marketplace, but subject to the oversight and monitoring by personnel of the central financing entity. In countries in which the SMF would initially have limited activities and insufficient volume to justify on-site underwriting and operational staff, the SMF could operate entirely off-shore or through a correspondent in such country.

Figure 2. How Would the MFC Operate?



It is likely that the operational structure in each country would evolve over time as the level of activities increases. Whether or not a particular transaction would be structured through a subsidiary or directly with the central financing entity would depend upon regulatory and tax tradeoffs. For example, a foreign lender may be subject to withholding tax on payments of interest while on the other hand a subsidiary would be subject to paying corporate income tax. Income generated from direct activity may also be subject to corporate income tax.

The tax treatment of SMF activities would be a major factor in structuring individual transactions. Analysis of the components of taxable income and the availability of exemptions, credits and deductions within each jurisdiction was beyond the scope of the study, but would naturally affect the internal structuring of operations within each country.

The staffing of the SMF in each office would depend on the nature of activities conducted there. Senior executives and financial management specialists would be located in the operational headquarters. Representative offices or subsidiaries could be staffed by marketing and credit management personnel. The marketing staff would generate new business for the SMF with PMLs. The credit staff would underwrite the mortgage loans to be purchased or pledged as collateral. In addition, they would monitor the performance of servicers and the financial health of PMLs. The SMF could retain outside counsel in each country to handle its legal affairs. One of its offices could be designated as a company headquarters, even though the majority of the financial operations are conducted elsewhere (subject to the tax implications of being headquartered in a particular location). Activities of the SMF would be directed by a shareholder -elected Board of Directors.

Central financing entity. Ideally, the central financing entity of the SMF would be located in a jurisdiction where it would face minimal tax liability and be allowed to conduct its operations with a minimum of regulation. The tax and legal structure of a country is an important consideration on where to organize a multinational facility. In the Central American context, the SMF could be organized in one of several "tax haven" jurisdictions such as Grand Cayman, British Virgin Islands, Bahamas or Panama. The operational headquarters of the central financing entity could be located in a jurisdiction other than the situs of its central financing entity (i.e., within one of the participating countries).

Ultimately, the optimal jurisdiction in which to be organized would depend upon the nature of activities which would be carried on in the jurisdiction compared with the nature of the activities to be carried on at other locations. Definitions of taxable income and expense frequently depend on both the nature and proportion of activities carried out on-shore versus off-shore.

Operating subsidiaries. An operating subsidiary would be organized within each country as a domestic corporation organized under the laws of such country. Since the subsidiary corporations would not be accepting deposits or providing financing to the public, the subsidiaries would not be engaging in the banking or financing company business and therefore should not require special licensing. However, as a business engaged in lending, a particular subsidiary may be required to register with the Central Bank. Additionally, subsidiaries accessing local capital markets may be required to register with local securities regulatory authorities and exchanges.

OPERATION OF THE SMF

How Would the SMF Raise Funds?

The facility could issue bonds or obtain loans to finance its lending activities. Given the lack of long-term funds in the region, it is likely that most of its funds in its early years would come from abroad through the SMF's central financing entity. An additional source of funds could be loans from the facilities' sponsors (equity investors).

Credit enhancement. As a new institution seeking to issue bonds backed (either explicitly or implicitly) by Central American mortgages, it is very likely that the SMF would require third-party credit enhancement in order to issue debt. A third-party guarantee of the bonds issued by the SMF for the first five years of its existence would substantially reduce its cost of funds and increase the attractiveness of its products.

There are two forms of credit enhancement potentially available for SMF debt issues. Multilateral agencies, such as the World Bank, offer partial credit guarantees to investors covering country-specific or political risks. The guarantees typically cover non-commercial risks, such as war and civil disturbance, funds transfer or convertibility restrictions, expropriation and breach of contract. The World Bank has two programs that would insure investors against political events that adversely affect the value of their investments. The Bank guarantees require a counter guarantee from member countries and range in cost from 40 to 100 basis points per annum on the outstanding guaranteed amount. The Multilateral Investment Guarantee Agency (MIGA) is a member of the World Bank group which offers long-term political risk insurance for qualified investments in developing member countries. MIGA guarantees do not require counter guarantees. Base rates are a function of the risks covered; the base rates for currency transfer, and war and civil disturbance coverage, for example, are 95 to 135 basis points. Actual rates and coverage amount depend on the project's risk profile.

In addition to political risk insurance, the SMF may also seek third-party credit enhancement for its debt issues. Commercial credit enhancement can come from one of three sources: commercial banks, insurance companies or the SMF's founding investors. The largest credit enhancer in the asset-backed securities market is the Capital Markets Assurance Corporation (CapMAC), which had over $26 billion in credit guarantees in force as of June 30, 1995.[5] CapMAC is a AAA-rated monoline financial guaranty company which "rents" its ratings to private security issuers. This company, however, only operates in countries with BB or better country ratings (by Standard & Poors or Moodys). As none of the Central American countries are rated at this level, the sponsors of the SMF may need to provide guarantees, at least for the first three to five years of its existence.

Structure of bonds. The structure of the bonds would depend on market demand. Initially, the SMF's bonds are likely to be dollar-denominated variable-rate issues, with the rate indexed to the London Interbank Offer (LIBOR) rate. If guaranteed by a reputable guarantor, dollar- (or sterling-) denominated bonds would be attractive to institutional investors in G-7 countries. The lack of experience of institutional investors with Central American mortgages (e.g., cash flow characteristics, repayment performance) suggests that initially the bonds should be as simple as possible (e.g., bullet or interest-only structure). As the SMF is established and investors grow more comfortable with the region, the characteristics of the bonds can change (e.g., amortizing, indexed, pass-through). The bonds may be fixed- or variable-rate, depending on the characteristics of the assets.

Pricing. The yield on such issues would principally be determined by the perceived credit quality of the issue. The presence of high quality investors, both within and outside of the region, combined with political risk insurance should allow the SMF to access the market at reasonable spreads.

Most emerging market debt issues are rated non-investment grade (BB) without credit enhancement. A number of Latin American Banks (Argentina, Brazil and Mexico) have issued debt in the two- to seven-year maturity range. These issues have been trading at levels between 300 and 500 basis points over comparable maturity U.S. Treasury obligations.[6] By way of comparison, U.S. BB- (non-investment grade) to-Treasury spreads are now approximately 170 basis points.[7] Yield spreads drop to under 70 basis points for investment grade corporate bonds (BBB+) and to less than 40 basis points for A-rated asset-backed securities.

Yield spreads on foreign (non-U.S.) debt issues are quite variable but tend to rise with the time to maturity. One possibility for structuring the initial debt issues of the SMF would be for one or more of the sponsors to provide a credit guarantee for the first three years, with a political-risk insurer such as MIGA covering the remaining term to maturity.

Local funding. Over time, the SMF may also issue debt in Central American markets. Such debt may be issued by the SMF's domestic subsidiaries with or without the guaranty of the central financing entity. The high credit quality (initially through credit enhancement and ultimately through the strength of its balance sheet and operations) of this debt should make it attractive to domestic investors. Local currency issues would allow the SMF to reduce its foreign exchange risk. As a new company, the SMF would need a third-party guarantee of domestic issues during the first three years of its existence in Costa Rica and El Salvador. The major constraint on local debt issuance is a lack of available long-term funds in Central American countries, primarily reflecting political instability in many of the countries and a high rate of liquidity preference among savers. Long-term funds that are available are "directed" into the purchase of government bonds and short-term deposits of state banks. The economies of several countries (notably El Salvador, Guatemala and Panama) have been stable recently, which may increase the supply of long-term savings. Perhaps more importantly, several countries (including Costa Rica and El Salvador) are contemplating reform of their pension systems, including deregulation (allowing fund managers more discretion in investments) and privatization (along the lines of the Chilean model). These changes would greatly improve the probability that the SMF could issue medium- to long-term debt in local markets. Its issues could stimulate domestic debt markets by providing a high quality instrument with social benefits. The central financing entity and each domestic subsidiary of the SMF would also need to establish normal banking arrangements (having deposits in and receiving a line of credit from one or more local banks) in the country in which it is domiciled. Depending on the nature of its activities, the central financing entity may maintain correspondent banking relationships in each country.

Equity. The SMF's equity requirements should be in line with the risk of its operations. Although it can be structured with minimal credit and interest rate risk, it would have a significant amount of exchange risk and country (political) risk. The market and the credit enhancement providers would determine the SMF's leverage.

It is assumed that the initial equity of the central financing entity of the SMF would be provided by a few investors, including both domestic Central American and international entities. For purposes of this analysis, the authors assumed an initial equity contribution of $20 million and a 5:1 leverage. Similar institutions in other countries (e.g., the Home Mortgage Bank in Trinidad and Tobago, the Federal Home Loan Banks in the U.S. and Cagamas in Malaysia) operate with significantly higher leverage limits, as high as 20:1. These institutions operate only within the confines of their domestic market and benefit from varying degrees of government support.

The SMF may seek to raise new capital after several years of operation. One possibility would be to require its customers to purchase shares in the SMF (either the central financing entity or directly in the domestic subsidiaries operating with individual countries). As new institutions seek eligibility to borrow from or sell to the SMF and existing institutions expand their mortgage portfolios, the shares held by lenders would increase, allowing the SMF to expand with market demand. For example, to maintain the ability to borrow, a primary mortgage lender could be required to own stock equal to at least 1% of its residential mortgage portfolio. (This is the basis of the capitalization of the Federal Home Loan Banks in the U.S.). The SMF would function as a liquidity facility for mortgage lenders. Thus, the 1% stock-ownership requirement can be thought of as the stand-by line of credit "fee." If, as planned, the SMF operates at a profit and pays dividends to its shareholders, this line of credit would in fact be free. This arrangement also provides the proper incentive for PMLs to deliver good quality mortgages to the SMF.

How Would the SMF Use Funds?

The SMF may either purchase mortgage loans from or make collateralized loans to PMLs. The choice would depend on market conditions and the risk and return of the alternatives.

Lending. As a lender the SMF can provide loans to PMLs collateralized by their mortgage loan portfolios. In the event of a default on a loan to a PML, the SMF must have the right to service (collect the loan payments) or liquidate (sell) the collateral in order to satisfy the loan. In order to safeguard against a decline in the collateral value (e.g., if interest rates rise and the loan rates are fixed or if house prices fall and the incidence of borrower default increases) and account for the potential costs associated with servicing or liquidating the collateral, the facility should make over-collateralized loans. For example, the SMF may make a ¢ 700 million loan to a PML backed by a mortgage portfolio of ¢ 1 billion. Such a loan is said to be overcollateralized as there is ¢ 1.42 of collateral for every ¢ 1 of loan.

Loan purchases. The SMF may also be a mortgage loan purchaser. This alternative can be more complicated than collateralized lending. If the SMF directly invests in mortgage loans, it must be able to underwrite (i.e., check the documentation and characteristics) and service the loans it purchases. It would have greater default risk and operational expense. Its default risk can be greatly reduced if it purchases loans on recourse (i.e., the seller must replace or buy back the loan if it goes into default). The SMF can operate with relatively low overhead if it arranges for third-party servicing of its loans, paying a fee to the seller (or other servicer). It would still be exposed to the risk of servicer default or fraud. The loan purchase option may take more time to develop and would depend on PML balance sheet needs and SMF capabilities.

Market demand. The market demand for the SMF's products would vary among the countries and institutions in the region. Interviews with banks and savings institutions in each of the countries evidenced a high degree of interest in long-term finance. For most customers, the key component would be the pricing of the products. The yields required by the facility for its loans or loan purchases would depend on its cost of funds (both debt and equity) and the spread necessary to compensate for risk and cost of operations. As a wholesale institution, the facility would have a relatively low operating cost. The credit and funding risk premiums for its activities also can be relatively low, as much of these risks can be eliminated through proper structuring and underwriting. The spread the SMF charges would principally be determined by the amount of foreign exchange and political risk it bears.

In addition to pricing, the SMF may be able to generate high value-added business through innovative product design. One of the strengths of the SMF may be its ability to invest in or fund alternative mortgage instruments. For example, indexed loans such as the dual-indexed mortgage may improve borrower affordability in an inflationary environment without sacrificing lender profitability. PMLs may be reluctant to make such loans (which can have substantial negative amortization) without a liquidity or purchase source.

Investments. The other major asset category would be an investment portfolio. This portfolio would be maintained for liquidity purposes and as a hedge against exchange risk. (This role is explained below.) To minimize credit risk, the investment securities should be limited to issues by governments or government-backed institutions. To minimize foreign exchange risk, such securities should be denominated in the currency in which its debt is issued. The SMF also would maintain a local bank account for cash management.

How Would the SMF Manage Risk?

The facility would be exposed to and have to manage a variety of risks. The five major forms of risk are (1) credit risk (the risk of borrower default); (2) funding risk (the risk of cash shortfall and/or a mismatch between the rates on its assets and liabilities); (3) operations risk (the risk of a mismatch between its costs and revenues); (4) foreign exchange risk (the cash flow risk associated with issuing debt in one currency and lending in another along with the risk that domestic currencies could not be converted into foreign currencies to meet the obligations of the facility); and (5) political risk (the risk of a major change in the legal, regulatory or tax framework in a particular country).

Credit risk. The proposed structure of the SMF would allow it to operate with low levels of the first three risks. The ability to secure its loans with PML mortgage portfolios on an overcollateralized or recourse basis would significantly reduce its credit risk. It can further minimize this risk through diversification (e.g., limiting PML loan size and the size of individual loans that serve as collateral) and through its underwriting of the loan collateral and PML.[8] If the SMF purchases loans from PMLs, it should do so (particularly at the outset) on a recourse or third-party guaranteed basis.[9]

As with any lending situation, the facility would underwrite the borrower and the collateral before making the loan. The facility must develop standards to assess the financial strength of the PML (e.g., capital adequacy, liquidity, magnitude of and trends in non-performing loans).[10] It also would set standards for the collateral it would accept, e.g., loan type, borrower underwriting standards (maximum loan-to-value and payment-to-income ratios), loan size. It would use these guidelines to determine whether to lend or purchase and the degree of overcollateralization of a loan or discount at purchase. The SMF would also have to assess and monitor the servicing performance of the PML.

Funding risk. The facility would manage its funding risk through matching the characteristics of its loans and funding instruments. The major forms of funding risk are interest rate risk (potential mismatch of rates on assets and liabilities) and liquidity risk (risk of loss due to cash shortfalls).[11] Interest rate risk can be minimized through matching the rate adjustment periods of its assets and liabilities. Liquidity risk is potentially more significant, particularly if the SMF borrows on the local capital markets in order to reduce its exchange rate risk. The SMF should develop diversified local funding sources (both short and long term) to manage this risk. In addition, it should maintain a significant high quality investment portfolio that it could liquidate to meet short-term cash needs. This portfolio would also help the SMF manage its foreign exchange risk.

Because of the differing needs of its borrowers and investors, the SMF would be exposed to some mismatch between its assets and liabilities. For example, its borrowers may prefer amortizing or even negatively amortizing loans while its investors prefer non-amortizing securities. This type of risk is quite manageable. In fact, the facility should develop an expertise in this type of risk management. As a specialized institution with capital markets access, it should be able to develop the loan and securities products necessary to manage funding risk.

Operating risk. As a wholesale institution, the facility should have a low ratio of operating-expense-to-assets and thus minimal operating risk. It would be critical for the facility to develop automated systems for cash flow management as well as systems and procedures for underwriting and monitoring the borrower and the collateral.

Foreign exchange risk. The two major risks the SMF must manage are foreign exchange risk and political risk. The extent of foreign exchange risk would depend on the degree to which the SMF obtains funds in foreign currencies and lends or invests in local currencies. There are a number of approaches to managing this risk. For example, the SMF may be able to diversify this risk across countries. Also, the SMF may be able to obtain some of its funds in local currencies and/or maintain an investment portfolio in foreign currency assets. It may be able to lend in dollars rather than local currencies. These techniques can reduce the overall currency mismatch between its assets and liabilities. The SMF may be able to hedge some of its short-term cash flows through forward contracts. It may also be able to pass some of the risk forward to borrowers or backward to investors. It is inevitable, however, that it would be exposed to and have to price for some degree of foreign exchange risk.

Political risk arises when governments change the rules of the game. For example, a change in tax treatment of interest income (e.g., imposition of a withholding tax) can affect the net margin of the SMF. A change in the legal rules governing bankruptcy or foreclosure or regulatory guidelines for capital could have adverse consequences for the SMF. This is a risk the SMF would have to bear, although it can diversify it across countries. Although there are no major government actions needed to establish the SMF in Central America, the differences in the legal, regulatory and tax systems of the countries suggests that setting up the SMF in each of the countries will be somewhat time consuming and costly. An innovative approach to this issue is the international treaty recently negotiated in order to set up the Eastern Caribbean Mortgage Bank (see the article from Trinidad for a discussion). In order to standardize the legal, regulatory and tax treatment of this new institution in the eight member countries in which it will operate, the governments signed a treaty providing for uniform treatment. As a treaty, this agreement was layered on top of existing laws and regulations.

CONCLUSION

Preliminary analysis by Cardiff Consulting Services suggests that an SMF is more than feasible, it is desirable. There is a strong demand for long-term funds which the SMF could provide on a competitive basis in Central America today. Access to such funds can significantly expand the supply of affordable mortgage credit throughout Central America. As a regional facility, the SMF could reduce risk through diversification and achieve economies of scale in debt issuance that a facility operating in only one of the countries in the region could not accomplish.

CCS uncovered no insurmountable obstacles to establishing the SMF in the Central American region. The critical variables will be the funding costs of the SMF (both debt and equity) and the management of foreign exchange risk. As a start-up company in an historically volatile region, the SMF would, to be viable, need guarantees on its initial debt issues. Provision of such guarantees by multilateral development agencies could be a promising way to develop the housing finance systems and housing markets of Central American countries.

NOTES

[1] Steven Bernstein, Robert Blanchard and Robert Grosse also contributed to the report.

[2] USAID has conducted several studies documenting the existence and magnitude of housing shortages in the region. These are referenced in a report by the InterAmerican Housing Union (UNIAPRAVI), 1994.

[3] International Union for Housing Finance, *Housing Finance Sourcebook*, 1995.

[4] Other factors include the lack of well-defined or enforceable property rights and the lack of reliable information on borrowers (e.g., past payment and income histories) and properties (e.g., comparable sales prices) as well as affordability problems caused by high and variable rates of inflation.

[5] Other major credit enhancers include the Financial Guarantee Insurance Corporation, Financial Security Assurance and MBIA Insurance Corporation.

[6] ING Barings, "Emerging Markets Weekly Report," December 28, 1995.

[7] Salomon Brothers, "Bond Market Roundup: Strategy," January 12, 1996.

[8] The credit risk inherent in mortgage lending should stay with the PML which has a comparative advantage in underwriting and management due to its retail orientation.

[9] In a recourse transaction, the seller would be obligated to repurchase or replace a mort-

gage that defaulted. A third-party guarantee could come from an insurer or non-affiliated bank. An alternative form of credit enhancement involves deferral of a portion of the purchase price. The seller would earn the full price after some period of time during which the loan performs as expected. This is equivalent to overcollateralization in the lending context. For example, in Argentina, the state housing bank purchases mortgages at 95% of their face value. The seller would receive the remaining 5% if the mortgage does not default over its term.

[10] The loan would be the obligation of the PML. Thus, the facility is underwriting the ability of the PML to repay the loan. In addition, the PML would service the collateral securing the loan. Financially sound servicers are less likely to allow servicing (and thus collateral value) to deteriorate than their weaker brethren.

[11] The other components of funding risk are options risk (reinvestment risk due to prepayment of loans) and spread risk (potential change in asset and liability spreads over time).