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Challenge and Change in the US Mortgage Market in the 1990s

by Ellen P Roche

The U.S. mortgage market is a successful model for the provision of housing finance to a broad spectrum of the population. However, this market is now challenged to extend the benefits of this market to a larger portion of the population. This article will explore the dimensions of the challenges and the resulting relationship between the mortgage market and the government.

IN THE UNITED STATES THE MORTGAGE MARKET IS MATURE AND STABLE

The U.S. mortgage market is the most sophisticated and extensive mortgage market in the world and a vital component of the international capital markets. This market includes all the transactions necessary for people to borrow money to purchase homes: origination of the mortgage, mortgage insurance, servicing the mortgage, credit enhancement for the mortgage securities, investment in mortgages, and the trading of mortgage-related securities and servicing. Over the last fifteen years this market has evolved from a number of segmented markets with credit controls and specialized institutions into one integrated market. The market structure is determined by the efficiency available through specialization and the flexibility required to respond to market demand.

The mortgage market provides uninterrupted delivery of housing finance

During the Depression, the stock market crash and the widespread withdrawal of money from financial institutions reduced liquidity and thus reduced the funds available for mortgage lending. To restore order in the financial and other markets the U.S. government created deposit insurance to provide confidence in the financial system and developed regulations for the safety and soundness of banks and other financial institutions.

In addition, the government established a special circuit to encourage the accumulation of capital for mortgage lending to homebuyers through depository institutions that were heavily regulated to protect depositors. The government also provided default insurance on mortgages that met its minimum standards. The secondary mortgage market was also created at this time through the establishment of a government agency that could purchase loans from financial institutions that originated the loans. This increased the liquidity in the primary market and thus encouraged mortgage lending.

By the 1970s, the mortgage market was characterized by two circuits: in one, depository institutions (savings and loans or thrifts) accepted deposits and lent money for mortgages and other consumer loans. In the other, mortgage bankers originated government-insured mortgages for immediate sale through GNMA (Government National Mortgage Association), a government agency that provides a secondary market for mortgages insured by the government. To support liquidity in the conventional (non-government insured) market, Federal Home Loan Banks provided advances and the government-sponsored enterprises Fannie Mae (Federal National Mortgage Association) and Freddie Mac (Federal Home Loan Mortgage Corporation) purchased loans.

In the late 1970s, the U.S. economy experienced high rates of inflation that exposed severe flaws in the thrift housing finance circuit. These institutions continued to have an upper limit on the interest rate that could be paid to their investors: the depositors. When depositors could withdraw their money from savings accounts paying six percent and invest at 15 percent, there was widespread disintermediation of these depository institutions.

This resulted in a lack of liquidity at individual institutions, but not in the mortgage market or the economy as a whole. Although liquidity problems prevented thrifts from retaining loans in their portfolios (i.e., investing in mortgages), they continued to originate mortgages. In addition, mortgage banks, commercial banks, and credit unions originated mortgages. Increasingly,

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these mortgages were sold to secondary mortgage market institutions such as Fannie Mae and Freddie Mac. These mortgage purchases were financed by issuing debt and pass-through securities that were sold to a broader range of investors. For example, non-traditional investors (e.g., pension funds, mutual funds foreign investors and life insurance companies) held 10 percent of mortgage-backed securities in 1980 and 23 percent in 1992.

Today the primary mortgage market of the 1970s is gone. More than half of the mortgages originated today are not held by the originator as a whole loan. Many functions that were formerly blended and considered the essential function of a thrift (e.g., origination, servicing, and portfolio investment) have now been separated and are conducted by specialized organizations. Thus some firms specialize in servicing mortgages and mortgage brokers only originate but do not service or fund mortgages. This process resulted in higher levels of competition and innovation. A major factor in the growth in functional specialization and use of the secondary mortgage market was standardization in mortgage documentation and underwriting. Standardization has resulted in cost savings by facilitating increased use of computerization in origination and servicing of mortgages as well as the pooling of loans for pass-through securities.

The government continues to support the mortgage market through deposit insurance for banking and thrift institutions as well as implicit support of several specialized housing finance institutions. For example, the Federal Home Loan Banks, Fannie Mae, and Freddie Mac all enjoy lower borrowing costs than triple-A rated corporations due to government support. In addition, the government continues to insure mortgages for moderate-income borrowers through the Federal Housing Administration (FHA), and for members of the armed forces through the Department of Veterans Affairs (VA).

Throughout these changes in market structure, mortgage credit has been available without interruption. The growth in the size and sophistication of the mortgage market as well as the ability of market participants to adapt to and use new technology suggest that this availability will continue.

Variety of mortgage products to satisfy consumer demand

Consistent with the change in the mortgage market structure is the increase in the number and variety of mortgage products offered to meet borrower needs. Prior to the 1980s, the 30-year, fixed interest rate, fixed payment mortgage was the standard. Now the menu of products available allows borrowers to select products that have different interest rate risk, default risk, and affordability characteristics. For example, a borrower can select a mortgage with a fixed interest rate and no payment risk for which the lender (or investor) absorbs the interest rate risk and the prepayment risk. Alternatively, the borrower can select a mortgage with variable interest rate and thus absorb some of the interest rate risk in return for a lower initial payment. Although generally investors can absorb the interest rate risk at a lower cost than individual borrowers, the latter possess information about expected mobility and income growth that allows them to select mortgage instruments that minimize the impact of interest rate variability.

The borrower can also choose to invest a small amount of equity. Lower equity increases default risk on mortgages. Mortgage insurance is available to diversify this risk facilitating a lower downpayment. For example, some borrowers may be eligible for mortgages with government mortgage default insurance that require no equity investment, that is no down payment. However the borrower must pay a mortgage insurance premium and a higher interest rate to compensate the investor for the higher probability of default. Private mortgage insurance is available for middle and upper income borrowers enabling them to obtain lower down payment loans. With a down payment of more than twenty percent of the value of the property, typically there is no mortgage insurance premium and the interest rate reflects the lower probability of default.

The characteristics of the mortgage product determine the mortgage finance cost and thus the affordability of housing. To minimize the initial payments, the borrower can select a variable interest rate mortgage, a long term (thirty years), high points to minimize the initial interest rate, a down payment of at least twenty percent. This mortgage does have high initial costs due to the downpayment and the points. To minimize the amount of savings required to be eligible for a mortgage, the borrower can select a small downpayment and a higher interest rate with no points, however, these characteristics increase the total cost of the mortgage.

The private sector is the engine for providing housing finance and is the moving force behind market innovations and thus the wide choice available to borrowers. The wide variety of mortgage products increases the effective demand for mortgage finance, by making it possible for more borrowers to finance a home.

Variety of investment products to satisfy investor needs

To provide the capital to satisfy this demand, investment products must satisfy investor needs for risk and return. Financial institutions that originate mortgages or purchase mortgages from originators create the investment products that provide an uninterrupted flow of funds to the mortgage market through the economic cycle and in every region of the country. These financial intermediaries include Fannie Mae, Freddie Mac, Countrywide Mortgage (the nation's largest mortgage banker), GE Capital Corporation (the largest finance company), and Citicorp (the largest commercial bank).

The investment products they provide include general obligation bonds, equity, and mortgage-related securities. The debt and

equity investments are vital to the mortgage market, but are very similar to debt and equity investments of other real estate or financial institutions. From an investor's perspective the unique aspect of the mortgage market is the wide variety of mortgage-related securities.

Mortgage-related securities represent a call on the cash flow of a specified pool of mortgages, rather than a call on the general revenue of the issuer. The most common are pass-through securities in which the payments on the underlying assets are transferred from the institution that collects the payments to the investor. Pass-through securities allow investors to invest in a pro-rata share of a pool of mortgages. Thus if the investor owns one-half of the security, then one half of all payments (less fees) are paid to the investor. If the mortgages had terms of thirty years, then the investor could receive payments over thirty years. This remains an important product for investors. In December 1993, $68 billion in pass-through securities were issued by GNMA, Fannie Mae, Freddie Mac and private issuers.

Financial innovation has responded to investor needs by creating securities with shorter terms and different payment characteristics. Structured financial securities, referred to as Real Estate Mortgage Investment Conduits (REMICs) and Collateralized Mortgage Obligations (CMOs), allow the principal and interest payments to be allocated to investors according to time, rather than simple proportional shares. Thus some investors may purchase a short term (one to three year) investment, others intermediate term portions and others receive payments near the end of the life of a mortgage pool (i.e., residual investors). By December 1993, these structured securities accounted for 31 percent of all mortgage securities outstanding.

In the 1970s, the most important group of U.S. housing finance investors were thrift institutions. Currently the most important investors are (in order) banks, insurance companies, thrifts and pension funds. Mortgage securities accommodate the needs of a larger and more diverse group of investors in every market sector around the world and thus ensure the flow of capital to housing finance.

Technology available to handle variations in origination volume

The efficiencies associated with standardization, volume, and access to capital markets has resulted in a lowering of the cost of housing finance by 30 to 50 basis points (Hendershott and Shilling and Sirmans and Benjamin). In 1992, $800 billion in single-family mortgages were originated and in 1993, $920 billion were originated. These volumes were made possible by mortgage technology, particularly the application of computer technology to handle the information processing requirements of originating, servicing and transferring several million mortgages. The mortgage market institutions continue to invest in technology to further reduce housing finance costs.

Advances in technology have ensured the constant availability of funds for housing finance in spite of unanticipated increases in demand. As advanced as the U.S. mortgage market is today, in the next ten years, the development will go beyond automation of existing processes. Computerized loan origination, econometric evaluation of appraisal and automated underwriting are examples of third generation technology processes which promise to change the way we think about lending.

THE CHALLENGE FOR THE MORTGAGE MARKET : CREDIT EXTENSION

Housing finance makes it possible to purchase a home with debt where equity finance would have long delayed or made impossible the purchase of a home. However, the growth in size and sophistication of the U.S. has stopped short of full coverage of the population.

The U.S. mortgage market have successfully provided low-cost housing finance for a large portion of the U.S. population. In 1993, 64.5 percent of the U.S. households owned their own homes and according to the 1989 American Housing Survey, 87 percent of all first-time home buyers bought their homes using a mortgage. However, many households that have not been able to take advantage of the benefits of the modern mortgage market because of their income, their racial or ethnic background, or their tenure choice.

The increasing divergence of the income growth between low-income and high-income groups has prevented low-income households from enjoying the benefits of homeownership. Recent efforts to eliminate racial discrimination has also focused attention on differential access to homeownership among racial and ethnic groups. Finally, the rental housing has not benefited as much as owner-occupied housing from today's mortgage markets.

The standardization of mortgages has resulted in the drawing of a bright line between mortgages that conform to mortgage market standards for exchange and those that do not conform to these standards. Realization of the importance of these standards has recently focused attention on their impact and the resultant denial of access to this market.

One of the reasons mortgages to these groups have not been included in the market is because imperfect information in the mortgage market manifested in arbitrary lending limitations. For example, the use of affordability ratios for loan qualification (e.g., the 28 percent payment-to-income ratio and the 36 percent housing expense-to-income ratio) may exclude some households from the market event though they are willing to pay higher interest rates or higher monthly payments. The assumption is that these households may, on average, be higher risks. The reasoning is that only high risk borrowers would need to pay high rates and/or they are only willing to agree to high rates because they are not likely to repay

the mortgage. The households that are good risks and are willing to pay higher rates have a difficult time proving their worth to the mortgage underwriters (Stiglitz and Weiss).

In addition, some mortgages meet the standards, but because they are a low-volume or niche product, the originations volume is not large enough to exploit the economies of scale. Currently, the great benefits that come with standardization and the creation of mortgage securities are not available to those households that seek customized housing finance arrangements.

Extend the benefit of homeownership to those with lower income

Low-income households have generally not benefited from the advances in the modern mortgage market. Low-income households have more difficulty than middle-income households in obtaining credit because it is more difficult for them to save for a down payment and because the cost of housing is rising faster than their income. However low-income households also have more difficulty achieving homeownership than middle-income households because of mortgage market procedures. To extend credit to low-income households, the mortgage market must remove the barriers to homeownership resulting from mortgage market procedures that limit opportunities for low-income households.

In spite of their lower incomes, these households may pay more than 40 percent of their income in rent. This makes it difficult to save for a downpayment. When they have saved enough for a down payment, they are prevented from obtaining a mortgage if the payments exceed 30 percent of their income. The conventional wisdom has been allowed to prevail even though there is no clear evidence that the payment-to-income ratio affects the probability of delinquency, default, or prepayment (Quercia and Stegman). Testing these assumptions through research or experimental lending programs would provide insight into mortgage risk.

Another procedure that affects low-income households is that their mortgages often have lower loan balances. Originators and sevicers are compensated based on the size of the loan. However, the cost of originating and servicing loans are not strictly proportional. Thus there is more incentive to originate one mortgage for $100,000 than two mortgages for $50,000 each. One solution to expanding credit access would be to develop alternative compensation schemes that do not discourage smaller loans to low-income households.

As was described above, some mortgage products have lower initial costs and some have lower costs over the term of the mortgage, but there is a trade-off between these cost reductions and risk. Low-income households may have a lower ability to absorb the payment increases that are likely to occur with variable rate mortgages. To extend the benefits of homeownership to those with lower-incomes, the mortgage market must develop mortgage products and lending arrangements that do not expose these borrowers to excessive risk, but also recognize the sacrifices that borrowers are willing to make to obtain homeownership.

If information problems are leading to limitations of credit to low-income borrowers, then the mortgage market must address these problems to extend credit to those who are willing and able to make mortgage payments. For example, programs and products could be supported that allow households to prove their creditworthiness and reduce the probability of attracting only those who are bad risks. One alternative measure of creditworthiness could be the use of rent histories as evidence of payment discipline.

Extend the benefits of homeownership to minority groups[1]

Households from a racial, ethnic, or cultural group that is different from those who establish underwriting guidelines may not benefit from the mortgage market. Discrimination is the unfair denial of mortgage credit to people because of their race, religion, gender, national origin, or other protected classes.

Mortgage market discrimination may occur at various stages in the lending process from market area selection and advertising to the application and product selection. Types of discrimination include the explicit use of race or other characteristics to deny mortgages (blatant), applying different standard to potential borrowers based on race (disparate treatment), or when lending policies have an unfair and adverse impact on members of protected classes (disparate impact). If underwriting guidelines have a disproportionate effect on members of protected classes, then the guidelines must support a business purpose.

Recent research on discrimination by the Federal Reserve Bank of Boston has revealed that mortgage applications from members of minority groups are rejected at much higher rates than those from whites with the same underwriting characteristics. (Munnell, Browne, McEneaney, and Tootell) Although subject to much criticism, the results of the study have been confirmed by recent work by Fannie Mae's Office of Housing Research.

Although this research focused on only one aspect of discrimination in one part of the mortgage market, it is sufficient to reveal that discrimination is limiting access to the mortgage market by creditworthy borrowers. Limiting the market for originators, servicers, insurers, and investors also limits the profits of mortgage market participants. Expanding service to these previously under-served markets will require that the mortgage market examine all aspects of the lending process for blatant discrimination, disparate treatment, and disparate impact. Methods have been suggested for neutral credit mechanisms (Galster), however, "The challenge is to develop color-blind lending procedures that still allow flexibility and sound business operation." (Carr and Megbolugbe) Fannie Mae and Freddie Mac have made changes in their underwrit-

ing guidelines to allow some alternative forms of downpayment and credit history. In addition they have encouraged lenders to use the underwriting documents as guidelines rather than as rigid requirements. Both are developing automated underwriting systems that will incorporate flexible underwriting guidelines. These efforts show promise, but more is needed to serve this important segment of the market.

Extend the benefits of the modern mortgage market to renters

Although the mortgage market focus is often skewed toward single-family lending, the ability to borrow at a fair interest rate for multifamily housing is very important in providing rental housing to those households that prefer the flexibility and low initial investment. The multifamily mortgage market has the same components as the single-family market. However, the multifamily mortgage market does not have the standardization of single-family market and thus does not have the benefits of the volume and liquidity of that market. Multifamily mortgage lending incorporates a combination of residential and commercial characteristics and thus represents a completely different product than the standard single-family mortgage. Development of a secondary market in multifamily mortgages has been impeded by a lack of data on multifamily default rates. Efforts are now underway to develop a database that will allow investors to better asses this risk.

The challenge will be to develop the multifamily mortgage market to assist in providing affordable rental housing to those who choose to rent as a lifestyle or as a transition to homeownership. Several efforts are currently underway to develop the market for pass-through mortgage securities collateralized by multifamily mortgages. Increased capital for multifamily housing will help. However, other mechanism that reduce the cost of multifamily housing finance, such as expanded use of FHA insurance, should be considered.

THE RELATIONSHIP BETWEEN THE GOVERNMENT AND THE MORTGAGE MARKET

The government has had an important role in the mortgage markets since the Depression through its support of specialized housing finance institutions to encourage homeownership. Given the challenge of credit extension articulated above, and the limited resources of the government, these institutions may be called upon once again to assist the mortgage market.

Recent legislative and regulatory action has increased the extent to which the government is using the mortgage market to advance social goals. This has resulted in a closer relationship between the government and participants in the mortgage market. At the same time, the government has increased capital requirements for all institutions. However, it continues to rely on market forces to determine which institutions provide credit. Thus the government appears to be setting the direction but not managing the operations and practices of the mortgage market participants.

Fair lending, CRA, HMDA

Racial and other discrimination in housing and mortgage markets is a high priority issue for the U.S. government and it is using its regulatory authority to achieve fair housing and equal access to credit. Forthcoming regulations could require Fannie Mae and Freddie Mac to inform the U.S. Department of Housing and Urban Development if lenders are violating a fair lending law and then perhaps to terminate business relations with the lender. This would be a critical penalty for a lender. This also makes Fannie Mae and Freddie Mac instruments of government regulation.

In addition, under the Community Reinvestment Act (CRA) financial institutions are required to invest in their communities rather than just accepting deposits. Institutions are evaluated on their compliance with these regulations and their efforts to reach out to the community. Because CRA performance is one of the criteria for approving mergers, it provides a strong incentive for compliance. This legislation has been particularly effective in getting additional funds for housing and community development.

To monitor their progress in combating discrimination, private sector institutions are required to report the racial, gender, age, income and other characteristics of mortgage applicants under the Home Mortgage Disclosure Act (HMDA). Even if a mortgage is not provided, institutions must maintain records of the applicant and the reason for rejection. As described above, research on this issue has revealed that minority group borrowers are more than twice as likely to be rejected for a mortgage than a similarly qualified white borrower. These proposed and recently enacted requirements represent an increased role for the government in determining the scope and activities of the mortgage market.

Affordable housing requirements

The government-sponsored enterprises are subject to special affordable housing requirements. Fannie Mae and Freddie Mac have a mission to provide housing finance to low, moderate and middle income borrowers. In legislation passed in 1992, the government initiated requirements that on the mortgage purchases by these agencies which represent more than 50 percent of the mortgages originated in the United States. Fannie Mae and Freddie Mac will now be required to purchase mortgages such that 30 percent of their purchases represent properties in central cities and 30 percent represent mortgages for low- and moderate-income households (the twin 30s requirements). They are also required to increase their purchases of loans from low-income borrowers by more than $2 million dollars over the previous year. The two year goal for 1993-1994 for Fannie Mae is $16.4 billion. The Federal Home Loan Banks are also required to support the development of affordable housing programs through a grant program they fund

from their profits.

Given their status as government-sponsored enterprises, and their critical contribution to the mortgage market, it is not surprising that they would have a special obligation to support these housing policy goals. These requirements contribute to the impression that these mortgage market institutions are extensions of the government.

Capital requirements

The thrifts and the agencies had very low and flexible capital requirements before 1989. However, following the re-structuring of the thrift industry in the 1980s, the government was required to pay billions of dollars to depositors in fulfillment of its deposit insurance commitments. As a result there has been increased attention on the risk taking of government backed institutions. Recent congressional budget reforms have changed the credit reporting requirements for the U.S. budget, requiring the evaluation and reporting of all contingent liabilities that could result in a future expenditures by the government.

In 1989, the Financial Institutions Reform, Recovery, and Enforcement Act stipulated higher risk-based capital standards for banks and thrifts. In 1992, legislation was passed that required Fannie Mae and Freddie Mac to increase their capital levels based on a periodic assessment of risk. The resultant changes in institution balance sheets has reduced the contingent liability of the U.S. government. In adopting this legislation, the government is requiring the financial organization of the mortgage enterprises to be more similar to private corporations than government agencies.

In addition, the 1992 legislation required an increase in lending to low- and moderate-income households and households residing in central cities. The result was a strengthening the commitment to the public purpose and an increase in their financial strength. These changes appear to be pulling the secondary market agencies in two directions: more control of their mission by the government and yet, perhaps, an increase in the likelihood of eventual privatization.

The mortgages represented by the twin 30s and affordable housing requirements are sometimes perceived to be more risky than the mortgages in the current portfolio. Thus the emphasis on increased capital is consistent with the forthcoming portfolio change. However, as was discussed previously, the differential risk for mortgages of low-income borrowers has not been well-established. Additional research in this area is needed to reveal the true level of risk associated with these loans.

IMPLICATIONS FOR THE MORTGAGE MARKET

The U.S. mortgage market will be unrecognizable in ten years time. The use of advanced technology will blur the distinction between customized and standardized mortgages. The markets will be more extensive and new organizational structures may appear.

Customization and Standardization

Today customization and standardization stand as opposites requiring different origination procedures and different funding. However, through the use of advanced underwriting technology now in development, it may be possible to have the same originations procedure for every mortgage and then to trade them on the basis of their essential risk characteristics rather than on the features of the property and the borrower.

Market structure

Changes in the originations process will lead to changes in the organization of the mortgage market as well. The originations segment of the mortgage market was formerly conceived as being divided between portfolio lenders and originators who sold their mortgages to intermediaries and investors. However, that distinction has faded as many institutions trade loans they originated for a pass-through security collateralized by the same loans, and as mortgage bankers became subsidiaries of thrifts or commercial banks. Thus the term portfolio lender is likely to disappear and be replaced by the specialized functions organized independently or as part of a larger institution.

The origination, insurance, and funding of mortgages that had been conducted by different specialized institutions now are increasingly integrated in the same institution. For example, several firms that originate and service loans are now obtaining funds from investors in the capital market by issuing pass-through securities without a financial intermediary.

There will be fewer, larger financial institutions as the economies of scale become more evident and interstate branching becomes a reality. However these institutions will need to have flexible capacity either through the continued development of mortgage brokers or some other mechanism. U.S. financial institutions will also be competing internationally as well as interstate and will be active in international capital markets. One possibility is that markets will be characterized by virtual corporations: large vertically integrated institutions that provide financial insurance, investment services, across the full range of services, but in reality are a set of functions connected by a central data base about customers with a controller referring business to the appropriate function.

CONCLUSION

The government will continue being a catalyst ensuring that credit extension will happen. If a change in the culture of lending and risk taking occurs, the credit extension could happen quickly. If the traditional approach of slow change (i.e., pilot studies, accumulation of experience) occurs, then

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CRH in France. Discussions about the privatization of Fannie Mae and Freddie Mac have taken place in the U.S. Reduced government support enhances market discipline and reduces the contingent liability of the government for the activities of the institution.

[10]A moral hazard exists when the activities of the insured directly affect the exposure of the insurer. An insured individual who engages in high risk activities presents a moral hazard to the insurer. In the U.S., the high risk lending by bankrupt savings and loans demonstrated the moral hazard to the government of deposit insurance.

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France and described in the article by Stone and Zissu in this issue, any bank which securitises assets and then repurchases the credit risk via holding the subordinated tranche of any security must provide an appropriate amount of capital against the entire pool of assets.

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change in credit availability to underserved groups will happen more slowly. The institutions that recognize this business as an opportunity will contribute to their profits as well as the goal of credit extension.

The future role of the federal government in the mortgage market is likely to be one of setting the policy (i.e., setting minimum requirements of what is provided and who is served) and sharing the risk in some difficult to serve sub-markets. The government is less likely to take the responsibility for directly providing services or financing. Private institutions following the policy direction will contribute the ingenuity to provide a vast array of services and finance at low cost to these groups.

Participants in the mortgage market range from government agencies to private unregulated corporations, but these institutions are different in degree, not kind. They will all be influenced by the new arrangement between the government and the mortgage market. ■

NOTES

[1]This section draws from Carr and Megbolugbe.

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