Mortgage Banking Unbundling: Structure, Automation and Profit

by Michael G. Jacobides

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The history of home mortgage lending over the last three decades has been a textbook lesson in natural selection. The mortgage finance industry evolved from a portfolio lender's world to a fragmented mortgage banking model. But the evolutionary steps are far from over. Information technology is taking the industry deeper still into a more fragmented, newly reconfigured, new world order. This article shares how you can keep a piece of the profit in this fractured and ever-changing industry.

The mortgage banking industry is one of the most fascinating examples of vertical disintegration and reconfiguration in modern business history.

By this, I mean the industry atomized the functions involved in making a mortgage, funding the loan and servicing it. It then permitted different firms to determine which chunks of the process they would perform. Single companies in the mortgage banking mode no longer performed the A-to-Z chain of steps in making, closing, funding, holding in portfolio and servicing-for-life an individual loan.

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Indeed, a defining period for mortgage banking came when the traditional A-to-Z model was overshadowed by the rise and eventual dominance of mortgage securitization. By the 1980s, and certainly by the 1990s, the old portfolio-lending model followed by thrifts and banks was eclipsed by this new, atomized industry of originators, funding lenders, warehouse lenders, separate secondary market buyers of loans, servicers and possibly subservicers and on down the line.

Just as the chain of functions was broken apart, the way it was put back together or reconfigured could be different, depending on different external market conditions and other business drivers. The reconfiguration models evolved (and continue to evolve) to best accommodate external market demands.

Different periods of industry history presented quite different external market landscapes—prompting different configurations to optimize profit and survival prospects. Furthermore, in mortgage banking, as in many other industries, we have seen a progression toward specialization as intermediate markets were created and as players adapted their behavior to (and also generated) changing industry structure.

In short, this is an industry that has been marked by change and permutations in its corporate identity around a chain of functions, some done internally and some in partnership with outside providers. Ironically, this has left an industry where it is easier to define "mortgage banking" than "mortgage banker."

By exploring recent industry history, we can better appreciate the perpetually morphing vision of what is known as mortgage banking.

BY WAY OF BACKGROUND

Recent decades have been marked by dramatic changes in the structure of mortgage finance and the development of a secondary market. Increasing technical sophistication, regulatory change, information technology and standardization led to changes in the vertical span of firms and the nature of the players along the mortgage lending value chain. In addition to the separation of capital provision from loan origination and servicing

that resulted from the rise of mortgage securitization in the 1970s, the mortgage banking function itself is disintegrating.

Now front-end loan origination is increasingly in the hands of mortgage brokers rather than mortgage bankers; several mortgage banks no longer service their own loans; specialized subservicers and focused wholesalers have grown dramatically. Myriad specialized markets now mediate activities that used to be internalized within firms' boundaries.

Mortgage origination, in particular, has seen significant change in its structure, including substantial disintegration and redistribution of profits. Mortgage brokers, for instance, who hardly existed before 1980, reportedly increased their origination volumes to as much as 65% of total originations over a few years' time span. Some mortgage bankers have shed their origination branch networks and have instead focused on wholesaling loans or restricted themselves to building networks of correspondent lenders.

Still other mortgage banks focused on servicing, and an active market for servicing rights appeared as mortgage bankers sold off the servicing rights their origination units produced. That challenged the traditional belief that producing and owning servicing had to be the objective of all mortgage activity and was certainly the ultimate goal of origination. New, large players emerged in servicing, and subservicers complemented the industry layout starting from the early 1990s.

Today, division of labor is increasingly made between firms, rather than within firms, and the value chain structure within origination itself appears to be increasingly fragmented —resulting in changes in profitability levels in the industry, as well as its distribution between industry participants.

LEARNING FROM THIS HISTORY

The mortgage banking segment is not new, and much can be learned from looking at its history. Mortgage bankers initially appeared around 1870, as eastern investors—life insurance companies (LICs), other institutions or wealthy individuals—wanted agents to lend to the expanding midwestern and western states. This enabled large, integrated companies to use a closely knit network of agents to originate and service their loans. Thus, mortgage bankers originally appeared as agents of integrated financial institutions involved in the provision of housing finance.

In the 1880s to 1890s, the real estate boom in the midwest led to the creation of independent mortgage banks that generated loans and funded them by selling their shares or selling bonds for collateral. With the recession in the 1890s, these specialized mortgage banks had all but vanished and mortgage bankers, once again, became the agents of life insurers and individuals. Soon thereafter, in the roaring 1920s, mortgage banks linked up with bond houses to feed the frenzied construction—yet this development came to an abrupt end with the Great Depression, which hurt all the participants in the housing finance system so much that the government had to step in and either insure loans or make loans itself. During this period, local financial institutions such as savings and loans (S&Ls), which performed all the functions of loan origination, loan holding and loan servicing, continued to play a significant role in the provision of housing finance, as they had done from the 1850s.

After World War II, mortgage banks would originate and service for life insurers and other financial institutions. The real break for mortgage bankers came in the 1950s, with the gradual increase of the role of Fannie Mae and, later, Freddie Mac. Starting in the 1950s, but mostly from the 1970s, mortgage lending by integrated companies (mostly S&Ls, or, to a lesser extent, other investors aided by their agents) was challenged by the securitized model of housing finance.

The premise of this new system was that some institutions (government-sponsored enterprises [GSEs] such as Fannie Mae and Freddie Mac, or private firms) would securitize the loans and sell securities backed by the loans to the market. What enabled this market to thrive was that, unlike in the 1880s and 1920s, the mortgage-backed securities were directly or indirectly guaranteed by the U.S. government. Also, the mortgages themselves were long-term rather than revolving, short-term debentures.

The growth of the GSEs allowed for (and was further supported by) the dramatic growth of mortgage bankers, a segment that specialized in the origination and servicing of mortgage loans, but did not hold the loans on its books. While the GSEs started with government loans (they initially enabled the VA-guaranteed and other government-insured loans to be originated, funded and serviced), they soon expanded to many more loan types and categories and, more importantly, started selling securities backed by the loans to the capital markets.

This led to the creation of a vertically disintegrated model for originating loans, which allowed one party to originate and service a loan (mortgage banker); another to securitize it and sell it to the capital market (the secondary market); and yet another party to hold the claim to the capital (mortgage-backed security investor).

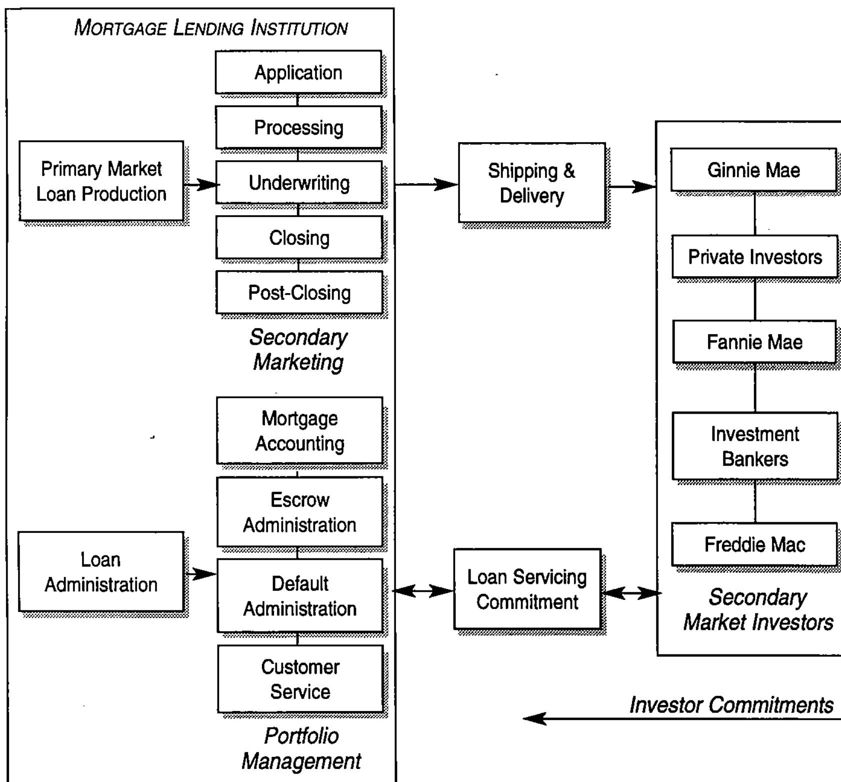
Today in the housing finance industry, both types of value chain structures coexist. The disintegrated model has dominated, with more than 56% of the mortgage originations in 1998 being securitized. However, a small number of S&Ls or other financial intermediaries still operate the traditional way—taking

loans, keeping them in portfolio and servicing them until they pay off.

Figure 1 provides an overview of the current disintegrated housing finance value chain. This specialized model for providing housing finance is the result of a gradual, and occasionally bumpy, road toward specialization and securitization driven by the common efforts of those that stood to benefit from the eventual success of the structure. This process was further facilitated in the 1980s by the problems S&Ls faced from regulatory overkill during the thrift crisis, which led to the demise of many integrated firms. It was also driven by firms that pushed disintegration to its limits.

GSEs and private conduits, with the collaboration of mortgage bankers, successfully reduced the transaction costs in selecting, assessing and trading loans. They promoted vertically specialized development to capitalize on their capabilities and to take advantage of opportunities within their grasp. Technology and information standardization were also key elements in this process. Mortgage bankers adapted well to these new, unbundled conditions, shifting business away from portfolio lenders in favor of securitized lending.

Figure 1. The Housing Finance Value Chain—The Mortgage Lending Circle



Source: Freddie Mac

In addition to the changes in the overall housing finance value chain, significant changes have taken place within the mortgage banking segment itself. This occurred despite the fact that its product/service definition (that of mortgage loan production and servicing) has remained conspicuously stable over the last few decades. What changed was the division of labor not only within mortgage banks but between different types of firms. As a result, profitability levels and profit distribution have changed significantly.

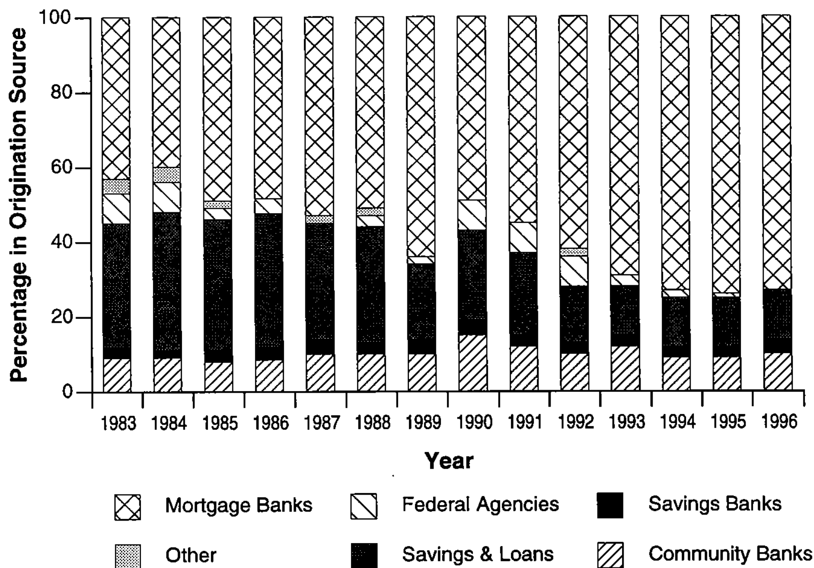
In the words of one senior industry executive, Joe Garrett, writing in the May issue of *Mortgage Banking:* "The industry has been broken apart into a multitude of different entities. Mortgage origination is often distinct from mortgage funding. And mortgage funding is often quite distinct from mortgage servicing. . . . The splintering of the mortgage industry may have hit the point of no return. The profit margins, once enough to support a thriving industry, now are so squeezed and vulnerable they make one wonder if we've gone beyond the logical boundaries of unbundling."

But let's take a closer look at industry history as it unfolded in the last two decades, and see how mortgage banking followed a process of vertical unbundling.

CHANGES IN THE STRUCTURE OF THE MORTGAGE BANKING INDUSTRY

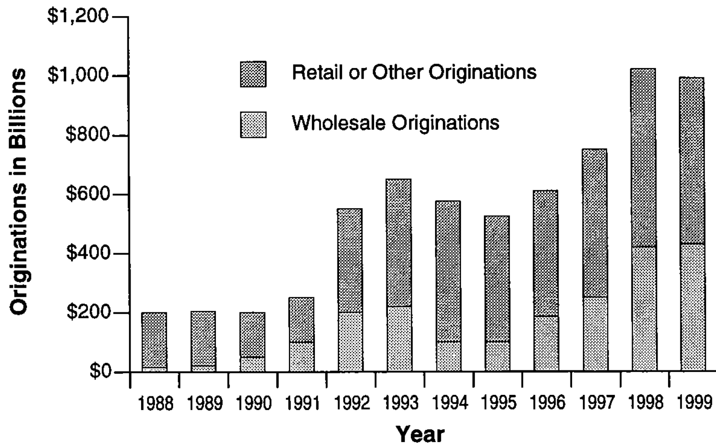
The 1980s was an important decade for mortgage banks, on two counts. First, it was the decade when the vertically specialized housing finance model (as opposed to the integrated S&L model) would first emerge as the winning one. This success was based partly on the efficient collaboration (and low

Figure 2. Mortgage Origination by Source



Source: HUD

Figure 3. Wholesale vs. Retail Originations (Billions of Dollars)



Sources: Wholesale Access and HUD

funding costs) of the GSE-cum-mortgage-banker structure, and partly on the inherent problems of S&Ls. Thrifts were too busy dealing with overregulation in the wake of the thrift crisis to successfully defend their turf. Figure 2 shows the growing role of mortgage banks as opposed to integrated entities in overall loan production.

The second important change during the 1980s was that mortgage banking increasingly moved from being an integrated retail industry to one in which firms would not cover the entire span of the mortgage banking value chain. The void was filled by new vertical specialists (or mutations of older mortgage banks). The most prominent example of this vertical specialization within mortgage banking was the birth of the mortgage brokerage function and the corresponding development of the wholesale segment.

This trend started in the mid-1980s. The wholesaler-cum-broker model grew quite fast. By the end of the 1980s, a new breed had been born: pure mortgage brokers who would originate and process but not fund loans. Brokers could use another mortgage bank's warehouse credit line and through the practice known as table funding bring the wholesale lender in at the closing of the deal. These "integrated brokers" or "specialized mortgage banks" were not interested in, and often not equipped to manage, loan pipelines or sell loans in the secondary—or even more so, service them. On the other hand, they were fully capable of undertaking all the remaining steps of the origination process.

While brokers, initially, were mostly former loan officers with entrepreneurial skills and the ability to create their own companies and capitalize on their origination skills and social embeddedness, their ranks soon grew in two directions. First, some mortgage banking companies actually became in-

volved in brokering some of their loans while keeping other production. Brokerage allowed these mortgage banks to sell the production they did not want, or were not able to fund and sell on their own behalf to the secondary market. Second, and more important, some of the smaller mortgage banks found it was neither economical in terms of scale nor efficient in terms of capabilities to maintain their own warehousing lines and/or servicing operations. They voluntarily restricted themselves to functioning as mortgage brokers.

As Figure 3 illustrates, wholesale, which started in 1989 at 19%, reached 37% of origination volume in 1993 and then plateaued at around 32% to 43%.

The second major breakup in the mortgage banking value chain traces to the increasing dissociation between production and servicing. Historically, mortgage banks would produce their loans to create valuable servicing rights. A mortgage company had both servicing and origination operations. On occasion, mortgage bankers would sell some of their servicing for immediate liquidity or other "distress" reasons, yet it would be unusual to be a specialist just in servicing or in origination in the earlier years of the industry's history.

Engaging in both origination and servicing provided what mortgage bankers refer to as a "natural hedge." This derives from the fact that servicing and origination operate counter-cyclically, so that revenues from one side of the business increase just as the other drops. It was clear there was a reason for mortgage banks to remain integrated.

The 1980s, however, saw this dogma and the entire integrated business model being severely tested. The most efficient servicers grew their servicing portfolio profitably, by acquiring mortgage servicing rights (MSRs) or whole portfolios. Given their significant cost advantages to the less capable servicers, they could provide top prices for servicing when they bought MSRs upfront. This made both buyers and sellers happy in view of latent gains from trade and specialization.

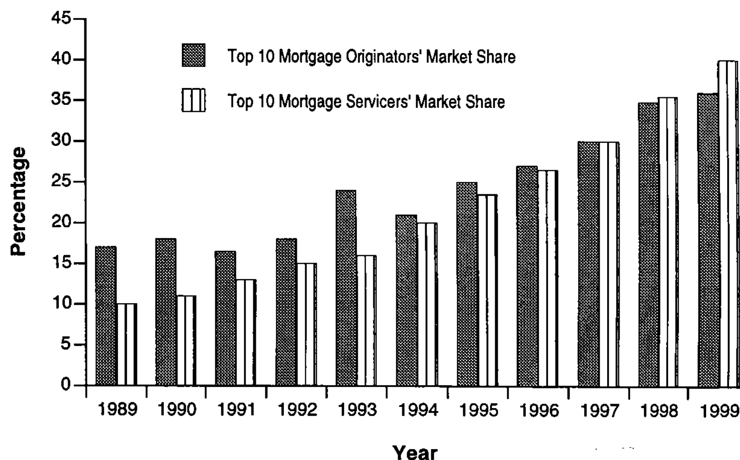
Concurrently, several mortgage banking firms started originating loans and selling them servicing-released on the wholesale market, or simply sold MSRs to other companies or sold the loans to the secondary market with servicing released. This helped create servicing-intensive firms. Also, since growing servicing was easier than growing originations, good firms began being more oriented toward servicing. As Garrett, in the May 1989 issue of *Mortgage Banking,* reports: "Servicing was rarely sold until recent years . . . but this changed. . . . To further add to the breakup of the old system came a new phenomenon, the correspondent. This was the small mortgage banker who sold his loans servicing released. That is, he sold the loans and the servicing together. . . . Now we had small lenders spring up with no intentions of even getting into the servicing business. Many would say that their intent was to do so, but the high prices for their loans were tempting, and cash up front seemed to cause many to lose their interest in long-term servicing annuities."

Figure 4 shows that while concentration grew in both servicing and origination, concentration in servicing (from 9% to 41%) grew twice as fast as in origination (from 17% to 37%). But why? While the common perception in the industry was that economies of scale (EOS) suddenly became important, I could not find any evidence to support this assertion.

"Real" EOS exist whenever the technology demands a high fixed cost upfront, so that we need to have high volume to maintain efficient operations; consequently, as operations are scaled up, average costs decline. Unorthodox as it may sound, this is not what happened in mortgage banking.

Between 1980 and today, technology has become more rather than less democratic;

Figure 4. Concentration in Servicing and Origination



Source: *Inside Mortgage Finance* Publications

that is, with workstations and distributed computing, as well as the emergence of off-the-shelf applications, the critical size—at least for servicing—has decreased. There now is less need to be big to afford the appropriate technology than 20 years ago. So why did concentration increase in servicing, much more so than in origination?

The reason is that selling mortgage servicing rights became easier; the transaction costs of giving up servicing became lower (aided further by innovations such as MERS® [Mortgage Electronic Registration Systems]) and efficient firms can induce specialization by buying up more servicing. Also, after 1996, when Financial Accounting Standards Board rule FASB 122/125 came into effect, an additional reason to remain integrated vanished. In the past, firms that produced loans did not have to report or capitalize the value of the MSRs, whereas firms that bought them had to. This led to a valuable off-balance-sheet asset for integrated firms that was used as a treasure chest in times of trouble. However, with FASB 122/125, this imbalanced treatment ceased, and the accounting and tax-based reason to remain integrated vanished.

There also were newly found gains from trading servicing. Some companies' bank parents decided that the volatility of servicing (especially from prepayments) was not easy to digest, leading to sales of servicing —whereas for other bank subs, the elusive promise of cross-sells made the servicing potentially valuable. So with a more efficient market and gains to be had from trading MSRs, origination became increasingly dissociated from servicing.

Furthermore, now that servicing could be unbundled from production, the firms that were good servicers (or expected to benefit from it, in relative terms) could afford to pay higher prices for servicing. So much so, that the buyers of MSRs might have suffered from "winner's curse"—as the prices paid not only reflected the full value for servicing, but also embedded the most optimistic assumptions about write-offs. That is, the winners in the bidding for servicing were the ones that systematically would have higher expectations—and, from what in statistics is called "regression to the mean," we know that these are the expectations most likely to be wrong. This is what may have led some servicer-only players to reintegrate into wholesale or retail production.

Finally, efficient firms that found it easier to grow servicing than originations would tend to specialize more in servicing. And better servicers would grow quickly, providing the illusion that scale leads to efficiency—although it appears to be the other way around. This tendency led to both higher concentration in servicing, and to greater specialization in servicing or production.

This means that the correlation between size and efficiency in servicing may be spurious. It may just be that better servicers grow—rather than the bigger servicers being more efficient than smaller ones. Rather than changing economics of servicing, and the widely presumed but not-so-clear importance of scale, what we might be witnessing is the impact of vertical disintegration and differential growth of servicing versus origination. If this is, as we suspect, correct, some of the recent high valuations of servicing portfolios may be unreasonable, as association between scale and efficiency is mistaken for causation.

All in all, vertical unbundling had progressed significantly in mortgage banking in the late 1980s and the 1990s. So much so, that John Jacobs, a senior mortgage banker annoyed with the gradual decline of the traditional way of doing business and the emergence of the "not-so-real" business models of brokers or wholesalers, wrote an article in the June 1992 issue of *Mortgage Banking,* entitled "In Search of Real Mortgage Bankers." His article deplored the ephemeral business models which did not respect the correct, integrated ways of doing business. In his opening line, he wondered, "has the herd mentality toward wholesale and correspondent loan originations trampled the traditional structure of mortgage banking?" Giving his own answer, he wrote:

> It is no secret that the strategies for loan origination have changed. Any number of companies have turned the corner from retail to wholesale originations or purchased servicing. Thus, the question begs to be asked: "Are there any 'real' mortgage bankers left?" The term "mortgage banker" has, until recent years, referred to a company with limited capital, external warehouse relationships, internal originations and retained or released servicing rights—in short, a fully integrated loan origination company. The focus of the firm was to originate, process, fund, market and service mortgage loans. Competition came primarily from the S&L industry. . . . This scenario sounds like ancient history today, with the dramatic demise of the portfolio lender, the emphasis on wholesale and correspondent lending and the mortgage loan conduits. Loan origination has shifted to the small mortgage company or loan brokerage. Many of today's major industry participants did not "grow up" in the industry. Most are "Johnny-come-lately" entrants. . . . Many CEOs look at servicing growth as just a "make or buy" decision, and many are erroneously concluding that buying is better.

For all the indignation of industry executives, the transformation of mortgage banking from one business to a series of specialized subsegments with intermediate markets allowing for the make-versus-buy question was irrevocable.

OTHER INDUSTRY DEVELOPMENTS IN THE 1990s

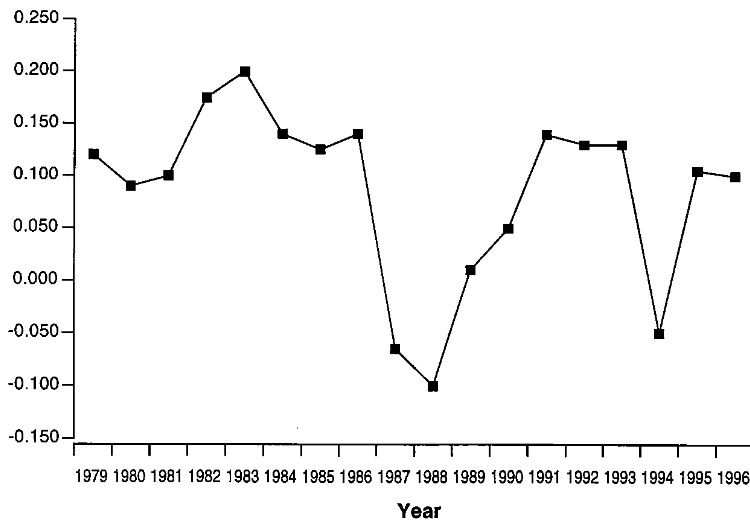
In terms of the macroeconomic environment, the 1990s saw a series of booms and busts in the mortgage market. These market swings precipitated the structural changes, as the industry had to respond to each dramatic shift in activity.

The 1990s, the decade of the most intense competition (or thinnest margins) for mortgage bankers—at least so far—also saw the development of several niche markets and products. These were created in an effort to maintain a reasonable level of returns, away from the destructive competition of the mainstream market. As Joe Garrett wrote in the May 1993 issue of *Mortgage Banking,* "It is my view that the shrinking margins we suffer from are due to this very fragmentation of the mortgage banking process. Division of labor is the logical result of the maturation process in any industry, but the division of labor has caused margins to shrink to the point that we must rethink division of labor. It may be that it is hurting us more than helping us."

But this cat was out of the bag and would not be put back in. Ironically, the disintegration caused by the conscious efforts of mortgage banking executives was now turning back on them with a vengeance. Figure 5 shows the net income margin for mortgage banking companies for the last 20 years. It illustrates the impact of intensified competition, partly due to the increasing vertical disintegration, information standardization and the concomitant commoditization.

The intensification of competition, especially in lean years, is clear. The implications of this are obvious in the lower prices that the mortgage industry could support. Competition for new loans reduced origination fees and charges by almost 40% in a few years. There are several reasons for this. First, standardization of underwriting criteria, measures, information and practices inherently reduced the possibility for differentiation and increased the intensity of competition among mortgage companies. Being local and embedded did not cut it anymore. Like the Red Queen's soldiers in Alice in Wonderland, mortgage firms had to run to keep their place—and run even faster to stay alive.

Figure 5. Profitability: Net Operating Income/Total Income



Source: MBA Cost and Profitability Studies

Given the availability of information and commoditization of the product/service offered, most of the savings was passed on to consumers through competition, as transparency and reduced search and transaction costs led to increased rivalry and the erosion of profits. Specialization and the development of intermediate markets meant that firms made more efficient decisions as to what to do themselves and what to sell or buy. This also meant that competition was not restricted to which lender the consumer would select for a mortgage, but it existed for production, warehousing, wholesaling, secondary marketing and servicing loans.

The problem with this multilevel competition was that the efficiencies created did not accrue to firms as profits. Instead they went to consumers as cheaper mortgages or to bondholders and GSEs as lower costs to create mortgage-backed securities and debentures.

One of the implications of competition was to prompt specialization among originators. Some chose to focus on jumbo loans while others would concentrate on B paper or other submarkets. Another long-term trend beginning in the 1960s, but accelerating in the 1980s and especially in the 1990s, has been the consolidation of the mortgage banking industry into fewer but larger firms.

Mortgage bankers either merged with other mortgage banking firms or were acquired by

commercial banks or nonbank real estate entities. This was tied to the rise of the cross-selling mentality in the financial services industry, and particularly in mortgage banking, despite scant evidence and overly optimistic predictions that mortgage customers would be ready and eager to purchase other financial services products from their mortgage lender.

On the regulatory front, mortgage banking also saw changes. Compared with any of its financial industry siblings, mortgage banking is remarkably unregulated as an industry. This is true even as the process of home lending is riddled with regulations and requirements of all sorts. Indeed, mortgage bankers may well hold an advantage over outside players currently weighing an entrance into the business, as they have intimate knowledge of the complex web of rules and regulations, compliance forms and processes to be followed to get a loan. Interestingly, this strength may turn into a key liability, as mortgage bankers may be overly focused on the specificities of the institutional context they inhabit. If these administrative tasks are ever simplified, this particular value-added of this industry may be in question.

TECHNOLOGY, AUTOMATION AND STRUCTURAL CHANGE IN THE 1980s AND 1990s

Technology—especially in the 1980s and 1990s—also affected the way business is done. Information technology (IT) developments have changed how individual tasks are performed, the division of labor between different entities in the value chain and the subsequent profit distribution.

Technology has dramatically affected the nature of operations in the servicing and origination segments alike. On the origination side, mortgage bankers have established online mortgage application networks and databases to inform borrowers of mortgage products and comparative interest rates, and to increase the speed and uniformity of loan underwriting decisions. The possibilities for judging the quality of loans based on quantitative/statistical methods, the ability to identify promising origination markets, keeping track of demand and price evolution, and the operational advantages of automating the process have all led to strong reasons to adopt technology—especially IT.

Implications of technological change, however, are more profound than simply having effects on operations or costs. Increased use of automated underwriting systems (AUS) and the growing importance of credit scoring, in particular, helped transform the structure of the industry and its profit levels.

Both automated underwriting and credit scoring have been strongly embraced by Fannie Mae and Freddie Mac in their role as dominant buyers of mortgages in the market. Their adoption and endorsement of these tools could commoditize some of the core functions of mortgage banking, potentially leaving the GSEs in a position to dictate the structure and affect the profitability of the origination process. This could also transform originations into a low-entry-barrier segment of information processing, thus strengthening the GSE's position vis-à-vis both the rest of the mortgage banking value chain and the capital markets.

The use of standardized information was brought about by the improvement in the nature, quality and cost of consumer credit information via the credit bureaus and credit repositories. This information became widely available with the dramatic cost savings in collecting, storing and retrieving information over the last 20 years. Furthermore, the existence of available records led to a series of modeling techniques, and ultimately led to the application of credit scoring technology directly to the mortgage transaction.

This information standardization facilitated the vertical disintegration of the industry and by the same token challenged the profitability of institutions such as S&Ls. Indeed, the assessment of the creditworthiness of any borrower through the data provided by new vertical specialists in the industry allowed the mortgage-banking-cum-GSE model to compete more effectively with the more integrated, local portfolio lenders. In essence, localized players like the S&Ls were profiting from having an intimate knowledge of their own customers and were thus able to make sound decisions on mortgage loans.

Prior to the standardization of client information, mortgage banks might have some difficulty in making a decision, because they had to rely on the sometimes overly strict underwriting rules set down by the GSEs. Because these were broad nationalized rules, they could have the effect of turning down deals that had merit. Even if local mortgage bankers had access to the same information that the integrated S&Ls had, it would be difficult to convince an investor (such as a GSE or a conduit) about the value of the customer without data validating it.

The institution of standardized information, then, allowed for the disintegrated model to play on a more level field, as there now was an independent source of information that allowed the mortgage bankers to connect with the conduits and enable more borderline deals to be closed.

From credit scores, risk-based pricing models can be refined and the concept will ultimately spread throughout the mortgage industry. This will most likely end the one-rate-fits-all practice. Already prevalent in other financial sectors, risk-based pricing means different rates for different borrowers,

based on their creditworthiness. With increased accuracy in assessing borrowers and adoption of automated underwriting systems, originators and customers will reap cost benefits from these risk-based pricing models.

Another implication of risk-based pricing, especially combined with the flexibility of automated underwriting systems, will be to reduce the number of niche mortgage products into variations on the conventional loan. In the old days, brokers would send customers with damaged credit to subprime specialists, but the credit-assessment capabilities available today permit prime lenders to penetrate the subprime business. Automated underwriting unlocked large segments of the market, and loans can now be underwritten with risk premiums, if necessary. Hence, lenders and brokers with the underwriting capabilities can compete with specialist lenders that have built businesses around products for niche markets. On the downside, the profit margins of these businesses may start declining, as the multilevel competition will lead to some of the savings being passed on to consumers.

The institution of automated underwriting systems, implemented in the 1990s, meant that mortgage bankers had even less real authority in deciding which types of loans they would make. Freddie Mac rolled out its Loan Prospector® for pilot use by selected lenders by the fall of 1994 and made it commercially available in 1995. Fannie Mae developed its rival system, Desktop Underwriter®, around this time as well. These systems, however, have become deeply integrated into the business environment only in the last two to three years. They have been further supported by direct incentives from the GSEs to those who use them (such as waiving some fees, waiving reps and warranties, and so forth). Some of the private conduits (and even some private mortgage insurers) implemented their own AUS. Others allowed mortgage banks to sell them loans that would be accepted by either of the GSEs' underwriting guidelines, and in addition added their own requirements or specific relaxation of underwriting criteria.

Individual mortgage firms also created their own underwriting systems on top of the investor's underwriting rules, to optimize their own decisions internally or structure their portfolio with real-time explicit criteria. Yet these efforts have neither had the scope nor the impact of the investors' and GSEs' automated underwriting systems. Some of the industry's largest lenders have signed special agreements with the GSEs to use their own AU systems—a move that allowed them to keep custody of the information and its use, rather than the GSEs.

On the one hand, with AUS, accuracy and data integrity are improved while simultaneously reducing the possibility of fraud. On the other hand, functions performed by mortgage bankers are also becoming increasingly standardized, with no really developed skill set needed for selecting loans. This means that mortgage bankers can be partly disintermediated. That is interesting; in most information-intensive industries, there is a battle over information, as each party wants to own it and base decisions on proprietary systems. That battle in mortgage banking was brief, unannounced and quickly abandoned.

The reason is that mortgage bankers, much like travel agents 10 years prior, chose new technologies on the basis of cost savings and on operational merits. They were oblivious to the medium-term implications of the changing uses of information. They are only now realizing that they are squeezed – protected perhaps only from the charter limitations of secondary market participants to encroach upon the primary market. Strategic considerations are back—with a vengeance.

An example of this tug-of-war has been the recent debate about making the automated underwriting systems accessible to everyone, including mortgage brokers. Mortgage bankers fear that, if this were the case, mortgage brokers could check the actual deals and pricing that mortgage bankers could have from the GSEs. They could then preclose the deal and shop it around among mortgage bankers, thus being able to extract the full value of the approved loan they originated. This would further disintermediate mortgage bankers—which reminds us that changes in the division of labor do not happen without casualties.

THE BOTTOM LINE: IS MORTGAGE BANKING ON THE ENDANGERED LIST?

If this brave new world that's ahead is so different, does it imply that mortgage bankers, as we know them, are on the verge of extinction? The answer is not a simple yes or no. On the one hand, mortgage bankers are admirably adapted to the needs of the housing finance system as it developed from the late 1960s until today. They have shown remarkable ability to adapt and further the goal of homeownership in the United States. On the other hand, the business model of mortgage bankers is being challenged as the industry layout is changing, as information becomes standardized and as the tasks that a mortgage banker can perform become increasingly unbundled.

In the 1980s and 1990s, this unbundling happened with the blessings of mortgage bankers and based on their initiatives. One result has been the changing dynamics of competition. From competition for mortgages overall, competition ended up being multilevel—for servicing, for brokerage, for warehousing. This trend is being extended. The finer chopping up of the value chain changes the intensity of competitive interaction. It leads firms to consider their scope as a major issue.

While decisions on how to change business relationships and the scope of the activities undertaken are based on operational data and immediate bottom-line implications, they also have unanticipated strategic side effects. And the increase in competition as well as the loss of valuable "information power" were two such persuasive side effects, which will be shaping the industry for years to come.

Perhaps the entire task description of mortgage bankers is being changed with the advent of technology. The types of intermediation functions that mortgage banks undertake are not the same in a virtual world. Also, the role of information, and the battle over information will only become bigger. It is only now, at the 11th hour, that the industry is coming to realize that technology is not only (or indeed primarily) about reducing costs; it is about defining the rules of the game, and about shaping strategic prospects.

Technology and information will be important tools for survival in the major turf battle that is brewing in the industry. Being well prepared will be indispensable for firms to survive and prosper.

In the last few years it has become evident that mortgage bankers' core value lies in being an intermediary—a processor of information, a delivery-and-service channel for those who hold the loan and a point of contact for borrowers. While mortgage bankers do help people fulfill the American dream of homeownership, it is becoming increasingly clear that this dream can be fulfilled in many different ways. For at least two decades, the structure of the industry has evolved, rather slowly, and innovation in the division of labor has not threatened the existing players too much. Now, however, things are changing, and the prospects are more challenging. The information revolution is changing the way business is done, and is affecting the very value added by some of the entities in the value chain.

What are the implications? The good news is that in many industries, fears of being fully disintermediated appear to be exaggerated. And even where they are not (e.g., travel agencies), there are still recipes for being profitable. The bad news is that with the newly flexible and vertically specialized structure in mortgage banking, one can achieve this in many different ways. And firms need to be vigilant to ensure they are not just doing things right—but doing the right things. In the medium term, operational excellence will be meaningless without a sense of strategic direction.

More intense and careful thinking about what each firm does is critical. A firm must question how it addresses underlying needs, how it fits in with the rest of the value chain and what the prospects of the segment may be. This is crucial, given that competition in a vertically unbundled world does not come from within the industry. It comes also from outside "vertical raiders" (e.g., information processors) who can now invade focused parts of the value chain that have been opened up and disaggregated. Competition may come from unexpected places.

Do some of these more ominous trends point to the ultimate lack of profitability or even the extinction of this industry? Not quite. But it certainly means firms that exist because they have done business this way for decades may be in trouble. There will be more firms that exit the business, and mergers and acquisitions will remain important—and in all likelihood will intensify.

To take an evolutionary view, mortgage banking looks like an evolving microcosm. In the housing finance value chain, we have the integrated business ecosystem, where integrated entities compete for the end-to-end provision of housing finance. Then we have the disintegrated system, where mortgage banks, together with the GSEs, brokers and others, cooperate and compete. Competition occurs largely between business ecosystems that differ with regard to scope (the battle between the integrated and the specialized versions of housing finance) and within each ecosystem (e.g., the competition between S&Ls or the friction between GSEs and mortgage banks).

Competition within specialized ecosystems between different parts of the value chain is often subtle. This is because there are gains both from competition and from cooperation, as reflected by the delicate, contentious—yet not openly hostile—relationship between the GSEs and mortgage banks. Now that the battle between the integrated and the specialized ecosystems seems to have been decided, one might expect an intensification of the turf battle between the participants of the specialized value chain—with originators, servicers, underwriters and capital providers battling over thin margins. In addition, this vertically specialized world is opening itself up with the advent of technology and with new species invading the business ecosystems.

One of the major concerns of mortgage bankers is whether, in this fiercely competitive world, they are about to be disintermediated. "Competitive bypass" (pushing aside a distribution or production channel), such as what happened between travel agencies and airlines, is indeed a concern. While the business proposition that mortgage bankers offer is more defensible than that of travel agents, there still is the threat of commoditization.

Mortgage bankers are not unjustified to be concerned with the power of the GSEs. While both Fannie Mae and Freddie Mac say publicly that they will remain in the secondary market and allow lenders to perform the functions of the primary market, what exactly these functions are and how their na-

ture will affect profitability remain to be seen. Given the standardized task descriptions of mortgage banks and the fact that they have all but relinquished ownership of valuable information, their ability to maintain healthy profits may be at stake.

What's so interesting about competitive bypass is that a channel does not need to be physically extinct. It needs to be potentially replaceable, to lose its bargaining power. Or the barriers to entry/replacement may become so low (through standardization) that current participants will lose their clout.

Notably, it's often new species that enable this bypass. In the case of airlines bypassing travel agents, it was publicly available central reservation systems (such as easySabre and, later, Travelocity), bundled with e-ticketing, frequent-flyer and internal upgrade systems that allowed airlines to squeeze travel agents. Are travel agents still alive? Yes—but on unenviable terms. Are there profitable exceptions? Certainly—those firms that saw that changes and well-positioned to exploit the new economics of the travel agency business. Mortgage bankers may have a lot to learn from looking at other relevant industries, but they also have to ensure that they draw on the correct analogies and take the right lessons.

Beyond changing competitive dynamics, the changing vertical layout of the industry pushes every player to ask itself some key questions: What is the specific value it adds? Which of the activities performed are done in ways that are really superior to the competition? Can the advantage be leveraged? Conversely, can a shortcoming lead to shedding this part of the value-adding process? Which of these decisions should be taken on a pure cost basis, and which should include strategic consideration?

Finally, value-chain structure (and intermediate markets therein) affects the way that a business can be structured. It delineates the segments a firm can be active in, and defines the types of links that can be established. Both in the housing finance value chain and, more particularly, in the mortgage banking value chain, the structure has become increasingly fragmented. This has been true in the last few years especially, following the disintegrating impact of IT and standardization. It has spawned a plethora of vertically specialized players, and subsequently led to exponential growth of potential and actual connections along the value chain. This might explain why in mortgage banking the terms "business model" and "revenue model" have become the new strategic buzzwords.

With far greater possibilities to mix and match components and selectively occupy parts of the value chain comes greater leeway in terms of both pricing and structure. The questions for each firm become: What part of the capabilities of the value chain is really exploited and "sold," and how does it tie in with the rest of the chain? In a disintegrated world, the very definition of scope and connections to the value chain (and subsequent revenue sources from the various intermediate markets or firm-to-firm arrangements) is a key problem in and of itself.

In times of change and discontinuity lie both the greatest danger and greatest promise. Mortgage banking has had the advantage of relatively slow-paced strategic change so far. In a world that hinged on excelling at operations, being best in breed was sufficient to ensure success. Now, added to the need for operational excellence, comes another prerequisite for success: the ability to understand the changing landscape and place the chips on the segments that will become strategically viable.

The rules are changing, and executives must pay attention if they are to adapt rather than be pushed aside by the unforgiving hands of natural selection. A good understanding of what the past can tell us, as well as a good grasp of the strategic dynamics that underpin the past and mark the future, will be important guides into the decades ahead.