



**TOWERGROUP**

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## **The Virtual Mortgage Bank: How Technology Is Toppling Traditional Barriers**

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Richard A. Beidl

+1.781.292.5200, ext. 241

rbeidl@towergroup.com

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### **Highlights**

- Mortgage banking is one of the last areas of consumer credit to be affected by the Internet. Electronic commerce has been slow to gain momentum in mortgage banking, but this is changing rapidly. Numerous barriers to true on-line mortgage lending remain, but they are toppling, and on-line originations can be expected to grow to more than 10% of the total market by 2005.
- TowerGroup estimates that in 1998 consumers completed nearly 65,000 mortgage loan applications on-line, which amounted to US\$8 billion in mortgages. While large, these numbers represent only about 0.55% of the estimated 12 million mortgage applications and US\$1.45 trillion in mortgages originated in 1998.
- There are several keys to achieving success with an on-line lending strategy. Lenders must seek ways to increase traffic to their respective Web sites and then turn those hits into loan applications. This Research Note examines several of the key factors that will affect an FSI's success in on-line lending.
- Despite the tremendous expected growth in on-line originations, TowerGroup expects on-line production service (business-to-business) to grow at twice the rate of on-line origination service (business-to-consumer). In this Note we discuss several of the factors fueling this adoption and explosive growth.
- Networks of lenders, brokers, and third-party providers are forming that bring together virtual communities of production-oriented firms. From loan sales to appraisal ordering, IT solutions are becoming more readily available and more critical.
- For those firms that seek entry into the on-line mortgage market but lack IT expertise or budget, service bureaus and outsourcers are filling the gap. Several such solutions are available.

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## Introduction

Mortgage banking is one of the last areas of consumer credit to be affected by the Internet and electronic commerce in general. Numerous barriers to true on-line mortgage lending remain, but they are toppling. Much of the popular attention on virtual mortgage lending has focused on the origination component of the business. While this area has grown rapidly and will continue to do so, much of the true opportunity is in the production arena. On-line originations have increased markedly over the last two years, a trend that will continue, but the overall market for true on-line originations remains relatively small compared to the market for virtual production. The potential for the processing and production business is enormous and the potential impact on the industry is much greater than that of on-line originations. In this TowerGroup Research Note, we will examine the fact, the fiction, and the future of both of these areas for mortgage banking, and examine some of the reasons why FSIs need to embrace, and not fear, the future.

## Background

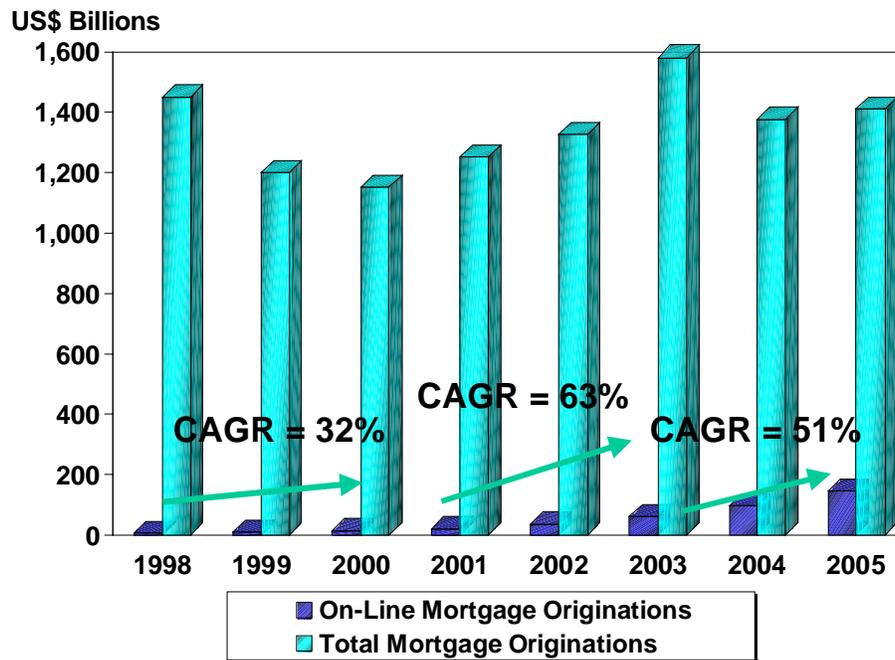
On-line lending has garnered considerable attention over the last few years. Already, products such as credit cards and second mortgages are commonly originated via on-line channels. On-line lending began in earnest in 1996, and originally this channel was widely dismissed by the financial services community. On-line lending has given rise, however, to both a new industry and a new way of conducting business.

Beginning in 1996, loan aggregators and Web banks began to emerge. As traditional banks have seen margins erode in their liability businesses (checking, savings, money market, etc.), they have sought to expand their product offerings and customer base on the asset side (loan products, like credit cards, overdraft, mortgages, auto loans, etc.). Loan aggregators and Web banks pose a potential threat to the asset product strategy of many financial services institutions (FSIs). In addition, FSIs have increased their reliance on re-marketed and co-branded products, like insurance and securities. Aggregators, portals, and Web banks have been quick to expand into these markets as well, presenting a new and real threat to the traditional way of banking and lending.

TowerGroup estimates that in 1998 consumers completed nearly 65,000 mortgage loan applications on-line, which amounted to US\$8 billion in mortgages. While large, these numbers represent only about 0.46% of the 14 million mortgage applications and US\$1.7 trillion in mortgages originated in 1998. We expect the percentage of on-line mortgage originations to rise to just over 10% by 2005, and then to continue to rise slowly over the next decade. (See Exhibit 1.)

The number of loans originated on-line and the number completed on-line are very small compared to the number of loans passing through on-line automated underwriting (AU) systems. On-line AU represents the greatest growth in on-line production to date. In 1998, Freddie Mac and Fannie Mae purchased nearly 55% of all originated mortgage loans, almost 70% of which passed through their on-line AU systems. With some of the changes occurring in the industry, which are addressed later in this Research Note, TowerGroup expects the percentage of loans underwritten by on-line AU systems to climb to over 90% within the next three years. Not all of these loans will be approved automatically, since these AU systems may generate decisions that require both additional processing and manual underwriting. They will, however, be evaluated initially by an on-line AU system.

Exhibit 1  
Dramatic Growth in On-Line Mortgage Originations



Source: TowerGroup estimate

### Obstacles to Growth of On-Line Originations

The first step in discussing on-line originations is to define the term. In researching on-line originations with FSIs, it has become evident that different FSIs define “on-line originations” in different ways. Many FSIs consider a consumer’s visit to the firm’s Web site and e-mail request for an application packet or a contact from a loan officer to be an on-line origination. In this scenario, the Internet is the identified source of the application. TowerGroup defines an on-line application as one in which the application itself is completed on-line, though much of the follow-up work, document exchange, and communications may take place through other channels.

There are a number of reasons why the popularity of on-line originations has grown dramatically and will continue to do so, but several issues must be addressed before this business truly competes with the traditional originations model. Major issues that remain to be resolved are summarized below, as are some of potential solutions on the horizon.

#### Security

A wealth of highly reliable security measures exists. Institutions can use encryption, secure socket layer (SSL2), digital certificates, and “cookies.” For many borrowers the prospect of providing very personal and comprehensive information over an Internet connection remains troublesome

nonetheless. Consumers are bombarded with warnings of fraudulent telephone scams, confidence games, and more recently, interception of e-mail and data transmissions. Hence, for many consumers the Internet will remain a research tool rather than a transactional medium until they are confident in the security that the Internet affords.

Time and consumer acclimation will slowly break down the barriers to use, as they did with ATMs. Improving technology will also continue to play a major role as 128-bit encryption and other cryptography options become more widespread. In addition, the use of Financial Electronic Data Interchange (FEDI), Interactive Financial Exchange (IFX), and other standards will provide guaranteed delivery and delivery confirmation over the Internet, similar to that available through EDI networks over value-added networks (VANs) and leased lines.

### **Brand Recognition**

Another very valid concern remains for many consumers. With the rise of Web banks, aggregators, and portals, consumers are often able to find great rates, prices, and products but offered by unknown entities. While their concern over data being intercepted enroute from point A to point B may be minimal, their uncertainty about the true identity of point B is a concern that is warranted. An attractive Web site and low rates can easily be displayed by anyone with a computer, an Internet service provider, and a phone. Convincing the customer of the legitimacy of the entity on the other side of the connection will continue to be of paramount importance.

Over the next few years, institutions will spend millions to create recognizable e-commerce brand names. Portal and banner ads were initially the preferred advertisement medium, but recently firms have focused more attention on traditional media like television, print, and radio. FSIs who leverage existing brand names will have a considerable advantage in this area over firms creating an identity. We have already begun to see the acquisition of relatively young e-commerce firms like GetSmart.com (purchased by Provident Bank), and will likely see considerably more such acquisitions as existing FSIs seek to merge their brands with existing e-commerce expertise.

### **Identity**

The converse is also true. Verifying the identity of consumers applying for loans on-line and obtaining a valid signature is a legitimate security concern for the financial service institution. FSIs have dealt with credit fraud for many years, essentially since the proliferation of consumer credit in this country. The Internet, while providing faster and more automated loan originations, also provides a fertile ground for consumer credit fraud.

Though it is unlikely that a fraudulent mortgage loan would be closed, it is highly likely that a fraudulent application would be received from an imposter posing as a legitimate consumer and then processed. Since personal information of the legitimate consumer whose identity was "stolen" would be exchanged with the perpetrator, this would open the institution to possible legal action by the injured consumer whose identity was compromised. It would also result in significant costs for processing and detecting the fraudulent application.

Efforts are currently underway to develop standards and mechanisms for identifying individuals and allowing for electronic digital and digitized signatures and digital certificates. Intel, in its Pentium III

product, has also attempted to incorporate electronic digital IDs, but most observers feel that this method falls far short of the level necessary, though it may be effective in concert with other methods.

### **Counseling**

Mortgage lending, unlike any other area of consumer lending, requires a wealth of data from the applicant, as well as detailed collateral information. A simple question about income can become quite complex for applicants who are self-employed or for whom commissions or bonuses comprise a substantial portion of their income. In addition, the Real Estate Settlement Procedures Act (RESPA), Truth-in-Lending Act (TIL), and the Home Mortgage Disclosure Act (HMDA), require certain product, rate, closing cost, and financing disclosures.

Few borrowers engage in real estate transactions frequently enough to be comfortable with the process, and most find it overwhelming. Many on-line originators are high tech at the expense of high touch, offering very little personal customer service. As a consequence, many borrowers prefer to use the Internet as a tool for comparison shopping and research and then apply for a loan in person with a local originator.

Those on-line lenders who offer borrowers more personal assistance will be more successful. Those who provide toll-free phone numbers, local representatives, and Web access synchronized with access to a customer service representative will find borrowers more amenable to the idea of applying on-line. In synchronized Web access, the lender provides a phone number the applicant can dial, in the midst of applying on-line over a secure page, to reach a customer service representative. The on-line page has a code that the customer can tell the CSR to indicate where he or she is in the Web application. The CSR can then walk through the Web page in question with the customer, and if necessary the remainder of the application. In answering questions, the CSR can use a cursor on the customer's screen to point out items on the page and lead the customer through required calculations and interpretations.

Eventually, as broadband access becomes more widely available, on-line firms will offer video conferencing solutions that will allow the customer to click a "Help" button and generate a real-time video feed with a live CSR. The applicant will be able to communicate with the CSR, and the CSR will be able to drive the customer's browser through the process.

Finally, successful firms will be those that avoid the temptation to simply divide the Fannie Mae standard 1003 application into discrete pieces and require their completion on-line. Quicken's TurboTax product became successful because of its simple, intuitive interface and interview process. In the TurboTax model, loan applicants answer simple, direct, and pointed questions presented on-line. The answers are automatically parsed and the data distributed to the appropriate locations throughout the application and disclosures. As each set of questions is completed, the application is updated, the information saved, and the cookie updated. Should a connection be dropped, the process need not be restarted.

### **Third-Party Providers (TPPs)**

Most consumer credit products are approved on the basis of a completed application and a credit report. Some products, like auto loans, also require proof of insurance and a purchase and sale agreement, for analysis of the loan collateral. Mortgage lending, however, requires the input of

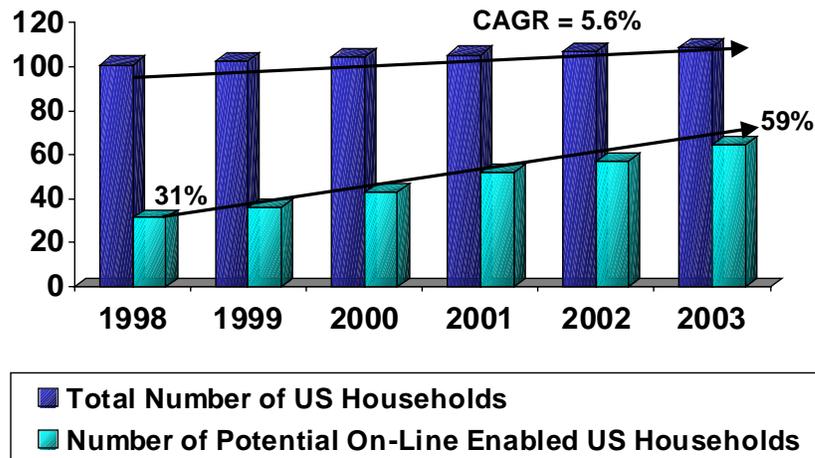
numerous third-party providers, including credit, automated underwriting, title, mortgage insurance, property insurance, legal, etc. Simply taking the application electronically does not imply that the application can be processed, approved, and closed electronically.

As explained later in this Research Note, the technology required to take an application electronically is complemented by a host of options underlying the new virtual production model of mortgage lending. Once in a digital format, application data, or components of the application, can be passed electronically to third-party providers, many of whom are ahead of FSIs in their use of the digital medium.

### Access

Though over 30% of US residents have access to the Internet, many connect over 28K, 33K, and 56K dial-up connections. The long mortgage application therefore can require quite a bit of time to complete if the connection is slow, the line has noise, weather interferes, or large packets are exchanged in the screen refreshes and data transmissions. Exhibit 2 indicates the current number of US households and the percentage of households that are Internet enabled. It also projects the growth of that segment.

Exhibit 2  
Growth in Internet-Enabled Households



Source: TowerGroup

Providing answers to this problem of slowness are various broadband solutions. Digital Subscriber Lines (DSL), the Integrated Services Digital Network (ISDN), and cable modems are becoming readily available throughout the United States. DSL, offered by most large Regional Bell Operating Companies (RBOCs), can provide speeds up to 7 Mbps. ISDN, the most mature of these high-bandwidth options, operates at speeds up to 128 Kbps (using dual channel in a residential environment, and up to 256K in commercial applications). Finally, and most recently, cable modems

operate at speeds up to 50 Mbps, though most operate through a T-Base10 Ethernet and are thereby limited to a theoretical 10 Mbps. ISDN and cable modem require the installation of special lines, while DSL requires a cable reconfiguration and different switching equipment at the “head.” TowerGroup expects that by 2003 nearly 60% of US households will be Internet enabled and over half of those will have high bandwidth access available.

### The Paper Chase

Despite the use of electronic file formats and EDI, there remains a considerable amount of paperwork in the current mortgage process. W-2s, pay stubs, and tax returns are often required for income verification. Bank and brokerage statements and HUD-1 Settlement Statements are used to verify funds to close. The automatic underwriting process often determines the need for these items and, depending on the lender, may require submission prior to closing or may be collected at the closing table. The higher the credit grade of the applicant, the more likely that these items will either not be required or may be collected at closing.

Again, as explained later in this Research Note, the technology required to take an application electronically is complemented by a host of options that will eliminate the need for many of these paper documents. Information will ultimately be retrieved digitally and electronically from third-party providers. Electronic tax filing services (ETFS) can provide income verification, while an FSI can link to other FSIs in the network using IFX for the gathering of debit and funds information. Credit data and underwriting are already routinely accessed on-line and have been for several years.

## Keys to Successful On-Line Mortgage Lending

For all on-line lenders, there are several keys to turning an on-line lending strategy into a success. A lender must seek ways to increase traffic to its Web site and then turn those hits into applications. Part of the challenge is to get consumers to associate a site with specific financial services, and then to anchor the consumer to the site, turning a convenience into a relationship. Too many consumers use Web sites simply to gather information and compare rates. They then use this information as a benchmark when shopping locally. We have identified a number of factors that will be key to the success of mortgage firms establishing a presence on-line:

1. **Provide “high touch” along with “high tech.”** Do not force customers to “go it alone” without the aid of a qualified counselor, should the customer require or desire assistance. Display the contact information prominently on the Web site and throughout the application process. For most FSIs, the on-line channel should exist as a complement to the FSI’s physical channels.
2. **Improve pricing.** The business model is based on passing on to the consumer the savings from the disaggregation of several players in the process. In reality, however, the aggregators rarely offer the best rates in a market. This is partly because someone still provides all of the processing and the aggregator receives a referral fee. Aggregators’ “par” pricing is usually not a wholesale rate, though this may change as the numbers grow. In the meantime, however, FSIs with production shops and wholesale or correspondent relationships still have a significant advantage in cost of funds.
3. **Gain a competitive advantage in technology.** Use virtual production networks to automate most facets of loan production or partner with processing outsourcers. Banks with streamlined

processes can maintain lower production costs which, combined with servicing release premiums, will generate overall greater profits on lower retail pricing.

4. **Generate multiple product bookings from each application or referral generated.** This strategy entails issues of data ownership for FSIs and aggregators alike, as well as questions of permissible credit data use. However, such multiproduct approvals are ways to increase the revenue per customer, and more importantly, the relationship. CRM is of particular value here.
5. **Attract traffic to the Web site without the high cost of portal and banner ads,** and then convert the hits to applications. Banner and portal advertising strategies must be carefully evaluated. Most do not provide the returns expected.
6. **Make the site “customer friendly,” easy to navigate, and content rich.** Offering customers re-marketed products and links to partners can increase the value of the site beyond the FSI’s limited offerings and induce the customer to return to the site after obtaining the loan.
7. **Allow profiles, like Quicken, and provide links to other, complementary services.** For security, customers prefer that their profiles reside on their own machines but be invocable via cookies or other means when needed by the FSI. This allows consumers to apply quickly and easily for other products and search through product databases, and it provides a backup of important data. It also allows the FSI to personalize content for a visitor who returns.

### **Virtual Production—The Future of Mortgage Processing**

Over 20 years ago, major automobile manufacturers like Toyota and GM introduced Electronic Data Interchange into their production processes. They created networks of interconnected suppliers, vendors, and subcontractors, automating all aspects of ordering, billing, invoice tracking, and materials and resource planning. Today we see this model beginning to make major inroads into mortgage lending. Despite the tremendous expected growth in on-line originations, we expect on-line production service (business-to-business) to grow at two times the rate of on-line origination service (business-to-consumer). This growth is largely fueled by the following factors:

1. Businesses are more comfortable with the technology.
2. Access by means of value-added network (VAN), virtual private network (VPN), and Frame Relay affords greater security and guaranteed delivery.
3. There is greater certainty about whom you are dealing with at the other end of the connection.
4. Virtual production affords opportunities to streamline the process and cut costs. The desire to utilize technology is forcing a change in an antiquated model.
5. Whether the application (Fannie Mae 1003) is completed on-line or by a broker, the data is already in a digital format for most lenders.
6. Eventually, access to channels and providers may only be available digitally as the cost differential between digital and manual interfaces widens. Lockout becomes a concern, and the fees charged for services that are not automated may rise, discouraging their use.

## **Electronic Production Networks: The Heart of Digital Production**

Most point-of-sale (POS) and Internet-based applications create electronic files as the loan application data is entered. For many firms, this file then passes into a loan production system, where it is “workflow managed,” i.e., by an automatic workflow engine, through the firm’s internal production process. In most cases, interfaces exist to credit repositories and to Freddie Mac’s Loan Prospector (LP) and Fannie Mae’s Desktop Underwriter (DU) automated underwriting systems. Some systems also support interfaces to mortgage insurance (MI) companies and the Mortgage Electronic Registration System (MERS), but most other third-party contact is routed by workflow to an individual within the production center. This person then orders the required items, inputs the order date and information into the systems, and then updates the record when the item is received, or follows up when the item is escalated (past its allotted time) by the workflow engine.

The challenge then is to pass these third-party requests on to third-party providers and third-party systems electronically, and to allow the workflow engine to monitor the status of these requests. When an item is received, the engine should update the task’s status and route the application as necessary. If the task is not completed in the allotted time, the engine should send a follow-up request and escalate the importance of the task and generate an exception item. While more robust workflow-enabled systems do perform this level of task tracking, oftentimes the third-party provider receives a fax or electronic request, performs the work, and then mails or faxes the results to the FSI. Even when the task request is generated electronically, the process eventually often includes significant manual components.

Many of these third-party providers already employ systems that are capable of passing data with other systems using EDI, application programming interfaces (APIs), or standard messages. The X12 data set continues to evolve and gain wider acceptance in mortgage banking, and often it is the FSI, not the TPP, that lags behind. For example, many appraisers and appraisal management firms already generate appraisals on computers and snap digital photographs of the subject and comparable properties. However, most lenders are not yet prepared to receive these electronic files, but continue to point to the appraisers as the obstacle.

Firms like Pinnacle X12 and Appraisal Services, Inc. have provided appraisers the means to save and transmit files electronically. The lender’s ability to accept them will affect the total time required to process a mortgage loan. The increased use of automated valuations models (AVMs) will provide the final piece of the puzzle, which will dramatically shorten the appraisal process, currently the most time consuming of all TPP activities. When these electronic files are delivered via digital channels, the appraisal time should drop to 72 hours, and many AVM appraisals will require substantially less time than this and a drive-by inspection.

Larger FSIs began creating networks of suppliers within proprietary value-added networks (VANs) to address their communications needs. This can be effective for the FSI, but since the TPP usually deals with multiple FSIs, managing multiple networks and connections can be cumbersome and expensive for most TPPs. Exhibit 3 sketches a sample network, operating over the Internet, that links several lenders, appraisal management companies, and appraisers.

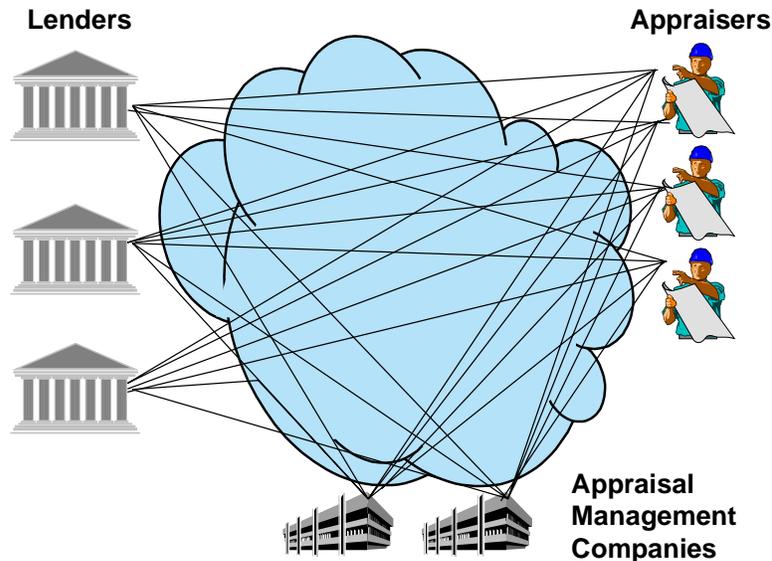
### ALLTEL InterChange and BCE Emergis E-Relay

When more TPPs and lenders are added, the complexity of the network and the technology and software needed to create interfaces with each partner grows exponentially. The need exists to standardize the interfaces and software so as to reduce the complexity and the need for proprietary interfaces. This need has sparked the advent of third-party electronic commerce (e-commerce) networks, like InterChange from ALLTEL and E-Relay from BCE Emergis.

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#### Exhibit 3

#### Standalone Networks Require Proprietary Interfaces and Are Cumbersome for Many TPPs



Source: TowerGroup

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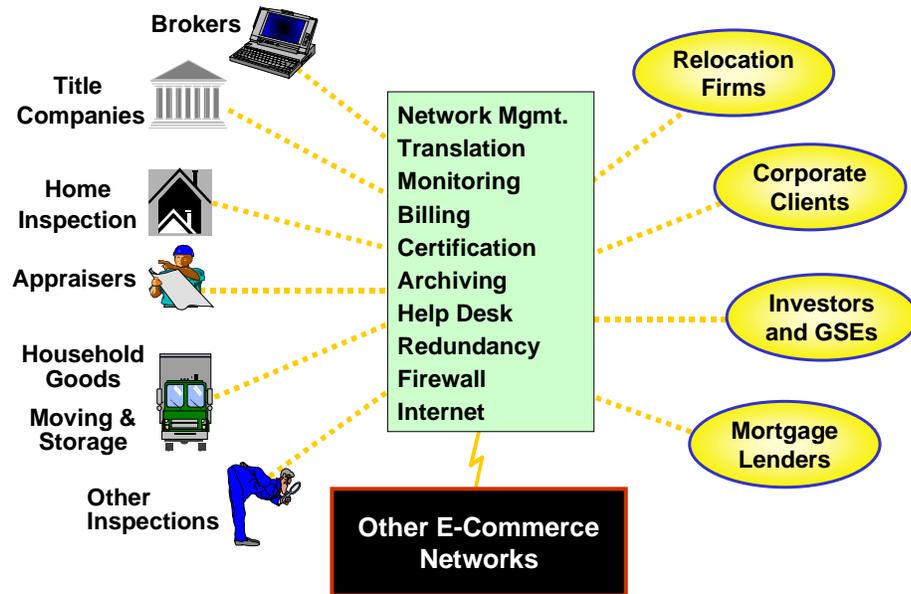
Exhibit 4 depicts this type of e-commerce network structure. Electronic commerce networks provide a technical architecture whereby industry participants can communicate in an industry-standardized format.

Both ALLTEL and BCE Emergis offer secure networks with the advantages of guaranteed delivery, service level agreements, firewall protection, monitoring, and guaranteed “up time.” TPPs can connect directly to the network and receive instructions and route completed or requested components to the appropriate institution(s).

Fannie Mae is also working toward creating an e-commerce network linking appraisers, mortgage insurance companies, and credit bureaus within MORNETPlus. The InterChange and E-Relay networks also have the capability to connect or interface with other e-commerce networks like MORNETPlus and Goldworks. InterChange has been in existence for many years but was developed primarily for ALLTEL’s network of servicing clients and providers. ALLTEL has recently expanded the network to include origination-side TPPs and has incorporated its originations service bureau, called Interact Online. E-Relay is a newer network, designed by BCE Emergis from the ground up as an e-electronic commerce network specifically for the origination and production business.

Exhibit 4

**E-Commerce Networks Fill Connectivity Gap**



Sources: TowerGroup and BCE Emergis

**E-Networks for the Other Half: Industry Efforts to Assist Brokers**

For many years, mortgage brokers had production economies of scale that large lenders often could not match. Brokers have more recently been concerned over being locked out of the technology loop, especially since both Freddie Mac and Fannie Mae make their automated underwriting systems available only to seller/servicers. This concern is becoming moot, however, as two networks have developed to keep brokers “in the loop.”

**Lenders Interactive Online Network (LIONINC.com)**

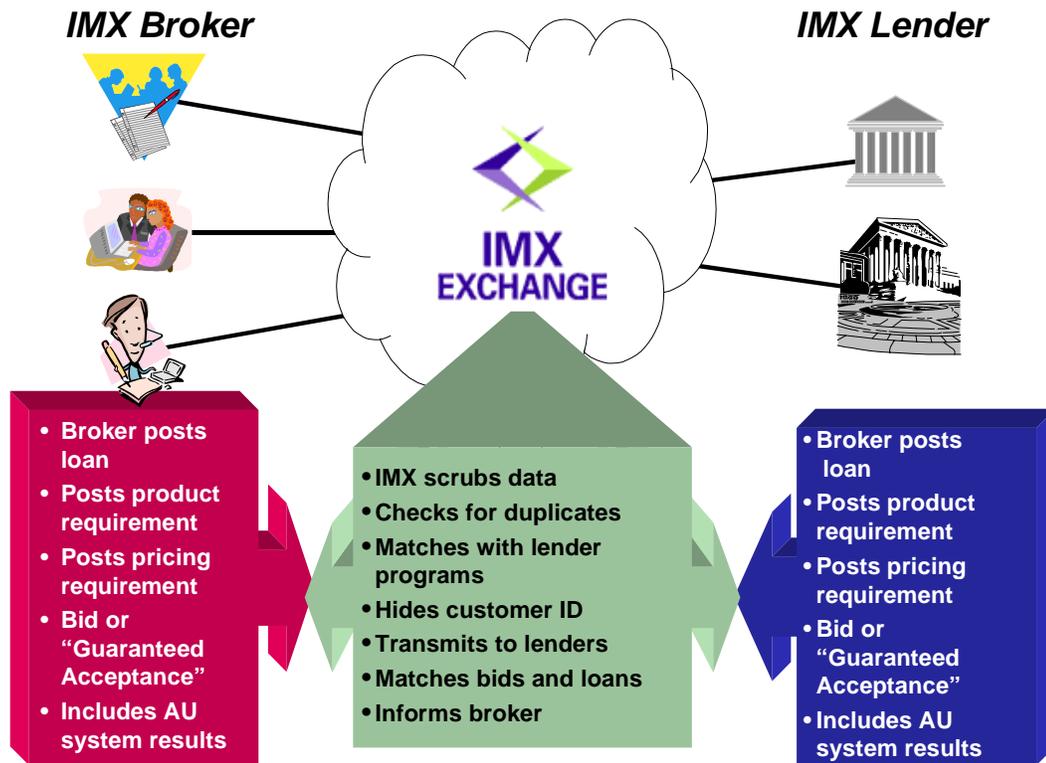
Lenders Interactive Online Network (LION) provides an Internet portal for distribution of rate, product, and program information from about 350 wholesale lenders to over 4,500 mortgage brokers across the United States. Recently, through its relationship with Fannie Mae, Mortgage.com, and Homeside Lending, LION has begun making Desktop Underwriter (DU) and Desktop Originator (DO) available to brokers. Access will expand greatly as additional seller/servicers join the ranks of Homeside. This arrangement brings point-of-sale decisioning to the broker community, which generates nearly half of all retail originations in the US. TowerGroup anticipates that this model will be pervasive because it greatly benefits both lenders and brokers, and we expect that Freddie Mac will follow closely behind. Some of the major benefits of this network, and of IMX Exchange (discussed later in this Research Note) will be additional access to specialty lenders, greater program variety, and delivery capability to subprime lenders. Most brokers would like to serve the subprime market, but usually can provide only a referral to a subprime lender.

## IMX Exchange

Exhibit 5 depicts the IMX Exchange business model. IMX provides an environment for brokers to input loan information into a database. The IMX system scrubs the data and conceals borrower specifics. The system then submits basic details to lenders, who may bid on the loan by offering their best price (rate and points). After the bidding, IMX matches the offer with the best bid and notifies the broker of the offer. The broker accepts the bid and IMX notifies the lender of the broker's acceptance. As of June 1999, IMX had 70 participating lenders and over 750 subscribing brokerages representing over 4,500 mortgage loan originators.

Exhibit 5

### IMX Exchange: A Mortgage Loan Bidding Environment



Sources: TowerGroup and IMX Exchange

IMX version 3 includes IMX Broker and IMX Lender. The software is tightly integrated into several loan originations systems (LOS), including Calyx's POINT, one of the dominant broker LOS systems. From within POINT, the broker can initiate the IMX program, allowing brokers to link effortlessly to IMX Exchange from within a POINT file. IMXLender's XpressBid function automates the process of both searching for appropriate loans based on the lender's criteria and then placing bids. Lenders can use XpressBid to place bids on up to 400 loans per minute.

Another new feature of IMX is XpressMatch. This functionality enables the system to react to loan postings in real time. Brokers seeking to place a particular loan can be notified instantly if there are loan programs that match their loan criteria. The loan can be delivered immediately to the lenders who can automatically generate bids on the new posting in a matter of seconds. A broker can also include the automatic underwriting decision within the loan file so that the bidder has comprehensive information and can make a complete and nearly final loan decision. A broker might choose to post the loan as a "Guaranteed Accept." This means that the first lender who meets or beats the ask terms of the loan receives the loan, and thus the transaction can take place in seconds.

Another advantage of this system is its improvement on the traditional method whereby each broker had to apply for a relationship with each lender individually, going through a full background and fiduciary investigation. A lender would then have to approve the broker before their relationship could begin. Now, IMX—acting as the intermediary—completes this process once for each broker and then enables the broker to interact with all lenders in the network.

The benefits to the broker are obvious, but this model provides significant benefits to the lender as well. Though the lender will not likely seek to transact all of its purchases through a bid-ask mechanism, this mechanism provides the ideal opportunity to purchase specific loans, credit qualities, or product types in order to balance portfolios or manage risk, or to purchase loans as needed to fill a commitment. Distributing rate sheets to dozens of brokers requires that a real costs-of-funds rate be distributed. Through the IMX model, an investor can "buy" the market by offering better pricing on select loans through bids as needed to fill a commitment and then discontinue the discount pricing. IMX began operation in October 1997, and by the time it hits its second anniversary, will have provided a trading platform for over US\$2 billion in mortgage loans, with growth of 70–80% per year expected over the next several years.

### **Service Bureaus: Making the Internet Viable for More Participants**

Service bureaus (SBs) for account processing, application processing, and merchant transaction processing have been common for many years in the credit card industry. Their use by the mortgage industry has been limited almost exclusively to the servicing side. However, changes in this pattern are occurring and their usage is expected to increase. Below we examine three service bureaus that focus on different areas of the business but have in common the goals of bringing greater electronic access and improved economics to their respective customers.

#### **ALLTEL**

ALLTEL has recently introduced a service bureau for mortgage loan application processing that is based on its Interact on-line LOS system. The firm will utilize its InterChange network to bring elusive economies of scale to a greater array of production shops across the country. Electronic networks and the Internet will be vital parts of the process, as loans will be forwarded, processed, approved, and decisions communicated over electronic channels. ALLTEL has expanded, and will continue to expand, its array of TPPs within the InterChange EDI network. The firm expects to capture as many of the benefits of virtual production as possible, expanding its reach as new and better options develop. As a major servicing force, ALLTEL's connections with the Government Sponsored Enterprises may also help it to have an impact on the future of electronic commerce in

mortgage banking as EDI and streamlined processing continue to evolve within the industry and standards are established.

The ultimate success of the venture will depend on the economies that ALLTEL can generate for its subscribers and the level of service it can deliver. However, ALLTEL has the advantage of dominating the servicing market and of understanding the needs of mortgage lenders and servicers alike. ALLTEL is also known for investing in its technology and responding to its customers' needs.

### **ARC Systems**

ARC Systems has developed a service bureau for on-line lending, product matching, and automated underwriting for lenders that desire a sophisticated suite of on-line tools but lack the resources or budgets to develop them in-house. ARC Systems deals with many large, small, and specialty lenders, integrating the lender's Web site into ARC's service bureau. The lenders access ARC's database, which houses the lender's data, programs, rates, guidelines, credit policy, and underwriting criteria. When visiting the lender's site, a consumer can apply for a loan on-line. The information is transmitted to the ARC system where a credit file(s) is (are) retrieved, merged, and scrubbed. The application is then evaluated against the customer's product request and the lender's parameters for that product. The loan is then scored and underwritten and a decision is rendered within 30 seconds. Both the lender and customer are advised of the decision and the lender receives the entire customer file, including application data, credit, and other scores and approval conditions.

The ARC system has several unique characteristics and is capable of evaluating mortgages, credit cards, auto loans, insurance, and personal loans. The primary focus in mortgages, at present, is in the second mortgage and home equity line products, but expansion into first mortgages has begun. Already, the system is being used for underwriting subprime loans, and conventional conforming is not far behind. The system also incorporates a special payoff algorithm (LT2k) capability unique in decisioning systems. If a consumer's qualifying ratios exceed the program's allowable ratios, LT2k is capable of determining what debts should be paid off and what funds should be loaned in order to make the most efficient use of the funds, taking into consideration interest rates, cash required, loan amounts, and loan-to-value ratios. In the past, this process has been at the underwriters' discretion, and rarely was in the consumer's best interest.

### **Landsafe Credit System (LCS)**

A joint venture of IBM and Countrywide, LCS is an engine for credit retrieval, merging, scrubbing, and scoring. Its initial target market is the broker market, but its uses go beyond brokers to loan officers, auto dealers, loan aggregators, marine product dealers, etc. LCS is accessible over the Internet and allows the subscriber to enter data about a particular customer. The data can then be retrieved and merged from all three major bureaus, scrubbed for old and duplicate information, and scored. The credit score and details can then be returned to the subscriber via the Internet, a fax machine, a pager, or even a personal digital assistant (PDA). The broker can then determine the best investor or other action based on the feedback.

The strength of the LCS system derives in part from its unique scoring engine. It is quite different than the Fair, Isaac Bureau Score. For instance, if a customer has a good and steady income, a long trade history, carries a high level of debt, is never significantly late, but periodically incurs a late fee, then the customer's LCS "value" score will be higher than the FICO score might indicate. This

reflects the fact that the LCS scoring engine expects that the customer will generate greater revenue for the FSI, without a significant increase in risk to the lender. Acceptance of this score is still required by the lender, however.

## **Conclusion**

Virtual mortgage banking continues to grow by leaps and bounds, and on-line originations is only one component of the growth. While on-line lending is expected to exceed 10% of the market by 2005, several obstacles still remain to its broad acceptance. Considerable obstacles in the industry's structure will inhibit growth of the on-line segment, at least for the next 3–5 years. As these obstacles are overcome, TowerGroup predicts that on-line lending could potentially comprise half the total market within the next 15 years.

Virtual production is an entirely different issue, however, and its growth will continue to be significant. Virtual production has enabled lenders to increase efficiency, expedite processing, and create faster and more accurate exchanges of information. Third-party requirements are now more easily ordered, tracked, and delivered, and significant opportunity exists for the continued growth in this market. Automated underwriting is now the main mortgage lending related activity that takes place on-line, and the integration of mortgage insurers, title companies, appraisers, and insurance firms is occurring rapidly. Already brokers, responsible for nearly 70% of the nation's mortgage originations in 1998, can choose two different networks designed to allow them better access to lenders and technology.

Firms wishing to have a presence on-line or to improve their efficiency need not build these capabilities in-house. Everything from automated underwriting to loan production and servicing is now available through service bureaus. This trend is expected to continue, and to contribute to the commoditization of mortgage money. The mortgage industry in 2005 will likely bear little resemblance to the industry of today.



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