Intuit Inc.: On-line Banking (A)

Seated in his kitchen, Scott Cook slowly leaned forward and hung up the phone. The deal was off -- so said this morning’s announcement from Microsoft headquarters in Redmond, Washington (Exhibit 1). The on-line banking “Dream Team” was not to be. On-going inquiries by the Department of Justice into Microsoft’s $1.5 billion acquisition of Intuit Inc. had caused the software giant to decide to not go forward with the acquisition. The potential prize was just not worth another fight with the DOJ.

To Scott Cook, the founder and Chairman of Intuit, the May 20, 1995 announcement was just a formality. However, this officially put to an end a deal that would have significantly increased Intuit’s chances of dominating the on-line banking world, made him a director in the world’s most powerful software company, and increased his net worth by several hundred million dollars.

For Intuit, the world was rapidly changing and Cook needed to chart a strategic course that would allow Intuit to not only compete, but to flourish. Everybody was talking about on-line banking and it seemed as if many players were already forming partnerships. The Microsoft Network was set to come into existence and Prodigy, America Online, and CompuServe were signing up customers at unbelievable rates. Citibank had already established their own on-line network and it appeared that other financial institutions were going to do the same in the near future. CheckFree had shown that paper free transactions were possible and would be accepted by the retail consumer. VISA, MasterCard, and American Express had all suggested that they would bring their knowledge and experience in consumer transactions to bare in this market. There were also rumors about AT&T and the RBOCs. And what about Microsoft?
Intuit
In 1983 Scott Cook set out to develop a high-tech product that would play to the marketing skills he had developed years earlier at Procter & Gamble as an assistant brand manager for Crisco. “I wanted to reach a mass market,” he explained. “My thinking was that every household in America has to pay bills. This is something computers should be good at.” 1 To handle the programming chores, he hired Tom Proulx, a Stanford University student who responded to a flyer Cook put on a university bulletin board. Proulx began writing the software code on a PC in his dorm room. Cook, meanwhile, went to work surveying potential customers via the telephone.

From his telephone surveys Cook learned that people liked the idea of having more control over their home finances but thought it much too tedious and time consuming. Probing further, as he had learned to do at P&G, he found that PC owners were eager to simplify bill paying, budgeting, and monitoring their investment portfolios, but resisted the idea of learning “computerese” to perform a simple task like writing a check. So he guided Proulx into designing the software to mimic the tasks customers were doing by hand. Bill paying, for example, was to be done by typing the information onto a screen that looked like a check. “You can’t alter people’s habits,” Cook explained. “That’s why Pampers were white and looked just like cloth diapers in the beginning. Once you get people hooked, you can move them to colors.” 2

Intuit’s approach of applying consumer marketing techniques to software proved highly effective. When Quicken went on sale in 1984, it cut in half the average bill-paying time of three hours. Still, it took Cook and Proulx almost two years to break into the marketplace with their unknown product.

Although Quicken had received good reviews from a couple of trade publications, retailers didn’t want to take on a package from an unknown company—not the kind of news his years at Procter had prepared him for. Cook thought the articles would get people going into stores and asking for Intuit. In actuality, there was a flood of software on the market, and the press ended up generating sales for Intuit’s competitors.

The company generated limited sales by marketing the package through banks, but by mid-1985 Cook and Proulx, who had already stopped taking salaries, had to lay off their staff of five. In 1986, using a direct marketing campaign designed to bypass retailers, they gambled their last available cash. Cook and Proulx spent $110,000 to run a series of ads in trade publications like PC and Byte.

Calls came pouring in, including one from Egghead Software. The 186-store chain, impressed by their advertising, wanted to stock Quicken. “If it had failed we would have been out of business,” said Proulx. “By that time we were prepared to get out and get on with our lives.” At the time of its release in 1984, Quicken was the 43rd personal finance software package on the market. Four years later, thanks to constant refinements based on Cook’s continuing market research and customer trials, sales of Quicken surpassed those of the then market leader, Managing Your Money. Annual revenues were at $33 million and growing fast. 3 Exhibit 2 provides selected financial data for Intuit Inc.

Venture Capitalists
At this time Cook realized that he and his management team had to shift from an entrepreneurial mindset to one suitable to running a complex company. Cook wasn’t sure he could lead Intuit through its growing pains on his own. He rejected hiring consultants because he wanted someone who would live with the company and help with its long-term problems. “We were looking for parents, not night-school teachers,” Cook argued. He decided to pursue venture capitalists in order to tap their substantial business experience. Cook also felt that you could count on their heartfelt involvement, commenting, “You get a lot of attention from people when you have a few million bucks of theirs.” 4

Cook interviewed dozens before selecting four talented venture capitalists: John Doerr of Kleiner Perkins Caufield & Byers, Burt McMurtry and John Johnson of TVI, and Peter Wendell of Sierra Ventures. They bought 20% of Intuit, with Doerr and McMurtry joining the board.

Each contributed up to twenty hours a week of his time. To begin with, the venture capitalists taught Cook and his team how to find good legal advice and steered him away from an outside supplier with a bad reputation. Their counsel went much deeper. Doerr, who made his mark as an early backer of Compaq and Sun Microsystems, introduced Intuit to a strategic planning system he had used as a manager at Intel in

2 ibid.
3 ibid.
McMurtry, formerly at GTE, was an operations whiz. He persuaded Proulx to quit as head of R&D. McMurtry saw that Proulx was more creative thinker than administrator, and suggested he’d be happier working on acquisitions and future business. A new R&D chief, experienced in product development, was able to greatly expand the number of products launched.

Peter Wendell’s contribution, offered Proulx, was his “great strength in people management.” Wendell taught Intuit a business world equivalent of the Socratic method, raising searching questions that forced people to reach novel conclusions. A different style, Cook recalled, from the old startup days: “It wasn’t telling, ordering or yelling. Peter got them to think about the business in new ways.”

**Personal Financial Management**

By 1995, Intuit was the clearly the market leader in the personal finance software market with over 7 million installed users compared to Microsoft *Money’s* 1 million. This installed base provided Intuit with a sizable set of satisfied users who continued to recommend its software products. Moreover, Intuit continued to receive high ratings from software reviews for their ability to present a personal finance software application which was easy to understand and use. These factors helped Intuit maintain its leadership position within the personal finance segment.

Other players in this market included MECA (*Managing Your Money*), Kiplinger (*Simply Money*), and Parsons Technology (*MoneyCounts*). Both *Managing Your Money* and *Simply Money* were rated highly by software analysts, but lacked the on-line banking capabilities of other packages. Kiplinger’s product had the advantage of coming from a publisher of guides to taxes, insurance, and investments. This allowed *Simply Money* to provide excellent advice as part of their package and draw from Kiplinger’s customer base. *Managing Your Money’s* greatest assets included the quality of its planning package and its agreement with CompuServe that aided users in tracking their investments. Despite these strengths, none of Intuit’s competitors had been able to forge anything more than a small presence in the market.

**The Market for PFM Software, 1995**

<table>
<thead>
<tr>
<th>Package</th>
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<tr>
<td><em>Quicken</em></td>
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<td><em>Money</em></td>
<td>1,000,000</td>
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<tr>
<td><em>Managing Your Money</em></td>
<td>600,000</td>
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<td><em>Simply Money</em></td>
<td>200,000</td>
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<td>All Others</td>
<td>300,000</td>
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However, despite Intuit’s seemingly strong position there were reasons for concern. Intuit had recently incurred highly publicized bugs in its *TurboTax* tax preparation software. The company had received high marks for promptly offering to replace the software on demand for Intuit’s 1.65 million customers even though the bugs would have probably impacted fewer than 1% of the customers. Still, Intuit was concerned that another highly publicized blunder in either personal software or electronic transaction processing would provide competitors with the opportunity to gain market share.

**New Products and Acquisitions**

With *Quicken* well positioned as the leader within the rapidly expanding personal finance category, Intuit looked into other areas of growth. In 1990, Intuit partnered with CheckFree, a company which allowed *Quicken* users access to electronic bill payment. In 1993 the company announced a public offering of 1,500,000 shares of common stock. Capital in hand, Intuit merged with Chipsoft, Inc., makers of the popular *TurboTax* and *MacInTax* tax preparation software products, which allowed them to provide more complete and closely-integrated financial solutions.

Intuit also enhanced its product line through numerous line extensions. Pocket *Quicken* was developed for use on a personal digital assistants (PDA) such as Apple’s Newton. *QuickBooks*, an “alternative” to traditional accounting software, became the number one selling bookkeeping software. The product was designed for small businesses, and required no knowledge of debit and credit accounting principals. *QuickPay* and *QuickInvoice* were also developed for small business users who were looking for easy to use software for payroll processing and invoicing.

In late 1993, Intuit established a long-term partnership with VISA to create products and services that would provide

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5Ibid.
7Intuit established a contractual relationship with CheckFree, which was set to expire in June of 1995.
fully automate financial tasks. Further, in early 1994, Intuit acquired Virginia-based Best Computing, which allowed the company to utilize Best’s tax expertise and existing call center to provide nationwide technical support for their tax products. Shortly thereafter, in July of 1994, Intuit acquired National Payment Clearinghouse (NPC) of Downers Grove, Illinois. NPC, an electronic service center, was renamed Intuit Services Corporation, through which Intuit planned to offer on-line banking services to Quicken users. Intuit Services was positioned to perform two roles: First, it would provide the communications between banks and their customers who used Quicken. Second, it would send payments to merchants after a bank had approved its customers’ instructions.8

Intuit Services, like CheckFree and other electronic bill paying services, simply cut checks to pay the bill for their customers. By integrating a bill paying service within Quicken, Intuit aimed to bring to the table a wealth of consumers. Their goal was to work with banks -- or if banks were not up for it, to work with processing companies -- in order to convince merchants to accept electronic payments. By serving as an intermediary, Intuit hoped to generate the high volumes on both sides necessary to make true electronic payments a reality.9

In April, 1995, William Campell, formerly of Kodak, Apple, Claris, and Go Corporation, joined Intuit as their new president and CEO. While Intuit had grown to a $400 million company, Campell and Scott Cook, now Chairman of the Board, would have to navigate Intuit through the enormous uncertainty surrounding the future of on-line banking.

Microsoft

Founded in 1975 by Bill Gates and Paul Allen, Microsoft had become a behemoth in the personal computer industry by 1995. The first software company dedicated to microcomputer products, Microsoft developed the BASIC language for the first generation of machines, including the MITS Altair, Apple II, and Commodore computers. In 1981 Microsoft’s place in history was initiated. The company was chartered to supply the IBM PC with their MS-DOS operating system. DOS, along with the enormously successful Windows operating systems

that followed, gave Microsoft a substantial advantage in developing software and suite packages that ran on these systems. By 1995, Microsoft Windows, Excel, Word, and Powerpoint were being used on over 100 million computers worldwide, fueling revenues in excess of $4.6 billion.

Microsoft had made some discreet inquiries to see if Intuit might be acquired as early as 1990. Cook, knowing the value of a strong brand, turned down Microsoft before the talks became serious. Ex post, this was a great move for Cook. Intuit went public a short time later, making both Cook and Proulx multi-millionaires, and Quicken became a stunning success, capturing over 75% of the market for personal financial management software. Microsoft, however, would not be denied. In November, 1994, Microsoft offered $1.5 billion for Intuit. The merger was immediately attacked, eventually coming under investigation by the DOJ. With the May 20 announcement May 20 Microsoft killed the deal, having decided to move on rather than forfeit more time and money. Bill Gates, it appeared, had missed his opportunity to acquire Intuit.

Microsoft, however, had positioned itself well for the possibility of a failed Intuit acquisition. The company’s personal financial management package, Microsoft Money, had just been improved and was slotted for launch with Windows 95 in August. Microsoft planned to make the software available free of charge from the Microsoft Network (MSN) and from the World Wide Web. Although Microsoft had been practically giving Money away for years, there appeared to be a big difference this time.

Money for Windows 95 was also to be integrated with financial services content on MSN. The extent of the integration was not revealed, but it was estimated that customers of Microsoft’s 17 bank partners would be able to access content from their bank. This included customer service information, product specials, and loan applications. MSN’s reach, the access to free Money, and Microsoft’s contacts within the banking world were expected to generate significant trial of home banking.

Finally, it could not be forgotten that Microsoft had previously demonstrated its ability to surpass seemingly dominant applications. Specifically, MS Word and Excel had displaced Lotus 123 and WordPerfect as the market leaders in word processing and spreadsheet markets. It was certainly possible

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8As of May, 1995 this service was only available to Money users. Quicken was planned to come on-line during the fall of 1995.
that Microsoft could repeat this process in the personal financial management segment.

**Electronic Transaction Processing**

While consumer software companies controlled the interface with the consumers, the transaction processors provided the clearinghouse functions which linked the consumer, merchants and financial institutions such as banks and brokerage houses. CheckFree and Intuit Services were the two major players in this segment which was still emerging in terms of both competition and capabilities. In theory, the transaction processors would eliminate the paper from bill payment by utilizing an electronic transaction system to settle consumers’ bills with merchants.

In reality, the capabilities of the transaction processors were less than impressive at the time. The vast majority of transactions were electronically *originated* -- not necessarily completed. As a result, bill payments were generally electronically transmitted to the clearinghouse which then printed a check and mailed it to the merchant. Consumers generally did not know that checks were being mailed and only found out when there was a problem with their bills. Concerns regarding security, transaction monitoring and merchants inability to handle electronic payment all contributed to the transaction processors’ failing to complete the settlement electronically.

**CheckFree**

CheckFree Corporation was founded in 1981 by Pete Kight, who went door-to-door in his Columbus, OH apartment complex in order to convince residents to pay their rent automatically. From there, CheckFree created a system of automated monthly payment and electronic funds transfers that were sold to small businesses. In 1988, the service was expanded to include consumer payment services.

By 1995 CheckFree had established itself as the leading player in the industry by providing the transaction processing for several personal finance management software packages including Intuit’s *Quicken*, MECA Software’s *Managing Your Money* and Kiplinger’s *Simply Money*. In 1995 CheckFree estimated that it would process more than $10 billion in payments for more than 6 million households and businesses -- which represented 70%-80% of the market. This represented a significant increase over the $6.7 billion it processed in 1994.

CheckFree had established relationships with lenders and was already providing PC and telephone bill payment services for customers of 21 financial institutions. Recently, CheckFree had begun to aggressively market a private label bill payment service for banks by running full page advertisements in trade journals. This marketing campaign was seen as an aggressive move and would likely address banks concerns about losing contact with the end consumers. CheckFree’s payment service, although getting good reviews, had made little penetration into the market by May of 1995.

Profiles of other notable technology players such as Netscape, America Online, MECA, and AT&T can be found in Exhibit 3.

**On-line Banking**

The vision of on-line financial institutions which could offer consumers greater convenience at a significantly lower cost than traditional retail banks was not a new concept. However, by early 1995 several forces were converging to increase the probability of widespread on-line banking in the near future. Taken to the extreme, on-line banking would completely transform the way in which financial services would be delivered to consumers. Exhibits 4 and 5 provide some perspectives into the past, present, and future of on-line banking.

Probably the most important trend had been the recent and expected growth in modem-equipped personal computers in the home. By the year 2000 it was expected that almost 40% of U.S. households would be equipped with PCs with modems. In fact, in several key customer segments PC/Modem penetration already exceeded 40% of households. (see Exhibit 6) These figures were even more important because the penetration was disproportionately higher in young affluent households. While these customers still faced limited on-line offerings, confusion as to the best way to access the different offerings and uncertainty regarding guaranteed security of the information transmitted, the basic foundations for on-line delivery of banking services was already in place.

Additionally, the past fifteen years had seen a dramatic rise in the level of technological aptitude throughout the general population. Innovations such as personal computers, modems, fax machines, voicemail, on-line services, the Internet, banking by phone and automatic teller machines had all served to increase people’s comfort level with technology. ATMs, in particular, had demonstrated how retail banking could be reshaped by the introduction of the
new technology. “It took a while for consumers to accept the ATM, but now people do not know how they would do without them,” said Catherine Graiber, senior vice president for BankAmerica Corporation’s interactive banking division.10 Of BankAmerica’s five million customers, only 25,000 were currently using its home banking service. This had not discouraged optimists within the corporation that believed that before too long, plenty of people wouldn’t know how to bank any other way.

Finally, the recent trend of bank mergers and acquisitions was having a noticeable impact on the banking community. Banks were under increasing pressure to reduce costs either to improve performance following a merger/acquisition or to improve profitability to prevent becoming a takeover candidate. As a result, banks were looking for ways to reduce the volume of paper transactions and the number of expensive retail branches, while still providing a satisfactory level of cost-effective customer service.

Benefits of Online Banking

Properly implemented, electronic commerce offered banks the opportunity to achieve higher levels of customer service. Customer service could be greatly enhanced by offering products and services to consumers at times when they typically thought about finances (i.e. nights and weekends). Banks were also attracted to the prospect of dramatically improving their ability to sell their products and services by strengthening the interface with customers and the ability to customize products for specific segments of consumers.

The development of on-line banking also offered banks the opportunity to greatly reduce the costs involved in servicing customers at branches or by phone. Traditional banks and financial institutions suffered from burdensome delivery systems based on brick and mortar, branches and paper. With these systems, many customers were unprofitable. On-line banking, on the other hand, would avoid both the expense of physical branches and, in the long run, the processing costs associated with paper transactions. By carefully targeting its customers and service offerings, a phone-based direct bank could secure a 30 to 40 percent cost advantage over traditional banks, thus redefining cost-effectiveness for the entire industry.11

In practice however, banks were less sure as to which services consumers would prefer on-line as opposed to in a traditional way. In addition, on-line banking still had some inherent limitations, e.g. how do you withdraw cash? This uncertainty, and banks’ traditionally risk averse culture, tended to make banks hesitant to invest. Traditional financial service firms tended to take a “wait and see” response, only making incremental improvements to their operations. They would make ad hoc investments in new distribution systems like phones or PCs, and participate sporadically in industry alliances and consortia, but never take a clear leadership role. Clearly, banks who could understand and implement the “right” model would have a noticeable advantage over its less informed peers.

Challenges of Online Banking

While on-line banking presented several interesting opportunities, it also created a new set of problems for banks. They were faced with a new series of distribution channels for their products in a rapidly changing environment where the major competitors came from outside the banking industry. Banks had traditionally been at the center of the consumer payment system, but the advent of the information superhighway allowed for the possibility that new entrants could significantly change the way banks interacted with customers. These new competitors had a very different agenda than the banks, and their economic model for their products was based on a different set of operating assumptions.

The banking industry had five key concerns:

1. The disintermediation of the customer from the bank, i.e. the bank would no longer be a significant contributor to the management of the customers’ financial affairs. Firms which could control the software interface or payment and billing mechanisms would be able to capture much of the value of the transaction.

2. The competitors that the banks faced in the on-line banking market had different agendas than traditional banking competitors.

3. If electronic banking succeeded to the extent predicted by some analysts, it would also threaten the bank’s current transaction based credit card and checking business.

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10 United States Banker, October, 1995, p. 66.
4. The customers most likely to be attracted to the features available with on-line banking were also the banks’ most profitable customers.

5. Would banks be able to leverage their current relationship with the customer in order to limit the in-roads of competitors and take advantage of opportunities? Or would consumers utilize their chosen software, whether it was Quicken, Money or another product, to shop for banking products which they viewed as non-value added, unbranded, interchangeable commodities?

An additional implication with a somewhat longer time horizon was the role that on-line banking would play within an electronic mall. It was argued that in the software business, the electronic shopping mall that software companies provided was more valuable than the merchants’ storefronts. Thus the owners of the mall -- whether it was Intuit, Microsoft, EDS, America Online, or a regional Bell or cable television company -- would be able to charge exorbitant rents in the form of monthly per-account fees. If home banking became the phenomenon that so many argued it was, then bankers would have little choice but to rent space in the electronic malls. Electronic banking would then become a profitable business, but the lion’s share of the profits would go into the pockets of the technology firms.

Banks Alternatives for Online Banking
Banks were faced with three broad opportunities with respect to how to enter on-line banking. Commercial on-line services, the Internet and proprietary systems each presented a complicated mix of risk and reward. Unfortunately, the banks were having difficulty identifying any one alternative as inferior, since arguments could be made as to why any given option would be the winning platform.

Commercial On-line Services (OLS) provided a ready made platform from which the bank could gain access to customers. The three established players were America On-line, Prodigy and CompuServe. (see Exhibit 7) In addition, Microsoft Network, mutual fund companies, and other firms could provide a similar type of service. If a bank was going to use one of these services it would have to engage in an alliance. The bank needed to be aware of the strengths and weaknesses of their potential partner. For instance, what was their attitude in terms of hosting other financial service providers? Who owned customer information and how much help would the provider contribute when setting up a service?

The Internet could be accessed by anyone, but was controlled by no one. This allowed more freedom for the banks to set up services as they wish. Security was the major issue when using the Internet - as it stands at present. This issue was being addressed by many software suppliers, but no one had yet been able to successfully develop a product that guaranteed the security of information. Exhibit 8 provides an overview of banks on the Internet.

The final type of platform that a bank could develop was a proprietary platform. This alternative was probably the most risky, yet possibly the most rewarding. Proprietary platforms offered a banks a great degree of control over content and operational aspects of managing the customer relationship while reducing costs. However, few banks had demonstrated the ability to quickly and cost effectively develop a compelling, functional, on-line system.

The Wave to On-line Banking
According to a recent McKinsey & Co. report, the transition to on-line banking was likely to occur in three waves, each representing a point where technological capability met with consumer acceptance. These waves held to a number of emerging themes:

1. Most of the technology required to enable each wave had already been developed.
2. Each wave moved from a period of immaturity, with rudimentary or limited technology at high cost, through a period of rapid acceleration of capabilities and acceptance into a mature phase, with stable technology at relatively low cost and broad consumer acceptance.
3. Each wave would build on the consumer acceptance and technology trends of previous waves.
4. Waves of change in the delivery of financial services were building and reinforcing changes in the delivery of all products and services.

Wave 1: ATMs and Telecommunications

This wave was already well established, so much so that many CEOs did not recognize it for the technological revolution it actually was. Wave 1 centered around the telephone, an invention over a century old, and the ATM, about 25 years old. These technologies created the shift to remote distribution of financial services that was just beginning to peak.

The cumulative effect of this shift had recently become apparent. A large number of consumers were now using the telephone, ATM, and mail for the bulk of their financial affairs. In the United States, for example, over 40% of mutual funds were distributed via the phone and mail. Fifty-seven percent of all banking transactions took place outside the branch, 24 percent by phone and 31 percent by ATM. Nearly 20 percent of consumers visited a branch less than once a month.\(^1\)

The key consumer benefit in this wave was convenience of access. The 24-hour availability of phone and ATM met the needs of consumers with busy lives. In many cases, price was also a factor. Mutual funds sold direct carried no load, for instance, while those purchased through brokers typically had a 5 percent load. The shift to remote delivery paralleled similar trends in retail merchandising, where catalog and home shopping accounted for 8 to 10 percent of all U.S. apparel sales.

In the United States, mutual fund companies had already taken advantage of remote delivery channels and seemed to be moving toward a “virtual bank” concept. Fidelity and Schwab offered 24-hour telephone and PC access, transaction accounts, bill paying services, and checking, linked to a wide range of investment products. Fidelity set new levels of consumer expectations for service, while Schwab, with several dozen independent mutual fund companies selling through it, set the standard for broad access and low-cost service.

Wave 2: PCs and Online Services
The second wave of technological change focused on the personal computer as a financial management tool, combined with information reporting through on-line network services like Prodigy or America Online. This wave reached an inflection point of accelerated growth in early 1995, although its full impact was still several years off. Its eventual effect on financial service delivery channels was likely to be profound.

In wave 2, financial institutions faced a real threat of losing relationships as gateways intervened between consumers and the product supplier. The resulting battle between content, transport, and gateway providers for control of customer relationships produced a series of variations for on-line banking, all with very different strategic implications for industry participants. Players therefore were prepared to compete under at least four different scenarios for the future:

1. **Gateway Domination.** Electronic gateways backward-integrate into financial services, with consumers consolidating their financial relationships around the gateway to obtain seamless integration of financial and nonfinancial information. Personal financial services providers are forced to compete for back-end commodity manufacturing roles.

2. **Financial Supermarket.** A few mega-institutions emerge as the dominant providers of a wide range of integrated financial services, serving a large segment of consumers who consolidate their relationships. Financial service providers that do not form alliances or sell out to winners risk lockout.

3. **Mix and Match.** Consumers use simple household management programs to run their financial affairs. Gateways and intelligent search agents allow easy comparison shopping among multiple providers and products. While personal financial services providers are somewhat commoditized, opportunities will remain to compete nationally on the basis of product, price, and features.

4. **Branch Agent.** Card associations allow existing banks to offer ubiquitous interactive services at low cost. Consumers regard these services as enhancing their traditional banking relationships much as many people regard ATMs today. This was the preferred scenario for most banks and insurance companies, as it did little to disrupt the current industry structure.

Key elements in wave 2 included capturing and using expense information, adopting the PC as a distribution channel, and expanding on-line services. While widespread switching to wave 2 was at least five years into the future, attractive segments of affluent customers were progressing much more rapidly, making it imperative that institutions took action...

\(^{13}\) *ibid.*
during the next year. Profiles of on-line users is presented in Exhibit 9.

**Wave 3: Electronic Cash**

The third -- and perhaps the most fundamental -- wave involved electronic cash. In the United States, cash and checks still accounted for over three-quarters of all retail payment transactions. While many European and Asian countries had higher electronic payment penetration, in all major countries check and paper-based transfers accounted for at least 20 percent of noncash transactions. All this paper in the system perpetuated the need for geographic presence to collect and disperse payments.

Electronic cash would evolve in two ways. First, in the further development of existing attempts to allow secure on-line cash transfer over the Internet. Second, in the development and widespread use of “electronic wallets” that would allow convenient transport of small amounts of cash for typical purchases.

The development and widespread use of electronic cash would render geographic presence obsolete. Customers wanting to make deposits or withdrawals would no longer need to visit a branch. Small businesses would not have to drop off notes and checks at nearby branches. ATMs would not need be stocked with cash at considerable expense. Instead, consumers would be able to obtain electronic cash in the safety and comfort of their own homes, via phone, PC, or dedicated terminal.

Although this third wave was still in its infancy, initiatives were under way to develop electronic cash standards to enable secure electronic commerce and face-to-face transactions without cash, checks, or credit cards. Several of these approaches would harness new electronic channels without disintermediating traditional payments providers. They included encrypted credit card payments over the Internet (i.e. CyberCash), digital checks, and smart cards or prepaid credit cards.

In wave 3, financial institutions would replace paper-based payments and cash access mechanisms and made large-scale cost reductions throughout the system. While wave 3 was still several years away, players in the on-line banking world needed to begin to define how their institutions might fit into the electronic cash future and use pilots and alliances to acquire experience and understanding.

**Pace of Change**

McKinsey’s forecast of how the on-line banking industry was to develop was conservative, yet suggested attractive potential. They estimated the U.S. market to be $4 to $5 billion by 2003, the first year in which interactive home shopping was to be truly accessible to the mass market.\(^\text{14}\) After 2003, there was potential for sales volume to rise sharply as the mass market became more fully penetrated.

**Strategic Alliances**

In the wake of the toppled Microsoft deal, Intuit was faced with a myriad of choices for strategic alliances that could significantly affect its future. The future landscape of the on-line banking industry was uncertain. It was not yet evident what the business model for success would be. Intuit had been successful to date in selling software and supplies (cheques, etc.) to the consumer market, but banking would require a whole new set of competencies that Cook was not certain he could provide. (See Exhibit 11) Cook was not sure whether Intuit could become the leader in on-line banking without strategic alliances.

However, strategic alliances were not always successful. Intuit’s alliance with VISA had yet to produce anything of consequence despite high expectations. Cook wondered whether partnering with a financial services provider would yield similar results. While privately he dreamt of going solo in the fight for on-line banking supremacy, publicly Cook admitted that this would be a difficult task given the trust, brand equity, data, and competencies the banks had already developed. On the other hand, becoming America’s first virtual bank might be an opportunity to skim off the cream of the banking market.

It was clear to Cook that Microsoft had fanned the interest of some other corporate giants such as AT&T, IBM, Chase Manhattan, and British Telecom, all of whom were potential suitors and allies (Exhibit 10). It was also clear that the banks were waking up to the threat posed by Intuit, and alliances were being formed quickly. On May 16, 1995, Interactive Transactions Partners, a joint venture of EDS, US West, and France Telecom, announced their service was being rolled out at ten banks. BankAmerica and

\(^{14}\)Equivalent to one-third of the 1992 U.S. market for all mail and telephone retail sales.
NationsBank had recently paired up to buy MECA Software, one of Intuit’s chief rivals.

Scott Cook believed Intuit would have an advantage over its rivals in seeking out strategic alliances because of its dominance in its segment of the software market. One banker, who had already selected Quicken for its on-line banking interface, said, “If we’re going to have a strategic alliance, we would like to be with the No. 1 provider.” Exhibit 12 describes select financial players.

Cook considered the banks, the credit card giants, the on-line services, and the utilities potential allies, although he had not concluded which would position Intuit as the leader in on-line banking. The banks were already knocking at the door, but Cook wanted to avoid becoming associated with potential “dinosaurs” of the banking age. VISA had already shown they were focused on ‘card-centric’ thinking, which might not be the best alternative for on-line banking. Cook was also not convinced of the long term viability of the on-line service providers given the rapid growth of the Internet.

Cook was concerned with giving away the crown jewels of the company. He needed to decide how Intuit would profit from this business, and what opportunities existed to have Quicken become the de facto standard for the industry. Finally, he was not sure how to structure such a strategic alliance so that Intuit would best profit from the deal. Cook considered fixed-fee and transaction-based fee structures as viable options, but wondered which one would ensure Intuit’s continued market dominance.

**Intuit’s Future**

As Scott Cook poured his morning coffee, his thoughts couldn’t help but turn to the banking industry and the development of electronic commerce. The fate of his company, and that of the banking industry itself, were to be forever intertwined.

He again thought of his former employer, Procter & Gamble. Several times in its history major transitions had hit the packaged goods/household products industry. One was in the 1920s, when supermarkets were invented. Eventually, over a 20-year time frame, supermarkets totally replaced the prior distribution channel -- Mom and Pop grocery stores. P&G had decided early on that they were going to be the winner in the new channel. The company put its best people on it and got much better than its competitors. P&G took its business from a regional soap and candle company to the dominant manufacturer of household products. The challenge facing Scott Cook was analogous: How could he lead Intuit to similar success in banking while avoiding the pitfalls that had seen Lotus and WordPerfect steamrolled by the Microsoft juggernaut?

---

15 *The American Banker*, May 16, 1995
Microsoft and Intuit End Merger Agreement

REDMOND, Wash. and MENLO PARK, Cal. -- May 20, 1995 -- Microsoft Corporation and Intuit Inc. today announced that they have agreed to terminate their planned merger. More than seven months after Microsoft and Intuit announced the merger, both companies agreed to terminate the transaction rather than pursue months of litigation with the Justice Department at the trial and appellate court levels if an appeal were filed. These litigation delays would have followed the months of delay already caused by the Justice Department’s unusually lengthy Hart-Scott-Rodino Act review.

“It’s unfortunate that after such a broad government review the merger faced additional months of uncertainty in the courts,” said William H. Gates, Microsoft chairman and CEO. “This is a fast-paced industry experiencing lots of change. Progress toward realizing our goals could not wait until the government’s lawsuit was resolved. It’s time for Microsoft to put this matter behind us and move ahead with our commitment to improve people’s lives with software that helps them execute financial transactions and make informed decisions more quickly and efficiently.”

“We really admire Scott Cook and his management team,” Gates continued. “Intuit is a great company and we believe it will continue to be one of the finest competitors in the software industry.”

“We believed the combination of our two companies would benefit our customers, the industry and the nation’s competitiveness by accelerating the development of innovative technologies for the future.” said Scott Cook, Chairman of Intuit. “The delays caused by prolonged litigation would cost both companies valuable time. While Intuit preferred to defend the merger in court by pursuing the litigation, the companies have been unable to mutually agree to do so. Our mission remains unchained -- to give consumers the control and the tools to make simply smarter financial decisions and to give financial institutions new ways to build close relationships with their customers.”

Personal finance products traditionally experience their strongest sales in the fall and early winter, and both companies have new versions of their products under development for release in the fall. The government’s lawsuit posed a significant potential distraction during this important period in the annual sales cycle for these products.

“We continue to believe the proposed merger did not violate any antitrust laws,” said William H. Neukom, Microsoft’s senior vice president for Law and Corporate Affairs. “This is a highly competitive field with many strong...”

players, and important new players in the process of entering the business. The recent announcement that NationsBank and Bank of America will acquire MECA and its Managing Your Money product illustrates the rapidly changing nature of the competition. Unfortunately, the pace of this business does not accommodate the long delay of the government review process and the months of additional delay that litigation necessarily entails."
Exhibit 2  Intuit Financial Data

Income Statement  Year Ended July 31, 1994 through 1996 (Dollars in Thousands, Except Per Share Amounts)

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td>$535,000</td>
<td>$395,869</td>
<td>$223,448</td>
</tr>
<tr>
<td><strong>Cost of Goods</strong></td>
<td>132,337</td>
<td>105,588</td>
<td>58,870</td>
</tr>
<tr>
<td><strong>Gross Profit</strong></td>
<td>402,713</td>
<td>290,281</td>
<td>164,578</td>
</tr>
<tr>
<td><strong>Operating Expense</strong></td>
<td>350,894</td>
<td>250,739</td>
<td>125,790</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>81,612</td>
<td>53,368</td>
<td>24,589</td>
</tr>
<tr>
<td>Customer Service</td>
<td>101,040</td>
<td>73,359</td>
<td>39,182</td>
</tr>
<tr>
<td>Marketing</td>
<td>135,800</td>
<td>99,595</td>
<td>49,502</td>
</tr>
<tr>
<td>G&amp;A</td>
<td>32,442</td>
<td>24,417</td>
<td>12,517</td>
</tr>
<tr>
<td><strong>Operating Income</strong></td>
<td>51,819</td>
<td>39,387</td>
<td>38,788</td>
</tr>
<tr>
<td>Interest Income, net</td>
<td>8,116</td>
<td>3,813</td>
<td>2,655</td>
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<tr>
<td><strong>Pretax Income</strong></td>
<td>59,935</td>
<td>43,200</td>
<td>41,443</td>
</tr>
<tr>
<td><strong>Taxes</strong></td>
<td>22,776</td>
<td>16,416</td>
<td>16,035</td>
</tr>
<tr>
<td><strong>Net Income (Oper.)</strong></td>
<td>37,159</td>
<td>26,784</td>
<td>25,408</td>
</tr>
<tr>
<td>Amort. &amp; Unusual (b)</td>
<td>40,018</td>
<td>72,147</td>
<td>198,809</td>
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<tr>
<td><strong>Net Income (Reported)</strong></td>
<td>(2,922)</td>
<td>(45,363)</td>
<td>(173,244)</td>
</tr>
<tr>
<td><strong>Earnings Per Share</strong></td>
<td>$(0.07)</td>
<td>$(1.11)</td>
<td>$(5.37)</td>
</tr>
<tr>
<td><strong>Pro Forma Shares</strong></td>
<td>46163</td>
<td>42824</td>
<td>33896</td>
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</table>

Margin Analysis

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<tr>
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<tbody>
<tr>
<td><strong>Gross Margin</strong></td>
<td>75.3%</td>
<td>73.3%</td>
<td>73.7%</td>
</tr>
<tr>
<td><strong>Operating Margin</strong></td>
<td>9.7</td>
<td>10.0</td>
<td>17.4</td>
</tr>
<tr>
<td><strong>Pretax Margin</strong></td>
<td>11.2</td>
<td>10.9</td>
<td>18.5</td>
</tr>
<tr>
<td><strong>Net Margin</strong></td>
<td>6.9</td>
<td>6.8</td>
<td>11.4</td>
</tr>
</tbody>
</table>

Expenses as % of Rev.

<table>
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<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Expense</strong></td>
<td>65.6%</td>
<td>63.3%</td>
<td>56.3%</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>15.3</td>
<td>13.5</td>
<td>11.0</td>
</tr>
<tr>
<td>Customer Service</td>
<td>18.9</td>
<td>18.5</td>
<td>17.5</td>
</tr>
<tr>
<td>Marketing</td>
<td>25.4</td>
<td>25.2</td>
<td>22.2</td>
</tr>
<tr>
<td>G&amp;A</td>
<td>6.1</td>
<td>6.2</td>
<td>5.6</td>
</tr>
</tbody>
</table>

**Tax Rate**  38.0  38.0  38.7


(a) Operating results include $1.3MM provision ($0.04 per share after tax) for Turbo Tax & MacInTax replacement disks that may be requested by customers for units shipped through January 31, 1995.
(b) Write-offs for purchased R&D, amortization of intangibles and merger-related expenses in connection with the CQ4:93 merger with ChipSoft and CQ3:94 merger with Parsons Technology
(c) Note that F1994 results exclude F1Q94 Chipsoft Operations, due to timing of merger if included, results for F1994 would have been lower due to ChipSoft pattern of losing money in October quarter.


(e) Intuit's FY ended on September 30 for fiscal year 1993 and earlier.
Exhibit 2  Intuit Financial Data (cont.)

### Balance Sheet  All Dollars in Thousands ('000)

<table>
<thead>
<tr>
<th></th>
<th>07/31/95E</th>
<th>07/31/94</th>
<th>09/30/93</th>
<th>09/30/92</th>
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</thead>
<tbody>
<tr>
<td><strong>Annual Assets</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>70,033</td>
<td>19,708</td>
<td>7,857</td>
<td>2,694</td>
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<tr>
<td>Marketable Securities</td>
<td>121,342</td>
<td>64,178</td>
<td>31,683</td>
<td>6,336</td>
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<tr>
<td>Receivables</td>
<td>35,256</td>
<td>10,140</td>
<td>24,944</td>
<td>8,130</td>
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<tr>
<td>Inventories</td>
<td>6,040</td>
<td>2,320</td>
<td>2,936</td>
<td>2,580</td>
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<tr>
<td>Other Current</td>
<td>26,710</td>
<td>23,596</td>
<td>8,091</td>
<td>2,776</td>
</tr>
<tr>
<td><strong>Total Current Assets</strong></td>
<td>259,381</td>
<td>119,942</td>
<td>75,511</td>
<td>22,516</td>
</tr>
<tr>
<td>Net PP&amp;E</td>
<td>48,849</td>
<td>24,196</td>
<td>7,422</td>
<td>5,593</td>
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<tr>
<td>Intangibles</td>
<td>74,378</td>
<td>98,691</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Deposits &amp; Other</td>
<td>1,594</td>
<td>1,753</td>
<td>348</td>
<td>1,525</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>384,202</td>
<td>244,582</td>
<td>83,281</td>
<td>29,634</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>07/31/95E</th>
<th>07/31/94</th>
<th>09/30/93</th>
<th>09/30/92</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Liabilities</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notes Payable</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>19,714</td>
<td>12,872</td>
<td>11,954</td>
<td>7,539</td>
</tr>
<tr>
<td>Accrued Expenses</td>
<td>62,724</td>
<td>32,672</td>
<td>16,214</td>
<td>3,625</td>
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<tr>
<td>Income Taxes</td>
<td>9,607</td>
<td>-</td>
<td>4,402</td>
<td>83</td>
</tr>
<tr>
<td>Other Current Liabilities</td>
<td>6,038</td>
<td>5,272</td>
<td>1,467</td>
<td>880</td>
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<td><strong>Total Current Liabilities</strong></td>
<td>98,083</td>
<td>50,816</td>
<td>34,037</td>
<td>12,127</td>
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<tr>
<td>Mortgages</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Deferred Charges</td>
<td>507</td>
<td>7,943</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Long-Term Debt</td>
<td>4,426</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Non-Current Capital Leases</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>162</td>
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<tr>
<td><strong>Total Liabilities</strong></td>
<td>103,016</td>
<td>58,759</td>
<td>34,037</td>
<td>12,289</td>
</tr>
<tr>
<td>Preferred Stock</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>13,203</td>
</tr>
<tr>
<td>Common Stock, net</td>
<td>439</td>
<td>192</td>
<td>112</td>
<td>667</td>
</tr>
<tr>
<td>Capital Surplus</td>
<td>490,225</td>
<td>349,989</td>
<td>37,230</td>
<td>-</td>
</tr>
<tr>
<td>Retained Earnings</td>
<td>(209,623)</td>
<td>(164,260)</td>
<td>12,049</td>
<td>3,624</td>
</tr>
<tr>
<td>Other Equities</td>
<td>145</td>
<td>(98)</td>
<td>(147)</td>
<td>(149)</td>
</tr>
<tr>
<td>Shareholder Equity</td>
<td>281,186</td>
<td>185,823</td>
<td>49,244</td>
<td>17,345</td>
</tr>
<tr>
<td><strong>Total Liabilities &amp; Net Worth</strong></td>
<td>384,202</td>
<td>244,582</td>
<td>83,281</td>
<td>29,634</td>
</tr>
</tbody>
</table>

Source: Intuit Annual Report

### Six-Year Earnings Summary

<table>
<thead>
<tr>
<th>Date</th>
<th>Sales (000$)</th>
<th>Net Income (000$)</th>
<th>EPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996E</td>
<td>535,000</td>
<td>(2,922)</td>
<td>(0.07)</td>
</tr>
<tr>
<td>1995E</td>
<td>395,869</td>
<td>(45,363)</td>
<td>(1.11)</td>
</tr>
<tr>
<td>1994</td>
<td>223,448</td>
<td>(173,244)</td>
<td>(5.37)</td>
</tr>
<tr>
<td>1993</td>
<td>121,372</td>
<td>8,411</td>
<td>0.37</td>
</tr>
<tr>
<td>1992</td>
<td>83,793</td>
<td>5,276</td>
<td>0.25</td>
</tr>
<tr>
<td>1991</td>
<td>44,539</td>
<td>4,298</td>
<td>0.21</td>
</tr>
</tbody>
</table>

Growth Rate: 64.5%
Exhibit 3  Select Technology Players

**America Online**, Vienna, CA
America Online was the mother of all consumer on-line services. The company was created in 1985 as a "new media" company -- well before anyone knew what that term meant. With more than 3 million members/subscribers, America Online was quickly becoming the largest U.S. consumer on-line service and was also beginning international expansion. The fundamental tenet for the company since day one had been the importance of providing an easy-to-use on-line service to customers -- the company consistently focused on offering great content, context, community, commerce, and connectivity at a low cost -- in short AOL was a product that even your mom could have used. America Online was many things: 1) a consumer on-line services company (AOL); 2) an Internet company (AOL-embedded GNN offerings); 3) an on-line/Internet service provider (through ownership of ANS, which provided a network connection for AOL and the Internet); 4) a content aggregation/programming company via its relationship with content providers/partners; and 5) a venture capital holding company through its $6 million+ investments in over 20 "greenhouse" companies.

**CompuServe**, Columbus, OH
CompuServe, a division of H&R block, and the largest consumer on-line service, had been an on-line service provider of computer-based information and communication services to businesses and individual for over 20 years. The company developed services that provided access to host server and data communication services and the Internet. As of May, 1995, CompuServe Information Services had over 3 million consumer users and over 900 corporate customers in 150 countries accessing over 3,000 databases, via modem. Several financial and business connectivity services were also sold to companies. During May 1995, CIS had over 12 million hours of traffic (doubling from the previous year), of which 2 million was Internet related.

**MECA**, Charlotte, NC
MECA Software's Managing Your Money was a distant third in financial management software with only 600,000 users. However, they had recently been purchased by NationsBank and BankAmerica from H&R Block. With the two bank's combined customer base of 20 million, Managing Your Money could become a potential threat to Quicken's market dominance.

**Netscape Communications**, Mountain View, CA
Netscape Communications was the high-flying startup famous for its Internet Web Browser which was considered to be the industry standard. Netscape was founded by Jim Clark and Marc Andreesen, two of the most formidable names in the industry. If the Internet was to become the channel of choice for on-line banking, compatibility with Netscape was critical. Wells Fargo had recently announced they would become the first bank to use the Internet for its on-line banking services. Users could perform secure banking transactions using Netscape Navigator software. The World Wide Web was becoming the dominant standard for on-line services, and Netscape was fast becoming the dominant standard for the Web. Actual usage numbers for Netscape were difficult to obtain because the company traditionally gave away its browser to expand its installed base. Most industry analysts estimated Netscape's installed base at 10-15 million consumers and businesses.

**AT&T**, Basking Ridge, NJ
AT&T had recently unveiled its strategy for the Internet, which involved building new on-line services based on Internet standards as well as adding Internet standards to its current on-line services. The long-distance carriers were well positioned to participate in the evolution of on-line services. First, in terms of bringing users on-line, AT&T was accustomed to connecting telephone users with the people and information they needed. This was similar to the company's objectives in the Internet. The value-added approach from AT&T included ease of use and navigation, interfaces with a greater degree of personalization, and better customer care. Moreover, AT&T had great reach through its existing customer base: it reached over 80 million consumers and 10 million business customers a month. The relationship with these customers provided AT&T a window on its needs and preferences. From the merchant side, AT&T was also in a position to bring together buyers and sellers.

**CyberCash**, Reston, VA
CyberCash focused on providing secure financial transactions and services over the Internet. Its Secure Internet Payment Service was browser-independent, providing a secure purchasing environment for electronic commerce on the Internet and offered instantaneous communications among consumers, merchants, and banks.
CyberCash processed thousands of transactions daily, and there were over 400,000 CyberCash wallets in the distribution channel. The company, started in 1994, was founded by technology entrepreneur Dan Lynch and VeriFone founder Bill Melton.
Exhibit 4 Where We Have Been and Where We Are Going

Lifecycles of Mainframe, Mini, PC and Internet Enabled Systems

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Mainframe</td>
<td>Minicomputer</td>
<td>PC</td>
<td>Hardware</td>
<td>Software</td>
<td>Tools, Content, Replace Mini</td>
</tr>
<tr>
<td>Hardware</td>
<td>Software</td>
<td>Tools, Content, Replace PC</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


New Media Programming Evolution

1985+

Iron Age
(text-based; low speeds; small audience)

- Member-generated content
- Branded, repackaged content areas
- Reference database materials
- Icons for information areas and logos for ads
- Rudimentary transactions

Silver Age
(multiple media; higher speeds; critical mass audience)

- Original content
- Less “repurposed” content
- Commerce as a programmed area
- New channels to serve new markets
- Network initiated, purchased or produced shows
- Member-generated content via home pages, personal web sights, intelligent message boards
- New HTML original content areas
- Few partners; better service and increased promo

1994+

Bronze Age
(text/picture-based; higher speeds; niche audiences)

- Channel creation and media programming
- Packaging of multiple content streams
- Shopping malls for commerce (w/ text & photo)
- Interactive marketing areas as information providers
- Celebrity events and vertical communities
- Connected properties
- Pointing to web sites

Golden Age
(full-motion video; speed not an issue; mainstream media)

- The next thing: cable and telephony and datacom and Hollywood blended together
- Advertisers/marketers pay the freight
- More customers using PCs in prime time than TVs
- Promise of interactive services achieved

Source: America Online, 1995
Exhibit 5 Perspectives on Internet Opportunities, 1995

**Less Than**
Less than 15% of worldwide office workers have PCs;
Less than 10% of U.S. population uses cellular phones;
Less than 10% of worldwide PC users have electronic mail connected to the Internet;
Less than 10% of worldwide PC users have on-line services;
Less than 9% of worldwide PC users have CD-ROM drives;
Less than 7% of worldwide PC users have real-time Internet access;
Less than 5% of worldwide homes have PCs;
Less than 4% of the U.S. population has real-time Internet access;
Less than 1% of the world population has any kind of Internet access (e-mail included).

**More Than**
More than 95% of U.S. homes have television sets;
More than 95% of U.S. homes have corded telephones;
More than 85% of U.S. homes have VCRs;
More than 60% of U.S. homes have cable television;
More than 55% of U.S. homes have telephone answering machines;
More than 45% of U.S. homes have video game software;
More than 45% of U.S. homes have CD-audio players.
*Source: Morgan Stanley Research, 1995*

**Internet Host Growth, 1969 to 1995**

*Note: Generally speaking, an Internet host was a device such as a computer or router that was connected to the Internet. Source: Network Wizards*

**Where Personal Computer users Place Their Trust** (% of respondents)
Intuit Inc.: On-line Banking (A)

Exhibit 6  PC, Modem, and Internet Use

Number of PCs, Modems, and Internet Users 1990-2000 (millions)

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</tr>
</thead>
<tbody>
<tr>
<td><strong>Worldwide</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCs</td>
<td>61</td>
<td>74</td>
<td>94</td>
<td>121</td>
<td>156</td>
<td>196</td>
<td>237</td>
<td>279</td>
<td>320</td>
<td>360</td>
<td>400</td>
</tr>
<tr>
<td>PC Users</td>
<td>56</td>
<td>67</td>
<td>80</td>
<td>97</td>
<td>122</td>
<td>151</td>
<td>178</td>
<td>201</td>
<td>224</td>
<td>241</td>
<td>252</td>
</tr>
<tr>
<td>E-Mail</td>
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<td>8</td>
<td>12</td>
<td>18</td>
<td>25</td>
<td>35</td>
<td>60</td>
<td>80</td>
<td>130</td>
<td>180</td>
<td>200</td>
</tr>
<tr>
<td>Internet/Web</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>10</td>
<td>25</td>
<td>50</td>
<td>90</td>
<td>135</td>
<td>170</td>
</tr>
<tr>
<td>Online/Hybrid</td>
<td>&lt;1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>13</td>
<td>18</td>
<td>23</td>
<td>27</td>
<td>30</td>
</tr>
<tr>
<td><strong>U.S.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCs</td>
<td>25</td>
<td>28</td>
<td>36</td>
<td>47</td>
<td>60</td>
<td>74</td>
<td>87</td>
<td>102</td>
<td>116</td>
<td>128</td>
<td>142</td>
</tr>
<tr>
<td>PC Users</td>
<td>20</td>
<td>22</td>
<td>28</td>
<td>35</td>
<td>43</td>
<td>52</td>
<td>58</td>
<td>64</td>
<td>67</td>
<td>66</td>
<td>71</td>
</tr>
<tr>
<td>Internet/Web</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>15</td>
<td>28</td>
<td>45</td>
<td>65</td>
<td>75</td>
</tr>
<tr>
<td>Homes w/ PC &amp;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Banks with Online Account Access 1990-2000

Exhibit 7  Consumer Online Services

<table>
<thead>
<tr>
<th>Number of Subscribers</th>
<th>06/30/95E</th>
<th>%</th>
<th>03/31/95</th>
<th>%</th>
<th>12/31/94</th>
<th>%</th>
<th>YTD Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>CompuServe</td>
<td>3,200,000</td>
<td>37.2</td>
<td>2,700,000</td>
<td>37.0</td>
<td>2,450,000</td>
<td>38.9</td>
<td>750,000</td>
</tr>
<tr>
<td>America Online</td>
<td>3,000,000</td>
<td>34.9</td>
<td>2,000,000</td>
<td>27.4</td>
<td>1,500,000</td>
<td>20.6</td>
<td>1,500,000</td>
</tr>
<tr>
<td>Prodigy</td>
<td>1,600,000</td>
<td>18.6</td>
<td>1,300,000</td>
<td>17.8</td>
<td>1,200,000</td>
<td>19.1</td>
<td>400,000</td>
</tr>
<tr>
<td>Delphi</td>
<td>140,000</td>
<td>1.6</td>
<td>140,000</td>
<td>1.9</td>
<td>100,000</td>
<td>1.6</td>
<td>40,000</td>
</tr>
<tr>
<td>eWorld</td>
<td>90,000</td>
<td>1.1</td>
<td>80,000</td>
<td>1.1</td>
<td>65,000</td>
<td>0.9</td>
<td>25,000</td>
</tr>
<tr>
<td>GEnie</td>
<td>75,000</td>
<td>0.9</td>
<td>75,000</td>
<td>1.0</td>
<td>75,000</td>
<td>1.2</td>
<td>0</td>
</tr>
<tr>
<td>Others</td>
<td>500,000</td>
<td>5.8</td>
<td>1,000,000</td>
<td>13.7</td>
<td>900,000</td>
<td>14.3</td>
<td>(400,000)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>8.6 million*</td>
<td>100</td>
<td>7.3 million</td>
<td>100</td>
<td>6.3 million</td>
<td>100</td>
<td>2.3 million</td>
</tr>
</tbody>
</table>

* The actual number of users is about 7.3 million with an estimated 15% of subscribers using two or more services.


Terms of Service

<table>
<thead>
<tr>
<th>Service</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>CompuServe</td>
<td>$9.95 per month for five hours. $4.80 per hour thereafter.</td>
</tr>
<tr>
<td>America Online</td>
<td>$9.95 per month for five hours. $2.95 per hour thereafter.</td>
</tr>
<tr>
<td>Prodigy</td>
<td>$9.95 per month for five hours or $29.95 for 30 hours. $2.95 an hour thereafter.</td>
</tr>
<tr>
<td>eWorld</td>
<td>$8.95 per month for four hours. $3.95 per month thereafter.</td>
</tr>
<tr>
<td>NETCOM</td>
<td>$9.95 per month for five hours. $4.00 per hour thereafter.</td>
</tr>
</tbody>
</table>

Source: Casewriter research.

The Microsoft Network

The new service, which will be launched next year and known as “The Microsoft Network”, offers many of the same services as its established competitors: news, electronic mail, information and software. It has some innovations, such as a way to transmit graphics over slow telephone lines so that a rough image appears almost immediately, allowing the viewer to do other things while the rest of the picture emerges. But it will not, at least initially, offer access to much of the content that rival services have developed, such as vast libraries of software and information files, and the specialized on-line communities that have been built up by the millions of users of the existing services.

The Microsoft Network will, however, have one key advantage over rivals: it will be built into Windows 95, the long-awaited next version of the operating system used by about 85% of all PCs sold worldwide. The millions of people who will but Windows 95 next year will find an icon for The Microsoft Network on their screen, and they will be instructed to log into the network to register their new operating system. In the process, they will also be urged to become a Microsoft Network subscriber, coaxed by the promise of an easy-to-use interface and seamless links.
with Microsoft's word processor and other products.

Source: The Economist, November 19, 1994
Exhibit 8  Select Banking Sites on the World Wide Web

<table>
<thead>
<tr>
<th>Company</th>
<th>Internet Address</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>overall excellence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Express</td>
<td>&lt;ExpressNet&gt; on AOL</td>
<td>Comprehensive and interactive T&amp;E content. Currently on AOL only.</td>
</tr>
<tr>
<td>Toronto Dominion</td>
<td><a href="http://tdbank.ca/tdbank/">http://tdbank.ca/tdbank/</a></td>
<td>Consumer friendly approach and a wealth of useful information.</td>
</tr>
<tr>
<td>Wells Fargo</td>
<td><a href="http://wellsfargo.com">http://wellsfargo.com</a></td>
<td>Account information and great layout.</td>
</tr>
<tr>
<td><strong>inspired content</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MasterCard</td>
<td><a href="http://www.mastercard.com">http://www.mastercard.com</a></td>
<td>The ATM locator was one of the best uses of Internet information processing capabilities.</td>
</tr>
<tr>
<td>Security First Network Bank</td>
<td><a href="http://www.sfnb.com">http://www.sfnb.com</a></td>
<td>The opening lobby provided excellent insights on what can be done with this medium.</td>
</tr>
<tr>
<td>Bank Rate Monitor</td>
<td><a href="http://www.bankrate.com">http://www.bankrate.com</a></td>
<td>Excellent “rate shopper” database. Provided up-to-date deposit and loan rates from across the country.</td>
</tr>
<tr>
<td>Kingfield Bank</td>
<td><a href="http://www.mainecom">http://www.mainecom</a></td>
<td>Good integration with local community. Provided space for local merchants and real estate listings.</td>
</tr>
<tr>
<td><strong>excellent interactivity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fidelity Investments</td>
<td><a href="http://www.fid-inv.com">http://www.fid-inv.com</a></td>
<td>Great financial calculators well integrated with appropriate products. It was like having Quicken running on their site.</td>
</tr>
<tr>
<td>Capital One</td>
<td><a href="http://www.capital1.com">http://www.capital1.com</a></td>
<td>The credit card savings calculator was a simple, yet effective, means of demonstrating value of their low-rate credit-card offer.</td>
</tr>
<tr>
<td><strong>high customer service</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Union</td>
<td><a href="http://www.firstunion.com">http://www.firstunion.com</a></td>
<td>Best implementation of an on-line application. Credit cards were sold with a button.</td>
</tr>
<tr>
<td>Salem Five Cent</td>
<td><a href="http://www.salemfive.com">http://www.salemfive.com</a></td>
<td>Salem made it clear they wanted your deposits with well-done on-line deposit specials.</td>
</tr>
<tr>
<td>Federal Express</td>
<td><a href="http://www.fedex.com">http://www.fedex.com</a></td>
<td>Federal Express’s easy-to-use shipment tracker was widely cited as an excellent Web application, cementing customer relationships AND cutting their 800 number costs.</td>
</tr>
</tbody>
</table>


**Definition: Web Site (a.k.a Home Page)**

Web was short for World Wide Web (WWW), the graphical portion of the Internet. A web site was a company’s “territory” in cyberspace reachable by anyone in the world with a PC, modem, Internet access account and software called a “Web browser.” Users connected their computer to a home page by either typing the Internet address (URL) into their browser or by clicking on a hyperlink from another site. For example, to reach MasterCard, the address http://www.mastercard.com would be
entered. Or if the customer was at another site such as Yahoo, which listed financial sites, “MasterCard” was simply clicked on, and they would be automatically transported to MasterCard’s Web site. Hyperlinks were one of the defining aspects of the Web.
Exhibit 9  Demographics of On-line Customers

Segmentation by Attitude and Behavior

<table>
<thead>
<tr>
<th>Age</th>
<th>&lt;30</th>
<th>30-44</th>
<th>45-59</th>
<th>&gt;60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;$50K</td>
<td>New enthusiasts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$30-50K</td>
<td>Surfers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$30K</td>
<td>Old-liners</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How Age and Income Influence Product Use

<table>
<thead>
<tr>
<th>Age</th>
<th>&lt;30</th>
<th>30-44</th>
<th>45-59</th>
<th>&gt;60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;$50K</td>
<td>Investments, financial planning, and mortgagas</td>
<td>Retirement planning and annuities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$30-50K</td>
<td>Lines of Credit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$30K</td>
<td>Savings and Life Insurance</td>
<td>Savings</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key Design Issues by Segment

<table>
<thead>
<tr>
<th>Group</th>
<th>Description</th>
<th>Issues</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Enthusiasts</td>
<td>- Upscale, above average income, secure about financial future - Desire to learn - Usually married - Higher level of education</td>
<td>- Looking for convenience and time saving - Will use technology when offerer</td>
<td>- Attractive segment - May be retained by electronic banking</td>
</tr>
<tr>
<td>Surfers</td>
<td>- Mostly young and single - Lower income; temporary for some within segment - Above average ability to use technology - Usually older and less wealthy - Capital depleting - Do not use new technology</td>
<td>- Will use technology - Concerned with security and privacy - Like current system - Probably will continue to use branch and teller - Migration to ATM and phone</td>
<td>- Many transactions accounts; cost saving opportunities - May increase future income - Least likely to move on-line - Lower priority</td>
</tr>
<tr>
<td>Old-liners</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Intuit Inc.: On-line Banking (A)

Exhibit 10  The Home Banking Network

The Home Banking Network was the result of a contractual agreement established between Microsoft and National Payment Clearinghouse (NPCI) in 1992. NPCI, led by Bruce Burchfield (who built the CIRRUS ATM network), hoped to build and operate a complete home banking infrastructure.


The network had been slow to catch on. It took over a year for HBN to add its fourth member, Chase Manhattan. Uncertainty with the Microsoft-Intuit deal along with price levels were to blame. Microsoft and NPCI set wholesale price fairly high. Visa Interactive, for one, had been showing bankers a price schedule significantly lower than HBN.

Intuit, who purchased NPCI during 1994, announced in March of 1995 that Quicken would be connected to the HBN by the fall of 1995. Finally, NPCI was sued by CheckFree in January for patent infringement on its paying process.

Members: Home Banking Network

<table>
<thead>
<tr>
<th></th>
<th>Chase Manhattan</th>
<th>First Chicago</th>
<th>Michigan National</th>
<th>US Bancorp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Joined HBN</td>
<td>June 1994</td>
<td>March 1993</td>
<td>March 1993</td>
<td>March 1993</td>
</tr>
<tr>
<td>Subscribers</td>
<td>6,000</td>
<td>1,500</td>
<td>1,000</td>
<td>3,800</td>
</tr>
<tr>
<td>No. of Debit Cards</td>
<td>1,410,000</td>
<td>890,000</td>
<td>380,000</td>
<td>1,020,000</td>
</tr>
<tr>
<td>Rank among issuers</td>
<td>13</td>
<td>24</td>
<td>57</td>
<td>21</td>
</tr>
<tr>
<td>Promotional Incentives</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free Money</td>
<td>all subscribers</td>
<td>no</td>
<td>selected</td>
<td>limited</td>
</tr>
<tr>
<td>Free Trial</td>
<td>90 days</td>
<td>30 days</td>
<td>30 days</td>
<td>30 days</td>
</tr>
<tr>
<td>Fees (monthly)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Online</td>
<td>$8.00</td>
<td>$7.95</td>
<td>$7.95</td>
<td>$7.95</td>
</tr>
<tr>
<td>Bank &amp; Pay Online</td>
<td>$15.00</td>
<td>$14.95</td>
<td>$14.95</td>
<td>$14.95</td>
</tr>
<tr>
<td>Bank, Pay &amp; Quotes</td>
<td>$20.00</td>
<td>$17.95</td>
<td>$17.95</td>
<td>$17.95</td>
</tr>
<tr>
<td>Heavy User Fees:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank or Quotes Pay</td>
<td>$1/session after 12</td>
<td>$1/session after 12</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td></td>
<td>$8 for 10 payments after first 20</td>
<td>$3.95 for 10 payments after 20</td>
<td>$3.50 for 10 payments after 20</td>
<td>$3.50 for 10 payments after 20</td>
</tr>
</tbody>
</table>

Exhibit 11  On-line Banking Value Chain
Exhibit 12  Select Financial Players

**American Express**, New York, NY
Amex’s on-line activity was primarily Internet focused, in two broad categories. One was the use of the American Express Card as a method of payment for transactions conducted over Internet. The other was the use of the Internet as a means for American Express’s cardholders to communicate with American Express and conduct a variety of transactions related to their charge-card account. In the first category, Amex had arrangements with four companies that offered Internet services: CyberCash; First Virtual Holdings; Netscape Communications; and Open Market. In each case, users of transaction services were able to pay for purchases using an American Express or Optima card. In the second category, American Express launched an arrangement in January 1995 with America Online for the on-line service to provide a link between American Express and cardholders who want to deal with the company over the Internet. The service, called ExpressNet, allowed American Express cardholders to check the status of their accounts, pay their American Express bills, make travel arrangements, and enroll in rewards-for-spending programs such as *Membership Miles*. American Express had 36 million cards outstanding worldwide at the end of March, 1995.

**Citibank**, New York, NY
Citibank gave up over $10 million in revenue by ending all electronic banking fees for customers in the New York metropolitan area. As of June 1, telephone bill payment, Citibank ATMs, PC banking, and screenphone banking were to become free of charge. Citibank holds over $269 billion in assets and has over 4.3 million debit cards outstanding.

**First Virtual Holdings**, San Diego, CA
First Virtual Holdings was a financial services company that enabled users to buy and sell information on the Internet. The First Virtual Internet Payment System provided a secure, easy-to-use Internet payment service in a “try before you buy” environment. Avoiding encryption issues, buyers signed up for a First Virtual account by calling First Virtual to obtain an account number in exchange for the user’s credit card number. Then, as the buyer made purchases with on-line merchants that accepted First Virtual accounts, he or she provided the first Virtual account number. The merchant then contacted First Virtual, which contacted the buyer via e-mail to allow the buyer to approve or disapprove the purchase before the credit card was billed. No special software was required.

**MasterCard International**, New York, NY
MasterCard International was a global payments system company of 22,000 financial institutions that issued MasterCards and made available other MasterCard products and services. By broadening its presence in new and existing markets, MasterCard hoped to obtain global acceptance. The introduction of electronic commerce and financial services over the Internet provided yet another medium for payment, creating a huge potential for cardholder use. Mastercard’s current primary objective was to create a secure environment for credit card transactions. In January, 1995, MasterCard and Netscape Communications began working together to develop the technology for authorizing and clearing transactions on credit and debit cards in a secure environment over the Internet. MasterCard and Netscape also collaborated with IBM, GTE, and CyberCash to develop a single, open industry specification for securing on-line credit card transactions. At the end of the first quarter of 1995, MasterCard had 247 million cards outstanding (versus 400 million for VISA).

**Smith Barney**, New York, NY
Smith Barney became the first brokerage firm to offer access to account information through a major PFM when they announced that they would provide access through *Quicken* to their Financial Management Account in the fall of 1995. Smith Barney planned to offer full service transactional banking including bill payment, account balances, checking and credit card transaction history, and funds transfer. Internal research indicated that 53% of Smith Barney’s affluent clients (minimum of $50K in liquid assets and $20K invested) used a PC in their home with half of those running some type of financial software. Smith Barney had 11,000 financial offices across the U.S. Smith Barney was a wholly owned subsidiary of Travelers Group, one of the nations largest financial services companies with more than $115 billion in assets. Smith Barney had in excess of 4 million accounts.

**Fidelity**, New York, NY
Fidelity had developed one of the best, and busiest, sites on the WWW. Despite having been on line only two months, by May 1995, over 250,000 information requests from over 60,000 customers had been logged. The
Internet volume equaled over 5% of the company’s total. Fidelity estimated that nearly two-thirds of its investors had a PC at home.
Notes