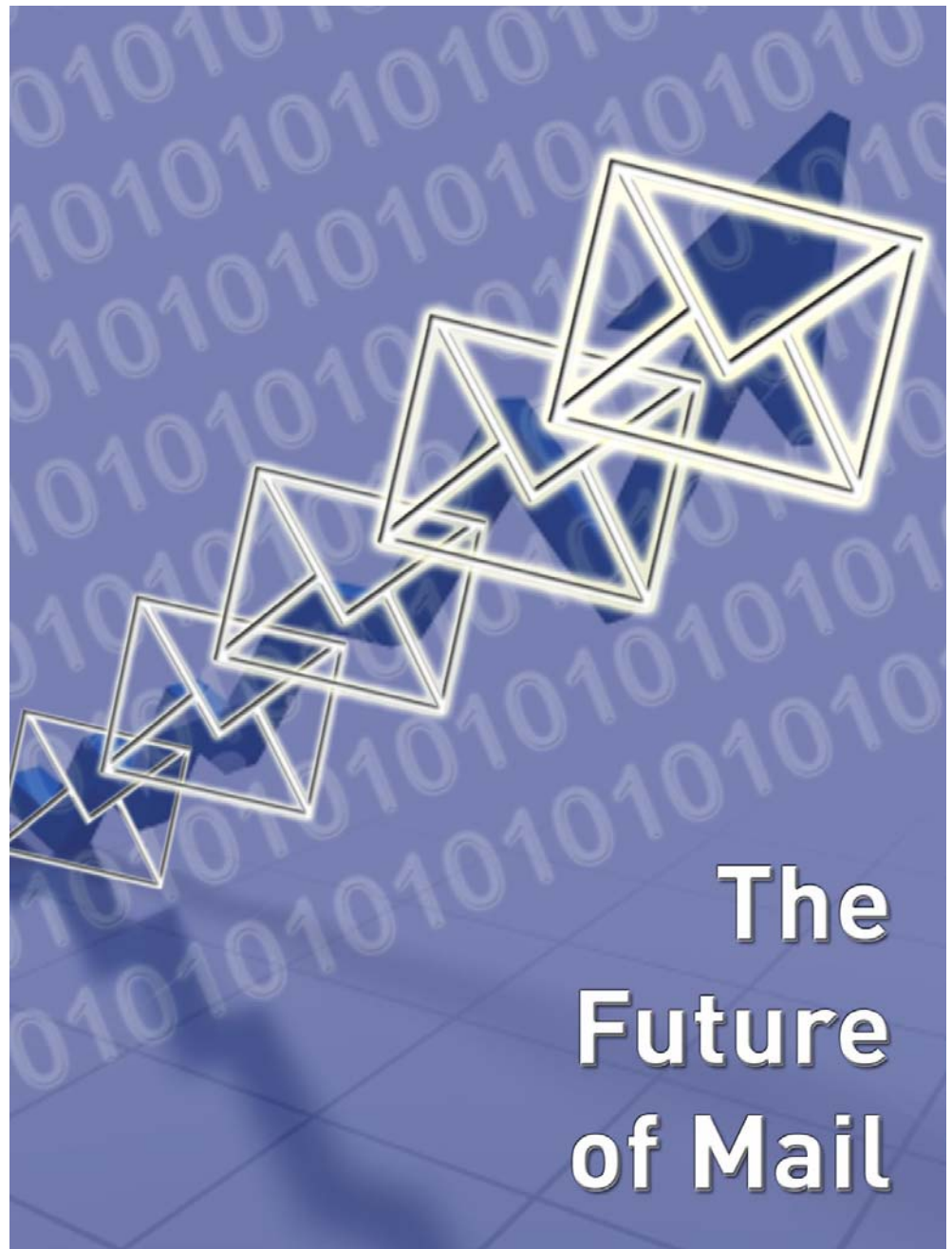


Bills, Statements and Payments - Paper and Electronic Delivery

Alex Fu (Pitney Bowes)

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This is one in a series of papers of the Pitney Bowes research project entitled: 'The Future of Mail'.
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Bills, Statements and Payments – Paper and Electronic Delivery

Alex Fu¹
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August 2007

The adoption of electronic bills, statements and payments has grown significantly in recent years, as has the explosive growth in Internet penetration, the evolving consumer preferences for new media, and a determined push by financial institutions to convert users from paper to electronic. Most forecasters, observers, and the general press typically characterize these electronic options as severely and negatively affecting the volume of bills, statements and payments that are mailed. Is there reliable industry data that can be used to check these assertions? Are the quantifiable trends universal or do they vary by region? Exactly how have electronic alternatives impacted user preferences so far and how will they continue to impact mail volumes in the foreseeable future?

Much has been written in recent years about the rapidly rising adoption of electronic bills, statements and payments. However, few attempts have been made to systematically review all available research and make sound predictions, especially pertaining to mail volumes and the expected growth of electronic alternatives². This paper first defines several terms and delineates the scope of this study. Second, the paper analyzes the U.S. and European landscape vis-à-vis: the adoption rates of electronic bills, statements and payments, and the evolution of the corresponding mail volumes. Third, the paper examines how consumers prefer to receive and pay bills so as to provide an outlook on the future of paper vs. electronic methods. Finally, the paper looks at the progress billers have made to effectively institute and establish new bill, statement and payment mechanisms.

Summary Findings

Payment:

- In the U.S., paper-based payment methods (cash and checks) are declining in importance and are being replaced by credit and debit card payments, especially at the point-of-sale (POS). In most of Western Europe, direct debit and credit/debit card payments have long been established over check payments and consumers generally have limited say in the choice of medium. As a result, checks are almost non-existent in a number of countries, such as Finland and Sweden with less than 1% of bill payment transactions.
- Electronic bill payment adoption (households that pay at least one bill online) has grown from 3.9 million U.S. households in 1999 to 30.5 million households in 2005 according to a Forrester estimate.

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² This paper is a development of “Bill Presentation and Payment: Mail vs. Electronic” by Flynn (2005) and “Trends in Consumer Payments Systems” by Tamayo, Flynn and Jimenez (2005).

- However, many adoption rate estimates of electronic bill payment and bill and statement presentment exaggerate the impact of electronic adoption because they define an electronic bill payer or receiver as anyone that pays or receives at least one bill a year. This only illustrates surface penetration rather than actual adoption.
- The USPS Household Diary Studies estimate that 15% of bills per month per household on average were paid using the Internet in 2006. This is up dramatically from a 6.3% Internet share in 2003. By volume, the study estimates that consumer households in the U.S. in 2006 paid 9 billion bills by mail and 2.2 billion online of a total 14.5 billion bills paid. While the Internet share of payments is rising, the volume of payments mailed has remained stable for the last three years.
- Frequent claims that Internet payments are the cause of the decline of single-piece mail in the United States are unfounded and inaccurate. As stated, check payments are stable. Instead, analysis of USPS data shows that single-piece mail is declining due to reduced B-B mail and the shift by B-C mailers from single-piece to worksharing because the latter represents better value.
- Direct debit payments are customary in Europe for expenses that U.S. consumers do not routinely allow to be deducted automatically from their bank accounts, such as utility bills and installment purchases.
- In some Nordic European countries, the share of household-to-business mailed payments has declined to as little as 1% of mail volumes possibly due to increased credit and debit payments and Internet bank transactions.

Presentment:

- Electronic bill and statement presentment refers to the ability of a recipient to view a bill or statement online. Where this “online viewing” option is accompanied by forced paper suppression by the biller, this reengineered process can be seen as changing the underlying biller’s obligation and as “transferring” this obligation to the recipient.
- From 2000-2005, total U.S. First Class mail volumes declined slightly -1.0% per year, but bills and statements from businesses to households grew 3.4% per year. Business-to-household bills and statements also represent the bulk of bill and statement volume (70%).
- In the U.S. in 2005, nearly 14 billion mailed paper bills and statements (7.9 billion bills and 5.9 billion statements) came from the financial services industry which comprises an estimated 38% of total bills and statements.
- The financial services industry in the U.S. also utilizes electronic bill presentment most prevalently. Forrester estimates that 39% of consumers received electronic deposit account statements in 2005, double the percentage of the previous year.
- In the U.S. the share of consumers receiving *both* paper and electronic bills and statements is rapidly growing to roughly a third of the market. This growth is being spurred by consumers overwhelmingly (over 90%) preferring the combined option of electronic “viewing” and mailed “presentment” of statements.

- U.S. households headed by consumers 45 to 64 years old and have the highest household income at over 65 thousand dollars per year receive the most number of bills and statements per week.
- Of 15 national postal operators in Western Europe, one third experienced positive bill and statement volume growth since 2000. In these countries, bill and statement mail volumes have declined as much as 6.3% compounded annually from 2000 to 2006.

Consumer Preferences:

- Informal surveys show that, while some 90% of highly educated, high-income consumers in the U.S. – i.e., the population segment that receives most bills and statement – have subscribed to an ‘online viewing’ capability, fewer than 10% suppress all paper mailing.
- Examining more formal research studies and industry reports the paper suppression rate number varies over industries; financial services paper bills and statements have the greatest paper suppression rate at 8 to 15%, while utilities are estimated to have a paper suppression rate of 2 to 5%.
- U.S. consumers are reluctant to adopt electronic bill and statement presentment methods because of a number of issues, including: familiarity and convenience of the paper method (37%), security and privacy (27%), and cost and lack of familiarity with electronic methods (26%).
- Of the 82% of U.S. consumers who do not pay most of their bills online, 80% say that they never plan to do so.
- Younger generations, worldwide, express a preference to receive bills online. However, since younger generations pay the least number of bills currently, it is unclear whether this preference will be maintained as they begin to receive more bills when they become much more economically active. Generational studies have shown that indeed mail reception habits mirror income and life stage, not generation.
- Because direct debit is so prevalent in Europe and seen as convenient, customers are more accepting of billers that force them to switch them from paper to electronic presentment, even when the billers impose a fee for consumers who want to retain the paper option. Furthermore, mailed paper bills and statements are the most prevalent method of bill presentment in most of Western Europe.
- In four Western Europe countries, an average of 33% of consumers prefers Internet bills and statements while 53.5% on average prefer mailed bills and statements. Other popular methods of presentment are by text message and by email.

Billers:

- Billers worldwide are making a concerted effort to enlist online bill payers, motivated purely by cost-reduction objectives. Online bill payment adoption rates at the ten largest U.S. banks average around 20%.

- Incentive and penalty programs are also widely used to encourage consumers to use electronic bill and statement presentment. However, billers in the U.S. have largely switched away from penalty programs. In Europe, however, penalties are not uncommon and because consumers use their bank account as a direct debit account for a very wide range of payments and periodic bills, they are more reluctant to switch away from their regular provider and seem more willing to pay the penalties.
- Some banks and billers offer opt-in/opt-out options to motivate electronic bill, statement and payment adoption. Some examples are online archival of statements and check imaging, which are made available upon paper turn-off.
- Rarely is the monthly statement seen as “an appointment with the customer” by large billers bent on cost-cutting, although there is a rising trend toward including targeted promotional material printed on the physical statement in what Gartner has termed “transpromotional” mail. Cross selling and direct marketing messages can be placed on the blank space of a physical bills and statement. This is particularly valuable because the ads can use targeted information from the bills and statements.
- In Western Europe, small and medium enterprises that send less than 300 bills a month send on average approximately 96% of their bills on paper. In general, since it takes a concerted effort to switch consumers to electronic media, smaller businesses globally lack the resources or drive to do so, and have other more pressing business priorities. In particular, billing function in a very small business is largely a “craft” function with ad hoc methods for bookkeeping and billing.

Strategic Conclusions and Prognosis

- Electronic payment channels are experiencing rapidly growing adoption rates. However, check payments in the mail are now stabilizing in the U.S., so that mostly only new demand is going electronic. In Europe, there have traditionally been few payments in the mail due to widespread use of direct debit; therefore, mail is no longer severely threatened by Internet bill payment.
- Electronic presentment adoption is growing, but at slowing growth rates. Most bill-intensive consumers have already adopted “online viewing” of bills and statements and also maintained the mailed statement. As a result, some 90% of consumers in the U.S. and more than 70% in Europe use both paper and electronic media for presentment and still overwhelmingly prefer paper. Further, many consumers who currently use just paper do not plan to go electronic. Of course, biller penalties could alter this prognosis. We believe that progressive billers will instead increasingly turn to use the monthly statements as a relationship and promotional tool and will cease viewing it purely as a cost item.

- Most of the previously forecasted severe and rapid “substitution effect” from electronic billing methods is likely behind us. Our base scenario sees stable volumes (growing or declining mail at about $\pm 1\%$) where some of the declining volume is compensated by new population and account growth. At worst, we see an ongoing but slow erosion of paper mail in the range of 1 to 3% per year of existing mailed volumes. This prognosis is corroborated by the actual rate for Europe in the last five years of only 1.2% annual decline of statements. In the U.S., bills and statements are actually growing, especially for B2C where they have experienced more than 3% growth in the last five years.
- It is important to note that some of the reductions in mailed bills and statements that are often attributed to electronic substitution are sometimes due to mailer “rationalization,” whereby billers cut frequency due to the increases in postage prices. This suggests that maintaining the value proposition for mail by operators will be an important strategy in keeping these important volumes in the mailstream.
- Any additional negative effect on mailed bills and statements from the “generational” factor is, of course, highly speculative. Quantitative research so far has shown that the younger generations receive mail according to their age and life stage and that Internet users receive more mail than non-Internet users. Further, simulation studies have concluded that, even if all of the youngest adult generation were entirely removed from the mailstream, the effect on mail volumes would be small due to the already established patterns in the overwhelming majority of the aging population.

1. Definition

1.1 Availability of Payment and Presentment Options

While consumers have many different options to receive and pay their bills (including automatic deduction, telephone payment, etc.), this analysis focuses exclusively on mailed paper versus electronic bills, statements and payments.

Electronic bill payment can be initiated by the consumer using a variety of pre-established options for paying bills, which can include credit cards, off-line debit or check cards and electronic checks. Banks can simply deduct the funds from the payer's checking account.

There are two types of payment models:

- **Biller Direct Model:** Consumers pay directly at the biller's website.
- **Indirect Model:** Consumers pay any biller through a third party website such as a bank's or by using software that interacts with the payer's bank.

Forrester (2007) estimated that in 2005, 34% of all U.S. households that pay bills online used the direct model while 43% used the indirect model.

There are two types of bill and statement presentment models:

- **Biller Direct Model:** A biller delivers the bill to customers via its own branded website. A biller can also prepare their bills and deliver them to their customers directly via an email attachment.
- **Consolidator Model:** Bills from multiple billers are delivered to a single website, to be presented in aggregate to the consumer for viewing and payment. Banks or other private parties can act as consolidators.

Infotrends (2006) estimated that of the U.S. consumers receiving bills and statements online in 2006 89.3% received them via the direct model while 10.7% received them via the indirect model. There has been a slight shift toward the direct model since 2002 when 87.4% received them via the direct model and 12.6% received them via the indirect model. This change, though minimal, is likely because consumers prefer to minimize the number of hands touching a bill for better safety and security of important information.

1.2 What is EBPP?

EBPP is an acronym for "Electronic Bill Presentment and Payment," the process by which businesses bill consumers (bill presentment) or receive payments (bill payment) electronically over the Internet (Webopedia.com, 2004). Not included in the acronym but included in the definition is statement presentment which typically gets grouped with bill presentment when measured. This term is important because it is the best used term for encapsulating the subject of the paper, electronic bills, statements and payments.

EBPP should also not be confused with Electronic Funds Transfer (EFT). EFT is defined as any transfer of funds that is initiated through an electronic terminal, telephone, computer, or magnetic tape for the purpose of ordering, instructing, or authorizing a financial institution to debit or credit an account. The term includes, but is not limited to: point-of-sale transfers;

automated teller machine transfers; direct deposits or withdrawals of funds; transfers initiated by telephone; and transfers resulting from debit card transactions, whether or not initiated through an electronic terminal (BankersOnline/EFT Corporation, 2004).

EIPP (Electronic Invoice Presentment and Payment) is another industry term used specifically to describe business-to-business billing and payment. EIPP solutions fall into two categories: accounts receivable solutions for sellers who want to get electronic invoices into the hands of buyers; and accounts payable solutions, geared toward buyers who want to receive all invoices electronically (Forrester, 2005). This term will not be used in this paper to avoid confusion. Instead all business originated billing and payment will fall under EBPP for clarity.

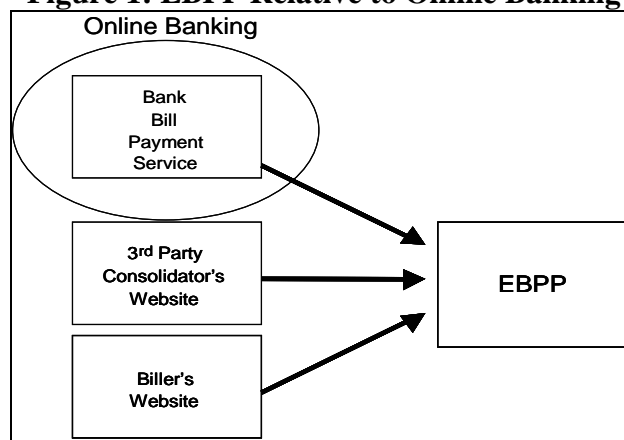
1.3 EBPP and Online Banking

Online banking services generally include all routine banking transactions such as account transfers, balance inquiries, bill payments and stop payment requests (investorwords.com, 2004). However, EBPP is not used interchangeably with online banking.

Approximately 41.5 million U.S. households of 113 million (36.7%) used online banking in 2005 according to eMarketer (2006). About the same number of U.S. households use online bill payment, but far fewer use bill and statement presentment.

As far as this study is concerned, a bank's site is merely another place to pay bills. Other ways bills can be paid are directly at a biller's website (which would be considered online bill payment, not online banking) and at a consolidator's website. The presentment and payment models are outlined in more detail in Figure 1. The types of billing options will be elaborated in section 2.2, *Availability of Payment Options*.

Figure 1: EBPP Relative to Online Banking



Source: Flynn (2005)

1.4 How does EBPP work?

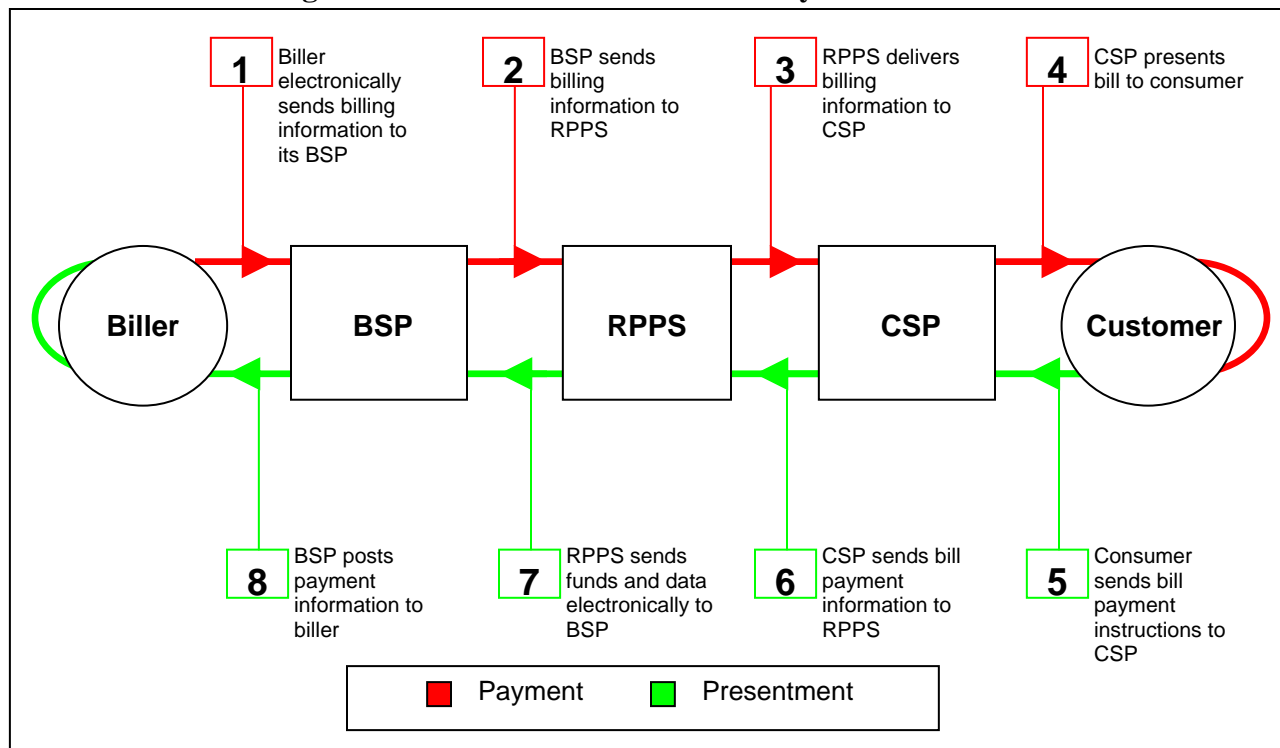
Typically, the bill presentment process functions by the following flow (Figure 2). The biller sends the billing information to the Biller Service Provider (BSP), an intermediary between businesses and consumers. The BSP then sends this information to a billing hub, like a Remote Payment and Presentment Service (RPPS). Next, the RPPS delivers the billing information to a Customer Service Provider (CSP), which is an agent of the customer that provides an interface directly to customers, businesses, or others for bill payment and presentment. The CSP enrolls

customers, enables payment and presentment, and provides customer care. Finally the bill is presented to the consumer.

The bill payment process is quite similar. The consumer sends the bill payment information back to the CSP. Then the CSP sends the information to the RPPS to be processed, the RPPS sends it back to the BSP, where payment is made to the biller.

Mastercard advertises that its RPPS enables 95% of the EBPP industry service providers to have customers bills paid online. The service offers users one-stop access to comprehensive electronic routing, posting and settlement services typically within 24 hours to effectively displace paper.

Figure 2: The Bill Presentment and Payment Process



Source: MasterCard (2006)

2. Scope

2.1 Geographic Scope

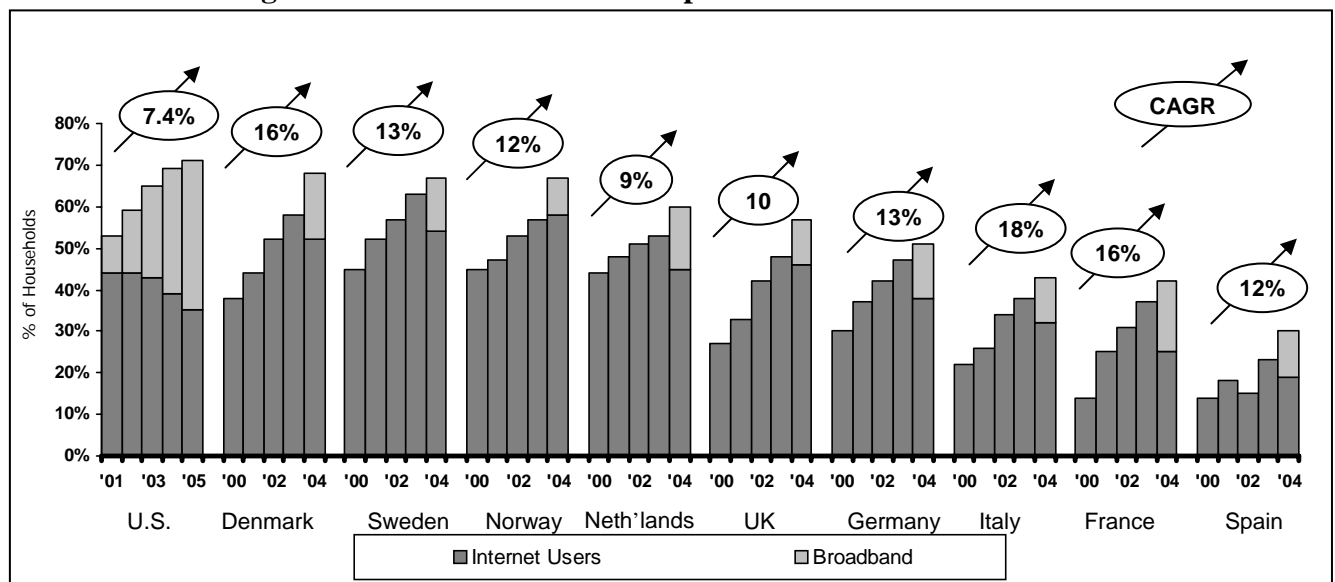
The geographical focus of this paper will be the United States and Western Europe. Most of the general consumer and biller trends discussed originate from U.S. trends, but are not exclusive to the U.S. Many of the trends and dynamics in Europe are quite similar to many of the trends in the U.S.

The impact of electronic bill presentment and payment on the mailing industry in Europe is difficult to assess because of a wide range of economic and postal factors throughout. Specifically, Western Europe will be the focus of this paper because it includes many of the countries that have both high mail volumes and high Internet penetration.

More specifically Western Europe can be classified into two relatively distinct geographic sections with regard to EBPP: North Western Europe, which includes Finland, Sweden, Norway, and Denmark; and the rest of Western Europe, including the UK, France, Germany, the Netherlands and Italy. The Nordic countries are grouped together in this instance because they have high mail volumes and a higher Internet adoption rate than the rest of Europe as well as the U.S.. Countries with higher Internet penetration generally have higher online bill payment adoption rates, while those with lower Internet penetration have naturally lower rates. In addition, many Nordic banks have moved toward an electronic system to facilitate the landscape of Internet adopters.

Figure 3 shows how the Nordic countries are ahead of the Internet penetration curve. EBPP in the rest of Europe will be deemed out of scope because both Internet adoption rates and mail volumes in those countries are respectively low. Though there are exceptions like Estonia with a high Internet adoption rate and low mail volumes, the European countries in this study will exclude those exceptions for simplicity.

Figure 3: U.S. and Western European Internet Penetration



Source: Datamonitor, OECD, BCG Analysis; PwC, Pitney Bowes Analysis

2.2 Shortcomings in Electronic Adoption Forecasts

It is important first to note a few shortcomings of most EBPP adoption estimates. First, most estimates do not account for the *total* number of bills presented or paid online. They only account for the number of users. For example, Forrester defines adoption as any household that has paid *at least one bill online* in the “past three months” in their bill payment statistics. For this reason estimates like these do not assess the depth of adoption, they only provide the impact of surface penetration.

Second, presentment and payment are often lumped together as one function of EBPP. However, the two processes are distinctly different. Bills paid online do not translate to bills presented online, and vice versa. Some researchers, such as Forrester and eMarketer, denote bill payment adoption as a sufficient indicator of EBPP. However others like Jupiter regard EBPP as all-inclusive payment and presentment adoption.

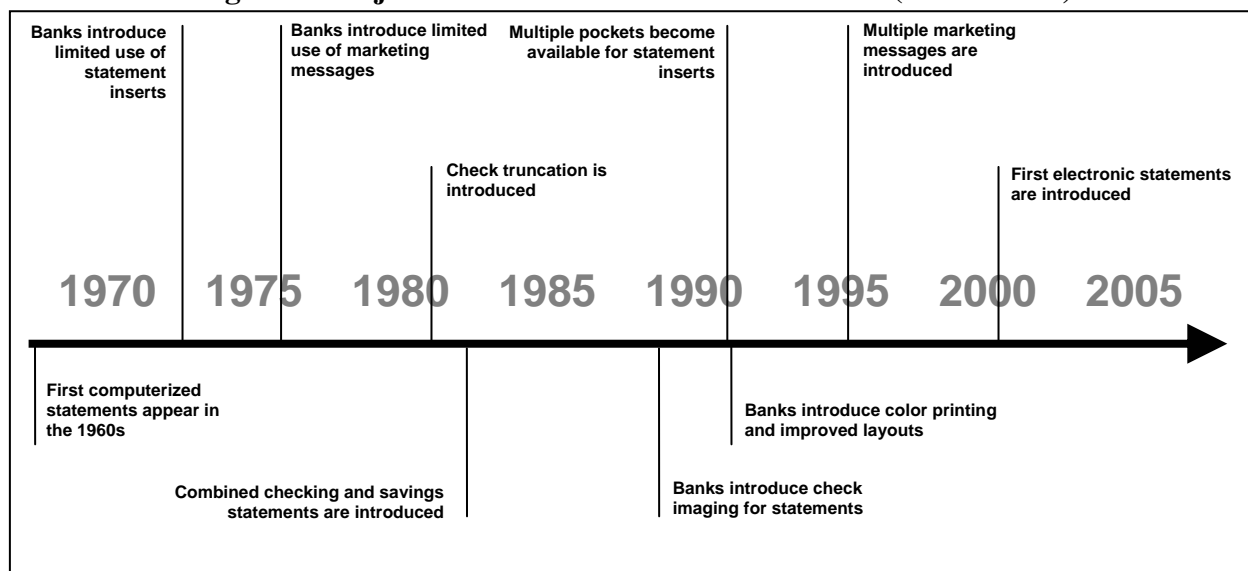
Due to these issues, it is difficult to accurately determine the potential impact on mail volumes by examining adoption rate data alone. The impact of EBPP is not definitively quantified by any one source, so the facts must be pieced together in order to build a qualitative amount based on trends and dynamics.

3. The Evolution of Bills and Statements

3.1 Evolution of Statements

Banks' statements have evolved considerably over the past 40 years. Figure 4 shows the evolution of the current statement environment.

Figure 4: Major Innovations of Bank's Statements (1970 – 2005)



Source: Tower Group (2006)

This chart indicates that financial statements have changed very slowly over the past 40 years. The next steps in this evolution will might be a “lighter” (truncated or summarized) statement with some marketing message on it. This will be further discussed in section 7.3, *Added Value Factor: Transpromo Statements*.

3.2 Previous Forecasts of EBPP Impact and Mail Volume

Industry observers have been traditionally optimistic about the growth of EBPP¹, but historical forecasts have varied significantly, demonstrating just how differently various observers saw the market.

Many experts forecasted that EBPP would significantly displace First-Class mail volume. They also predicted that rapid electronic payment adoption would be followed closely by electronic bill and statement use. However, rapid EBPP adoption and full use did not occur.

Households that utilized online bill payment chose not to pay *all* of their bills online, meaning EBPP adoption does not translate to *total* bill presentment and payment adoption. There is strong evidence that consumers still prefer to receive and pay their bills using traditional paper mail. Therefore, the many pessimistic First-Class mail volume predictions developed by the USPS (Figure 5) and many others was never realized in the U.S..

¹ As described in section 2.1, EBPP adoption is defined as consumers or households that pay or are presented *at least one bill online*.

Figure 5: First-Class Mail Volume Forecasts vs. Actual



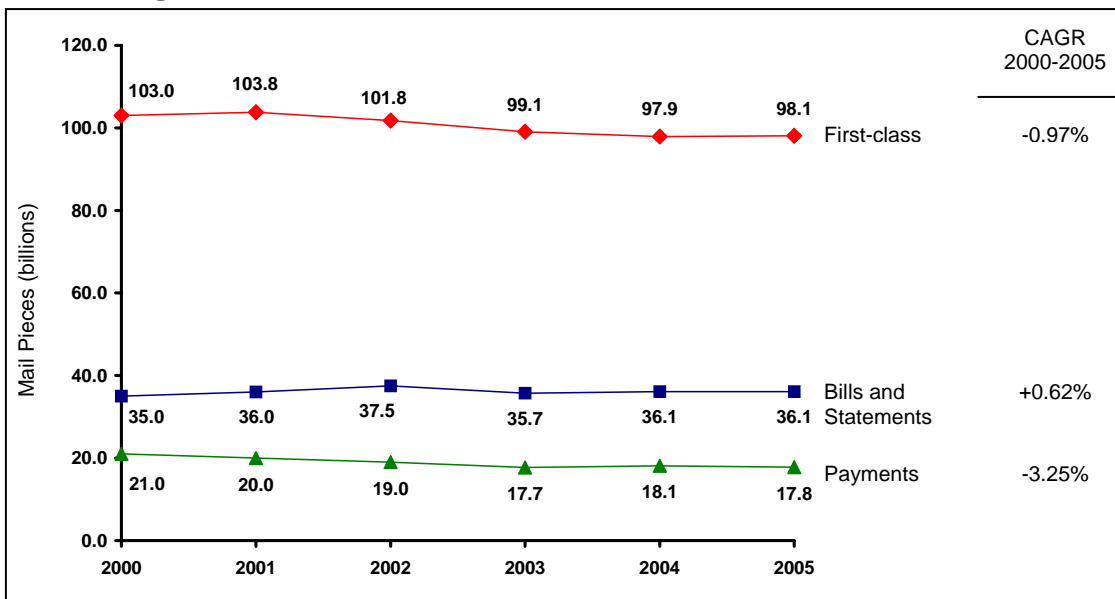
Source: Nader (2005)

What these past forecasts can show us is that full electronic adoption of bill presentment and payment is very difficult and involves many factors. This paper intends to capture those factors for the development of a more accurate outlook of EBPP.

3.3 Current state of bills and statements by mail in the U.S.

From 2000 to 2005, total U.S. First-class mail volumes have decreased slightly with a compound annual growth rate (CAGR) of -0.97%. Though this may be disconcerting to paper and mailing industry companies, if we look at the total volume of bills and statements through the mail, they have actually increased slightly from 2000 to 2005 with a CAGR of +0.62%, evident in Figure 6.

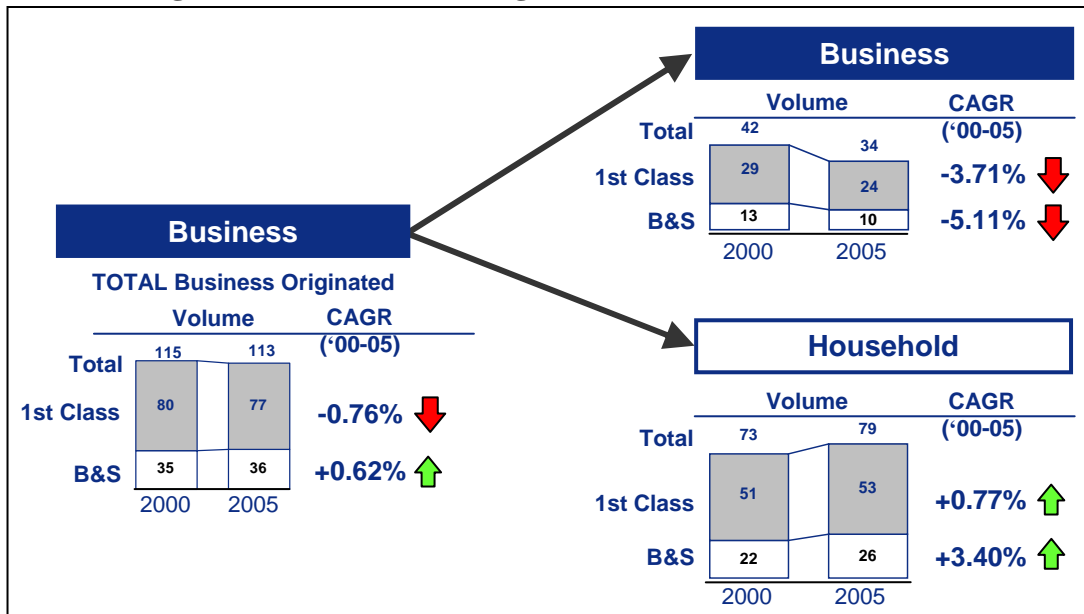
Figure 6: U.S. First-class Mail, and Bill and Statement Volumes



Source: USPS Household Diaries, Pitney Bowes Calculations

In comparison, business-to-business bills and statements fell -5.11% per year from 2000 -2005, while business-to-household bills and statements grew 3.40% per year over the same period (Figure 7). Moreover, the volume of business-to-household bills and statements grew from a 63% share of total bills and statements (compared to business-to-business bills and statements) to a 72% share. This indicates that business-to-household bill and statement presentment by mail is increasing quite robustly.

Figure 7: U.S. Business Originated Mail Flows and Volumes



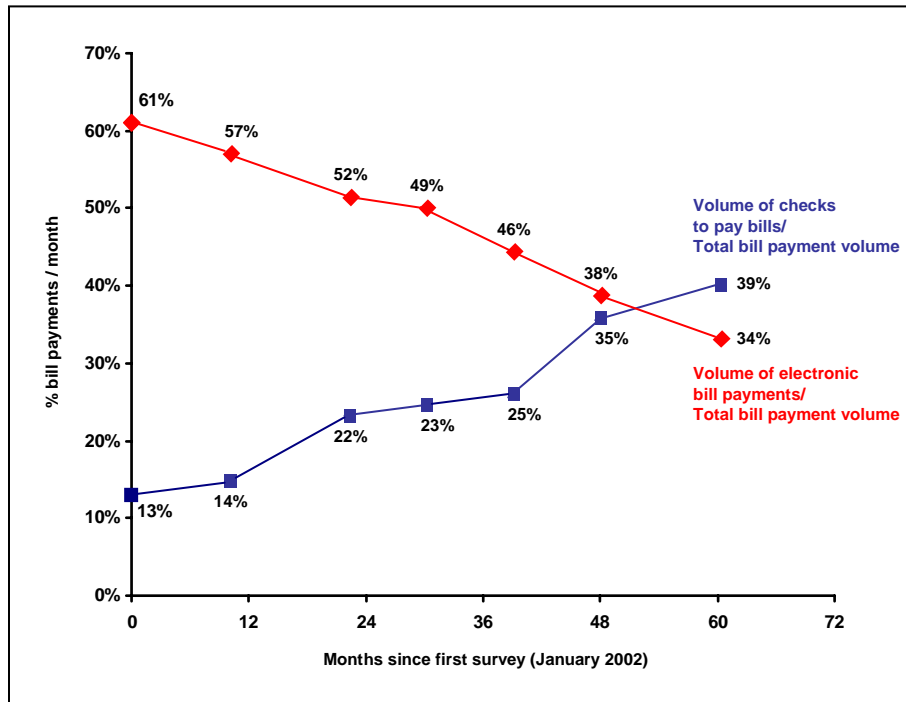
Source: USPS Household Diaries

4. Bill Payment Landscape

4.1 Consumer Bill Payment in the U.S.

Consumer payment methods are increasingly moving toward non-paper options. CheckFree's study on consumer bill payment indicates that the share of electronic bill payments has surpassed share of checks used for bill payment in March 2006, approximately four years and two months after the first survey which was done in January 2002 (Figure 8).

Figure 8: Share of Check Payments versus Electronic Payments in the U.S.*



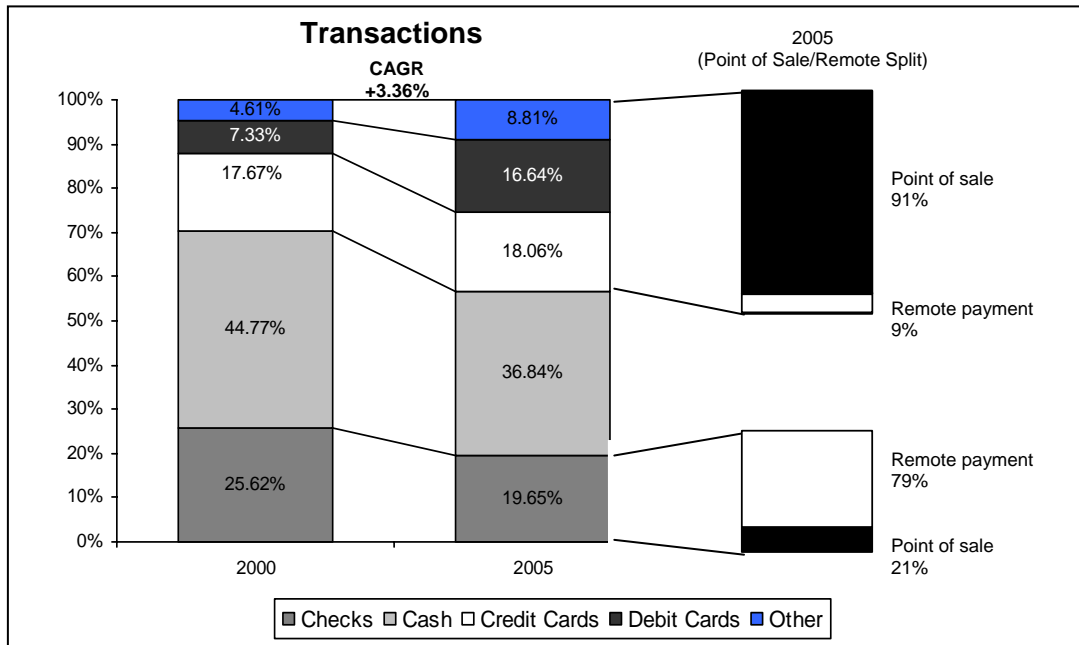
*Harris Interactive Poll

Source: CheckFree (2007)

In Figure 9, Nilson corroborates CheckFree's findings estimating that both check volumes and check transactions have gone down significantly from 2000 - 2005. Moreover, electronic payments in this analysis (included in "other" category) have increased in volume from 4.61% to 8.81%.

The methods of payments can be further broken down into remote payments, such as online and mailed, and point of sale, such as peer to peer. Figure 9 shows that less than 79% of checks are mailed, while less than only 9% of credit cards, debit cards, and other forms are mailed (Nilson, 2006). This means that the decline in check payments has a negative effect on mail volumes, but the increased use in credit, debit, and other means have a much smaller effect on mail volumes.

Figure 9: Share of U.S. Consumer Payments by Method



Source: Nilson (2006)

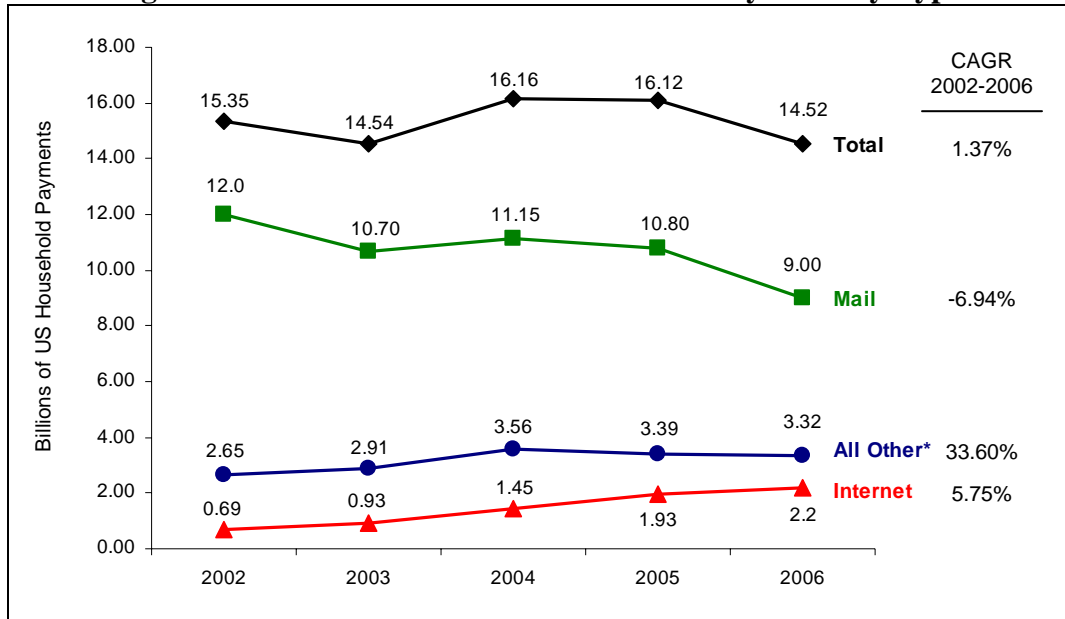
Though paper-based payment mechanisms are losing share, checks continue to play a significant role in the U.S. payment systems however, particularly when electronic payments are not well suited for fully meeting consumer or business needs.

These conclusions pertaining to the check and electronic payments corroborate the findings of the previous Pitney Bowes study, “Trends in Consumer Payments Systems” by Tamayo, Flynn and Jimenez published in 2005.

The USPS, in its Household Diary Studies, estimated that the volume of household originated Internet payments has increased from 690 million in 2002 to 1.93 billion in 2005, a growth of more than 40% per year (Figure 10). Meanwhile, while household originated mailed payments fell from 12 billion pieces in 2002 to 10.8 billion pieces in 2005 with a CAGR of -3.45%, these payments appear now stable in the last three years. Total payments have grown just slightly from 15.35 billion in 2002 to 16.12 billion in 2005 with a CAGR of 1.64%.

Figure 10 also shows that payments fell throughout 2003 during a short period of a general mail downturn. Despite that downturn, household originated payments have been stable from 2003 to 2005. Data from 2006 has shown this downturn in mailed payments may have once again have returned. On average, about 60% of all payments are household originated.

Figure 10: Total Volume of U.S. Household Payments by Type

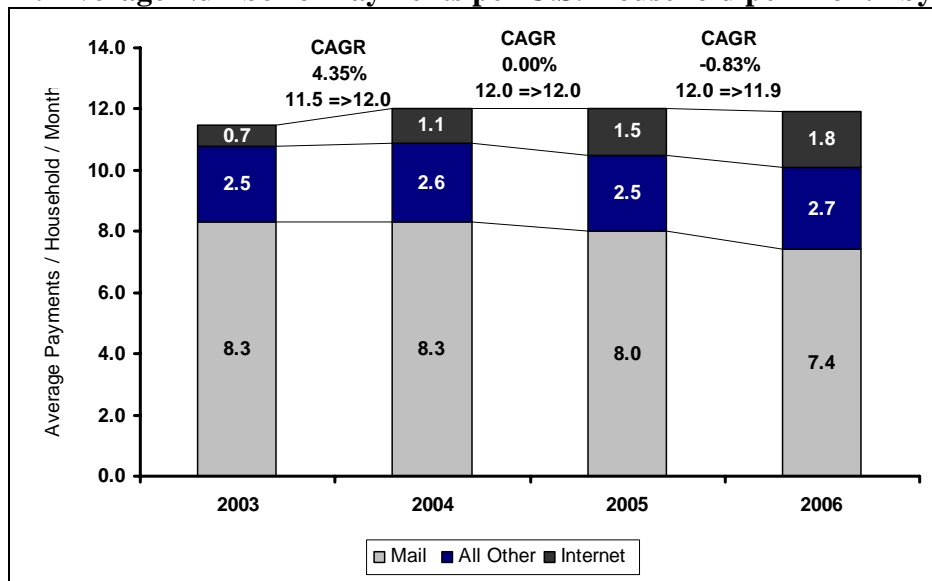


*All Other includes payment methods: automatic deductions, in-person, credit card, telephone, and ATM

Source: USPS Household Diary Studies and Pitney Bowes Analysis

The USPS Household Diary Studies also estimate that 15% of bills a month on average were paid by each U.S. household using the Internet in 2006 (Figure 11). More specifically 1.8 of 11.9 total bills a month, were paid by each household using the Internet. This is an increase from a 12.5% (1.5 of 12 total bills a month) Internet share in 2005 and up even more from a 6.1% (0.7 of 11.5 total bills a month) Internet share in 2003. This means the average payments by the Internet per household per month have more than doubled from 2003 to 2006. Moreover, it would seem that the average mailed payments per household per month have gone down slightly from 2004 to 2006, possibly indicating some level of substituting of mailed payments for other methods, but in reality they have only returned to their 2003 level after growing from 2003 to 2004.

Figure 11: Average Number of Payments per U.S. Household per Month by Method



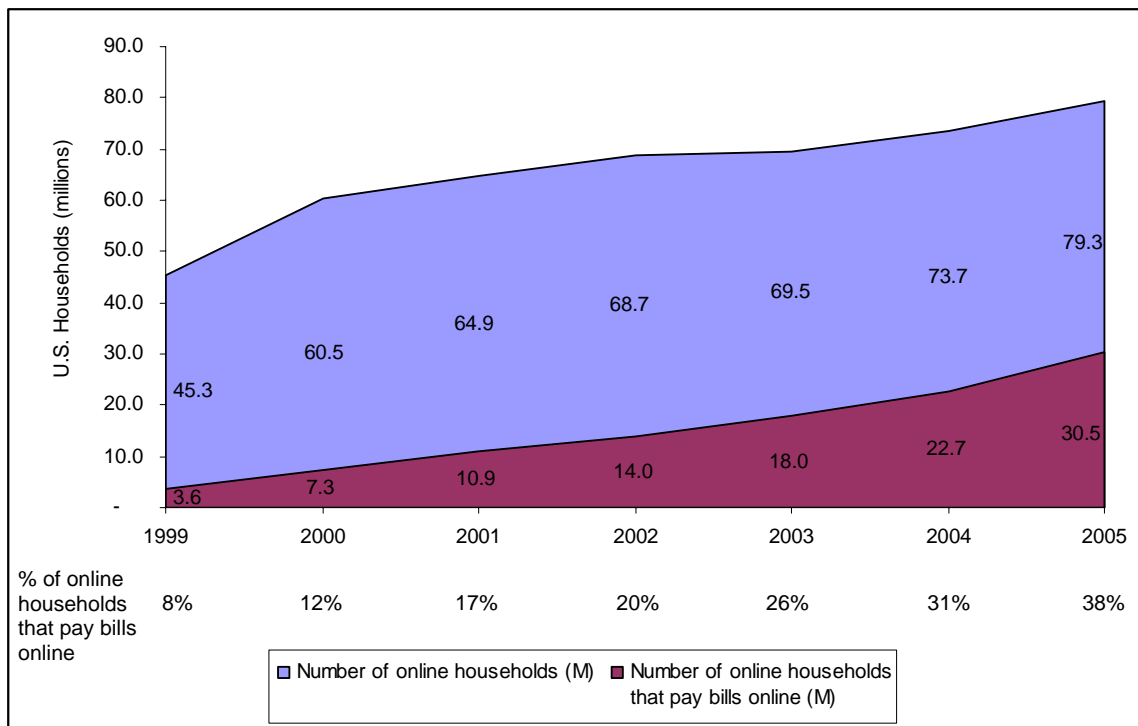
*All Other includes payment methods: automatic deductions, in-person, credit card, telephone, and ATM

Source: USPS Household Diaries, Pitney Bowes Analysis

This data from the USPS generally corroborates the findings from CheckFree and Nilson that check volumes have fallen. Mailed payments have gone down partly due to a decreased use of check payments. However, the overall decline of mailed payments may be affected by other factors such as increased postage prices.

The share of electronic payments has been growing the past several years. Forrester (2007) estimates that the number of online paying households (households that pay at least one bill online) has grown from 3.6 million households in 1999 to 30 million households in 2005. This means 38% of U.S. online households (households with an Internet connection) paid at least one bill online in 2005 (Figure 12).

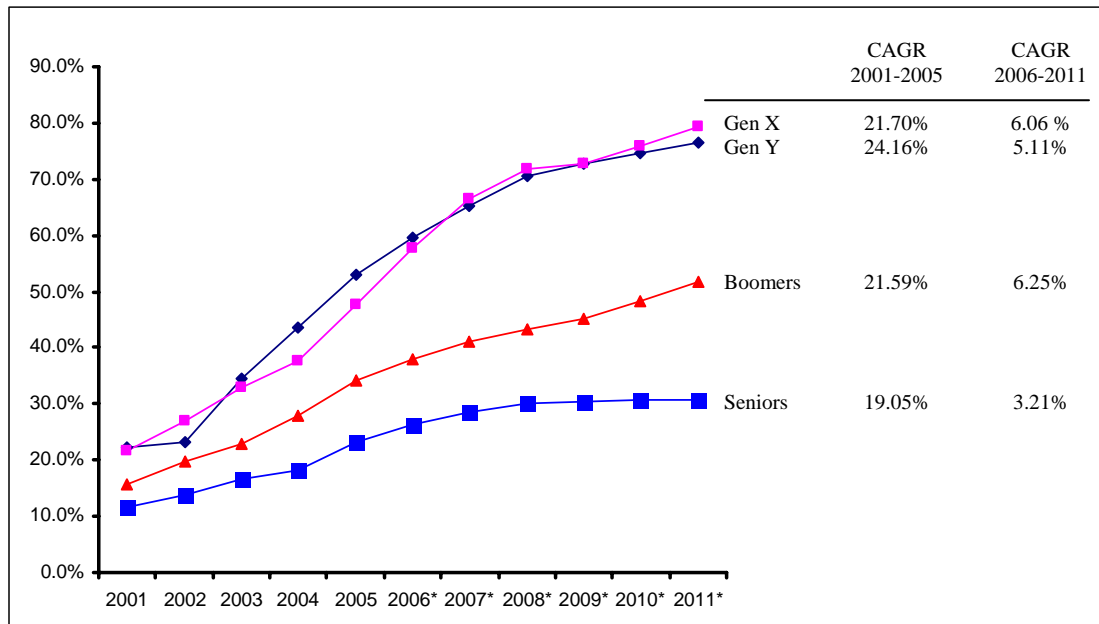
Figure 12: Percentage of U.S. Households Using Electronic Bill Payment



Source: Forrester (2007)

Online bill payment adoption also varies from generation to generation. In Figure 13, Forrester finds that younger generations, such as generation X and Y households have adopted electronic bill payment more than older generations. Though, all generations have grown at a rapid rate evident in the CAGR from 2001 to 2005. The online bill payment market is also likely reaching saturation. Forrester predicts that growth rates will slow in the next few years indicated by the CAGR values from 2006 to 2011 in Figure 13. Forrester’s electronic bill payment adoption includes any household that pays at least one bill online.

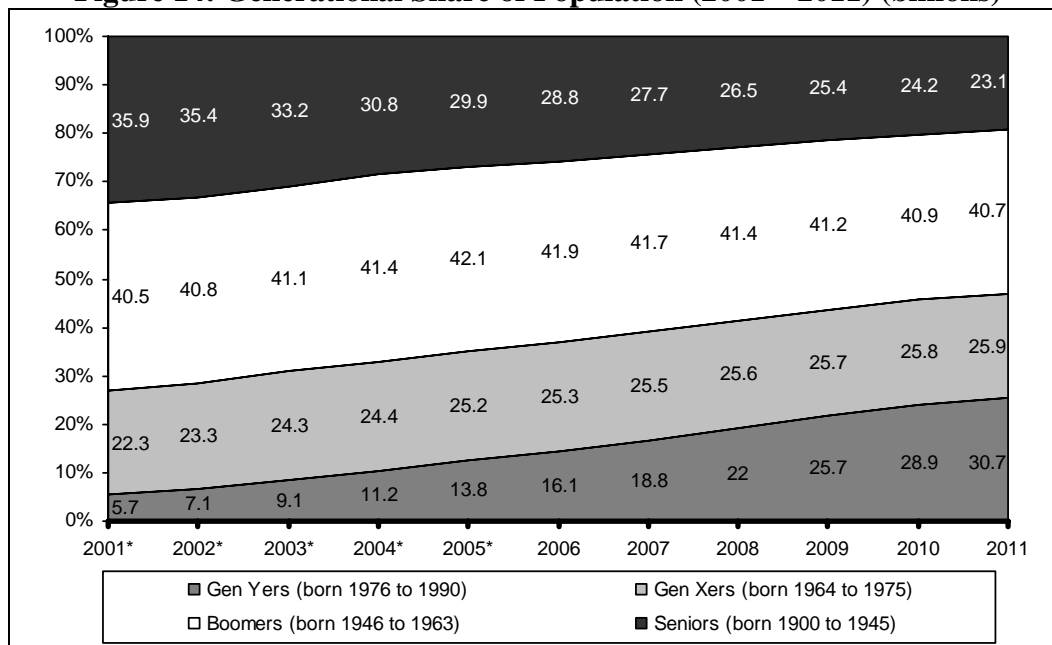
Figure 13: Share of Total Electronic Bill Payment Adoption by Generation¹



Base: U.S. Households, *Forecasted
 Source: Forrester (2007)

This assessment of generational use of must also be cross referenced with the number of people in each generation in the U.S. In Figure 14, Forrester estimates that generation Yers will grow rapidly over the next few years, but boomers will continue to be the majority. This means that although the majority of online payments are made by generation Xers and Yers, boomers will still be paying the most total volume of bills.

Figure 14: Generational Share of Population (2001 – 2011) (billions)



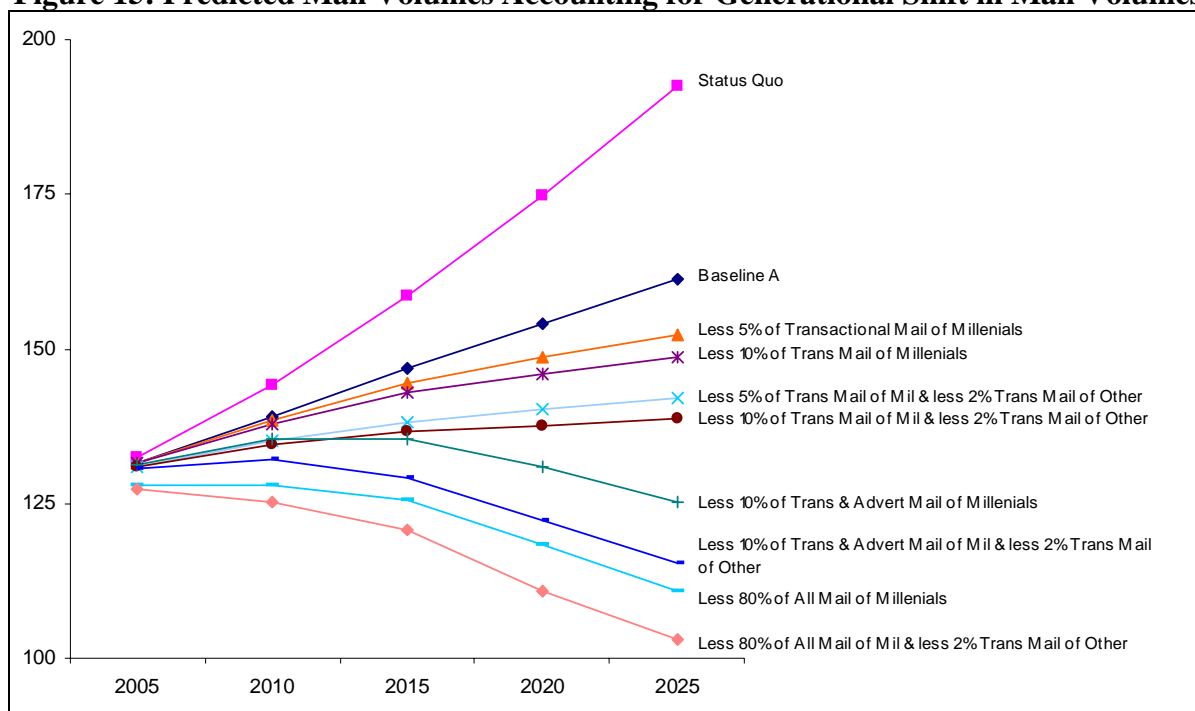
Base: U.S. Households, *Forecasted
 Source: Forrester (2007)

¹ Gen Y households (born 1976 to 1990), Gen X households (born 1964 to 1975), Boomer households (born 1946 to 1963), Senior households (born 1900 to 1945)

Despite the growing share of electronic payments, households still pay the large majority of their bills using the U.S. Postal Service. In 2005, 10.8 billion payments were sent through the USPS. However the volume of bill payments through the mail has declined in recent years, from 84% in 1998 to 67% in 2005, as the volume of bill payments on the Internet (12.5%) has been rising.

A previous Pitney Bowes study carried out by Luis Jimenez, et al, called “Scenarios of Mail Receipt Patterns Across Generations,” shows how mail volumes might change if the youngest generation, the “Millennials” born between 1982 and 2001, were to drastically stop sending mail. In this scenario, 80% of transactional mail volume received by Millennials and 2% of transactional mail from all other generations was removed from mail volume projections. The result was a decline of just 1.33% of total mail volume per year. This scenario is defined as the worst case scenario, while other scenarios showed lesser decline (Figure 15).

Figure 15: Predicted Mail Volumes Accounting for Generational Shift in Mail Volumes



Source: Pitney Bowes (2006)

In addition to volume, electronic payments have spread to a growing number of households. Tower Group estimates that the number of electronic bill paying households has grown significantly, from 5.5 million households in 1999, to more than 45 million households in 2006, representing annual growth of more than 20%.

Similarly, Forrester (2007) estimates that there were 3.6 million online bill paying households in 1999 and 30.5 million in 2005. Also, in that period Forrester estimates the share of online bill paying households out of total online households has gone from 45.3% in 1999 to 79.3% in 2005.

Online bill payment adoption has likely grown for the key reason of convenience. Bill payment is more complicated than bill presentment for the consumer. After the bill arrives, it must be opened, cross referenced with a bank account to check for sufficient funds, then a money transfer must be made, such as writing and mailing a check. After that, records must be kept to ensure accurate balances next billing cycle. Online bill payment eliminates those complications into a

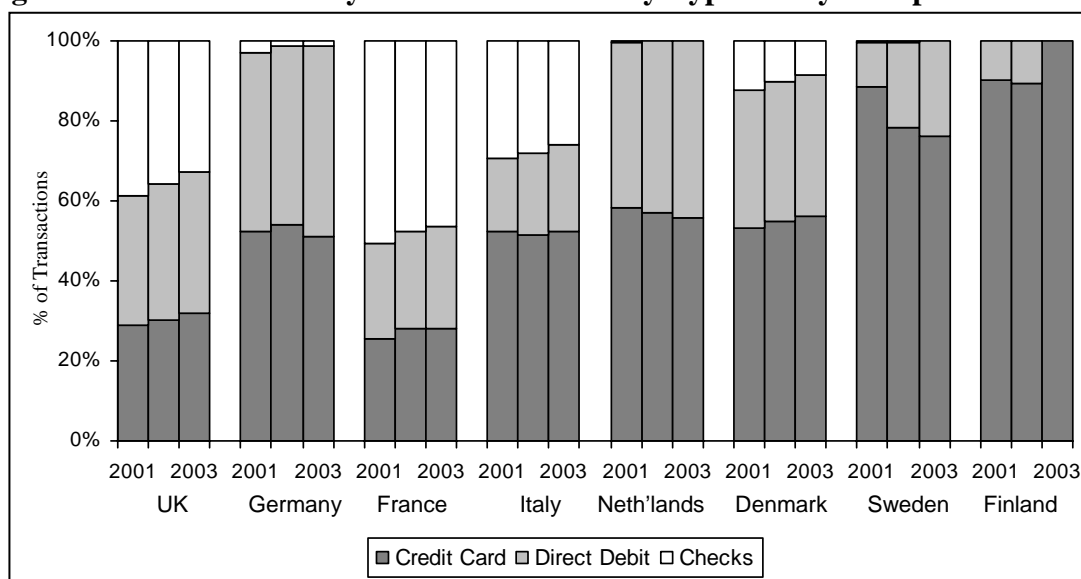
single interface which is typically used free of cost. These conveniences will be elaborated in section 6.1, which will focus on consumer preferences.

While electronic payment percentages may be construed as high, they pose little threat to the actual mail volumes because consumer generated mail payments make-up only 5.2% of the 211.7 billion pieces of total mail processed by the USPS in 2005 (Pitney Bowes Analysis, 2007).

4.2 Bill payment in Europe

Most bills in European countries, with the exception of consumers in France and the U.K. (who have historically used checks), are paid using non-check based payment mechanisms such as credit and debit cards and direct debit (Figure 16). Therefore, the opportunities to reduce payment processing costs associated with billing are a much greater priority for U.S. based companies than their European counterparts. Moreover, while approximately two-thirds of U.S. households have an Internet connection, only about 30% of households in Europe have online access (AIIM E-Doc Magazine, 2004). EBPP is none-the-less gaining traction in some European countries with Jupiter Research reporting that approximately 25 million consumers in Western Europe (14.4% of Internet users) paid their bills online in 2004 (eMarketer Extranet, 2002).

Figure 16: Share of Bill Payment Transactions by Type in Key European Countries



Source: European Central Bank (2006)

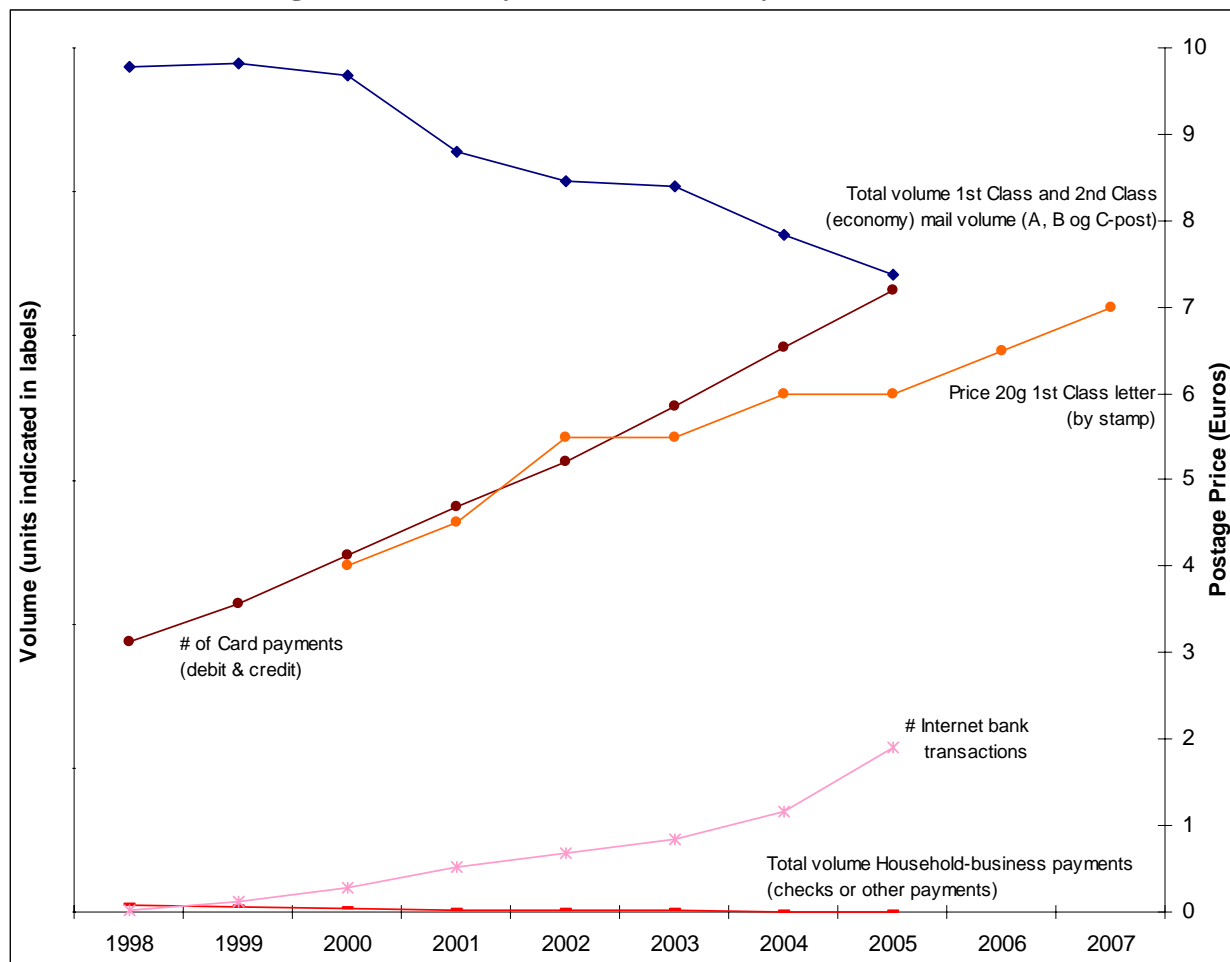
With payment methods, countries can be categorized in two groups. In the first group, the common theme is that “credit transfer” is (or used to be) the preferred instrument. This group includes Switzerland, Sweden, Germany, Belgium, Netherlands and Italy. The second group of countries shows a less prevalent or non-existent share of credit transfers and a more significant reliance on the check as a payment method and is composed of Canada, France, U.K. and the U.S.

For both groups though, the underlying conclusion is that cards and direct debits are increasing their share at the expense of checks and credit transfers. The main difference between countries of North America and Europe stems from the fact that consumers in Europe have, for the most part, been more used to the ability to choose from more payment mechanisms and are more adept at shifting payment mechanisms quicker.

Many European posts have indicated that checks are an anomaly in several countries, including Austria, Denmark, Finland and Switzerland. Almost all banks today have automatic clearing houses (ACH) that allow checks to be processed immediately at point of sale, but counter payments pose a problem for the governments in that consumers who have no electronic payments methods instead require a retail service that the post is often mandated to provide. Thus, enabling these consumers electronically makes good policy sense as it can reduce the cost of physically staffed retail services, with no consequence for mail volumes.

In Norway, household to business mail volumes have declined possibly due to increased Internet bank transactions and credit card payments (Figure 17). However, there may be additional reasons for this decline in volume. Over the course of this period Norway raised prices of postage which may have introduced a lag in mail volumes. Shown in Figure 17 are 20 gram letter stamp prices which have risen 42% from 2000 to 2007.

Figure 17: Norway Post Mail and Payment Volumes*

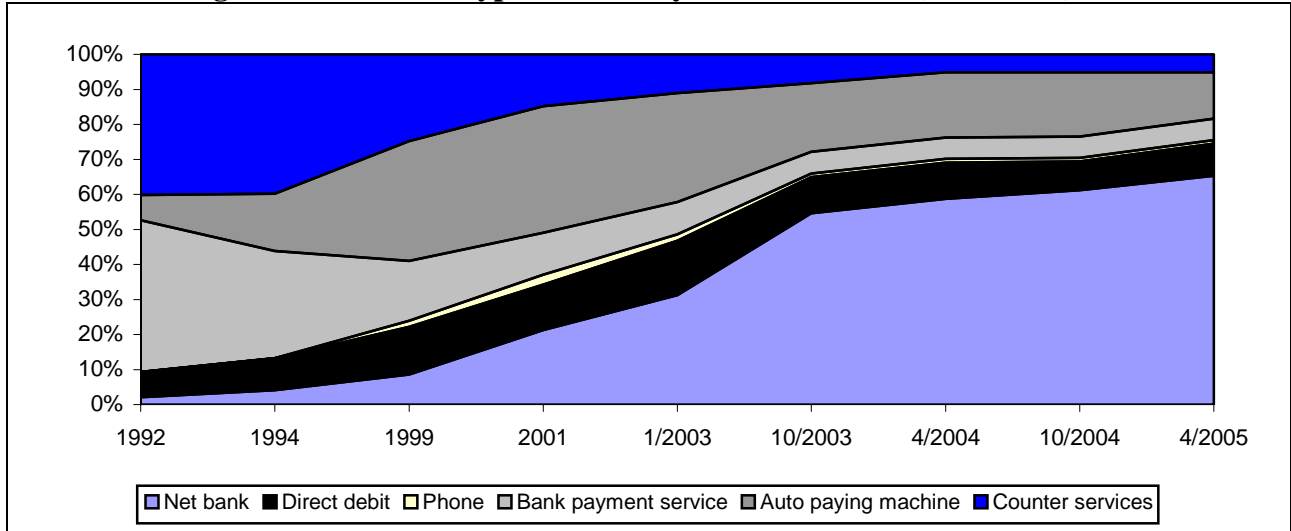


*Units not shown for confidentiality; chart is to scale

Source: Norway Post (2006)

Figure 18 shows Finland’s bill payment evolution. Finnish consumers have overwhelmingly adopted online banking that facilitates online bill payment, called NetBank. This graphic also corroborates the high adoption of direct debit in Finland shown in Figure 16.

Figure 18: Share of Types of Bill Payment in Finland (1992-2005)



Source: Finland Post (2005)

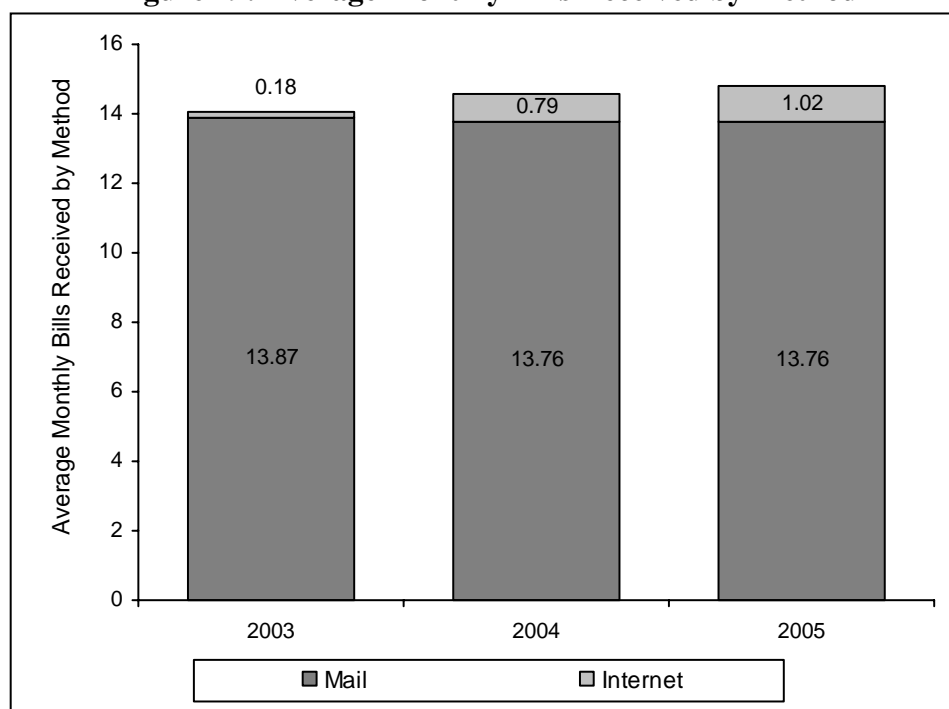
5. Bill and Statement Presentment Landscape

5.1 Bill and statement presentment facts in the U.S.

As mentioned earlier, the 2006 USPS Household Diary Study estimates that of the 36.1 billion bills and statements delivered by mail in 2005, 25.4 billion (70%) were from businesses to households while 10.7 billion (30%) were from business-to-business. Because the majority of bills and statements volume is from business-to-household, that flow will be the focus of this section.

On a monthly basis, the study estimates that the average number of online bills received per month has increased from 0.18 bills to 1.02 bills (Figure 19). Meanwhile, the average number of mailed bills has fallen very slightly from 13.87 bills to 13.76 bills. What these figures lack however is the overlap of online and mailed bills received. It may be that that one online bill a month is also mailed.

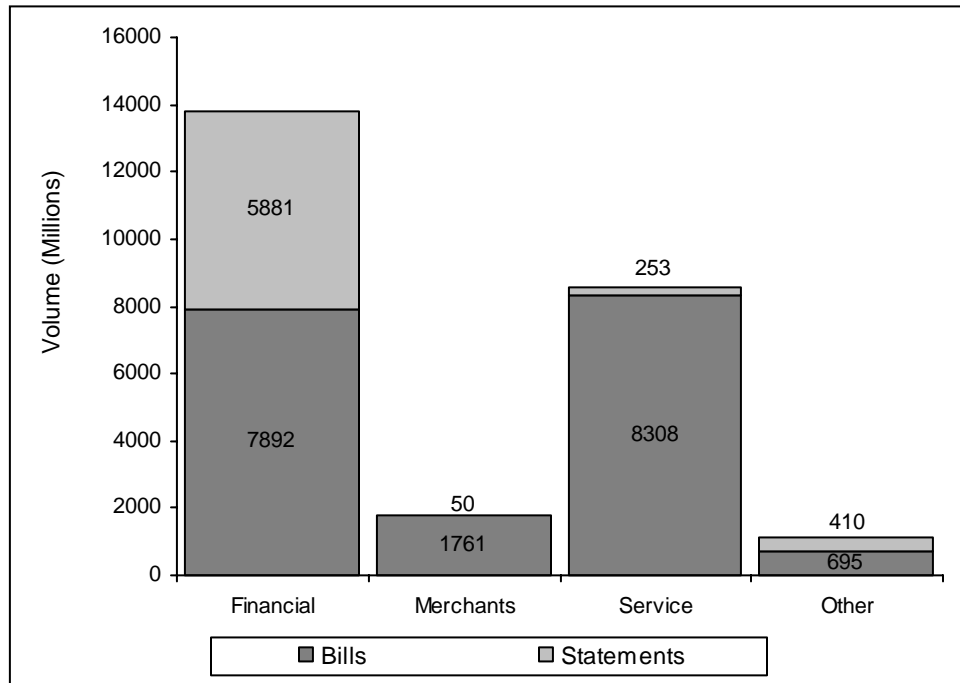
Figure 19: Average Monthly Bills Received by Method



Source: USPS Household Diary (2005)

The large percentage of mailed paper bills are being sent primarily in the financial, service, and merchant industries. Nearly 14 billion financial services bills and statements were sent in 2005, 42% of those statements and 58% bills. The largest number of mailed paper bills, 8.3 billion pieces, comes from the service industry (Figure 20).

Figure 20: Volume of Mailed Bills and Statements in the U.S. by Industry (2005)

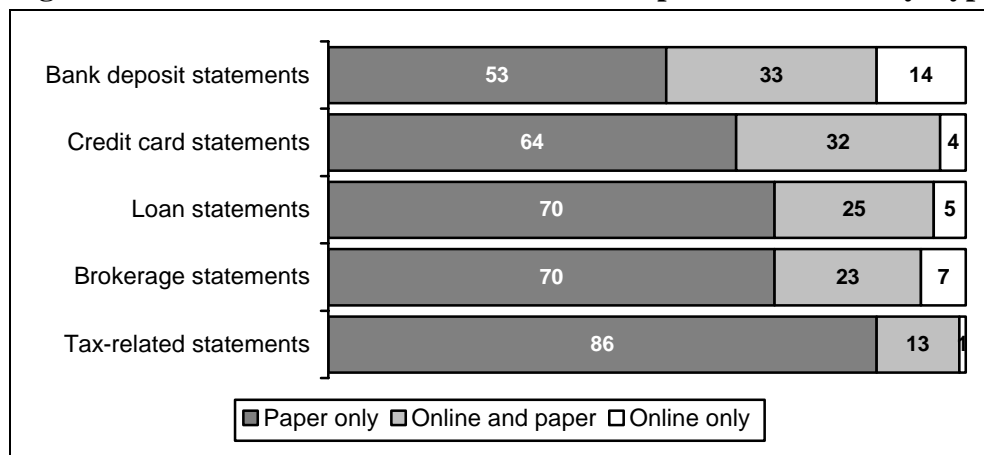


Source: USPS Household Diary (2005)

Forrester Research estimated that 39% of consumers received electronic deposit account statements in 2005, double the percentage in the previous year. However, TowerGroup estimates that less than 10% of deposit account statements and 20% of loan account statements have changed from paper to electronic.

Low electronic bill presentment can be attributed to the fact that many financial companies such as banks, thrifts and credit unions still regard account statements as a regulatory obligation rather than a consumer communications vehicle (TowerGroup, 2006). Though the view of statements is changing rapidly with more personalized statements and better statement reception control, the mailed paper bill and statement is still tremendously favored, as shown in Figure 21.

Figure 21: Method of Financial Statement Reception in the U.S. by Type

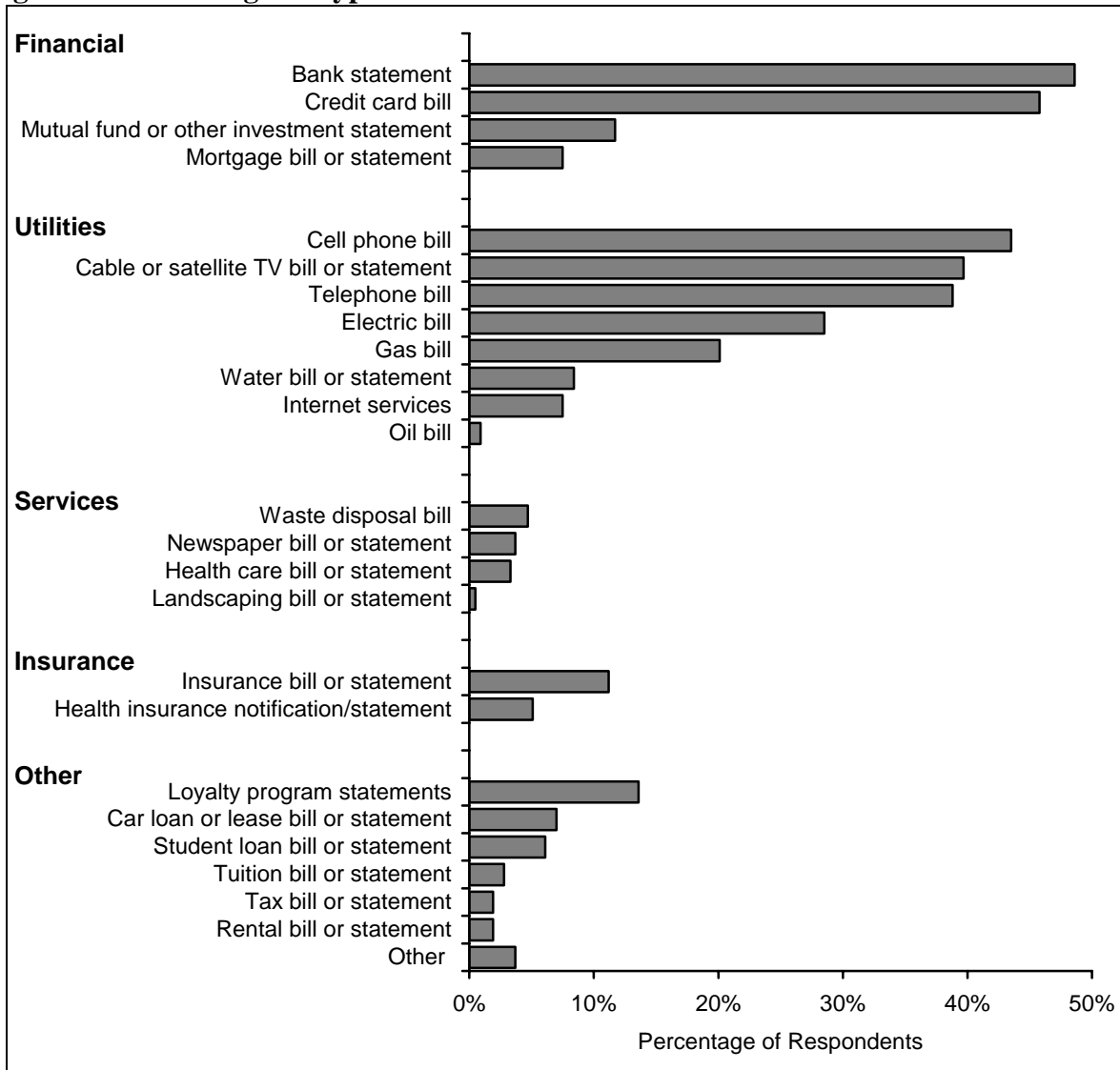


Source: Forrester (2006a)

Though financial statements are mostly received by mail, they also happen to be the industry with the most prevalent online bill receivers as shown in Figure 22. This is likely because

financial services send the largest total number of bills and statements and the most frequently. For utility bills, adoption of electronic bill reception is rather low at only about 6.0% (Ascent Group, 2007).

Figure 22: Percentage of Types of Transaction Documents Received via Email or Internet



Source: Infotrends (2006)

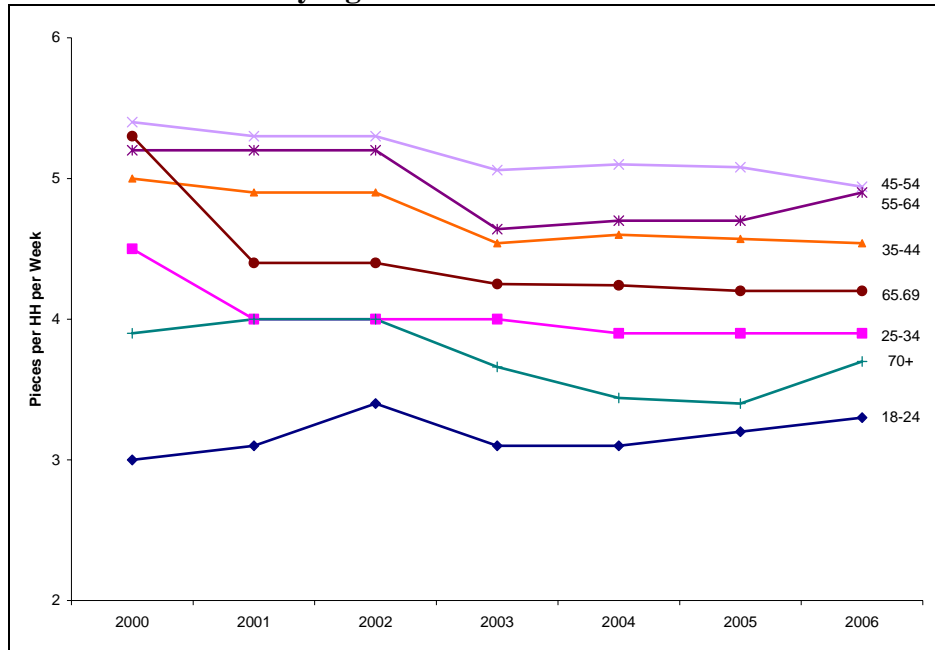
It is estimated that Figure 21 will eventually look very similar for statements from all industries not only financial statements. If electronic bill presentment adoption were high in all industries, every industry might look like Figure 21 with a low ‘online only’ reception method and much higher ‘online and paper’ and ‘paper only’ groups.

Online bill and statement presentment adoption is likely lower than payment because paper offers many affordances electronic means cannot, such as added security, privacy and familiarity. These will be elaborated in the consumer preferences section on presentment, section 6.2.

Figure 23 elaborates on which age groups receive the most bills and statements per week. Households in which the head is between 45 - 64 years old receive the most number of bills and

statements at around five per week, while households in which the head is 18 - 24 years old receive the least number at around three per week.

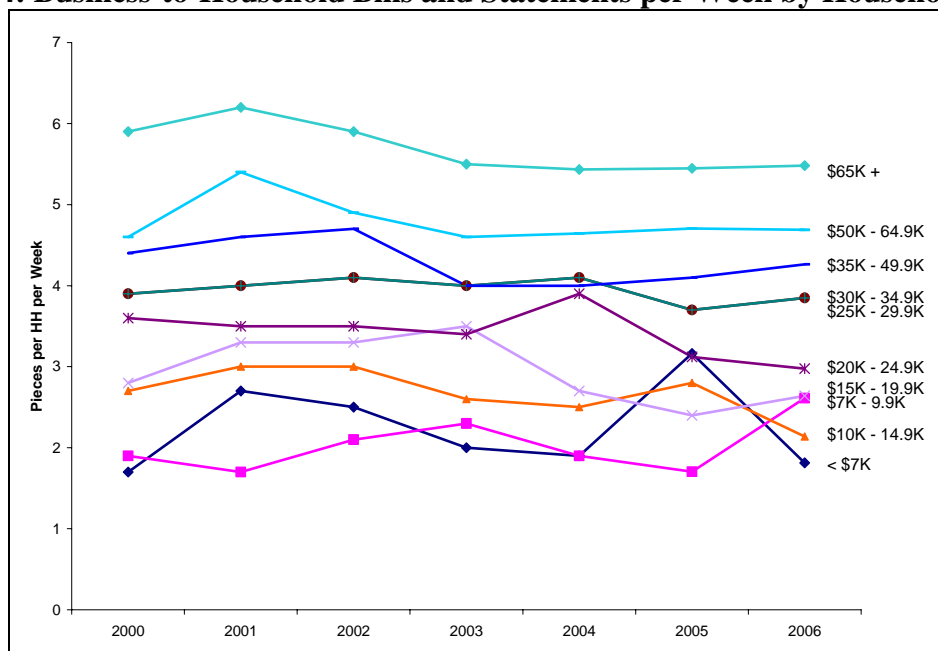
Figure 23: Business-to-Household Bills and Statements per Week By Age of Head of Household



Source: PB Mail Database

Figure 24 shows that the reasons for fewer bills received by the youngest and oldest households are likely directly correlated with income. Households with a higher combined household income receive the most bills and statements while those with lower household incomes receive fewer bills and statements.

Figure 24: Business-to-Household Bills and Statements per Week by Household Income



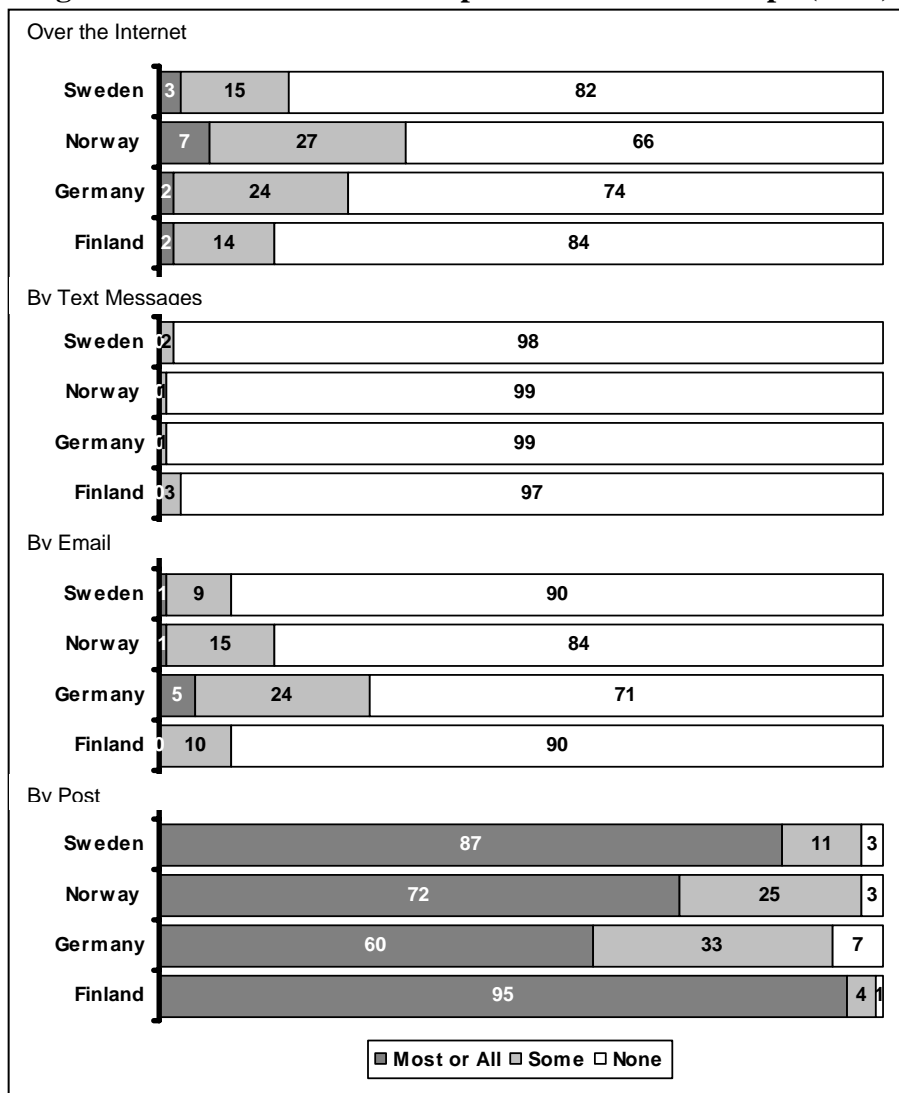
Source: PB Mail Database

5.2 Bill and statement presentment in Europe

As discussed in section 4.2, European billing differs from U.S. billing due to a different underlying bill payment system. Most Europeans pay bills by direct debit which eliminates the bill presentment process altogether. The expansive use of this system makes bill presentment in Europe more convenient than they are typically regarded in the U.S..

Despite that difference, bill presentment in Western Europe heavily favors mail. Figure 25 indicates that the majority of consumers in Sweden, Norway, Germany, and Finland receive their bills by mail. Among these four countries, Finland has the largest percentage of bills received by mail while Norway has the largest percentage of bills received over the Internet. Norway has made progress in online bill presentment because they are a forerunner in the use of the service, technology and practices and appears to have achieved a common user-friendly solution and successful marketing.

Figure 25: Methods of Bill Reception in Western Europe (2006)

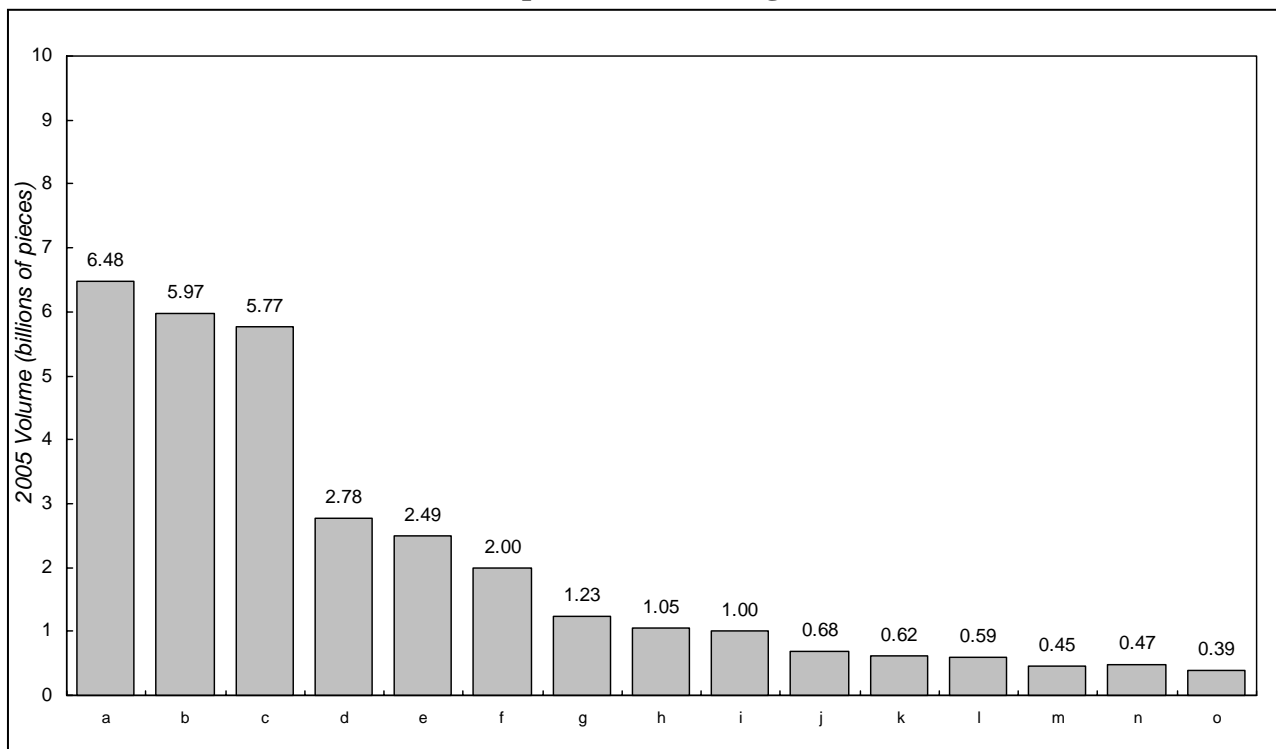


Source: Elkela, Finland Post (2006)

Some of the most detailed consumer surveys on invoicing and payment preferences have been conducted by Finland Post (Elkelä, 2004 a-c) and are reviewed in more detail in other papers (Flynn, 2005 and Szeto, 2005). In summary, they indicate that consumers prefer to receive paper bills but are increasingly willing to migrate to payments over the Internet. This is not surprising, because there is an obvious advantage for consumers to migrate to Internet payment from either in-person payments at the counter or from credit transfers where the consumer today has little control over when the payment is deducted. What is interesting, though, is that consumers are less likely to use mobile phones to receive or pay invoices, despite the promotion of such capabilities by mobile service providers.

Figure 26 shows mails volumes from the national postal operators from the EU-15. Figure 27 shows the business-to-household bill and statement volumes which for the most part are down since 2000 with only five exceptions in the EU-15. The average growth rate in all 15 countries is -1.2% per year.

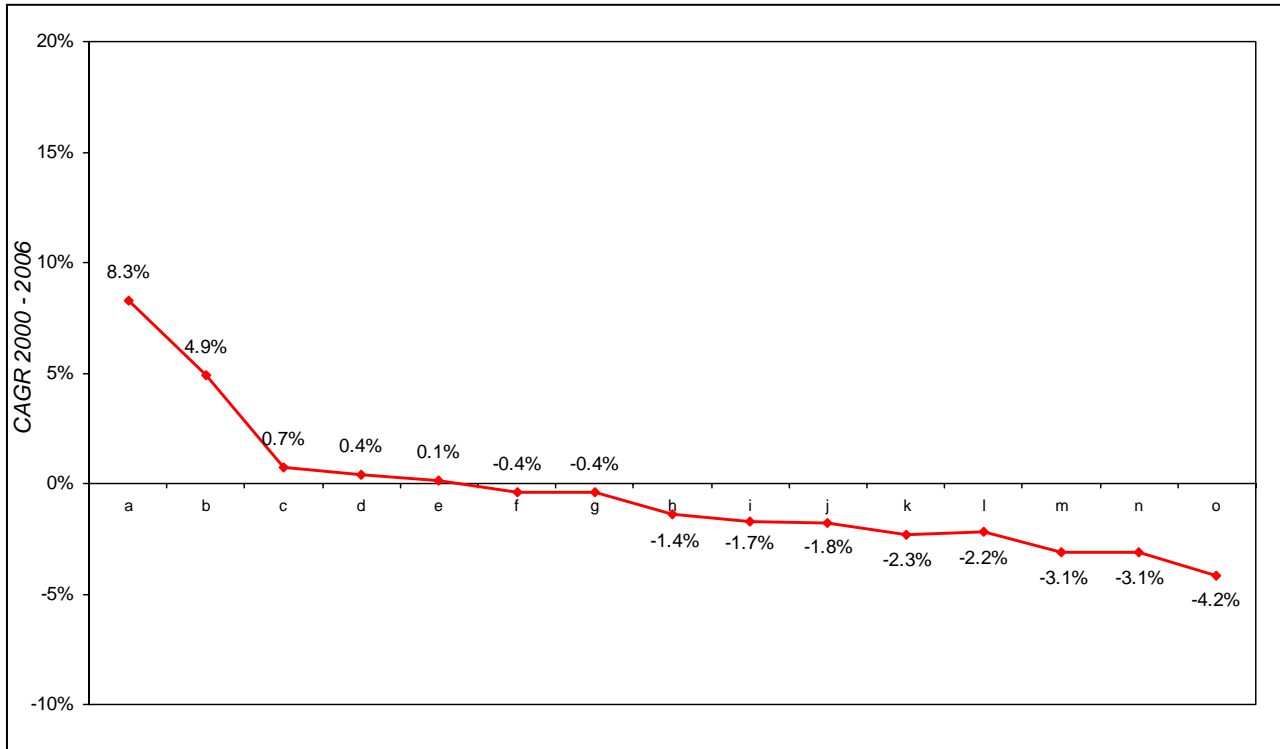
Figure 26: 2005 Business-to-Household Bill and Statement Volume in the EU-15 Countries (National Postal Operators) from Highest to Lowest*



*Country names excluded for confidentiality

Source: Postal Reports, Annual Reports, PB Mail Database

Figure 27: Business-to-Household Bill and Statement Growth 2000 to 2006 in the EU-15 Countries (National Postal Operators) from Highest to Lowest**



**Country names excluded for confidentiality, names not consistent with previous chart (Figure 26)

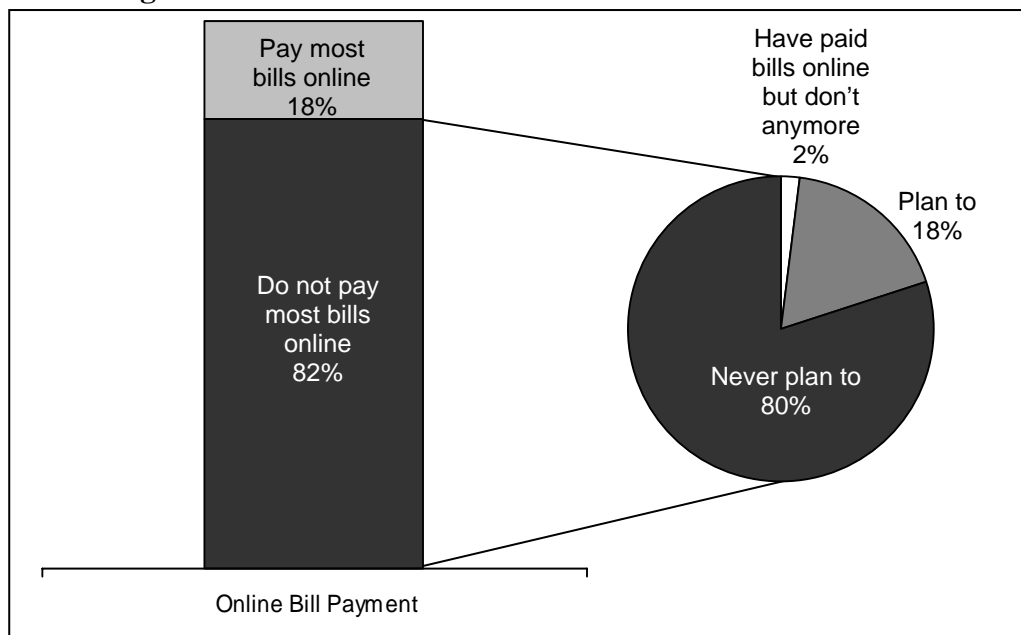
Source: Postal Reports, Annual Reports, PB Mail Database

6. Consumer Preferences

6.1 Bill payment preferences in the U.S.

Forrester estimates that 82% of U.S. online consumers do not pay bills online; and 80% of *that* group says that they never intend to, 2% say they no longer pay bills online, and 18% say they plan to in the future (Figure 28).

Figure 28: Consumer Preferences of U.S. Online Consumers



Source: Forrester Research (2004e)

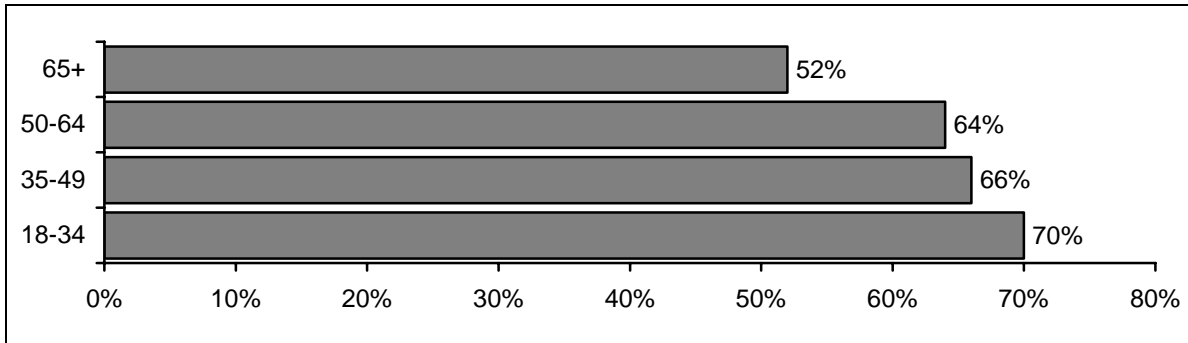
Consumers are not completely paying electronically yet for a number of reasons. The most paramount of these reasons is that consumers are concerned about the security and privacy of their crucial financial information. Forrester found that 30% say they are worried about the security of account data.

Check payments allow such affordances such as:

- Familiarity, convenience and ease of access;
- Simplicity and hands-on control of payment;
- Allowance for easy peer-to-peer (P2P) payments and payments to small businesses;
- Control over the float due to delayed payment, as opposed to nearly-instant fund withdrawals when using direct debit or electronic bill payment;
- Archival abilities i.e., to receive the check back as proof of payment and store the record in lasting and inexpensive hardcopy;
- Privacy and security benefits, especially when compared with electronic alternatives.

It has also been argued that younger generations prefer paying and receiving bills electronically. While that holds true in most survey analyses such as the eMarketer analysis below (Figure 29), what is not always mentioned in these discussions is the role income has on payment bills. Those with higher income typically pay and receive more bills. Younger generations are not yet those with the highest income, so the impact of their methods of bill payment are yet to be seen.

Figure 29: Percentage of U.S. Consumers Who Pay Bills Online by Age (2005)

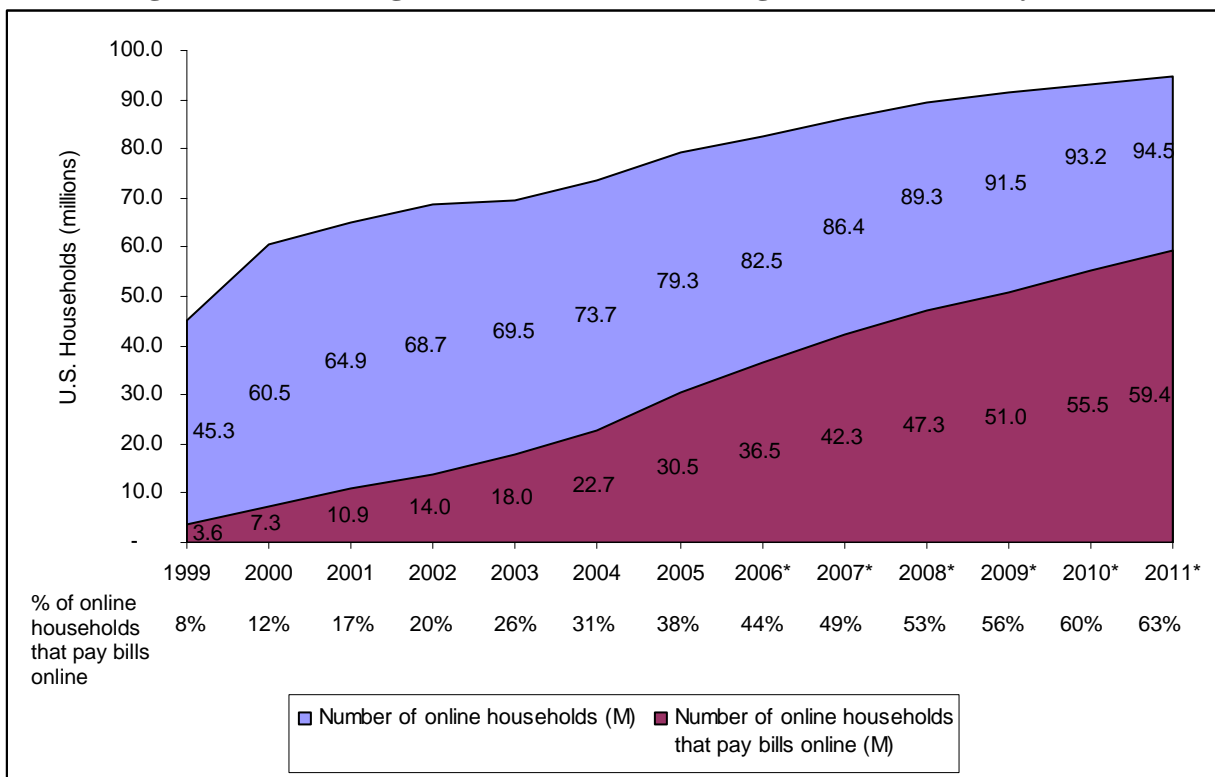


Source: eMarketer (2005)

As for the future of electronic bill payment, adoption seems to be leveling off. In 2004, eMarketer predicted that 50 million households would pay bills online by 2008 (eMarketer, 2004) and The Online Banking Report predicted that 57 million households will use online bill payment by 2008 (Grau, 2004).

In 2007, Forrester estimates that by 2008 47.3 million households will be paying bills online which is on par with those estimates from 2004 (Figure 30). Furthermore, Forrester estimates that 59.4 households will pay online by 2011 (Forrester, 2007). Online bill payment will likely continue to grow similarly to this forecast at slower than historical rates.

Figure 30: Percentage of U.S. Households Using Electronic Bill Payment



*Forecasted estimates

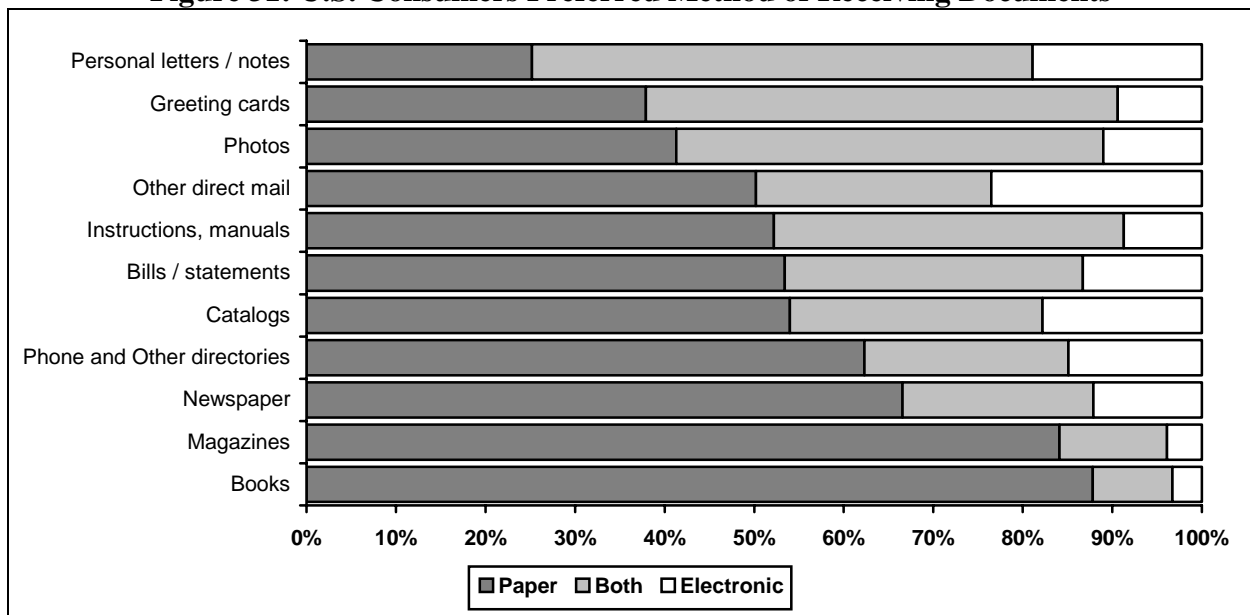
Source: Forrester (2007)

6.2 Bill and statement presentment preferences in the U.S.

Consumers are showing that they favor mailed paper bills and statements for a variety of reasons. In a Pitney Bowes study about consumer mail preferences, participants were asked how they prefer to receive financial-type mail such as bills, bank statements and financial reports. The overwhelming majority, 86%, indicated that they prefer to receive these documents via regular mail (Pitney Bowes, 2003).

Similarly, an Infotrends CAP Ventures study on paper found that fewer than 15% of consumers prefer to receive bills and statements exclusively via electronic channels (Figure 31).

Figure 31: U.S. Consumers Preferred Method of Receiving Documents



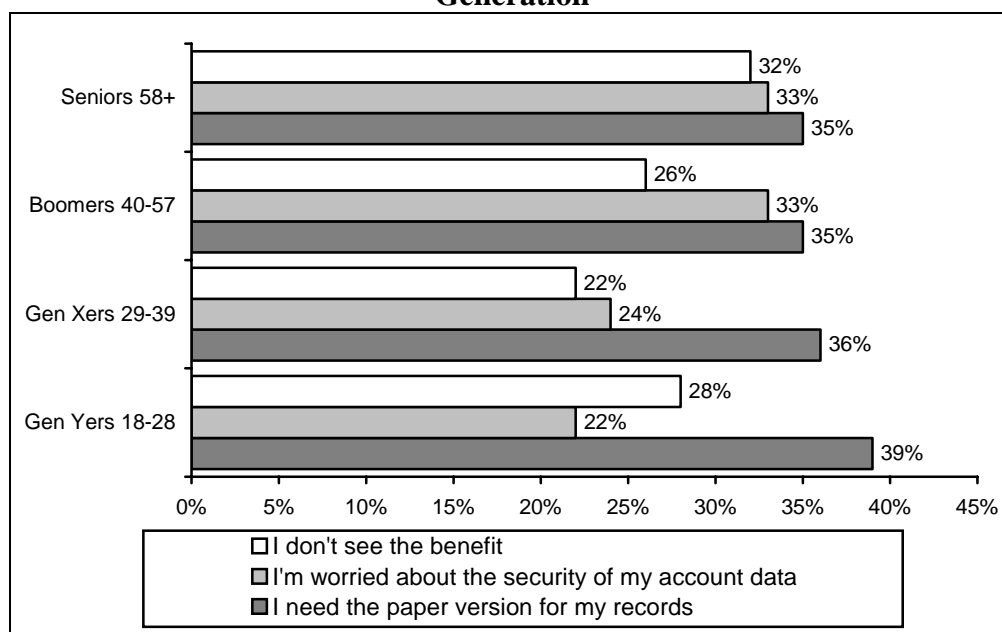
Source: Infotrends CAP Ventures (April 2003)

There are several reasons electronic bill presentment has likely not been adopted readily and completely. First, with paper bill or statement there is no direct action and active upkeep needed. The consumer doesn't need to do anything for the bill to arrive in their mailbox. Internet based e-billing requires the consumer to register, choose and remember a username and password, link back from the reminder email, login, find the bill detail and then pay it.

Second, consumers still prefer the paper version for archival and record keeping. Forrester found that 36% of consumers surveyed say they *need* a paper version for their records. Many consumers has established archival systems and abandoning those for a completely different system could be an intimidating task that would require something to go wrong with paper bills and statements first.

There is a generational issue with bill and statement presentment as well. Figure 32 shows that seniors, 58 and older, are inhibited by the security of online statements, while younger generations are showing they desire paper statements for archival purposes.

Figure 32: Reasons U.S. Consumers Are Not Using Online Statement Presentation by Generation



Source: Forrester (2004)

6.3 Bill payment preferences in Europe

As aforementioned, the bill payment trend in Western Europe heavily favors direct debit and electronic alternatives. However, there is some reluctance in these countries to fully adopt online banking. The reasons are shown in Figure 33. Security and identity theft seems to be a major concern across all Western Europe. Also, in France, Italy, Germany, the UK, and Spain, consumers are content with their branch banking elucidating the theory that if nothing is wrong, don't fix it.

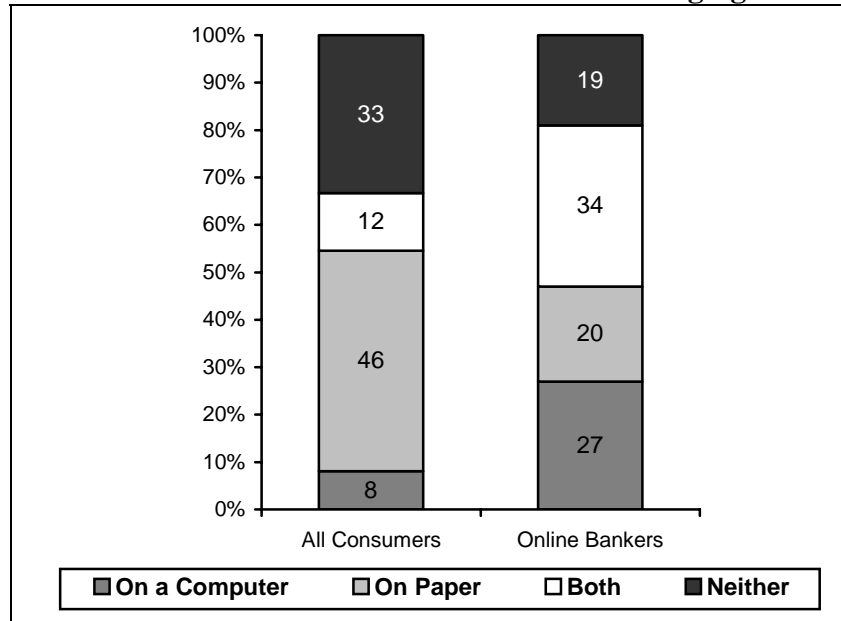
Figure 33: Reasons for not Using Online Banking in Western European Countries

	Germany	Spain	France	Italy	Neth'lands	Sweden	UK
I prefer/am happy with branch banking	56%	50%	43%	54%	24%	28%	53%
I prefer/am happy with cash machines	36%	24%	31%	26%	49%	39%	39%
I am worried about security	42%	42%	33%	31%	39%	39%	42%
I don't see the need for it	31%	38%	20%	19%	29%	40%	32%
I worry about phishing/fraud/identity theft	44%	39%	26%	20%	36%	22%	35%
I don't know enough about it	6%	31%	16%	17%	26%	20%	14%
It's too complicated	6%	8%	9%	8%	13%	10%	10%
Because there is no human help	4%	8%	16%	9%	6%	4%	25%
I have already automated all my payments	14%	1%	6%	5%	20%	13%	8%
I prefer/am happy with telephone banking	4%	2%	7%	2%	16%	17%	16%
All other reasons	25%	34%	41%	41%	42%	48%	33%

Source: Forrester (2006b)

Additional data from The Henley Centre and Royal Mail in the United Kingdom indicates that 37% of consumers cite security concerns as an inhibitor of online banking. When UK consumers were asked their preferred method of managing their personal finances, 46% cite paper as their preferred method while 12% cite both paper and computer (Figure 34).

Figure 34: UK Consumers’ Most Preferred Method of Managing Personal Finances



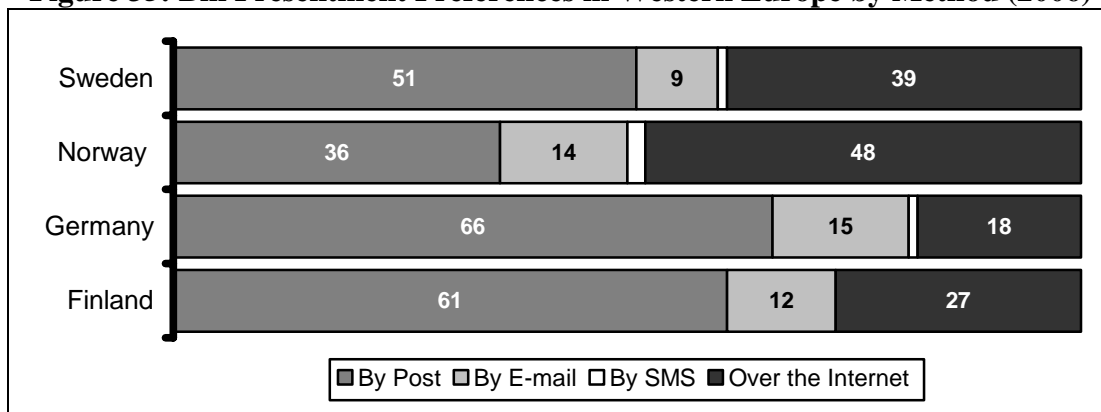
Source: The Henley Center/Royal Mail (2004)

6.4 Bill and statement presentment preferences in Europe

Data from the Finnish Post study indicates that consumers in Norway most prefer their bills presented to them over the Internet while consumers in Sweden, Finland and Germany are not far behind (Figure 35). The four countries on average receive 52.5% of their bills by mail and 33% over the Internet.

The high online bill presentment adoption rates in Norway are due to of E-Faktura, a common system marketed to Norwegians by banks and invoicing companies. The system was developed on the basis of consumer studies.

Figure 35: Bill Presentment Preferences in Western Europe by Method (2006)



Source: Elkela, Finland Post (2006)

In a similar study conducted in the UK, 87% of consumers that don't use online banking say that they are unlikely to use the service. Moreover, 65% of UK consumers agree that “[mail] is more secure to receive confidential information by post than via email/online” (The Henley Centre, 2004).

In France, Internet adoption is relatively low at only 44% of households. Though 57% of French households receive at least one bill and statement per day and 24% of households in Paris receive more than 10 bills and statements a week, mail expectations have changed in the past couple decades. In the 1990s reliability was a priority. In 2006, now that speed is not as important, convenience of deposit and delivery are perceived as essential. This indicates that mailed bills and statements are persisting in France.

An interesting phenomenon occurring in the Nordic country Sweden, a country with high Internet penetration and high EBPP adoption rates, is that young consumers are telling the post (through survey data) that they would prefer a mailed paper statement delivered to the home in addition to an electronic statement. Some 90% of Swedes believe it is important to receive paper bills to the home, while 65% of Swedes believe that bills should be sent home for free; but 26% of 15-29 year olds go as far as to say that they would pay up to 5 Swedish Krona (approximately 0.71 USD) per paper bill. Clearly, an example like this shows us the possible negative consequences in consumer partiality of a mass shift toward electronic bills and statements.

6.5 Paper suppression

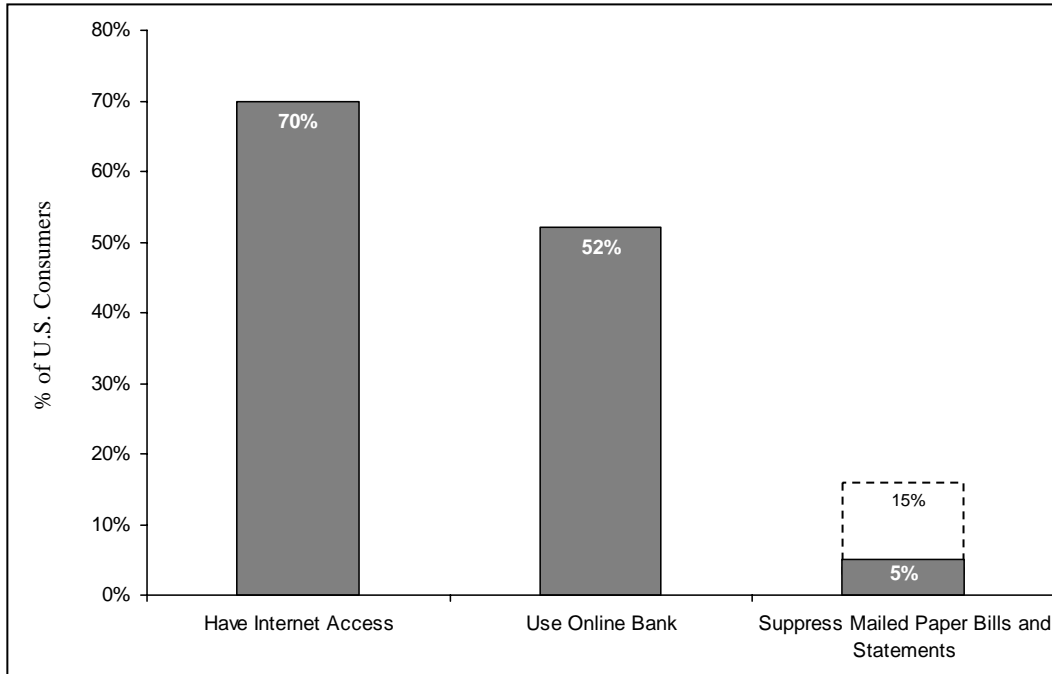
Paper suppression – or paper bill or statement turn-off – is a matter that few EBPP analysts properly elucidate. Paper suppression is the amount of paper bills or statements that are being cancelled by recipients of electronic bills and is *the most important factor* in estimating the impact of EBPP on mail volumes.

Forrester (2004f) showed that 26% of U.S. online consumers got at least one electronic statement, but 97% of those electronic statement adopters continued to receive a paper statement (Forrester, 2004f). In Canada, the findings are similar. 47% of online Canadians now receive an online statement for their bank deposit accounts, but 86% of these adopters also continue to receive a paper statement by mail (Forrester, 2006). Paper suppression can be loosely derived from these estimates.

Approximately 5 -15% of U.S. consumers suppress their mailed paper bills and statements (Figure 36). Also shown is that online bill payment figures are much higher than bill and statement presentment and therefore paper suppression. Moreover, it is estimated that among industries, paper suppression is higher in the financial services industry (around 8 to 15%) and much lower in industries such as utilities (2 to 5%). A 2007 Ascent Group study shows that electronic bill reception adoption from a sample of large mailers (88% of which are utility companies) was only 6.0% (Ascent Group, 2007). These estimates are corroborated by informal surveys which show that, while some 90% of highly educated, high-income consumers – i.e., the population segment that receives most bills and statement – have “on-line viewing” available, fewer than 10% suppress all paper mailing¹.

¹ See Jimenez (2007) for results of Pitney Bowes' on-going survey with 16 groups at international industry conferences that has to-date (June 2007) polled over 700 high-income, highly-educated consumers.

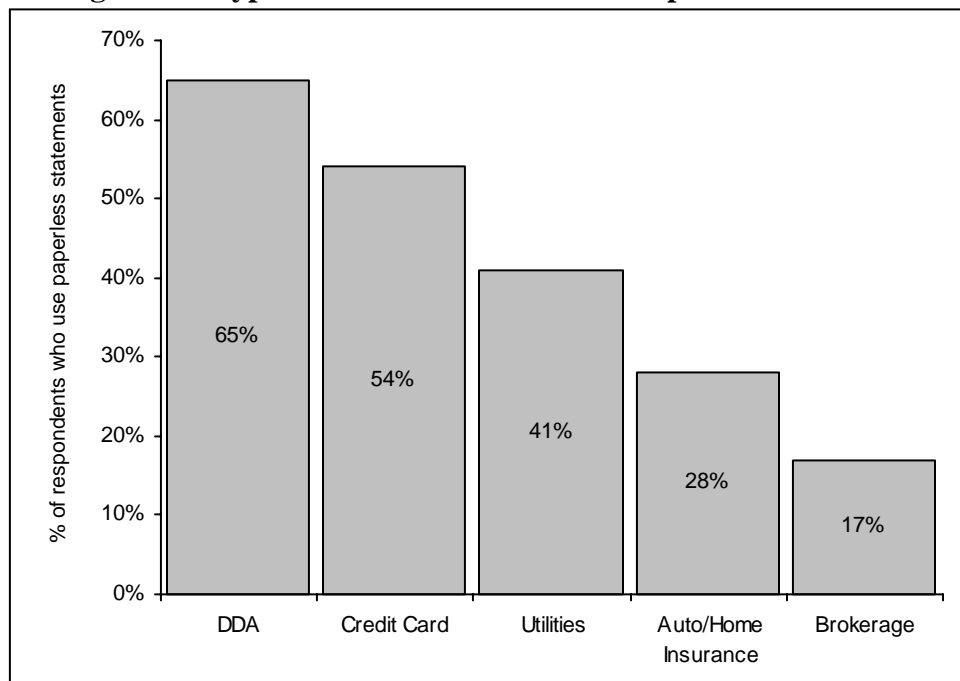
Figure 36: Paper Suppression Estimate



Source: Pitney Bowes estimates based on eMarketer (2007), Nader (2005)

Additionally, ComScore (2007) found that demand deposit accounts, credit card accounts and utilities accounts had the largest percentage of respondents say they enrolled in paperless statements (Figure 37). Their top reasons for enlisting in paperless statements were: to be more organized; to integrate financial management in an online lifestyle; to conserve paper for environmental reasons; and to set up email alerts and bill reminders.

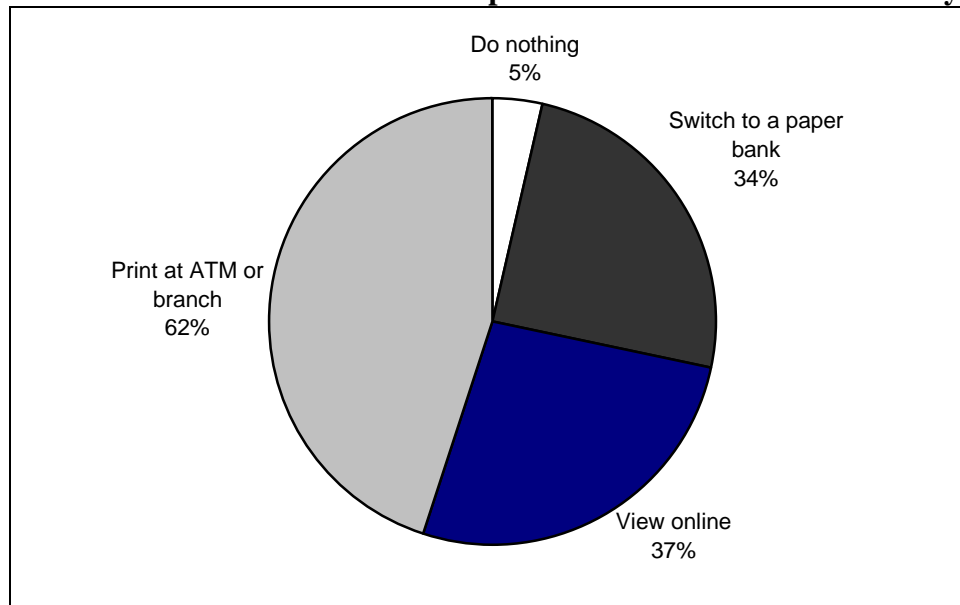
Figure 37: Types of Accounts Enrolled in Paperless Statements



Source: ComScore (2007)

Additionally, consumers in the UK indicated that if their paper statements are abolished, 62% of them would print their statements at an ATM or branch while 34% would leave their bank in favor of a bank that will still provide them with paper statements (The Henley Center, 2004). Also, 85% of UK consumers and 71% of UK online bankers disagree with the statement: “I would like my bank to stop sending me paper statements.” These findings corroborate the notion that consumers around the world are unwilling to completely suppress their paper bills and statements (Figure 38).

Figure 38: UK Consumer Reaction if Paper Statements Are Turned Off by Bank



Source: The Henley Center (2004)

Although many consumers say they would switch banks if their bank turned off paper statements, the reality in Europe is that switching banks can be an arduous process involving additional paperwork which can consume a tremendous amount of time. This dynamic is unlike that of the U.S. where switching banks can be very simple and sometimes even automated. Because it is difficult to switch banks in most parts of Europe, banks are able to make changes with little regard for consumer preferences. This can lead to serious problems if consumers are unhappy and banks do not recognize it.

7. Billers

7.1 Biller Facts

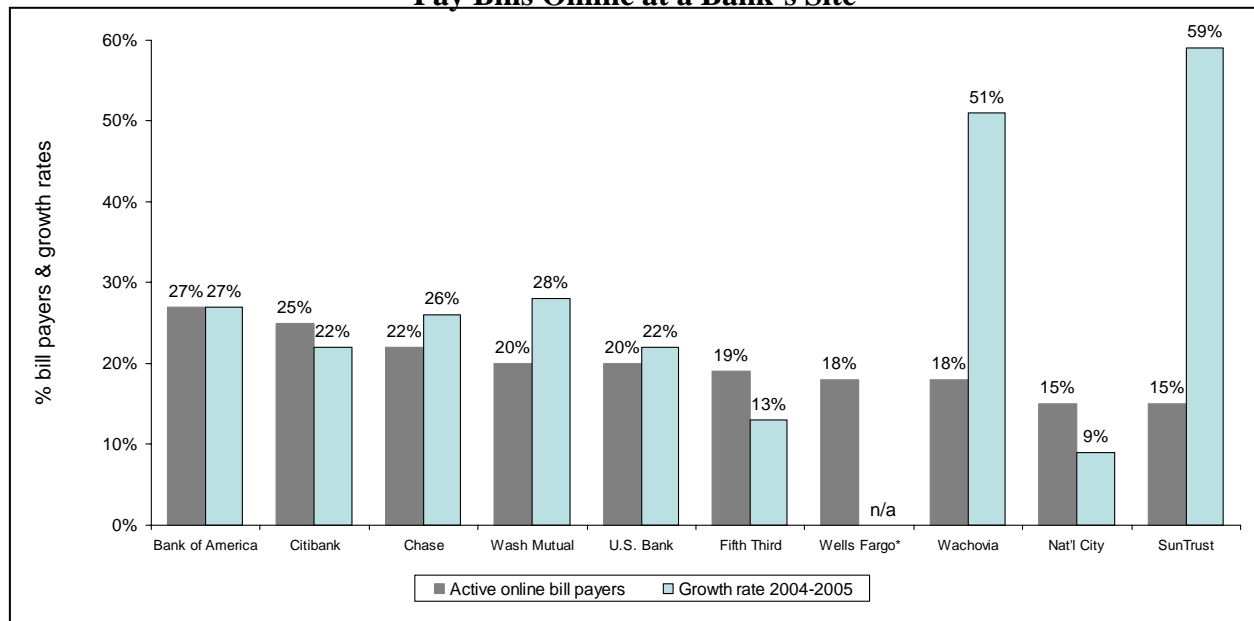
Billers, those that send the actual bills, determine the channel in which bills are delivered today. If they decide to change the way consumers are billed, consumers, in practice, cannot stop them. In fact, there are instances in some countries like Finland and the Netherlands in which all the large banks have switched for the most part to either direct debit or online billing leaving consumers few or no options to pay by any other method or forcing them to reduce their frequency of paper bills and statements. This section focuses on how billers have instituted and established online bill payment and presentment mechanisms.

Payment

The Ascent Group conducted a survey of large scale billers U.S., 88% of which were utility companies. They found that 92% of surveyed businesses in the U.S. offered electronic bill payment. Still, 59% of companies reported less than 5% of their bill payments coming electronically (Ascent Group, 2007).

Financial institutions like banks, however, are making better progress by way of online bill payment adoption. From 2004 to 2005, banks with some of the lowest electronic bill payment adoption rates had the largest growth rates, as shown in Figure 39 with SunTrust and Wachovia.

Figure 39: Percentage and Growth Rate of U.S. Households that Pay Bills Online at a Bank’s Site



*Growth rate not available

Source: Forrester (2007)

Some banks are even making electronic payment less attractive to consumers by requiring that the money is in the customer’s account when a payment request is submitted, thereby removing the ‘float’ benefit from sending a check in the mail (Chicago Tribune, 2004). Banks earn billions of dollars annually themselves from this ‘float’ associated with check processing (and penalties

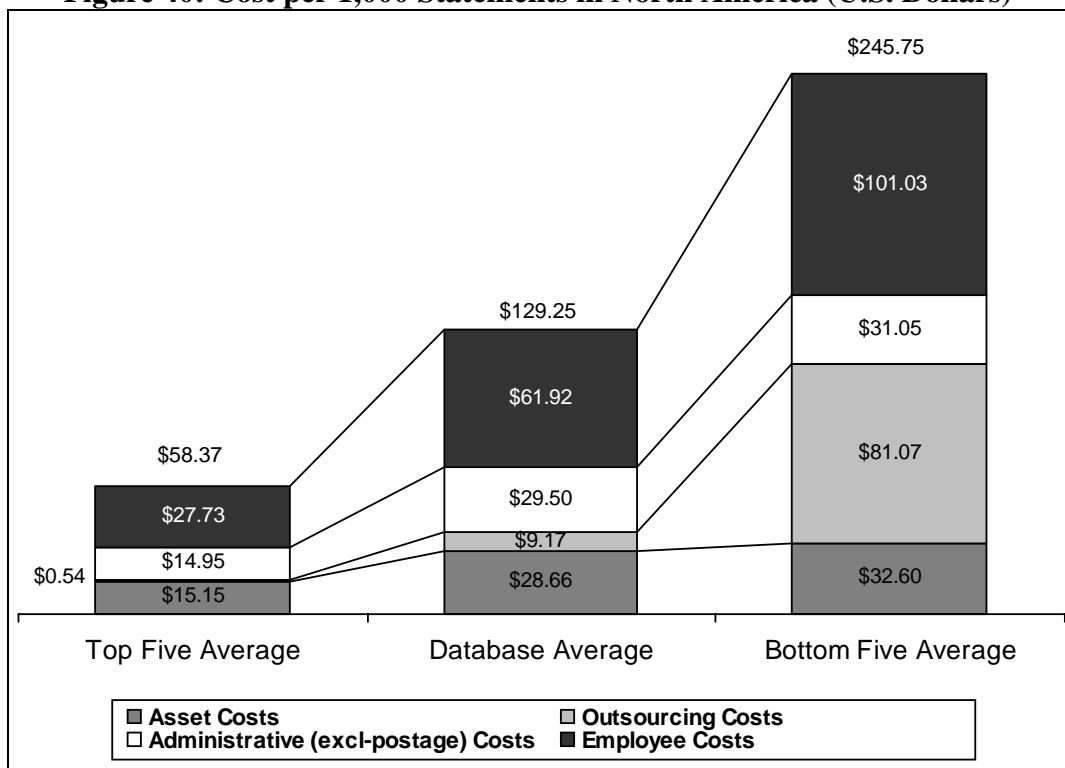
from bounced checks) and, therefore, do not have an incentive to move all customers to an electronic system (Economist, 2004).

Presentment

Many, if not all, large billers and banks have already made the leap to offer electronic bill presentment for a multitude of reasons such as convenience for the consumer and rapid delivery. The Ascent Group (2007) also found that 75% of companies surveyed (again large billers, mostly utility companies) offered some sort of electronic bill presentment. However, 47% of the participants reported less than 5% of their bills presented electronically.

However, the key factor in pushing electronic statements is the cost benefit to the biller. The Corporate Executive Board (2000) estimated the cost of paper statements in North America at less than 6 cents a statement from the five largest senders, approximately 25 cents from the five smallest senders and a database average of approximately 13 cents (Figure 40). The estimate excludes postage and still the cost is relatively large compared to an email notification that can cost almost nothing.

Figure 40: Cost per 1,000 Statements in North America (U.S. Dollars)



Source: Corporate Executive Board (2000)

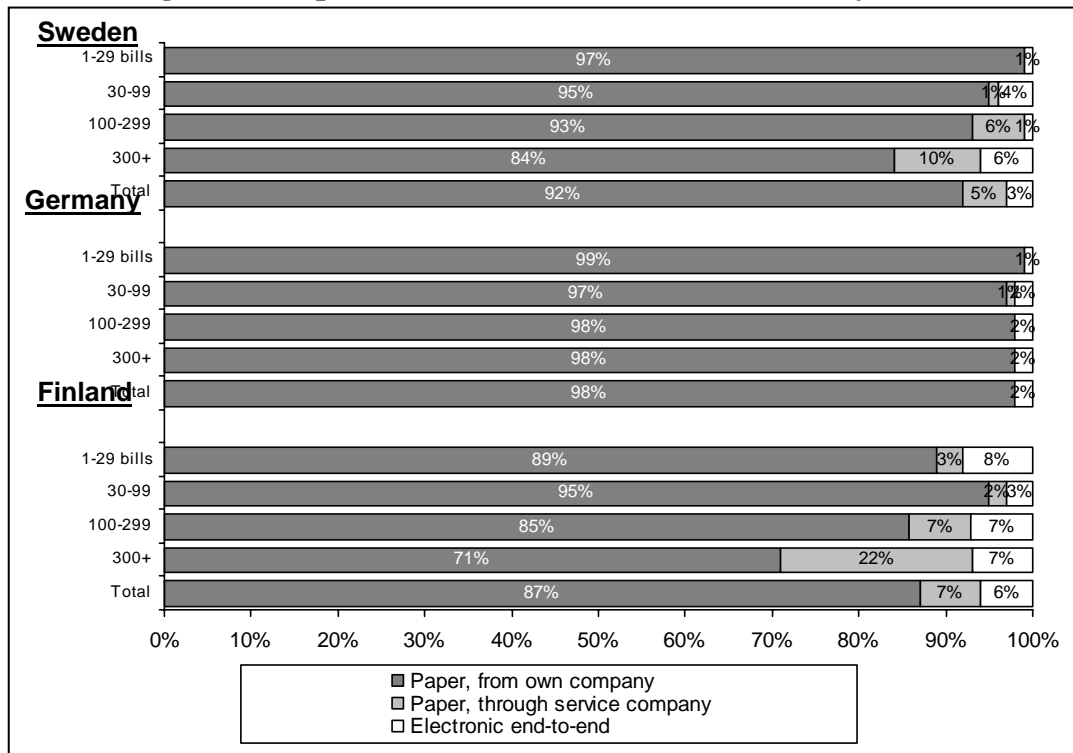
Financial institutions are becoming increasingly creative in promoting electronic statements citing convenience, the environment and prevention of identity theft as reasons to avoid paper statements. Javelin Strategy, a consulting and research firm focused on the financial services industry, estimates that 44% of financial service companies offer the option of electronic statements, with some success (Javelin, 2005).

Regulus, the largest processor of paper and electronic transactions in the U.S., agrees that migration to electronic statements has been much slower than with payments. One reason is that

some customers who pay bills electronically still request a follow-up hardcopy. Also, a billing statement acts as one of the most regular and reliable communication vehicles (MAIL: The Journal of Communication Distribution, 2004).

In Europe, it is evident that paper-based presentment mechanisms to large scale billers have subsided in Nordic countries. However, small and medium enterprises (SMEs) have not transitioned to electronic billing. Figure 41 elucidates that point showing that SMEs in Sweden, Germany and Finland are reluctant to present their bills electronically. This is especially true for those SMEs sending less than 300 bills a month.

Figure 41: Paper and Electronic Share of Bills Sent by SMEs



Source: Elkela, Finland Post (2006)

Customer service call centers are becoming increasingly expensive to run effectively. This fact is obvious in the wave of outsourcing of call centers American companies have recently undergone. Another main motivator for billers to use electronic presentment methods, according to Forrester, is for call center deflection. Electronic bills and statements, however, can direct many customer service inquiries to online methods like email, chat, and self-help frequently asked question lists. Electronic adoption allows consumers to research their own problem, but if all else fails they can use the telephone number. This ‘curbing’ of customer service inquiries is another way billers can reduce costs of billing.

Several problems exist concerning biller presentment though. First, billers have to choose an agreeable presentment model: the direct model or the indirect model. Infotrends (2006) estimates that 89.3% of electronic bills presented use the direct biller method, while 10.7% are presented use the indirect model. This is up from 2002 in which 87.4% presented using the direct model and 12.6% presented using the indirect model.

Second, billers' offerings must match consumer preferences. There are several examples in Europe that show how forced electronic bill presentment can lead to unhappy consumers. As mentioned in section 6.4 Swedish consumers are indicating they want a paper bill mailed home and younger consumers are even willing to pay for them. Also, in the United Kingdom, consumers are going to ATMs to print their paper statements in cases where their paper has been turned off (The Henley Centre, 2004). The question remains, how long with Swedish and British consumers remain unsatisfied without a paper statement before they switch banks?

7.2 Incentives and Penalties: Opt-in/Opt-out

Incentives and penalties were once widely practiced to gain the adoption of consumers for electronic bill payment and bill and statement presentment. However, Forrester has found that banks with free online bill pay have been shown to grow their active online bill payers 150% more than fee-charging banks.

Bank of America was the first big U.S. bank to offer free bill payment but many other large banks held out for some time. It was not until late 2004 that other big banks like Wachovia began offering free online bill pay. A survey by Celent LLC in 2004 estimated that 47% of all banks offered bill payment for free to all customers, while another 24% waive fees for most customers.

Some European banks charge for paper statements to better encourage electronic only use, such as FinecoBank in Italy, Millenium BCP in Portugal, and La Caixa in Spain¹. Netbank in Finland has also been known to charge as much as €3 per paper statement. In Norway financial statement mail volumes have dropped nearly 20% from Q2 2002 to Q4 2005 (9 to 7 million pieces) likely due to up to a € penalty per in-person teller transaction (Norway Post, 2005). This dynamic is similar in most Nordic countries.

Opt-in and opt-out programs at banks work by allowing one service, such as online statement view, in place of another service, such as mailed paper statements. This type of incentive/penalty is becoming more apparent in many banks that are pushing electronic bill and statement adoption.

Check imaging is an opt-out service offered by many banks. About three out of four Scorecard² banks provide online check images with no charge for them. Less than half of *those* Scorecard banks offer to include check copies or images with the paper statement for all checking accounts.

However, there are some requirements to receive check imaging. Charter One requires making online check imaging available only to customers not receiving returned checks with their paper statements. Hibernia provides online check imaging for free, except that it charges \$2 per month for customers who do not immediately agree to stop receiving checks with their paper statement³.

¹ Benjamin Ensor, Forrester 2006

² The Watchfire GómezPro Internet Banker *Scorecard* evaluates U.S. retail banks on the value their online offerings provide consumer-banking customers. The scorecards measure the quality of online financial services offerings, evaluating factors such as ease of use, customer confidence, onsite resources, relationship services, and overall cost.

³ BillingWorld.com

Figure 42 lists some other examples of incentives and penalties large financial institutions are using to push consumers to go paperless. Among them, environmental incentives seem to be most popular reflecting the current state of environmental concern.

Figure 42: Additional Incentives Used by Different Financial Institutions

Financial Institution	How long documents are available online	Incentives to go paperless
American Century Investments	Two to three years' worth of mutual-fund account statements.	Clients can avoid semi-annual account-maintenance fee by managing account exclusively online. Investors who view statements online can also qualify for lower fund investment minimums.
Citi Cards	Credit-card account statements available for six months. Company is planning to expand its online archive.	Citi will make a donation to plant a tree for each credit-card holder who converts to online statements.
Smith Barney	Clients can access seven years' worth of brokerage-account statements.	Smith Barney will make a contribution to an environmental organization for each client who switches to online statements.
Vanguard	Last four quarterly mutual-fund statements. Clients can search nine years' worth of transaction history.	In June 2007, some clients who receive statements, reports and prospectuses online will avoid an additional account fee.
Washington Mutual	Bank statements available for 13 months. Check images available for up to 90 days.	Washington Mutual will make a donation to the National Arbor Day Foundation for each customer who opts to receive statements online.

Source: Wall Street Journal (2007)

7.3 Added Value Factor: *Transpromo* Statements

Previously paper statement volumes were predicted to deteriorate but as they did not, companies chose to embrace paper statements by adding marketing messages to them. Many billers, with the assistance of companies like Kodak, are integrating small advertisements into statements in what is called *transpromo* short for *transpromotional marketing*. The key to the success of this marketing design is that the advertisements utilize the statement information to provide personalized advertisements and cross sells in space on the statement that was previously blank (called *whitespace*).

Infotrends (2006) showed that when surveyed consumers are shown two statements, one plain and the other a *transpromo* version, 63% prefer the *transpromo* version. This is likely because enhancements like full digital color on statements are transforming traditional statements to look like direct mail inserts.

According to McCann-Erickson, formerly Universal-McCann, approximately \$276 billion was spent in the U.S. on advertising in 2005, 21% of which was on direct mail (Universal-McCann, 2006). Advertising expenditures have also been increasing over the past five years indicating that there is new market growth.

Transpromo statements also enable more effective advertising. The average North American consumer receives anywhere from 279 to 3000 advertising messages per day. *Transpromo* statements can help spotlight certain marketing messages in an already crucial document.

DSTi Output, a British printing company specializing in business-to-household transaction mail, has shown success of their *whitespace* use on paper statements for an online bank that mails over 300,000 statements per month. Response rate increased up to 27% for “due to expire” direct debits and 19% for those already expired.

It can be argued that online statements can lead to marketing opportunities as well. However, Infotrends (2006) also found that 61% of consumers prefer direct mail advertising; nearly three times greater than the second most preferred type of advertising, which is not online advertising.

8. Conclusions

It is clear that, among payment channels, adoption of new electronic methods is high and is rapidly dispersing among consumers, stimulated and ‘pushed’ by the largest billers. This push is driven primarily by a cost-saving objective. With regard to the presentment of bills and payments, ‘online viewing’ is widespread among highly-educated, high-income consumers who receive the largest numbers of bills, but adoption rates are naturally slowing down. Despite heavy promotion of electronic presentment by billers, consumers typically maintain the paper channel as well, unless forced out of it by penalties. Billers for the most part have not yet recognized the market and relationships potential of mailed statements.

Looking at these trends in more detail, mailed payments have lost share to electronic adoption, but primarily due to the increased use of direct debit for recurrent bills in Europe and direct debit at the point of sale in the U.S. Mailed bills presented have actually increased in the past several years in the U.S., suggesting that electronic adoption may have a much reduced effect on mailed paper bill and statement volumes than has been commonly assumed.

In Western Europe, mailed paper payments have long been low due to widespread use of direct debit even for recurrent payments (and concomitant reduction of bills), an anomaly in the U.S.. Countries with higher Internet penetration have higher online bill payment adoption rates, while those with lower Internet penetration have naturally lower rates.

Electronic bill presentment in the U.S. is widespread or rapidly increasing as common as commonly assumed. While some 90% of consumers can view bills online, fewer than 10% suppress paper. As a result, bills and statements in the U.S. are growing, especially those to consumers. In Western Europe, B2C invoices have been declining slightly on average at 1.2% per year, although invoices have grown in selected countries. In the Nordic countries, this declining trend is more marked and reached rates of 4.2%.

It is important to note that some of the reductions in mailed bills and statements that are often attributed to electronic substitution are sometimes due to mailer “rationalization,” whereby billers cut frequency due to the increases in postage prices. This suggests that maintaining the value proposition for mail by operators will be an important strategy in keeping these important volumes in the mailstream.

Both mailed paper bills and statements will likely retain their share in the mail for some time to come, but as businesses continue cost-cutting measures, statements may be reduced in frequency or billers may decide to impose more fees for the receipt of paper statements. Because consumers are choosing *both* paper and online for bill and statement reception, billers must cater to both of their needs. The fine line between good service and cost cutting will define how billers manage these channels.

Perhaps the main determining factor will continue to be consumer preference and willingness to change. It is difficult to change consumer habits unless there are obvious disadvantages with the current process, the new method is shown to be significantly simpler, or sufficient economic incentives are provided for the change. As of now, the perceived advantages of electronic methods have appealed to a relatively small segment of the population. While these advantages will over time appeal to more people, we expect the evolution of mail volumes to be evolutionary and gradual rather than precipitous and revolutionary.

Appendix

Table 1: U.S. First Class Mail Volumes by Originator

	2000	2001	2002	2003	2004	2005	2006
First Class Mail	103.0	103.8	101.8	99.1	97.9	98.1	-
Bills and Statements	35.0	36.0	37.5	35.7	36.1	36.1	-
Payments	14.0	13.0	12.0	10.7	11.15	10.8	9.0

Source: USPS Household Diaries

Table 2: Comparative Online Bill Payment Estimates

U.S. Households (Millions)	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11
Forrester – 2007	14.0	18.0	22.7	30.5	36.5	42.3*	47.3*	51.0*	55.5*	59.4*
eMarketer – 2004	17.0	28.0	34.0	38.0*	42.0*	46.0*	50.0*	-	-	-
Online Banking Rpt – 2003	20.0	31.0	37.0*	43.0*	48.0*	53.0*	57.0*	-	-	-
TowerGroup – 2004	18.9	26.1	35.5	41.1*	45.4*	-	-	-	-	-

*Forecasted

Table 3: Total Number of Bills Paid by Households

(Billions)	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06
Total	10.5	11.4	11.0	12.0	10.8	11.5	12.7	12.4	12.2	13.6	13.6	14.0	14.7	14.8	-	-	-
Mail	8.9	9.7	9.3	9.8	9.2	9.8	10.3	10.5	10.2	11.0	10.8	11.0	11.0	10.8	11.1	10.8	9.0
All Other	1.6	1.7	1.7	2.2	1.6	1.7	2.3	1.8	1.9	2.5	2.5	2.5	3.0	3.1	-	-	-
Internet	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.5	0.6	0.9	1.39	1.0	-

All other includes payment methods such as in-person, telephone and automatic deductions.

Table 4: U.S. First Class Mail Volumes Flows

B2B	1995	2000	2005
First Class	34	29	24
Bills & Statements	15	13	10
Payments & Donations	5	5	7

B2H	1995	2000	2005
First Class	43	51	53
Bills & Statements	20	22	26
Payments & Donations	1	2	1

H2B	1995	2000	2005
First Class	12	16	15
Payments & Donations	10	12	11

H2H	1995	2000	2005
First Class	7	7	6

Source: USPS Household Diaries; Nader (2007)

References:

- AIIM E-Doc Magazine (2004): "EBPP: What are the Differences Between North America and Europe?"
- Aite Group (2006): "Walk-in Bill Payments: The Prepaid Storm," Mar.
- Aite Group (2006): "Online Banking e-Commerce Payments: Has the Time Come?" Jul.
- Aite Group (2006): "Online Banking: Moving Toward a New Paradigm," Sep.
- Aite Group (2006): "Online Bill Payments: Chasing the Next Big Thing," Oct.
- Aite Group (2006): "Small-Business Electronic Bill Presentment & Payment: An Opportunity for Financial Institutions," Nov.
- Aite Group (2007): "Wholesale Payments to Become More Electronified in 2007," Feb.
- Arthur D. Little (1974): "The Less Cash, Less Check Society."
- Ascent Group (2007): "Billing and Payment Profiles & Best Practices 2007," May.
- Au & Kauffman, Journal of Management Information Systems (Fall 2001): "Should We Wait? Network Externalities, Compatibility, and Electronic Billing Adoption."
- Austin Business Journal (2004): "In Depth: Central Texas Money Guide," by Jason W. Meeker, accessed at <http://www.bizjournals.com/austin/stories/2004/08/23/focus1.html?t=printable> on 07/13/05.
- Australia Post (2003): "Reaching Consumers in the Information Age, How Australian Consumers Prefer Organizations to Communicate With Them."
- Bank for International Settlements (BIS): Accessed at www.bis.org.
- BankersOnline.com (2004): "Federal Reserve Banking Regulation E," <<http://www.bankersonline.com/regs/205/205-3.html>>
- Banklink, Suarez, L. (2004): "Electronic Bill Payments & the Small Business: EBPP & ACH," October.
- Boston Consulting Group (2006), Van Heel, Bas, et. al. "European Postal Landscape 2015." BCG; Apr 2006.
- Bruce, L. (2002): "Cards Keep Gaining Ground, But Cash and Checks are Still King," February 12 accessed at <http://www.bankrate.com/brm/news/cc/20020212a.asp>.
- CAP Ventures (2003): "The Future of Paper," April.
- CAP Ventures (2003): "The Future of Mail and Transaction Documents," May.
- Celent Communications (2004): "The Future of Check Processing in the U.S" October
- CheckFree (2007): "Executive Summary: Consumer Billing and Payment Trends 2002 to 2007."
- CheckFree (2007): "Online Bill Payments Surpass Checks for the First Time Among Internet-Connected Households." April.
- Chicago Tribune (2004): "Bank One Alters Online Paying: Customers Stung by Overdrafts," March 30.
- ClickZ Network, DiGuido, A. (2002): "Bills, Bills, E-Bills," August.
- Communications Billing Report (1998): "Biller-Bank Partnerships May Drive EBPP," November.

ComScore (2007): “The State of Online Banking.” April.

Corporate Executive Board (2000): “The Future of Statements: From Information to Communication”, Performance Enhancement Series, Volume #7.

Credit & Collections World (2001): “EBPP Fans Cling to Their Dream.” November.

DeCovney, S., Banking Technology (2004): “Paper Chasing,” October.

Dove Consulting (2003-2004): “Study of Consumer Payments Preference.”

Ducasse, J.P., (2005): “Mail Forecasts: A Powerful Communication Tool,” A Pitney Bowes Background Paper for the Project “Electronic Substitution for Mail: Models and Results, Myth and Reality.”
eBilling.org (2004), <<http://www.ebilling.org/EIPP/eipp.html>>

Economist (2004): “America’s New Law on Cheques,” October.

EFT Corporation (2004), <<http://www.etransfer.com>>

eMarketer (2001): “The Electronic Payments Report,” October.

eMarketer Extranet (2002): “Internet Users Paying Bills Online in Western Europe, 2001-2007,” November.

eMarketer, Elkin & Hallerman (2003): “Electronic Payments: From Online Bill Payment to Credit Cards,” June.

eMarketer (2004): “Online Banking Gains Canadians’ Interest,” October.

eMarketer, Grau, J. (2004): “Online Bill Payment: The Road to Increased Profits,” October.

eMarketer (2005-2007): Chart database <<http://www.emarketer.com/>>

EPaynews.com (2004): “Statistics for Online Banking,” <<http://www.epaynews.com/statistics/bankstats.html>>

European Central Bank (2004): “Payment and securities settlement systems in the European Union Addendum incorporating 2002 figures (Blue Book, April 2004),” <<http://www.ecb.int/paym/market/blue/html/index.en.html>>

Federal Reserve (2004): “The 2004 Federal Reserve Payments Study: Analysis of Non-cash Payments Trends in the United States: 2000 – 2003,” December.

Federal Reserve Financial Services (2001): “A Snapshot of the Retail Payments System: Research Results from the Federal Reserve,” November.

Finland Post, Elkelä, K. (2004a): “Paper or electronic? Desired and undesired reception channels for direct marketing.”

Finland Post, Elkelä, K. (2004b): “Invoices and the Consumer,” March.

Finland Post, Elkelä, K. (2004c): “Senders and Recipients of the Invoices,” June

Finland Post, Heikki Nikali (2005): “Letter Services in Finland -Present State and Future.”

Finland Post (2006): “E-invoicing in four countries Consumers and SMEs in Finland, Sweden, Norway and Germany.” Elkelä, K.; June 2006.

Florian, E. (2004): “The Money Machines,” July 26, accessed at
<http://www.fortune.com/fortune/fortune500/articles/0,15114,662142-1,00.html>.

Flynn, S. (2005): “Bill Presentment & Payment: Electronic vs. Mail,” A Pitney Bowes Background Paper for the Project “Electronic Substitution for Mail: Models and Results, Myth and Reality.”

- Forrester Research, Graeber, C. (2004a): “Canadian Online Banking and Bill Pay Forecast: Robust Growth Continues,” April.
- Forrester Research, Giovannini & Ensor (2004b): “How to Boost Online Banking in Italy,” September.
- Forrester Research, Gillespie, P. (2004c): “EIPP: Don’t Be Left Behind; Reap The Benefits,” September.
- Forrester Research, Graeber, C. (2004d): “Online Bill Pay 2004: Understanding The Mindset Of Holdouts, Fence-Sitters, and Quitters,” September.
- Forrester Research, Graeber, Louca, Schadler & Sweeney (2004e): “The Impact of The Consumer Adoption of Online Payments, Bills and Statements,” Presentation to the USPS, November.
- Forrester Research, Graeber, C. (2004f): “The Dirty Little Secret About eStatement Adoption,” December.
- Forrester Research (2006a): “How might the proposed rule on proxy materials on the Internet affect shareholder democracy?” Bill Doyle, Michael Louca; Jan 2006.
- Forrester Research (2006b): “Why Half of Europe’s Net Users Don’t Bank Online,” Elena Giovannini and Benjamin Ensor; May 2006.
- Forrester Research (2007): “EBPP Forecast: 2006 - 2011,” Graeber; November.
- Gartner, Kerr, K. (1999): “Consumer Adoption of EBPP: Pathways and Barriers,” April.
- Gartner, Litan & McCoy (1999): “Digital Document Focus: Electronic Bill Presentment.”
- Georgia State University, Kalakota, R.: “Online Banking and Financial Services.”
- Gerdes, G.R., and Walton, J.K. (2002): “The Use of Checks and Other Non-Cash Payment Instruments in the United States,” Federal Reserve Bulletin, August.
- Giga Information Group, Gillespie, P. (2001): “Electronic Bill and Invoice Presentment: Move Over B2C, Here Comes B2B,” September.
- Henley Centre (2004): “Making a Statement: The Value of Sending Statements & Bills Through the Post,” October.
- InformationWeek, Dunn, D. (2004): “A Time Line of the IBM PC Business,” December 8.
- Infotrends (2006). The Future of Direct Mail, Transaction and “Transpromotional” Documents: Executive Summary, Conclusions & Recommendations.
- Institute for the Future (March 2003): “Workers, Postal Strategies, and Mail Volumes.”
- International Communications Research (ICR) (1999): “Household Mail Preferences Survey,” Commissioned by Pitney Bowes.
- International Communications Research (ICR) (2001): “Household Mail Preferences Survey,” Commissioned by Pitney Bowes.
- International Communications Research (ICR) (2003): “Household Mail Preferences Survey,” Commissioned by Pitney Bowes.
- Investorwords.com (2004), www.investorwords.com/3420/online_banking.html.
- ITAA (October 2000): “E-Data: Electronic Bill Payment and Presentment Adoption Finally Takes Hold: 40 Million Households in 2005.”
- Javelin (2005), “Electronic Bill Presentment: Product and Marketing Strategies to Drive Adoption.” Bruce Cundiff; Dec 2005.

Jimenez, L. (2004): “Electronic Substitution for Mail: Models and Results, Myth and Reality,” Pitney Bowes, address at the 12th Conference on Postal Delivery and Economics, Rutgers University, Center for Research in Regulated Industries, Cork, Ireland, June 2-5, 2004.

Jimenez, L. (2005): “Electronic Substitution for Mail: Models and Results, Myth and Reality,” Pitney Bowes, presentation at the National Postal Forum, Nashville, TN, March 20-23

Jimenez, L. (2007): “The Changing Mailing Industry: Dealing with Convergence,” Global Envelope Alliance Conference, Berlin, June 4, 2007.

Killen & Associates (2004): “Billing and Incoming Payment Processes in the 21st Century,” November.

MacSweeney, G., Insurance & Technology Online (2003): “E-Payments: The Waiting is the Hardest Part,” August.

MAIL: The Journal of Communication Distribution (2004): “Paper & Electronics Working Together,” November.

Majors, L. (2004): “What’s the Big Deal with Check 21,” October.

Majors, L. (2005): March 22, 2005 Presentation at National Postal Forum, Nashville, TN.

Mastercard (2006). “How Online Bill Payment and Presentment Works.” Chart. Mastercard RPPS.
<<http://www.mastercardintl.com/rpps/>>

Mateer, W.H. (1969): “The Checkless Society, Its Cost Implications for the Firm,” MSU Business Studies.

McKinsey, Ouren, Singer, Stephenson & Weinberg, McKinsey Quarterly (1998, Number 4): “Electronic Bill Payment and Presentment.”

Metavante. “Moving Toward a Paperless Environment in the World of Financial Services.” Marc Wall; December 2006.

Moneyextra.com (2004): “Moneyextra Guides to Online Banking.”
<<http://www.moneyextra.com/faqs/bankingfaq1.html>>

Nader, F. (2004): “Mail Trends,” A Pitney Bowes Background Paper for the Project “Electronic Substitution for Mail: Models and Results, Myth and Reality,” www.postinsight.pb.com., December.

Nader, F. and Jimenez, L. (2005): “Substitution Patterns,” A Pitney Bowes Background Paper for the project “Electronic Substitution for Mail: Models and Results, Myth and Reality”, www.postinsight.pb.com.

Nader, F. (2005): “Forecasts,” A Pitney Bowes Background Paper for the Project “Electronic Substitution for Mail: Models and Results, Myth and Reality,” www.postinsight.pb.com., February.

Nilson: “The Nilson Report.” Cumulative monthly reports from 2005-2007.

Norway Post (2005). Transactional Mail Data.

Park, A. (2004): “Checks Check Out,” accessed at
http://www.businessweek.com/magazine/content/04_19/b3882606.htm.

Pennsylvania State Employees Credit Union Website (2004), October 3.

Peppers and Rogers Group (2001): “Direct Mail as a CRM Tool.”

Pew Internet & American Life Project, Madden, M. (2003): “America’s Online Pursuits,” December.
Pitney Bowes (2004): “Mail Volume Drivers Analysis,” October.

Pew Internet & American Life Project, Fallows, D. (August 2004): “The Internet and Daily Life.”

Pew Internet & American Life Project (Jan 2005): “The Future of the Internet.”

PricewaterhouseCoopers (2000): “Projecting Electronic Diversion for First-Class Mail in the H.R. 22 Simulation Model,” February.

Print Solutions Magazine (2004): Print Solutions Magazine accessed at <http://formmag.com/news.html>, May 2004.

Reuters via Yahoo (2005): “Online Banking Growing Rapidly, Survey Finds,” February 9.

Sapsford, J. (2004): Wall Street Journal “As Cash Fades, America Becomes a Plastic Nation,” July 28.

Saul, D., e-Doc Magazine (March/April 2001): “The Value Proposition for Electronic Billing.”

SunTrust Robinson Humphrey, Johnson & Parikh (2003): “e-Payments Overview,” December.

Szeto, C. and Jimenez, L. (2005): “Consumer Preferences for Communication Media.” Pitney Bowes Background Paper for the project “Electronic Substitution for Mail: Models and Results, Myth and Reality”, www.postinsight.pb.com.

Tamayo, Flynn and Jimenez (2005): “Trends in Consumer Payments Systems,” A Pitney Bowes Background Paper for the Project “Electronic Substitution for Mail: Models and Results, Myth and Reality.”

The Nilson Report (2004): Issue #823, December 2004.

TMCnet.com (2004): “MasterCard, Ariba Survey Shows EIPP Adoption Growing Among Large Companies,” August.

TowerGroup, Press Release (2002): “While U.S. Will Continue to Lead Global Markets in Electronic Bill Presentment/Payment, Other Regions Poised for Major Gains Through 2005,” January.

TowerGroup, Press Release (2003): “TowerGroup Declares No Clear Victor in Battle to Dominate Online Bill Presentment and Payment,” August.

TowerGroup, Press Release (2004): “Over One in Three U.S. Households Will ‘E-Bank’ by 2007,” May.

TowerGroup (2006): “Bank Account Statements: Underestimated, Underutilized, and (Finally!) Undergoing a Renewal,” Kathleen Khirallah; Jul 2006.

U.S. Postal Service Household Diary Studies (1987-2006).

U.S. Postal Service Transformation Plan (April 2002).

U.S. Postal Service Website (2004) < http://www.usps.com/paymentservices/ops_discontinued.htm>

Universal–McCann (2006). “Insider’s Report: Robert Coen’s Presentation on Advertising Expenditures.” Robert J. Coen; June 2006.

USA Today (2004): “The Check is Not in the Mail,” March 25.

Wall Street Journal Online (2007). “Pushing Paperless: The Pros and Cons.” Eleanor Laise; 2 May 2007.

Webopedia.com (2004), <<http://www.webopedia.com/TERM/E/EBPP.html>>