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Universal Access, Cost Recovery, and Payment Services

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Abstract

We suggest a subtle, yet far-reaching, tension in the objectives specified by the Monetary Control Act of 1980 (MCA) for the Federal Reserve's role in providing retail payment services, such as check processing. Specifically, we argue that the requirement of an overall cost-revenue match, coupled with the goal of ensuring equitable access on a universal basis, partially shifted the burden of cost recovery from high-cost to low-cost service points during the MCA's early years, thereby allowing private-sector competitors to enter the low-cost segment of the market and undercut the relatively uniform prices charged by the Fed. To illustrate this conflict, we develop a voter model for what begins as a monopoly setting in which a regulatory regime that establishes a uniform price irrespective of cost differences, and restricts total profits to zero, initially dominates through majority rule both deregulation and regulation that sets price equal to cost on a bank-by-bank basis. Uniform pricing is dropped in this model once cream skimming has subsumed half the market. These results help illumine the Federal Reserve's experience in retail payments under the MCA, particularly the movement over time to a less uniform fee structure for check processing.

Keywords: Monetary Control Act, payment system, check processing, regulation

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The Monetary Control Act of 1980 (MCA) required the Federal Reserve (Fed) to provide all banks with equal access to payment services, not just member banks, and to price those services with explicit fees. The legislative history of the MCA suggests this mandate had the twin purpose of promoting competition in the provision of payment services and generating revenue for the Treasury.

We analyze the interplay between two of the MCA's most salient features in the area of retail payment services. The first is the requirement that the fees charged for Fed services should in total cover both the costs of providing those services and an adjustment factor designed to reflect the taxes that would have been paid and the return on capital that would have been generated had the services been provided in the private sector. The second is the requirement that, in setting its prices, the Fed should strive to ensure that an adequate level of payment services is provided nationwide. This latter provision suggests the Fed may need to set prices for payment services in some regions below the cost to provide those services, if necessary to ensure equitable access for banks in all areas of the country.

We contend these two requirements are inconsistent, essentially promoting, if not entailing, a partial shift in the burden of cost recovery from high-cost to low-cost service points, thereby allowing private-sector competitors to enter the low-cost segments of the market and undercut the relatively uniform prices charged by the Fed. To clarify the ultimate implications of this legislative environment, we develop a voter model for what begins as a monopoly setting in which a regulatory regime that establishes a uniform price irrespective of cost differences, and restricts total profits to zero, initially dominates through majority rule both deregulation and regulation that sets price equal to cost on a

bank-by-bank basis. The uniform price rule is dropped in this model once cream skimming has subsumed half the market, and the alternative regulatory regime that ensures the equality for individual banks of service fees and costs is never selected by the voting mechanism.

These results suggest the MCA set the stage for a declining role of the Fed as a provider of retail payment services, including check processing, and the losses in Fed check volume that began in the early 1990s may have reflected the provision of universal access, in addition to private sector competition, as heightened by structural change.[1] Our model then points to the increasing complexity of the Fed's fee structure as a relaxation of, but not departure from, the universal service objective, necessitated by the tension between universal service and cost recovery.

We proceed as follows. The first section provides an account and interpretation of the MCA's relevant provisions. In the second section, we develop a voter model of payment services regulation. The third section offers empirical support for our arguments in the area of check processing. The fourth section concludes.

1. Pricing Provisions of the MCA

1.1 Cost Recovery

The MCA required the Fed to establish a fee structure for payment services that recovered not only its overall direct and indirect operating costs, but also any additional

[1] Regarding structural change, Stavins (2004) suggests that declining Fed check volume in 1994 partly reflected the introduction of same-day settlement. The same-day settlement rule allowed correspondent banks to compete more effectively with the Federal Reserve Banks.

costs faced by private sector providers of retail payment services.[2] These additional costs are imputed through a private sector adjustment factor designed to reflect the taxes that would have been paid and the return on capital that would have been generated had the services been provided in the private sector.[3] In this manner, MCA was intended to promote private sector competition in check collection and other payment services provided by the Fed.[4]

1.2 Universal Service

Along with the requirement that the Fed cover costs with revenue, the MCA also included in Section 107 a universal service objective directing the Fed to adopt pricing principles that "give due regard to competitive factors and the provision of an adequate level of such services nationwide." This latter provision suggests the Fed may need to set prices for payment services in some regions below the cost of providing them.

While this universal service objective is subject to a greater amount of interpretation than the relatively straightforward requirement that revenues cover costs, its spirit is nevertheless fairly clear. And, that spirit is reflected in the Fed's description of it business practices, as published in *Federal Reserve Regulatory Service 7–137*, "Federal Reserve services will be offered on a fair and equitable basis to all depository institutions on similar terms and conditions." Similarly, as stated in *Federal Reserve*

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[2] The MCA specified that "over the long run, fees shall be established on the basis of all direct and indirect costs actually incurred." In practice, the Board of Governors has set fees with the goal of covering costs on a year-by-year basis (*Federal Reserve Regulatory Service, 7–135*).

[3] See *Federal Reserve Regulatory Service, 7–147* for a description of the accounting system used to calculate the costs associated with the Fed's provision of payment services.

[4] The MCA specified the following services as requiring explicit fees: currency and coin, check clearing and collection, wire transfer, automated clearinghouse, settlement, securities safekeeping, float, and any additional services initiated after the MCA was passed.

Regulatory Service 7–143, "Federal Reserve payment services are available to all depository institutions, including smaller institutions in remote locations that other providers might choose not to serve."

In this manner, the MCA's universal service objective entails the provision of payment services for all depository institutions, including smaller institutions in remote locations, where volumes are typically low and costs are high. In addition, the MCA's emphasis on fairness, equity, and inclusiveness may be interpreted as encouraging a tendency toward charging relatively uniform prices for these services, even if significant differences in costs exist between different users, as indicated in *Federal Reserve Regulatory Service 7–137*, as cited above.

1.3 Potential Price Undercutting

However, with the mandate in place for the Fed to match overall cost and revenue in providing payment services, its ability to partially shift costs away from high-cost users depends on its ability to set fees for low-cost users in excess of the levels associated with the recovery of costs for that user category. As a result, through its universal service objective, the MCA may have done more than simply promote private sector competition in the provision of payment services. Rather, it potentially exposed the Fed to price undercutting by competition focused on low-cost users.

These considerations are relevant to the Fed's role in check processing and other areas of payment services as well. A useful example is documented in the policy discussions surrounding the implementation of the MCA in the area of currency and coin transportation. The Fed's original proposal for pricing principles and a schedule of fees (*Federal Register*, 1980) included the following statement:

> To assure that the public serviced by institutions in more remote locations receive an adequate level of service, the proposed prices for transportation to depository institutions located in more remote areas (over-the-road endpoints) have a ceiling imposed for the per stop portion of the cash transportation charge. The proposed price to mail endpoints has the same ceiling. In the proposed pricing structure, the ceiling is set at $32.

The MCA's universal service objective is clearly manifested in the Fed's original proposal for the pricing of currency and coin transportation. The total transportation charge consisted of a volume charge and charge per stop, the latter of which varied by zone. The proposed $32 cap on the per stop charge most likely amounted to a cost shift in favor of institutions located in remote areas.

But the tension in this context between the provision of universal service and the MCA's cost recovery mandate came to light early in the public comments received by the Board of Governors on the proposed fee schedule. In reviewing the comments received, the Fed noted the following concern (*Federal Register*, 1981):

> Several commentators also were concerned that full cost recovery for these services would result in significant increases in charges for rural and remote endpoint deliveries as urban institutions drop the services.

These commentators apparently anticipated that the price relief for rural areas would, under full cost recovery, necessitate prices above cost for urban areas and thereby open the door for bypass and cream skimming.[5] Consistent with this interpretation, the final fee schedule for currency and coin transportation that became effective in January of 1982 established a $75 ceiling on the per stop charge, significantly higher than the $32 cap initially proposed by the Fed (*Federal Reserve Bulletin*, 1981). It turned out that

[5] Because the Fed paid private couriers to provide it with currency and coin transportation services, bypass would involve an institution establishing a direct relationship with a courier at a lower price than the price charged for the indirect relationship provided through the Fed.

financial institutions generally established their own transportation arrangements once the Fed prices became effective.

2. The Model

The following develops a voter model of payment system regulation. We couch the political economy aspects of our model in terms of voting behavior in appreciation of the influence of individual banks on regulatory policy, both through the legislative process and, perhaps more importantly, through the process of public comment that accompanies significant regulatory changes.

2.1 Consumers

A population of financial institutions, referred to here as consumers, is assumed with perfectly inelastic demand for a particular payment service, S. A wealth constraint places an upper limit on price. The notion of a fundamentally necessary service motivates the assumption of inelastic demand.

2.2 Firms

Let $0 \leq c \leq 1$ denote the cost of providing S to individual consumers, with cumulative density function $F(c)$ and $f = F'$. Attention generally is restricted to strictly concave, linear, and strictly convex functions. Fixed costs are not considered explicitly.[6] In the monopoly case, technological or regulatory constraints lead to a sole provider. In

[6] For simplicity, and also to isolate cross-subsidization, we consider only attributable costs and not common costs. While not a subsidy in economic terms, the allocation of fixed costs could also yield prices that potentially result in cream skimming.

an alternative case, perfect competition is introduced to the low-cost segment of the industry ($c \leq c^l$). The model then becomes one of undercutting and limited monopoly.

2.3 Regulation

Regulation emerges as a way to affect P^s, the price of S. Under social regulation, all consumers are charged the same price ($P^s = P^*$), even when the cost of providing the service varies, and the monopolist is restricted to earn zero economic profits overall. The associated per capita administrative costs are denoted as δ. An alternative, which we refer to as marginal cost regulation, sets price equal to cost on a consumer-by-consumer basis ($P^s = c$), also at the per capita cost of δ. A third policy option is no regulation at all.

The wealth constraint is specified so as to ensure each of the policy options is technically feasible. In particular, each consumer's initial endowment is equal to $\max(c) + \delta = 1 + \delta$.

2.4 Politics

Consumers assume a political role as voters. In this role, they determine the form of regulation. In voting for policy alternatives, consumers seek to minimize the cost of S and thereby maximize end-of-period wealth. Majority rule is assumed, so that a policy alternative prevails when it receives more than one half of the vote. If no alternative prevails in the first vote, then the two alternatives with the most votes enter a runoff. The proportions of the population with first-best choices of $P^s = P^*$, $P^s = c$, and no regulation are denoted as V^{P^*}, V^C, and V^{NR}, respectively.

2.5 The Monopoly Case

Suppose $c^l = 0$ and social regulation ($P^s = P^*$) successfully requires the monopolist to charge the same price to all consumers, while earning zero economic profits. The corresponding regulatory constraint is given by

$$\int_0^1 (P^* - c) dF(c) = 0. \tag{1}$$

Consumers for whom $P^* > c$ pay a higher than competitive price. If these consumers could obtain the service at competitive prices from an alternative provider, then they would exit the regulated system.

<u>Proposition 1:</u> When $c^l = 0$, social regulation occurs if and only if F is strictly convex.

<u>Proof:</u> When $c^l = 0$, $V^{P^*} = 1 - F(P^*)$, $V^C = F(P^*)$, and social regulation occurs if and only if $F(P^*) < 0.5$. From (1),

$$P^* = \int_0^1 cf(c) dc. \tag{2}$$

When F is strictly convex, Jensen's inequality implies

$$\int_0^1 F(c) f(c) dc > F(P^*). \tag{3}$$

Integration by parts for the left side of (3) gives 0.5. Hence, $F(P^*) < 0.5$. When F is strictly concave, the inequality in (3) is reversed, so that $F(P^*) > 0.5$. Linearity implies $F(P^*) = 0.5$.

2.6 Monopoly with Undercutting

Now suppose new technology or a reduction of regulatory constraints allows low-cost consumers ($c \le c^l$) to purchase the service at marginal cost from someone other than the former monopolist, so that competitors undercut the regulated price and "cherry-pick" in the low-cost (high-profit) areas of the market. As low-cost consumers bypass the regulated system, the social regulatory constraint covering those remaining becomes

$$\int_{c^l}^{1} (P^* - c) dF(c) = 0. \tag{4}$$

Proposition 2: When $c^l > 0$, social regulation occurs if and only if $V^{P^*} > V^C$ and $V^{NR} \le 0.5$.

Proof: When $c^l > 0$, $V^{P^*} = 1 - F(P^*)$, $V^C = F(P^*) - F(c^l)$, and $V^{NR} = F(c^l)$. If $F(P^*) < 0.5$, then over half the population is characterized by $c > P^*$, and $V^{P^*} > 0.5$. If $F(P^*) \ge 0.5$, then $V^C + V^{NR} \ge 0.5$. If $V^C = F(P^*) - F(c^l) > 0.5$ or $V^{NR} = F(c^l) > 0.5$, then the corresponding policy alternative prevails. If $V^C \le 0.5$ and $V^{NR} \le 0.5$, but $\min(V^C, V^{NR}) \ge V^{P^*}$, then the regulatory option of $P^s = c$ and the no-regulation option enter a runoff. Because consumers who had voted for social regulation in the initial vote would now band together with the supporters of marginal cost regulation, the regulatory regime with $P^s = c$ prevails. If $\min(V^{NR}, V^{P^*}) \ge V^C$, then consumers who had voted for marginal cost regulation in the initial vote would band together with the supporters of social regulation, and the regulatory regime with $P^s = P^*$ prevails. If $\min(V^{P^*}, V^C) \ge V^{NR}$, then consumers who had voted for no regulation in the initial vote do not participate in the runoff, as they

have no stake in its outcome. As a result, max(V^{P*}, V^{C}) determines the regulatory regime.

2.7 Deregulation

What is the effect of undercutting on the viability of social regulation? Extensive undercutting ($V^{NR} > .5$) leads to complete deregulation, as shown in the proof of Prop. 2. However, whether or not undercutting has the capacity to induce a shift to the alternative regulatory regime ($P^{s} = c$) before this point remains to be seen. If not, then once social regulation is established in equilibrium under monopoly, increases in undercutting associated with rising competition in the low-cost segments of the market eventually lead to complete deregulation, and marginal cost regulation never emerges. In this case, relatively long lags may occur between the inception of competitive pressures and the dissolution of social regulation.

Proposition 3: An increase in c^{l} leads to an increase in P^{*} if and only if $f(c^{l}) > 0$.

By pushing up P^{*}, increases in c^{l} reduce support for social regulation, since $V^{P*} = 1 - F(P^{*})$. However, as shown in Prop. 2, this effect cannot precipitate the dissolution of social regulation prior to the point when $F(c^{l}) > 0.5$ unless it causes V^{C} to exceed V^{P*}. Because P^{*} rises, bypass hurts those consumers remaining in the regulated system. This result for universal service regulation contrasts with the more general regulatory context analyzed by Laffont and Tirole (1990), where the effect of bypass on low demand customers is ambiguous.

Proof: (4) implicitly defines P^{*} as a function of c^{l}. The implied relationship is

$$\frac{dP^*}{dc^l} = (P^* - c^l)h(c^l), \tag{5}$$

where $h(c^l)$ denotes the hazard rate. Because $P^* > c^l$, (5) is positive when $h(c^l) > 0$, indicating that the regulated price must rise as low-cost consumers exit the system.

Proposition 4: If *F* is strictly convex, marginal cost regulation never occurs.

Proof: By Prop. 1, social regulation occurs when $c^l = 0$. When $F(c^l) > 0.5$, deregulation occurs. By Prop. 2, if $0 < F(c^l) \leq 0.5$, then social regulation occurs if and only if $V^{P^*} > V^C$ $\Rightarrow 1 - F(P^*) > F(P^*) - F(c^l)$. Let $F^*(c) = [F(c) - F(c^l)]/[1 - F(c^l)]$ and $f^*(c) = f(c) / [1 - F(c^l)]$. For $c^l > 0$,

$$P^* = \int_{c^l}^{1} cf^*(c)dc. \tag{6}$$

Since F is strictly convex, F^* must be also, and Jensen's inequality implies

$$\int_{c^l}^{1} F^*(c) f^*(c)dc > F^*(P^*). \tag{7}$$

Integration by parts for the left side of (7) gives 0.5, so that $F^*(P^*) < 0.5$. Rearranging terms gives $1 - F(P^*) > F(P^*) - F(c^l)$.

2.8 Strategic Voting

The discussion above entertains switching of voting blocks to second best outcomes in the context of runoffs, but leaves unconsidered true strategic voting [see Eckel and Holt (1989)], by which consumers vote for second best alternatives in the first round with the purpose of influencing second round results. Below we show this form of strategic voting does not arise in our model.

Under the assumption that voters cannot coordinate to split their votes among several alternatives, there is no gain to strategic voting in our model. Voters who prefer no regulation are indifferent between social regulation and marginal cost regulation, and so obviously have no incentive to vote strategically. Those who prefer marginal cost regulation over the other alternatives also prefer social regulation over no regulation. They would not want to vote for no regulation in the first round; and they would have no incentive to vote for social regulation either, since in any event max(V^{P*}, V^{C}) would determine the outcome in the second round, given $V^{NR} \leq .5$. The same argument applies to voters preferring social regulation.

3. The Case of Check Processing

Our model of regulation entails clear predictions for the Fed's experience in check processing under the MCA, and these predictions are consistent with broad trends in various check-related data.

3.1 Model Predictions for Fed Check Pricing Under the MCA

We would expect the MCA's universal service objective initially to promote a relatively flat fee schedule, in parallel with the model's social regulation regime. The added element of the MCA's cost recovery mandate would then be expected to foster entry by alternative check processors specializing in delivery to low-cost presentment points, in parallel with the vulnerability of the model's social regulation regime to price undercutting. That is, the cost shifting implied by the combination of a relatively flat fee structure and full cost recovery would be expected over time to give rise to bypass of the Fed in the provision of check processing services directed toward low-cost presentment

points. Such bypass, in turn, would eventually pressure the Fed to price in closer accordance with the varying costs associated with the geographic locations of different presentment points, thereby relaxing, while not departing from, the MCA's universal service objective, in a manner similar to the eventual deregulation occurring within the model.

3.2 Trends in Fed Check Pricing

Given the MCA's universal service objective and its emphasis on small institutions located in remote areas, we expect the Fed would have designed its fee structure for check processing so as to promote the provision of check processing services for rural institutions. And there is anecdotal support for this view. In forums hosted by the Rivlin Committee in the mid-nineties, a taskforce designed to assess the role of the Fed in providing retail payment services, private-sector participants expressed the view that small remote institutions would face higher prices for check processing if the Fed were to exit the business (Committee on the Federal Reserve in the Payments Mechanism, 1997).

In this regard, given the relatively low volumes and greater geographic distances associated with rural presentment points, it seems safe to assume that incremental costs are relatively high for the presentment of checks to institutions located in rural areas. Given the higher costs associated with rural presentment, an approximately flat fee schedule would imply that rural presentment was priced lower relative to costs than urban presentment. Therefore, if the fee schedule was approximately flat, rural banks would benefit from Fed participation, as the Rivlin Committee found, if rural banks depend more heavily on rural presentment than urban banks. Even considerable geographic

differentiation in pricing could be consistent with the view that rural institutions are more dependent on rural presentment and benefit from Fed cost shifting, so long as the differentiation does not fully compensate for underlying geographic differentials in incremental cost.

Supporting the view that rural institutions depend more heavily on rural presentment, the fees charged by the Reserve Banks for check processing services were fairly uniform in the early years of the MCA. While early on a higher fee was already charged for presentment in a remote location, over time the degree and complexity of geographic differentiation increased substantially.

As of 1990, only two Reserve Banks—Kansas City and Minneapolis—used a tiered fee schedule, whereby different prices were set for low- and high-cost presentment points within the same check collection zone, as shown in Table 1. The Federal Reserve Board approved tiered pricing as a permanent fee structure for these offices in 1986 and specified as one of the criteria for the adoption of tiered pricing at other offices the requirement that clear cost differences exist between groups of presentment points within the check collection zone under consideration.[7] By 1998, all the Reserve Banks except Atlanta and Dallas had moved to a tiered fee structure within Regional Check Processing Center (RCPC) zones.[8] Today, the pricing of check services is far more differentiated

[7] For a brief history of the advent of tiered pricing, along with a statement of the associated criteria established by the Federal Reserve Board, see the *Federal Register*, 1990.

[8] The Kansas City Reserve Bank did not employ an RCPC zone, but used tiered pricing in its country zone, as shown in Table 1. RCPC zones are designated areas within the territories of Federal Reserve offices, but outside Federal Reserve cities. Country zones generally are exterior to RCPC zones. Of the five Reserve Banks that designated country zones in both 1990 and 1998, four employed a flat country zone fee, rather than a tiered price. Each of these four Reserve Banks raised the country zone fee from 1990 to 1998.

than in 1998.[9] Assuming each of these movements to tiered pricing satisfied the Federal Reserve Board's requirement that clear cost differences should exist within check collection zones, we can infer that prior to the move to tiered pricing a constant price had been charged across endpoints with significantly different costs.

In addition, several other features of the Fed's fee schedule for check collection services also conform to the model's implications. Interestingly, in many cases the move to tiered pricing in RCPC zones was accompanied by a reduction in prices in the corresponding city zones. Moreover, four Reserve Banks moved to tiered pricing in the city zone as well. These events are consistent with our view that heated competition and cream skimming focused on high-volume low-cost presentment points led the Fed to reduce over time the degree of cost shifting associated with the universal service objective of the MCA. Other features of the fees charged for check clearing services, such as the emergence of volume discounts, also conform to our theory.

3.3 An Alternative View

Our perspective takes on increased importance in light of the controversy surrounding the prices charged by the Fed for retail payment services. Lacker and Weinberg (1998) argue that that the movement toward greater differentiation in check processing fees might reflect certain legal privileges bestowed upon the Fed. In particular, Reserve Banks can present checks to a paying bank until 2:00 p.m. and still receive payment the same day, whereas private-sector participants must present by 8:00 a.m. in order to insist on same-day funds. For relatively remote presentment where

[9] For more details regarding pricing of Federal Reserve check services, see

transportation time is significant, the six-hour monopoly enjoyed by the Fed could represent a significant competitive advantage. The possibility then arises that the increasing differentials observed in the Fed's pricing structure might reflect efforts to shift costs to protected market segments for presentment in rural areas, thereby leaving room to maintain relatively low fees in the more closely contested city markets.

In support of our view that a good part of the observed changes in fees reflects underlying cost differentials, we have pointed to the relatively flat cost structure that initially was adopted under MCA, together with the Board's requirement that the adoption of tiered pricing at the Reserve Bank offices must be supported by the demonstration of clear cost differences between groups of presentment points. Assuming the widespread movement to tiered pricing satisfied the Federal Reserve Board's requirement that clear cost differences should exist within check collection zones, we can infer that prior to the move to tiered pricing a constant price had been charged across endpoints with significantly different costs. Moreover, squaring the alternative view that prices for rural presentment have been set artificially high with the findings of the Rivlin Committee that the Fed followed the universal service objective by favoring rural institutions would require that rural institutions actually tend to present a lower share of their collected checks to rural institutions than do their urban counterparts.

In summary, our analysis suggests costs historically were partially shifted to city presentment, but then over time were aligned more closely with underlying cost differentials for rural presentment, whereas Lacker and Weinberg focus on the possibility

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http://www.frbservices.org/FeeSchedules/index.html.

that changes in prices have gone beyond this point, so that now costs actually are partially shifted to rural presentment. While we cannot rule out this possibility, our findings are nevertheless significant, in that they show that at least part, if not all, of the movement toward greater complexity and geographic differentiation in prices could be expected as a natural outcome of the MCA.

4. Conclusion

Our analysis supports the view that the Fed's movement away from its initial relatively flat fee structure for check processing to a less uniform schedule reflects to a significant degree an effort to curtail undercutting and cream skimming by pricing access in closer accordance with geographically determined costs, ultimately reflecting a resolution of the underlying tension between the MCA's cost recovery and universal service provisions.

The universal service objective is no longer politically supported in our model once cream skimming has subsumed half the market, while the alternative regulatory regime that ensures the equality for individual banks of service fees and costs is never selected by the voting mechanism. These results from our model suggest the MCA's universal service provision, while still in effect, may continue to become a less prominent feature of the Fed's role in retail payments. At the same time, other potential motivations for the Fed's presence as a provider of retail payment services, not considered directly in our model, may come to have greater visibility.

Table 1

Check Processing Fees for Federal Reserve Cities and Associated Regional Check Processing Centers (RCPCs), Cents per Item [1]

	City		RCPC [2]	
	1990	1998	1990	1998
Atlanta	1.1	1.2	1.8	2.0
Boston	1.7	1.4	2.2	1.2 2.0 2.6
Chicago	2.2	2.0	3.3	2.9 3.1 3.3
Cleveland	1.6	1.9 2.3	2.0	2.1 2.7 3.3
Dallas	1.6	1.6	2.2	2.2
Kansas City [3]	1.7	1.5	2.2 3.2	1.5 2.4 4.1
Minneapolis	1.7	1.3 1.8	2.0 2.8	1.1 2.4 3.2
New York [4]	2.7	2.0 5.0	2.4	2.0 3.5 5.0
Philadelphia	1.5	1.0 1.6	1.9	1.7 1.9 2.2
Richmond	1.6	1.6	2.1	1.9 2.5 3.2
St. Louis	1.8	1.4	2	1.5 2.4 3.1
San Francisco	1.7	1.9	2	2.2 2.4 2.6

[1] The fee data are taken from the *Interdistrict Check Manual*, 1990 and 1998. Where only one price is shown, the processing bank charged a single price for all checks within the zone; where multiple prices are shown, the processing bank charged a tiered price. The total fee for check processing also includes a cash letter fee, which is not shown above. Prices shown are for "unsorted regular" cash letters.

[2] RCPC zones are designated areas within the territories of Federal Reserve offices but outside Federal Reserve cities.

[3] Because the Kansas City territory did not employ an RCPC zone, prices for country zone items are shown instead.

[4] Checks for New York were processed at East Rutherford, NJ or Jericho, NY.

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