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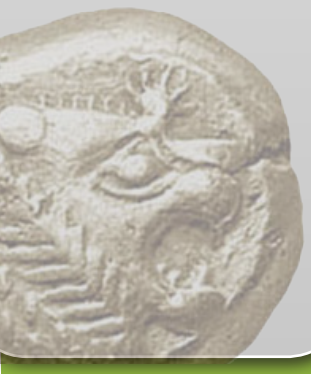

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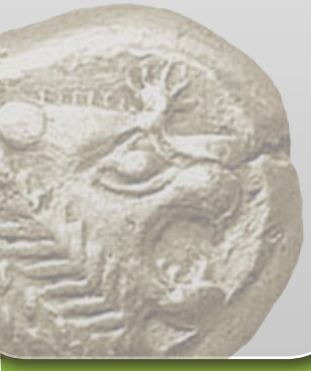

Cross-Routing: PIN and Signature Debit Interchangeability under the Durbin Amendment

by Adam J. Levitin
November 2010

This article argues that the Durbin Interchange Amendment's "multi-homing" provision, which prohibits exclusive routing arrangements on debit card transactions, should be understood to permit "cross-routing"— the routing of signature debit transactions over PIN debit networks and vice-versa to encourage competition for best price execution on payment card authorization, clearance and settlement.

The Durbin Interchange Amendment, passed with bipartisan support over intense opposition from the financial services industry, marks the point the federal government has regulated payment card networks beyond the consumer interface. The goal of the Amendment is to improve competition in the payment card market, particularly for electronic debit transactions.

This article focuses on the Amendment's so-called "multi-homing" provision that prohibits exclusive routing arrangements on electronic debit transactions. It argues that the multi-homing provision should be read as permitting "cross-routing"—the routing of signature debit transactions over PIN debit networks and vice-versa—as the best implementation of the Amendment's goal of improving competition for best execution in debit transaction routing that is also consistent with statutory language.

The Durbin Amendment, section 1075 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, has two basic operative parts. The first part of the Amendment requires that interchange fees on electronic debit transactions—the fee paid by the merchant's bank to the bank that issues the debit card—must be "reasonable and proportional to the cost incurred by the issuer with respect to the transaction." [1] The legislative history indicates that "cost" refers to:

> the incremental cost incurred by the issuer for its role in the authorization, clearance, and settlement of a particular electronic debit transactions, as opposed to other costs incurred by an issuer which are not specific to the authorization, clearance, and settlement of a particular electronic debit transaction. [2]

The amendment also permits an issuer-specific variance above the incremental cost for a transaction for fraud prevention costs, provided that the issuer complies with fraud prevention standards established by the Federal Reserve. [3]

The second part of the Amendment prohibits various payment card network rules that have limited price competition among networks. [4] The interaction between the two parts of the Amendment for electronic debit transactions may be viewed as follows: The first part creates a price ceiling for interchange fees with its reasonable and proportional to incremental cost

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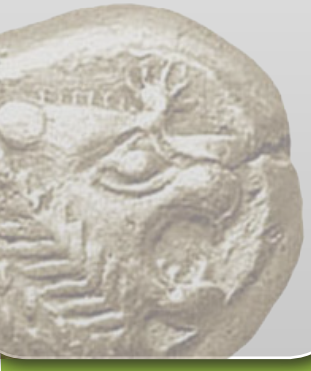

requirement. [5] The second section is designed to address not just the interchange fee component of the cost of accepting electronic debit transactions, but the total pricing bundle that merchants face for electronic debit transactions.

The cost to a merchant of an electronic debit transaction is not just the interchange fee. It also includes any network fees and the acquirer's spread. Most merchants pay a merchant discount fee that is explicitly priced as "interchange plus," meaning that the merchant pays a fee that is equal to the interchange rate plus network fees plus the acquirer's spread. As acquirers' spread is generally the same irrespective of the network over which a transaction is routed, the distinction in pricing between networks typically depends on the sum of interchange and network fees. It is the total pricing bundle of interchange and network fees, not the breakdown therein, which is relevant to merchants.

The first part of the Durbin Amendment addresses only interchange fees, a component of the total pricing bundle. The Amendment gives the Federal Reserve authority to directly regulate network fees—the other transaction-specific component of the total pricing bundle—only to prevent circumvention of interchange fee regulation. [6] The second part of the Durbin Amendment, however, is designed to foment price competition for the total bundle of fees that merchants face, including the network fee, not just the interchange fee. In other words, while the first part of the Durbin Amendment involves regulatory price capping, the second part of the Durbin Amendment relies on market competition to control prices.

The key provision of the second part of the Amendment is the so-called "multi-homing" provision. [7] Multi-homing refers to the ability to route a payment card transaction over multiple networks. [8] When multi-homing is possible, the transaction can find its way "home" through multiple routings. The amendment's multi-homing provision provides that:

> an issuer or payment card network shall not directly or through any agent, processor, or licensed member of a payment card network, by contract, requirement, condition, penalty, or otherwise, restrict the number of payment card networks on which an electronic debit transaction may be processed to—
>
> (i) 1 such network; or
>
> (ii) 2 or more such networks which are owned, controlled, or otherwise operated by —
>
> (I) affiliated persons; or
>
> (II) networks affiliated with such issuer. [9]

The Amendment further provides that neither card issuers nor networks may restrict the ability of merchants to direct the routing of the transaction. [10]

What does the multi-homing requirement mean in practice? The answer will, of course, depend on the Federal Reserve's rule-making, as required by the Dodd-Frank Act. On its face, the Durbin Amendment appears to merely prohibit exclusive network arrangements in debit card issuance. Arguably, the requirement would be satisfied with the inclusion of a single signature and single PIN debit network on a card (as long as they are not affiliated with each other). Such a reading of the Durbin Amendment is too narrow, however, as it would likely yield an outcome at odds with the Amendment's goal of fostering better price competition for the total pricing of accepting a debit card transaction for merchants. [11] The only question would be whether a consumer used a signature or PIN at point of sale, at which point there would be no

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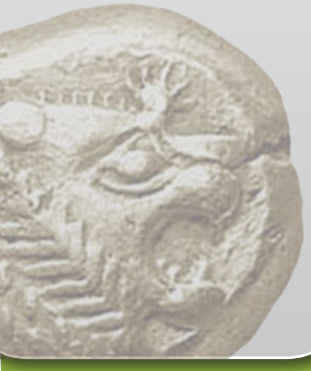
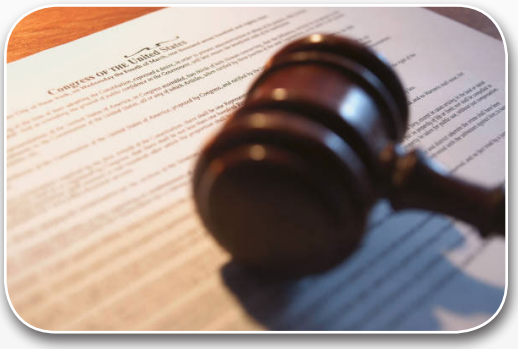


no competition on the total cost of the transaction. While the interchange fee would be limited to the "reasonable and proportional" fee, there would be no competition for the total cost bundle to the the merchant, including network fees. Networks would have no incentive to reduce the total cost bundle in order to be competitive for the merchant's routing decision.



This means that networks would be free to set their own network fees as high as they would like, and the problem of lack of market discipline on interchange fees (or, more precisely, too much market discipline from the issuer side of the interchange market relative to the merchant side) would merely be replaced with a problem of lack of market discipline on network fees. Capping interchange fees by themselves is meaningless when they can simply be replaced by noncompetitive network fees. While the networks are prohibited from kicking back network fees to issuers in lieu of interchange, enforcement may be difficult, given the networks' other financial dealings with issuers, such as the "rebates" paid to large issuers. [12] Alternatively, even if networks do not effectively circumvent interchange price regulation by remitting network fees indirectly to issuers, they might, absent of meaningful competitive constraints, take advantage of interchange price regulation to shift merchant fee revenue from issuers to themselves.

Indeed, absent meaningful competition for the total pricing of an electronic debit transaction, networks would have no incentive to set interchange fees any lower than the "reasonable and proportional" price ceiling. Instead, all networks would set interchange fees at the maximum amount permitted under the Fed's regulations in order to maximize their attractiveness to issuers. [13]

These results would be directly at odds with the intent of the Amendment. As Senator Durbin noted in his floor statement about the Amendment, the multi-homing provision

> is intended to enable each and every electronic debit transaction—no matter whether that transaction is authorized by a signature, PIN or otherwise—to be run over at least two unaffiliated networks, and the Board's regulations should ensure that networks and issuers do not try to evade the intent of this amendment by having cards that may run over only two unaffiliated networks where one of those networks is limited and cannot be used for many types of transactions. [14]

What type of network is "limited and cannot be used for many types of transactions"? Only a PIN debit network because there are many types of merchants that do not have PIN pads—e.g., many restaurants, utilities, landlords, mass transit and Internet merchants. [15] Thus, cards that can be routed over only a single signature and single PIN debit network (or even a single signature and multiple PIN debit networks) would frustrate the intent of the Durbin Amendment's multi-homing provision. [16]

Another conceivable interpretation of the multi-homing provision (albeit with little textual

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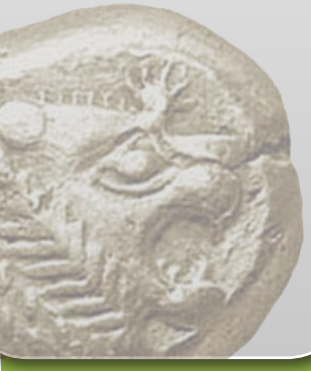

support) is that it only applies to PIN transactions. That result too would fail to result in improved competition. Card issuers would simply have an incentive to encourage consumers to use signature (exacerbating a trend that is already present today). This could be done by tying rewards to use of a signature (widely done already), by charging consumer fees for use of a PIN (currently done by some banks), by making claims that signature is more secure (as one major bank recently did, contrary to all evidence and the common sense that two-factor authorization is necessarily safer than single-factor authorization), by imposing longer debit card "holds" on PIN transactions or simply by decreasing convenience, such as through requiring excessively long PIN numbers.

These overly narrow readings of the multi-homing provision would both frustrate its purpose and defeat its stated requirement that merchants have the ability to choose the network on which any given electronic debit transaction is to be routed. Multi-homing can fulfill its potential only if it results in competition for each transaction on a field that card issuers cannot effectively control. A careful reading of the Durbin Amendment's language shows that the multi-homing provision, in fact, requires something more than the narrow readings suggest. The Durbin Amendment should be read to permit signature debit transactions to be routed over PIN debit networks and vice-versa in order to improve price competition for debit routing.

The Durbin Amendment requires multi-homing for every electronic debit card transaction, not every electronic debit card. While multi-homing has traditionally been conceived as being card-based, meaning that a card would be capable of performing transactions on more than one network (as is already the case with some debit cards), the language of the Durbin Amendment is quite particular in requiring multi-homing on the transaction, rather than the card level. Indeed, given the imminent move away from physical plastic cards, the transactional rather than card-based focus makes sense. [17] As the legislative history notes, the multi-homing provision "is intended to enable each and every electronic debit transaction—no matter whether that transaction is authorized by a signature, PIN or otherwise—to be run over at least two unaffiliated networks…." [18] The intent is to ensure that there are at least two unaffiliated networks competing with each other for processing every electronic debit transaction.

In theory, the goal of routing competition on each transaction could be satisfied in one of three ways. First, it could be satisfied by having at least four unaffiliated networks—two signature debit networks and two PIN debit networks on every card. This would mean that all cards are so-called "dual function" cards, [19] which would ensure that there would be at least two networks competing for every transaction, be it authorized by signature or PIN. While having at least two networks competing for every transaction is a vast improvement over no competition, this interpretation of the Durbin Amendment still has drawbacks in terms of fostering maximum competition and fulfilling the Amendment's ultimate policy goal of fostering a competitive debit routing market.

Interpreting the Amendment to require two signature and two PIN network on each card (all unaffiliated) would essentially result in two separate markets—a signature debit and PIN debit market. The signature debit market only has three participants currently—Discover, MasterCard and Visa. At best, then there would be three-party competition in the signature debit market. While a triopoly is better than a monopoly, it is hardly ideal competition.

Moreover, requiring at least two signature networks on a card does not guarantee that every transaction can be routed by more than one network. The Durbin Amendment does

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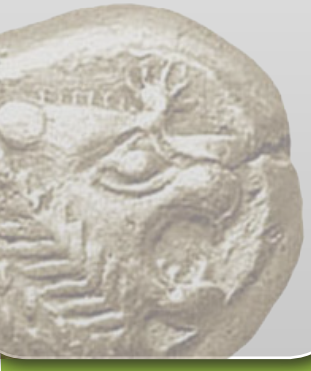

not require merchants to accept any particular debit card network, and acceptance varies by network. This could create an incentive for a strong signature debit network with high acceptance levels to offer a greater network rebate to issuers that agree to issue cards that pair it with a low acceptance rate network as the only other signature debit network on the card. If the differential in acceptance rates were significant, then even requiring two signature debit networks on a card would not result in competition for routing many signature transactions.

A second reading of the multi-homing provision consistent with promoting transactional routing competition is that multi-homing could be satisfied by permitting PIN debit networks to process signature debit transactions or vice-versa, an interchangeability I refer to as "cross-routing." This would mean that every card would need at least two unaffiliated networks. This outcome too is less than ideal, as it also replaces a monopoly with a duopoly. In this scenario too, a dominant network could insist that issuer only include smaller network with less acceptance on the card. For example, Visa could offer rebates to issuers of its signature debit cards that include only a small PIN debit network, like Iowa-based Shazam, as the other network on the card. In such a situation, Visa would likely get the lion's share of the routing.

The third and best reading of the Durbin Amendment's multi-homing provision combines the other two readings and would both require at least two signature and two PIN debit networks, all unaffiliated, on each card and permit cross-routing. This would mean that there would be at least four networks competing for all debit transactions, which should result in better price competition than any of the alternatives. The interchange and network fees that would apply in a cross-routing situation would be those of the network that actually routed the transaction. [20]

Currently, debit cross-routing is not permitted by networks, but there is no reason that need be the case. If interchange fees are capped at "reasonable and proportional" to incremental cost ceiling, then as among networks approved by an issuer, the precise routing of a particular transaction should not matter. [21]

"Currently, debit cross-routing is not permitted by networks, but there is no reason that need be the case."

The particular routing as among approved issuers should not matter because of the commodity service provided by payment card networks. The role of a payment card network in a payment card transaction is to link the funding source of the transaction—a deposit account, a prepaid account or a line of credit—to the merchant's bank. This intermediation involves authorizing

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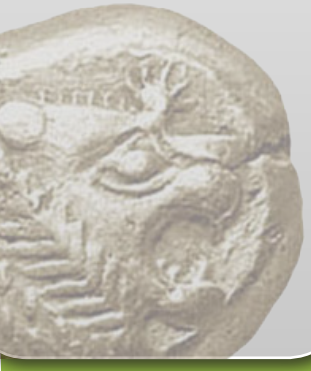

the withdrawal of funds from the deposit account or line of credit and settling the funds into an account controlled by the merchant's bank. The networks provide the pipelines that transmit transaction authorization data to the issuer and then transmit the funds from the issuer to the acquirer.

While the pipeline technology used for payment card authorization, clearance and settlement (ACS) is impressive and proprietary, the service provided by the various networks is virtually identical from the perspective of any network participant—issuers, acquirers, consumers and merchants. ACS is essentially commodity work. The most significant variation is in terms of the credit risk issuers bear on chargebacks, as payment of chargebacks is ultimately guaranteed by the network.

The Durbin Amendment recognizes that the identity of the network might matter from the issuer's perspective, even if there is no difference in interchange fees. Section (b)(1)(A) of the Durbin Amendment clearly contemplates issuers continuing to select the networks on a card within limits, rather than mandating open access, as exists in check clearing where there is unrestricted multi-homing. [22] But among those networks selected by an issuer, it should not matter to an issuer which one routes a particular transaction.

To understand why, it is important to recognize that electronic debit transaction authorization requires only the transmittal of the proper sequence of digits to the source of the transaction's funding and the transmittal of further information regarding where the funds are to be sent. Although the authorization sequence happens to be encoded on debit cards and is embossed on its front (excluding additional PIN digits in PIN debit's authorization sequence), the physical card is completely dispensable for an electronic debit transaction. All that is necessary for an electronic debit transaction is a means for the merchant to capture and transmit the proper sequence of authorization digits. [23] In theory, any network can capture and transmit that data.

A PIN debit network is easily capable of capturing and transmitting all the necessary data for signature debit authorization. Signature debit, which is now sometimes done on a signatureless basis, does not require a signature for authorization. Instead, the signature is an ex post validation device in case the transaction is challenged by the cardholder as unauthorized. The signature is transmitted to the card issuer well after funds have been released, and it is not examined unless the transaction is challenged by the cardholder.

Signatures' value in terms of real-time fraud prevention is negligible, as shown by the advent of signatureless debit; if the signature had real value, there would not be a market for signatureless. Thus, a PIN debit network is easily capable of capturing and transmitting all the information required to authorize a signature debit transaction; capturing and transmitting the signature is not necessary for authorization; it is only necessary for dealing with chargebacks. If the PIN debit network does not capture and transmit the signature, the merchant would be on the hook for any chargeback, but that decision should be left to the merchant. [24]

A merchant that anticipates low chargeback rates might reasonably accept greater chargeback risk for lower merchant discount rates due to lower network and interchange fees. As the Durbin Amendment lets the merchant choose the routing among the menu of networks on the card, it should be the merchant's decision whether to use a PIN debit network to execute a signature debit transaction. [25]

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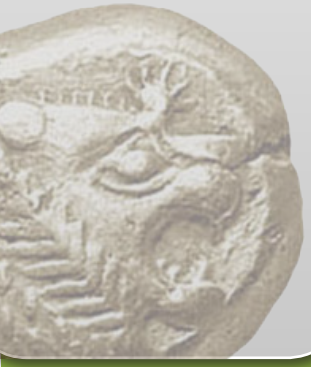

Similarly, a signature debit network should be permitted to perform PIN debit transactions. If an issuer issues any signature debit cards, it has expressed a willingness to forgo the security of two-factor authentication with a PIN. Thus, a signature debit network should be permitted to perform a PIN-less PIN debit transaction. The one caveat with this is that a consumer might conceivably have a preference with authorization method due to security concerns; even with issuers that have zero-liability policies that go beyond the requirements of the Electronic Funds Transfer Act and Reg E, payment card fraud imposes serious non-pecuniary costs on consumers. Thus, permitting PIN-less routing of PIN transactions over signature debit networks should probably require a consumer opt-in. It might be possible, however, for a signature debit network to capture and transmit PINs. For transactions in which this is done in real time, there would be no reason to require consumers to opt-in.

Thus, PIN debit networks should be able to compete for signature-authorized transactions, and signature debit networks should be able to compete for PIN-authorized transactions, with the merchant choosing the routing. Permitting debit cross-routing will increase the number of networks competing to route each transaction and thus improve competition for best price execution, which should be the ultimate regulatory goal for a commodity service like payment card clearance. Greater price competition for transaction routing will force networks to innovate to either find greater operational efficiencies or to meaningfully differentiate the services they offer through the provision of new value. [26] Either would be a net positive social welfare outcome.

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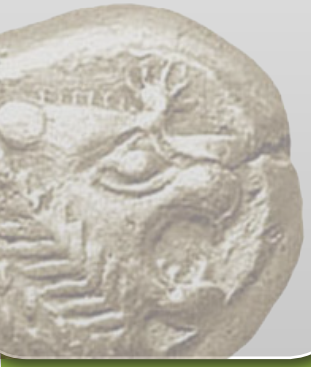

Endnotes

[1] Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, P.L. 111-203, § 1075(a)(2), codified at 15 U.S.C. § 1693r(a) (Section 920(a) of the Electronic Funds Transfer Act (EFTA) [hereinafter Durbin Amendment].

[2] 156 CONG. REC. S5925 (daily ed., July 15, 2010) (statement of Sen. Durbin) ("Paragraph (a)(4) makes clear that the cost to be considered by the Board in conducting its reasonable and proportional analysis is the incremental cost incurred by the issuer for its role in the authorization, clearance and settlement of a particular electronic debit transactions, as opposed to other costs incurred by an issuer that are not specific to the authorization, clearance, and settlement of a particular electronic debit transaction.")

[3]156 CONG. REC. S5925 (daily ed., July 15, 2010) (statement of Sen. Durbin). It is unclear how frequently issuers would have to reapply for the variance.

[4] Durbin Amendment, codified at 15 U.S.C. § 1693r(b) (Section 920(b) of the EFTA).

[5] Presumably "reasonable and proportional" to incremental cost means that all electronic debit transactions would be (1) flat fees, as the cost of an electronic debit transaction does not depend on its size and (2) priced lower than the lowest existing debit card interchange fee, which is 18 cents for some networks for quick serve restaurants and grocery stores.

[6] Durbin Amendment, codified at 15 U.S.C. § 1693r(a)(8) (Section 920(a)(8) of the EFTA). It is unclear how broadly this provision should be read. Arguably any economic dealings between networks and issuers, including credit card interchange fees, raise concerns about circumvention of debit interchange fee regulation.

[7] Id., codified at 15 U.S.C. § 1693r(b)(1) (Section 920(b)(1) of the EFTA).

[8] See Jean-Charles Rochet & Jean Tirole, Platform Competition in Two-Sided Markets, 1 J. EUR. ECON. ASS'N 990, 995 (2003) (adopting the Internet protocol term "multi-homing" and applying it payment card network context in which "a fraction of end users on one or the two sides connect to several platforms.").

[9] Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, P.L. 111-203, § 1075(a)(2), codified at 15 U.S.C. § 1693r(b)(1)(A) (Section 920(b)(1)(A) of the Electronic Funds Transfer Act) (emphasis added).

[10] Durbin Amendment, codified at 15 U.S.C. § 1693r(b)(1)(B) (Section 920(b)(1)(B) of the EFTA).

[11] See 156 CONG. REC. S5925 (daily ed., July 15, 2010) (statement of Sen. Durbin).

[12] The easiest way to avoid concerns about kickbacks would be to require issuers to pay the network fees, as they do in check clearing.

[13] It is important to emphasize that although the interchange fee is set by the network, it is paid to the issuer by the acquirer (and often passed on explicitly to the merchant).

[14] 156 CONG. REC. S5926 (daily ed., July 15, 2010) (statement of Sen. Durbin).

[15] While the use of PIN debit is theoretically possible in virtually every setting, Senator Durbin's floor statement is clearly directed toward the actual state of the world, where PIN debit is not used by many types of merchants.

[16] To be sure, these merchants could add PIN pads, but consumers have shown themselves to be adverse to using PINs in some transactional settings because of a concern that use of the PIN would compromise the safety of their deposit account.

[17] See Durbin Amendment, codified at 15 U.S.C. § 1693r(c)(5) (Section 920(c)(5) of the EFTA) (defining "electronic debit transaction" as a transaction made using on a "debit card," which is in turn defined as "any card, payment code or device, issued or approved for use through a payment card network to debit an asset account," excluding checks).

[18] 156 CONG. REC. S5926 (daily ed., July 15, 2010) (statement of Sen. Durbin) (emphasis added).

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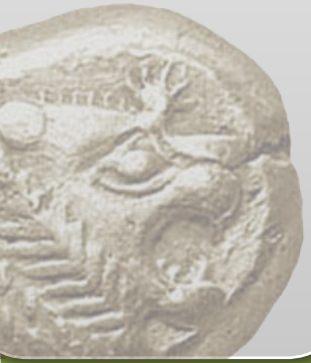

Endnotes

[19] The exception would be if an issuer refused to permit either signature or PIN transactions out of security or other business concerns. So limiting the functionality of a card would, of course, come at the expense of transaction volume. This choice should be permitted as long as there is not an honor-all-cards rule in place requiring merchants that accept a network's PIN debit cards to also accept its signature debit cards or those of its affiliated networks.

[20] In a situation in which there were two signature and two PIN debit networks on a card, the only possible network and interchange fees are those of the network that actually routes the transaction. For example, if a signature debit transaction were routed over a PIN debit network, it would be impossible to know which signature debit network would have otherwise received the routing.

[21] Issuer approval would account for issuers' satisfaction regarding credit risk, which is very small on debit in any case.

[22] Checks multi-home. A consumer can buy his or her own checks as long as they conform to the basic MICR encoding requirements, and those checks can be processed through any routing system. Check clearinghouses do not require specific check manufactures. A check can be cleared via the Federal Reserve system, via multilateral clearing houses, through bilateral correspondent relationships or direct presentment. How a depositary bank (analogous to a merchant in this context) chooses to route a check for presentment is solely its own decision, based, presumably, on lowest net cost. Neither the depositor nor the payor bank particularly cares about the routing, as presentment warranties reduce credit risk.

Open access has also proved successful in other network economy contexts. For example, with landline telephones, the routing of the call does not depend on the manufacture of the telephone. Any telephone can be plugged into any landline operator's wall jack and serve as an access device. Similarly, in the wireless space, networks frequently restrict access to their networks to their approved devices, but an iPhone can be unlocked to run over networks other than AT&T's without difficulty, and an iPhone can also be used for Internet telephony using WiFi, rather than AT&T's wireless system.

[23] The dispensability of a physical card is ultimately what makes decoupled debit possible. Decoupled debit involves the use of debit cards issued by financial institutions unrelated to those that provide the funding for the transaction (through a deposit account). The card is merely an access device that holds the authorization sequence, but it need not be issued by the funding institution or even involve a card.

[24] Technically, it is the acquirer that is liable for any chargebacks, but acquiring contracts pass that liability through to the merchant.

[25] Permitting cross-routing does not account for consumer choice. The Durbin Amendment itself does not guarantee consumers the choice of how a transaction is routed, but absent interference with consumer choice through either positive or negative incentives from issuers or networks, consumers are unlikely to prefer signature debit over PIN debit.

[26] Networks could try to compete through offering additional value, such as requiring settlement twice rather than once a day.