

EMV MIGRATION FORUM

A Smart Card Alliance Affiliated Chapter Organization

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Report on EMV Stakeholder Survey

**EMV Migration Forum:
Communications & Education Committee
April 2013**

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About the EMV Migration Forum

The EMV Migration Forum (EMF) is a cross-industry body focused on supporting an alignment of the EMV implementation steps required for global and regional payment networks, issuers, processors, merchants, and consumers to ensure a successful introduction of more secure EMV contact and contactless technology in the United States. The focus of the Forum is to address topics that require some level of industry cooperation and/or coordination to migrate successfully to EMV technology in the United States. For more information on the EMV Migration Forum, please visit <http://www.smartcardalliance.org/pages/activities-emv-migration-forum>.

Purpose of this Document

The goal of this document is to share the results of the EMV Stakeholder Survey conducted during December 2012 and January 2013 with EMF members and the payments industry. All U.S. market stakeholder groups were surveyed and are represented in the results.

This survey report will be located in the members-only section of the EMV Connection website at <http://www.emv-connection.com>. A publicly available summary of the report will be available on the website as well. Comments or questions regarding this document should be submitted to surveyreport-feedback@us-emvforum.org.

Disclaimer

Several survey questions allowed for open-ended responses. All opinions expressed in the open-ended responses that are included in this report are the opinions of the individual respondents, except where the respondent specifically states them to be the views of any organization or employer, and in any event, are not the opinions of the EMV Migration Forum. Open-ended responses are shown in the report using quotation marks and italics.

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Acknowledgements

The Survey Project Team would like to thank everyone who participated in the survey. Participants' time and effort to complete the survey was very much appreciated. It is only with their input that we are able to get this insight into the state of play in the U.S. payment industry with respect to EMV migration.

The Survey Project Team would also like to acknowledge those fellow industry associations who facilitated survey participation from their members, particularly the ATM Industry Association, the Merchant Advisory Group, and the Secure Remote Payment Council.

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EXECUTIVE SUMMARY

The Stakeholder Survey was identified as a means to help the EMV Migration Forum more quickly understand U.S. payments industry stakeholders' needs with regard to EMV migration in terms of level of awareness, education and training, and their perspectives on several issues ranging from technology to costs and benefits.

Survey Participation

The Stakeholder Survey was conducted online December 5, 2012 through January 9, 2013. There were 230 respondents in total of whom 176 fully completed the survey (i.e., answered all questions). The answers from the other 54 who partially completed the survey are included in the analysis of the questions they answered.

The survey participants represent 14 different stakeholder groups within the payments industry, including issuers of credit, debit and prepaid cards. Issuers, Payment Processors and Merchants had the most respondents, over 30 respondents each, and together represent over 50% of respondents to most questions. POS/ATM Manufacturers, Integrators and Regional Networks had the least number of respondents at under five each.

Low numbers in some stakeholder groups may be attributable to the fact that those groups represent business lines that are often owned by organizations that identify with a different primary business (e.g., ATMs are mainly owned by Issuers; and some Regional Networks are owned by a Payment Processor or Payment Network).

69% of the respondents were from organizations that were Forum members at the time of the survey. 15% of respondents also identified themselves as members of over a dozen other

Survey Participation (continued)

payment industry groups focused on EMV migration including, for example, the Merchant Advisory Group, the Secure Remote Payment Council and the ATM Industry Association.

Level of Readiness

The level of awareness about U.S. EMV migration was generally high with almost 100% of respondents who rated themselves as very or somewhat familiar with the planned liability shift and who rated 94% of their organizations as the same. At the same time, only 50% of respondents' organizations were rated as having a high proficiency with EMV and another 11% with low or no proficiency at all.

62% have company roadmaps already and another 19% said they support EMV already. Primarily these are the Payment Processors, Merchant Acquirers, Issuers, Payment Networks, Card Manufacturers, Hardware/Software Vendors, Integrators and Test Tool Providers, all who have been working on EMV technology longer than other groups.

However, having company roadmaps does not equate to meeting payment network timelines. 50% of respondents said they will meet the payment network timelines, comprised mainly of the same groups as have company roadmaps and/or are already supporting EMV. Another 30% said they will not or are not sure they will be EMV-enabled by the planned liability shift date.

Over three-quarters of respondents have or plan to have an EMV business case.

Technical Choices

The survey did not separate questions for ATM and POS, and therefore it is not known if respondents' selections reflect their thinking of the ATM or the POS or both. Also, the answer "Contactless and foundation for Mobile" in the menu of answers for Terminal Interface was intended to mean that "no Contact" was included, although we cannot state for sure that respondents read that answer with the same meaning.

By stakeholder group, responses were virtually the same for Terminal Interface and Card Interface, except for ATM Owners who selected *Contact Only* at a higher rate for Card Interface than for Terminal Interface.

- Terminal Interface: *Dual Interface* was selected most frequently, by 77% of all respondents (respondents = 191). *Contactless and foundation for Mobile* was selected as the second most preferred interface, by 23% of all respondents. *Contact Only* was selected by <20% of respondents, including one-third of whom selected it in combination with *Dual Interface* and/or *Contactless and Foundation for Mobile*. Only one-third of ATM Owners selected *Contact Only* although we are not aware of any U.S. ATMs that support contactless cards today.
- Card Interface: *Dual Interface* was selected most frequently, by 75% of all respondents (respondents = 190). *Contact Only* was selected by <20% of respondents, including one-fourth of whom selected it in combination with *Dual Interface* or *Contactless Only*.
- NFC-enabled mobile payments: 64% of respondents said they would participate in NFC/mobile payments, three times the number who selected *Contactless and foundation for Mobile* for Terminal Interface. Another 26% said they weren't sure they'd participate, half of whom were Issuers and Merchants. On the other hand, 53% of respondents said they thought U.S. EMV migration should be integrated with migration to NFC-enabled mobile payments.

Technical Choices (continued)

- Cardholder Verification Methods: Overall, *Chip and Online PIN* was selected most frequently by respondents for credit (61%), debit (73%) and prepaid cards (53%). *Chip and Offline PIN* was selected second most frequently. *Chip & Signature* was a distant third preference, favored more for Credit than for Debit & Prepaid. (No CVM had numbers similar to *Chip & Signature* for Debit and Prepaid). However, there is disagreement in the industry on CVM for Credit, with Issuers showing greater preference for *Chip & Signature* for Credit and Merchants and others showing greater preference for *Chip and Online PIN*.

Benefits and Concerns

There was not an overwhelming consensus on the reasons to migrate to EMV in the U.S. and concerns were wide-ranging. When the written comments are taken into account with the raw responses, there is clearly debate among industry stakeholders about the efficacy of the EMV standard in the U.S. market.

The top two reasons to migrate were identified, in rank order, as (i) Provide global interoperability/increase acceptance and (ii) Reduce counterfeit fraud. Several written comments written in response to this question suggested more in the way of concerns than reasons to migrate: availability of other more cost efficient means of preventing fraud than EMV; a concern with contactless standards; and EMV benefits were only to a limited set of stakeholders in the U.S..

The top three concerns among stakeholders were identified, in rank order, as (i) Cost to organization, (ii) Lack of industry coordination, and (iii) Durbin compliance. Several written comments suggested there is a concern with being able to show a viable business case for EMV, a strong desire not to have to invest twice for EMV and mobile contactless, and grave concern for the consumer experience at the POS and ATM.

Education and Training

There's an overwhelming need expressed for increased communication and education around EMV across most stakeholder groups. Most respondents indicated that employee training is important, but almost 40% of them have no internal education program in place. At the same time, their external customers and clients are mainly perceived as having little or no familiarity with EMV and its impact. It's unknown if various respondents are the external clients of other respondents, but the responses add up to a clear need.

Stakeholders desire education on all aspects of EMV, from Basic to Business, and several preferred means of delivery of information and education were cited. It was clear from the results that many stakeholders are relying on the Forum for EMV information and education.

The importance of consumer (cardholder) education is recognized. Many are in favor of a mass media campaign.

Symbol or Brand Mark

A significant majority, 68%, of respondents believe a symbol or brand mark at the POS/ATM would be helpful. Reaction to this question drew wide ranging comments from supporting the idea, including providing details on how it should be provided and factors that will enable successful use, to eschewing the idea.

Phase 1

Over 80% of respondents said they were interested in a first phase of EMV deployment in the

Phase 1 (continued)

U.S., and further expressed a high level of enthusiasm for active participation in this “Phase 1”. It can be noted the planning work for Phase 1 is underway in the Forum’s Phase 1 Project Team that is part of the U.S. Coordination Working Committee.

Recommendations

The following are general recommendations that have been gleaned from the survey responses and comments:

1. Better align stakeholders across the value chain through improved access to relevant information.

EMF should develop and post on the EMV-connection website a set of FAQ’s and a broader piece on the case for change. The latter can be done either through developing a white paper and/or linking to others’ already existing. These efforts should address:

- What the differences are among mandates, planned liability shift and waivers in the context of the Payment Networks’ Roadmaps
- Perception by those stakeholder groups who see no clear business case for EMV
- Perception of EMV as outdated technology
- Perception there are more efficient means to combat fraud
- Rationale for investment in Contact technology
- Concerns for consumer experience

Recommendations (continued)

1. Better align stakeholders across the value chain through improved access to relevant information. (continued)
 - Concern with having to invest twice in terminal HW/SW to support NFC-enabled mobile payments

2. Develop a strategy and plan for providing education programs and educational resources.
 - a. Identify which products, services and delivery channels will have the most impact.
 - b. This plan should include Forum-sponsored education events and resources (e.g., webinar, EMV-connection web site) and promotion of other events and resources provided by members and other organizations.
 - c. Assess the availability and quality of existing educational material, push out what it can through the EMV-Connection website and initiate activities to fill the information gaps.
 - d. A lot of material and expertise is available through vendors, many of whom are EMF members. The Forum should address what role vendor material and expertise can play to support its mission while recognizing that vendors' material and expertise are core to their business (the "vendor's conundrum": how much to give away to help the industry move forward versus charging for resources and services).
 - e. Many legitimate concerns raised by stakeholders can be alleviated with data, statistics and information. The Forum needs to collect and provide organized access to statistics and information, including access to such data from other places outside the U.S. that have implemented EMV and find ways to draw on them to address U.S. stakeholders'

Recommendations (continued)

2. Develop a strategy and plan for providing education programs and educational resources (continued)
 - e. concerns. For example, a concern with speed of transaction at the POS was mentioned by survey respondents. This could be addressed through making available technical data, consumer research, and merchant reaction from areas with existing EMV deployment.

The Communications and Education Working Committee has agreed to address this recommendation through a new project.

3. Link Forum members to resources that can help them with development of their own organizations' EMV business case and EMV roadmap.

A significant portion of stakeholders have not yet prepared business cases for EMV or their own roadmaps, critical tools to support organizational decision-making. Several respondents indicated their organizations had prepared business cases and/or roadmaps. The Forum could support stakeholders' needs in this area by:

- Posting links on EMV-connection website to templates provided by the Payment Networks and to the FAQ's (from Recommendation 1 above).
- Collecting and making available online best practices and samples from business cases and roadmaps that EMF members' are willing to share
- Developing and posting on EMV-connection a list of factors that need to be considered in quantifying the Fraud element by stakeholder group (illustrating how "\$1 in fraud costs

Recommendations (continued)

3. Link Forum members to resources that can help them with development of their own organizations' EMV business case and EMV roadmap. (continued)

results in \$2.70 in consequential costs.”)

- Facilitating the collection and availability of fraud data, especially counterfeit-related data
- Providing training for stakeholders on how to prepare a company roadmap and business case

4. Determine need for EMV acceptance symbol or brand mark

The Forum should take the lead to seek consensus on need for a symbol or brand mark (or dispense with idea) to support communications and messaging to both cardholders and front line merchant staff, and consider whether a symbol might help facilitate U.S. coordination, and enable better cardholder communications and education.

The Communications and Education Working Committee has agreed to address this through a new project that will cover Messaging Guidelines for Migration Phases.

5. Identify and share best practices to avoid customer confusion at the POS throughout the migration period.

“Communications and messaging to both the front line Merchant staff and consumers is critical to ensure success.”

Recommendations (continued)

5. Identify and share best practices to avoid customer confusion at the POS throughout the migration period. (continued)

The Communications and Education Working Committee has agreed to address this through the already-existing Communication Channels & Best Practices Project.

6. Level-set EMF resources and efforts and work towards an overall Forum strategy

The Forum has a critical role to play to help create informed stakeholders and help the industry obtain an evening of buy-in across the industry. Given the reliance of the payments industry and stakeholders on EMF to provide information and education, the Forum needs to:

- Identify follow up actions required on Survey Report Recommendations. Understanding that the survey was conducted four months ago from the time of this report, level set what was found, what provides directional information to act on, and what the Forum should do with it.
- Assess its current resources and efforts, and determine if they are in line with industry expectations for providing information and education and planned new initiatives
- Consider if facilitating and/or leading a mass media campaign geared towards cardholders at the appropriate time during the migration should and can be part of the overall strategy. Given time and expense involved in this type of campaign, this recommendation should be addressed in the near term.

i. INTRODUCTION

Migration to EMV in the U.S. will be unprecedented in size and scope. The U.S. payments sector involves in round numbers approximately over 1 billion credit and debit cards¹, and five million POS² and over 400,000 ATM³ terminals. While there are lessons that can be drawn from EMV migrations implemented in other regions of the world, planning for a coordinated U.S. migration must account for the unique characteristics of the U.S. market including its 18 debit networks, the Durbin Amendment routing requirement and the sheer magnitude of the effort.

In an industry as large as that in the U.S. , there are bound to be multiple perspectives on EMV technology, varying levels of understanding about EMV technology, and various pockets of needs for information, education and training. The EMV Migration Forum (“the Forum”) needed to quickly and efficiently get a scan of the U.S. payments landscape with respect to stakeholder perceptions and understanding of EMV in order to identify how the Forum can further its mission to align stakeholders and coordinate the U.S. migration.

The Stakeholder Survey was identified as a means to help the EMF more quickly understand payments industry stakeholders’ needs in terms of level of awareness, education and training, and their perspectives on several issues ranging from technology to costs and benefits. The Survey results will help the Forum identify coordination challenges & opportunities. The results also are intended to fill information voids for EMF Working Committees and similarly aid individual stakeholder organizations in their migration planning as well.

¹ <http://www.creditcards.com/credit-card-news/credit-card-industry-facts-personal-debt-statistics-1276.php#Debt>

² <http://data.worldbank.org/indicator/FB.POS.TOTL.P5worldbank.com> and <http://quickfacts.census.gov/qfd/states/00000.html>

³ <http://data.worldbank.org/indicator/FB.ATM.TOTL.P5> and <http://quickfacts.census.gov/qfd/states/00000.html>

ii. DEFINITIONS OF TERMS USED IN THE REPORT

The Survey contained 43 questions in total, including extensions of questions intended to provide additional information in response (e.g., if person responding said his/her company was an Issuer, another question provided opportunity to identify whether they issued credit, debit and/or prepaid cards.). The questions were primarily menu-driven, and depending on the question, the person responding could select only one answer or could select more than one answer as instructed in the survey. There were also open-ended responses allowed for several questions.

The results are presented in various ways depending on the nature of the information, the number of respondents to the question, whether more than one answer could be selected, and whether the combination of answers selected mattered to the results. For the most part, the data is presented as is. The results are presented sometimes in raw numbers, sometimes in percentages and sometimes both. In order to be clear about how to read the results presented in this report, please be guided by the following definitions of terms:

- *Respondent* = one person, person who completed the question
- *Stakeholder* = a respondent's organization as identified by its primary business; 14 different stakeholder types or groups were identified this way
- *Selection* = single selected answer; if more than one answer could be selected and were, then a respondent's multiple answers selected would be "selections" or a "combination"
- *Combination* = the multiple answers that one respondent chooses for a question

Section I: REPRESENTATIVENESS

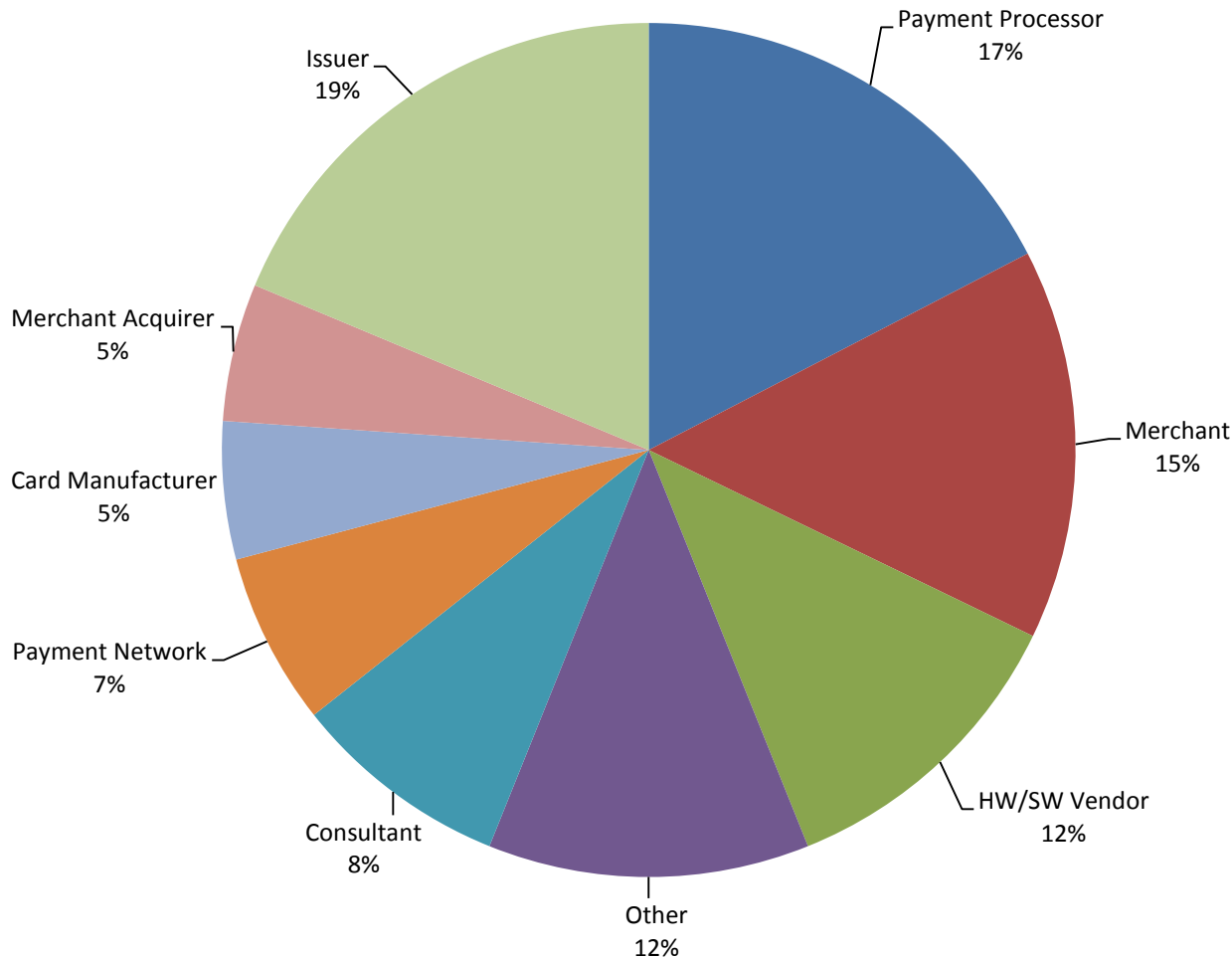
PARTICIPATION INVITED THROUGH INDUSTRY GROUPS

- EMF Members
- SCA Councils: Payments, Mobile & NFC, and Transportation
- Over 12 other industry stakeholder associations
- Non-EMF members
- Allowed for more than one person per organization
- Allowed for more than one business line per organization

INDUSTRY-WIDE REPRESENTATIVE RESULTS

- 230 Respondents with full or partial responses
- 176 (76.5%) fully completed survey
- Based on expanded responses from those who selected “Other”, we identified two new stakeholder groups:
 - HW/SW Vendor
 - Testing Tools/Services
- Issuers cover Credit, Debit and Prepaid cards

Primary business of the organizations that responded



<u>Stakeholders</u>	<u>#</u>
Issuer	43
Payment Processor	40
Merchant	34
HW/SW Vendor	27
Consultant	19
Payment Network	15
Merchant Acquirer	12
Card Manufacturer	12
<u>Other</u>	
Testing Tool Provider	8
ISO	5
ATM Owner	5
ATM/POS Manufacturer	4
Integrator	4
Regional Network	2
Total	230

EMF members gave a strong response, 69% of all respondents

Other Industry Groups focused on EMV migration in which respondents are members

<ul style="list-style-type: none"> • AAAE: American Association of Airport Executives 	<ul style="list-style-type: none"> • MAG: Merchant Advisory Group
<ul style="list-style-type: none"> • ASIS: [an international organization of security professionals] 	<ul style="list-style-type: none"> • NACS: The Association for Convenience and Fuel Retailing
<ul style="list-style-type: none"> • ATMIA: ATM Industry Association 	<ul style="list-style-type: none"> • NRA: National Restaurant Association
<ul style="list-style-type: none"> • EMVCo 	<ul style="list-style-type: none"> • NRF: National Retail Federation
<ul style="list-style-type: none"> • ETA: Electronic Transactions Association 	<ul style="list-style-type: none"> • SCA: Smart Card Alliance
<ul style="list-style-type: none"> • GlobalPlatform 	<ul style="list-style-type: none"> • SRPc: Secure Remote Payment Council
<ul style="list-style-type: none"> • IPI: International Parking Institute 	

Section II Survey Questions

Q. 7 Does your organization understand what is meant by the Payment Networks’ planned “liability shift” that will occur as part of the U.S. migration to EMV?

Available responses:	a. Yes	
	b. No	
	c. Not sure	

Q. 8 Please rate your organization's level of proficiency with EMV:

Available responses:	a. High	d. None
	b. Medium	e. Not sure
	c. Low	

Q. 9 Does your organization currently have its own U.S. EMV migration roadmap or is one in the process of being developed?

Available responses:	a. Yes	d. Not sure
	b. No	
	c. Already support EMV	

Q. 10 Will your organization be prepared to participate in EMV transactions by the key liability shift dates that apply to your organization? Known key dates are: [dates were listed].

Available responses	a. Yes	d. Not sure
	b. No, will not be ready	e. Not sure what the key dates mean
	c. No, liability shift does not apply to our business	f. Does not apply

Section II Survey Questions

.Q 38 Does your organization have or plan to have a business case to support investment in EMV migration in the U.S.?

Available responses:	a. Yes	d. Not sure
	b. No	e. Not applicable
	c. Under evaluation	

Level of EMV Readiness

- 99% of Respondents were “very” or “somewhat familiar” with the planned liability shift
- 94% said their organizations understand the shift
- 50% with high, 38% with medium, 9% with low and 2% with no EMV proficiency
- 62% have company roadmaps already and another 19% said they support EMV already
- 50% said they will meet timelines. 30% will not or are not sure they will be EMV-enabled by planned liability shift date.
 - 16% responded “Does not apply”. Removing these from the numbers increases the above to 59% and 36%, respectively.

Over three-quarters of respondents have or plan to have an EMV business case

Do you have a business case or plan to prepare one?		
Yes	90	49%
No	15	8%
Under evaluation	52	28%
Not sure	12	7%
Not applicable	15	8%
Total respondents	184	100%

*“High cost to implement with a fairly low ROI”
*
“The ROI for counterfeit reduction in the U.S. still needs to be analyzed and stated.”*

Section III Survey Questions

Q. 11 In a chip environment, payment and ATM terminals can adopt contact and contactless technology. Which interface(s) does your organization think should be implemented for the EMV terminal interfaces in the U.S.? Select all that apply.

Available responses:	a. Dual Interface (both contact & contactless)	d. Contactless and foundation for mobile
	b. Contact only	e. No preference
	c. Contactless only	

Q. 12 In a chip environment, cards can adopt contact and contactless technology. Which interface(s) does your organization think should be implemented for the EMV card interface in the U.S.? Select all that apply.

Available responses:	a. Dual Interface (both contact & contactless)	
	b. Contact only	
	c. Contactless only	
	d. No preference	

Q. 13 – 15 Which set of EMV cardholder verification method(s) (CVM) for [CREDIT/DEBIT/PREPAID] cards does your organization think should be implemented in the U.S.? Select all that apply.

Available responses:	a. Chip & Online PIN	d. No CVM
	b. Chip & Offline PIN	e. No preference
	c. Chip & Signature	f. Not sure

Section III Survey Questions

Q. 42 Does your organization see a need to integrate U.S. EMV Migration and NFC migration plans?

Available responses:	a. Yes	
	b. No	
	c. Not sure	

Q. 42 Does your organization see a need to integrate U.S. EMV Migration and NFC migration plans?

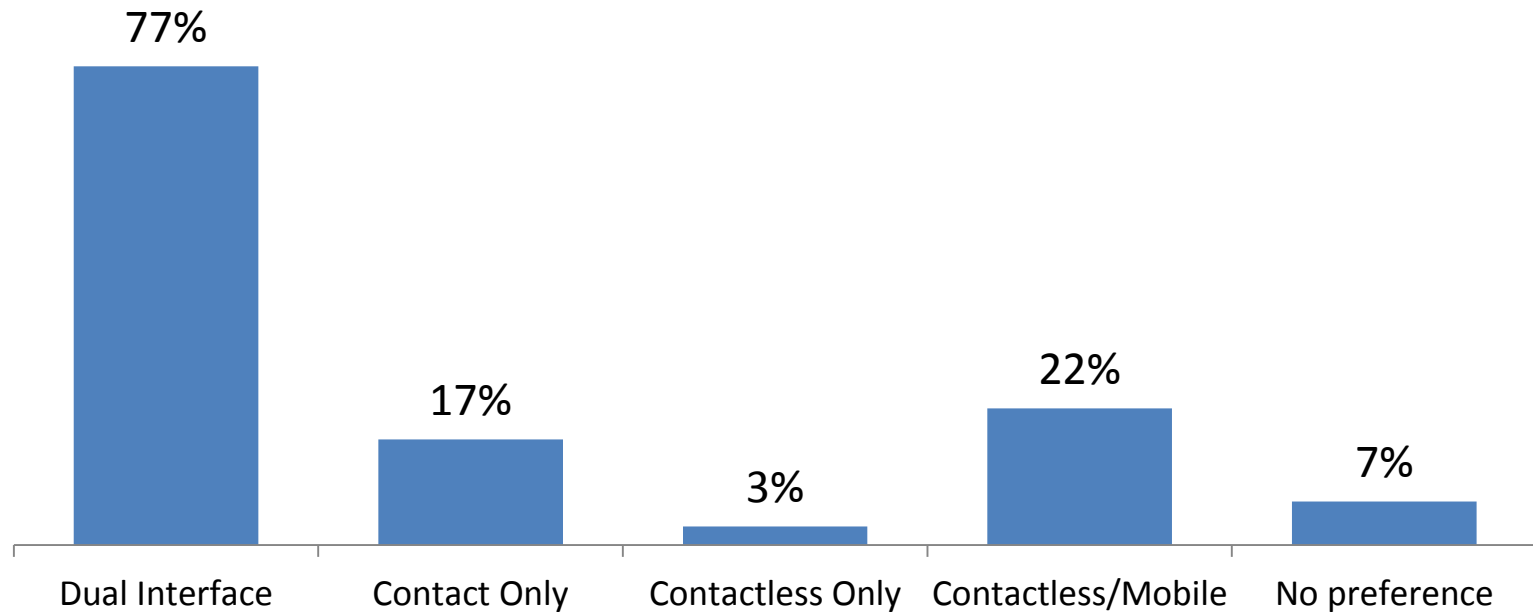
Available responses:	a. Yes	
	b. No	
	c. Not sure	

Terminal Interface

- *Dual Interface* was selected most frequently, by 77% of all respondents (respondents = 191)
 - Top choice amongst 12 of 14 stakeholder groups; not top choice for ISOs and Regional Network respondents
 - Top choice even though able to select multiple interfaces
- *Contactless and foundation for Mobile* was selected as second most preferred interface, by 23% of all respondents
- *Contact Only* was selected by <20% of respondents
 - One-third of whom selected it in combination with *Dual Interface* and/or *Contactless and Foundation for Mobile*
 - Only one-third of ATM Owners selected *Contact Only* although we are not aware of any U.S. ATMs that support contactless cards today
- Caveat: Question didn't separate ATM and POS terminals, so unclear if choices made reflect one, the other or both

Overall preference is for Dual Interface for Terminal Interface

Terminal Interface selections as % of 191 respondents



Interface Combinations selected for Terminal Interface

No preference	13
Contactless and foundation for mobile	6
Contactless only	1
Contact only	22
Contact only AND Contactless and foundation for mobile	1
Dual Interface (both contact & contactless)	110
Dual Interface (both contact & contactless) AND Contactless and foundation for mobile	27
Dual Interface (both contact & contactless) AND Contactless only AND Contactless and foundation for mobile	1
Dual Interface (both contact & contactless) AND Contact only	2
Dual Interface (both contact & contactless) AND Contact only AND Contactless and foundation for mobile	5
All Options	3
Total # of Respondents	191

Dual Interface and Combinations that include Dual Interface = 148

All Stakeholders

Selected comments on Terminal Interface

“Dual Interface Gives maximum flexibility for upcoming changes to the payment space - transit and other ticketless applications - and paves the way for mobile payments.”

*

“Providing the most flexibility gives the greatest chance a transaction can occur.”

*

“Doing both will allow for other contactless payment form factors such as mobile and wouldn't require an additional terminal upgrade at a later date.”

*

“Merchants should have the option to implement Contactless based on the business case. Issuers should be mandated to support Contact if they intend to implement EMV. Mobile NFC based payment demands Contactless merchants will have to think seriously about what they believe is the timing of mobile wallet deployment and the value of supporting.”

*

“Contact only will limit NFC adoption in the US mitigating growth of mobile payments”

*

“With mobile and contactless gaining momentum, forward thinking needs to prevail on how customers can easily transition to "chip" environment.”

*

“contact chip card readers have more read issues and will result in a higher dispatch rate per terminal which is not good for our customers.”

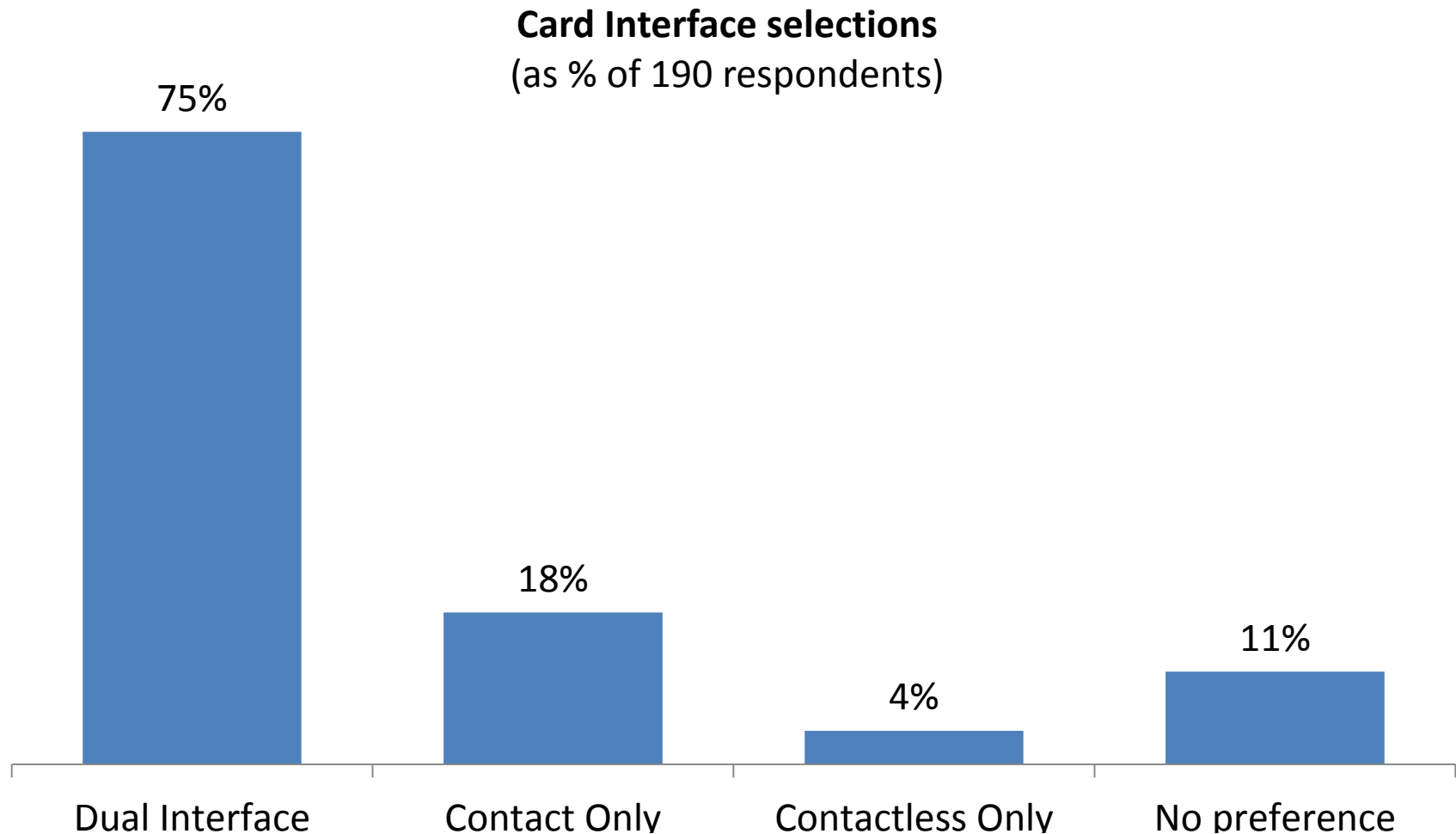
*

“Without a clear mass market winner in mobile technology (NFC/Barcode/Other) it's impossible to get the manufacturers to invest in the appropriate module for contactless - our request to manufacturers is to be mobile ready...”

Card Interface

- Dual Interface was selected most frequently, by 75% of all respondents (respondents = 190)
 - Top choice amongst 11 of 14 groups; a 60% or greater majority within 10 of the 11 groups
 - 61% of Issuers and 50% of Merchants included *Dual Interface* in their selections
- Contact Only was selected by <20% of respondents
 - One-fourth of whom selected it in combination with *Dual Interface* or *Contactless only*
 - 35% of Issuers and 23% of Merchants selected only *Contact Only*
- By stakeholder group, responses virtually the same as for Terminal Interface
 - Except for ATM Owners: 60% selected *Contact Only*, a higher rate than selected this choice for the Terminal Interface

Overall preference is for Dual Interface for Card Interface



Interface Combinations selected for Card Interface

Dual Interface (both contact & contactless)	132	} Dual Interface and Combinations that include Dual Interface = 142
Dual Interface (both contact & contactless AND Contact only)	5	
Dual Interface (both contact & contactless AND Contact only AND Contactless only)	3	
Dual Interface (both contact & contactless AND Contactless only)	2	
Contact only	26	
Contactless only	2	
No preference	<u>20</u>	
Total # of Respondents	190	

All Stakeholders

Selected comments on Card Interface

“As experience in Canada has shown, contactless has added-value and is worth implementing.”

“The current cost of dual interface cards is too expensive to promote. A card with a contact chip with a mobile companion would be more cost effective.”

*

“Issuers should provide options to cardholders and merchants”

“Use of contact would be a phase 1 approach until there is a better understanding of the opportunity to leverage contactless (i.e., transit). The bank is still assessing its mobile payments strategy.”

“Dual interface allows issuers maximum control over contactless use via scripts delivered through the contact interface while also allowing contactless use in merchant verticals where cash has proved difficult to shift due to throughout requirements”

*

“To keep up with future technology (mobile, etc.), dual interface support from an issuing standpoint would be required. That may or may not impact the actual cards but their systems would need to support both.”

“Use internationally will require both interfaces.”

Card Verification Method

- *Chip and Online PIN* was selected most frequently across all stakeholder groups for credit, debit and prepaid
- However, there are differences of opinion in the industry on CVM for Credit, with Issuers showing greater preference for *Chip & Signature* and Merchants and others showing greater preference for *Chip and Online PIN*.
 - *Chip & Signature* was selected most frequently for Credit by Issuers- by 78% of Issuer respondents, but it was selected by only 50% of Payment Networks and 15% of Merchants respondents.
- *Chip and Offline PIN* was selected second most frequently across all groups for credit, debit and prepaid

Stakeholders expressed a lot of concern for the consumer experience and the introduction of the EMV PIN

Frequent comments mentioned involved:

- PIN entry requirement for Credit
- Retention of (forgetting) PIN
- Lack of locations to change PIN
- Maintaining security through unique PINs

“chip & online PIN will require significant education of cardholders which will be an obstacle even though PIN is more secure and preferred from that perspective.”

*

“Requiring a PIN with a credit transaction would be a foreign to most people, but if they have to learn about this 'new way of doing things', having a PIN be part of that process NOW would make the most sense.”

*

[A Top Three concern with U.S. migration is] “The ability to offer a consistent and non-confusing method of self-selected PIN and subsequent PIN change capability.”

*

[A Top Concern for impact on Cardholders is] “reduced ability to support cardholder selected PINs. Lack of locations for a consumer to change their PIN or handle forgotten PIN.”

Overall preference is Chip & Online PIN stand alone and in combination with other CVMs for Cardholder Verification Method for credit, debit and prepaid

CVM	Credit		Debit		Prepaid	
	# of selections	As % of 191 Respondents	# of selections	As % of 191 Respondents	# of selections	As % of 189 Respondents
Chip & Online PIN	117	61%	140	73%	100	53%
Chip & Offline PIN	91	48%	82	43%	69	37%
Chip & Signature	78	41%	36	19%	41	22%
No CVM	41	21%	32	17%	38	20%
No preference	17	9%	16	8%	21	11%
Not sure	20	10%	22	12%	35	19%

Opinion on Credit CVM is concentrated in top five selected combinations which cover more than 50% of all respondents

Cardholder Verification Method	CREDIT	
	Total	%
Total # of Respondents	191	100%
Top Six CVM Combinations Selected		
Chip & Online PIN	35	18%
Chip & Online PIN AND Chip & Offline PIN	23	12%
Chip & Online PIN AND Chip & Offline PIN AND Chip & Signature AND No CVM	20	11%
Chip & Online PIN AND Chip & Offline PIN AND Chip & Signature	18	9%
Chip & Signature	17	9%
Not sure	<u>17</u>	<u>9%</u>
	130	68%

19 total different combinations

Chip & Online PIN and combinations with Chip & Online PIN included = 90

Opinion on Debit CVM is concentrated in top three selected combinations which cover more than 50% of all respondents

Cardholder Verification Method	DEBIT	
	Total	%
Total # of Respondents	191	100%
Top Six CVM Combinations Selected		
Chip & Online PIN	56	29%
Chip & Online PIN AND Chip & Offline PIN	35	18%
Not sure	20	10%
No preference	14	7%
Chip & Online PIN AND Chip & Offline PIN AND Chip & Signature AND No CVM	12	6%
Chip & Offline PIN	<u>12</u>	<u>6%</u>
	149	78%

17 total different combinations

Chip & Online PIN and combinations with Chip & Online PIN included = 103

Opinion on Prepaid CVM is concentrated in top four selected combinations which covers over 50% of all respondents

Cardholder Verification Method	PREPAID	
	Total	%
Total # of Respondents	189	100%
Top Five CVM Combinations Selected		
Chip & Online PIN	35	19%
Not sure	34	18%
Chip & Online PIN AND Chip & Offline PIN	22	12%
No preference	20	11%
Chip & Offline PIN	<u>13</u>	<u>7%</u>
	124	66%

18 total different combinations

Chip & Online PIN and combinations with Chip & Online PIN included = 57

Selected comments on Card Verification Methods - CREDIT

“Credit cards should support both offline PIN and signature with condition of use next CVM if fail. If merchants in fast paced environments like quick serve food etc. want to implement No CVM the card should work without the need of PIN or signature.”

*

“Most of my potential constituents (transportation and parking agencies) would prefer chip based transactions without signature or pin.”

*

“Chip & signature where PIN is not available and no CVM for low dollar transactions - like is available today. We would considering an offline PIN strategy for foreign markets if there is determined to be a real need.”

*

“Signature becoming more useless as security measure with bank cards today; signatures on mobile devices/tablets look even more ridiculous. Adds unnecessary time to transaction. Don't believe signatures are verified anyway before transaction is approved.”

*

“Requiring a PIN with a credit transaction would be a foreign to most people, but if they have to learn about this 'new way of doing things', having a PIN be part of that process NOW would make the most sense.”

*

“signature has no value - both online and offline PIN should be supported to ensure that international cards (e.g., from the UK) can be processed in a seamless way. I do not believe the incremental cost to support offline PIN will be that great for acquirers - the issuers can decide if they only want online PIN to save on card costs.”

Selected comments on Card Verification Methods - DEBIT

"No CVM for small amounts"

" ...There is a challenge for Debit networks who will have to assure that their interface is able to support transactions that do not have the PIN included within. A similar situation arose surrounding ATMs that caused ATM to default to online PIN back in Italy years ago."

"For PIN debit transactions, only chip & online PIN makes sense. Chip & offline PIN or chip & signature for PIN debit transactions does not afford adequate protections against fraudulent use of DDA funds."

"If your going to the trouble of authenticating the card to the device, you might as well authenticate the card to the cardholder (signature is worthless and time consuming for Merchants and Customers). Not sure I fully understand the implications of online vs. offline on my business."

"It should be depending on MCC, because in some e.g. unattended applications, pin entry is not applicable. In such cases just chip verification without signature is best fit and is convenient for cardholder."

"Cardholders are largely unaware of the back end security features their card undergoes during the authorization process. Small Ticket or express payment merchant locations should consider the "offline PIN" in an Online authentication environment as an effective means to further secure the transaction - especially if they have had NSR requirements in the past. No Signature Required on a Signature routed transaction lends itself to no additional protection on an EMV card from that of a mag stripe card should it be used after loss/theft/compromise."

Selected comments on Card Verification Methods - PREPAID

“Prepaid is a large category. If you are speaking about one time use prepaid cards, then I think there should not be an EMV component. If you are talking about prepaid cards like EBT cards, then there should be CVM that allows for strong fraud protection like Chip and PIN (either offline or online)”

*

“I would see prepaid cards in the transportation and parking industry as program value cards that are chip based only - no signature and no pin.”

*

“It seems that we would want to be consistent across all payment types, but I could see an argument being made to online PIN for Prepaid products.”

*

“In all segments but particularly in prepaid, different CVMs will play unique roles and will not all be enabled on a single product. Prepaid has given little thought to EMV due to the economics.”

*

“I thought about allowing signature in this case but decided against so that we have a consistent approach across debit, credit and pre-paid. Since many pre-paid are targeted at the 'unbanked' or 'underserved' we will probably need a lot of clear, concise education regarding the use of PIN and the security benefits.”

*

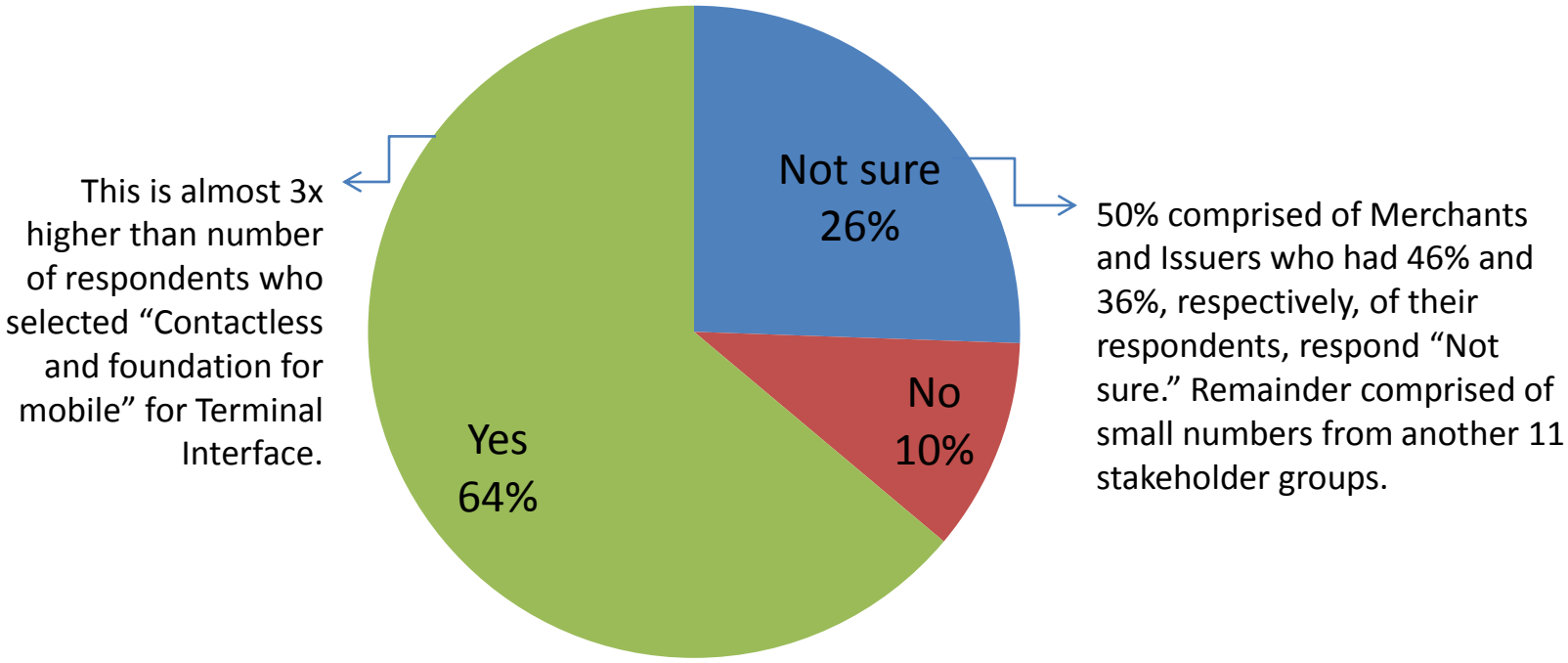
“It will be interesting to see how the Prepaid issuers with J Hook prepaid card offerings respond to EMV issuance in the US.”

*

“This represents my personal views and not necessarily the views of my organization. While I've selected multiple implementation options, I think chip and online PIN allows for the most secure transaction and therefore should be most widely adopted in the US. Chip and Sig, NO CVM and chip and offline PIN are options to consider as fall back or for use in only certain scenarios (e.g. QSR, int'l tourists).”

Almost two-thirds of 180 respondents plan to participate in NFC-enabled mobile payments

Will participate in NFC-enabled mobile payments



All Stakeholders

Selected comments on participation in NFC-enabled Mobile Payments

"NFC is currently in a very poorly defined and organized state, and it is not at all clear where it is going, what approaches/standards will be most popular, etc. We want to plan for this, but it is impossible given the way the technology and marketplace are today."

*

"NFC seems to be "coming Soon" -- for the past 6 years. Too many stakeholders, too many issues, etc... There is an old adage " Too many cooks spoil the broth"."

*

"have programs and pilots underway."

*

"support mobile wallets, NFC, and card emulation through our contactless readers"

*

"Most likely but not in the immediate future. Too many players and unknowns; lack of merchant acceptance."

*

"Already accept NFC enabled mobile payments and expect to continue despite EMV migration"

*

"Only if it looks like it is gaining some traction with consumers"

*

"Because we provide software that our customers use to test their internal and external systems, we must support the payment association specs, network specs, etc. So if somebody updates a spec to support NFC, we'll need to support it too."

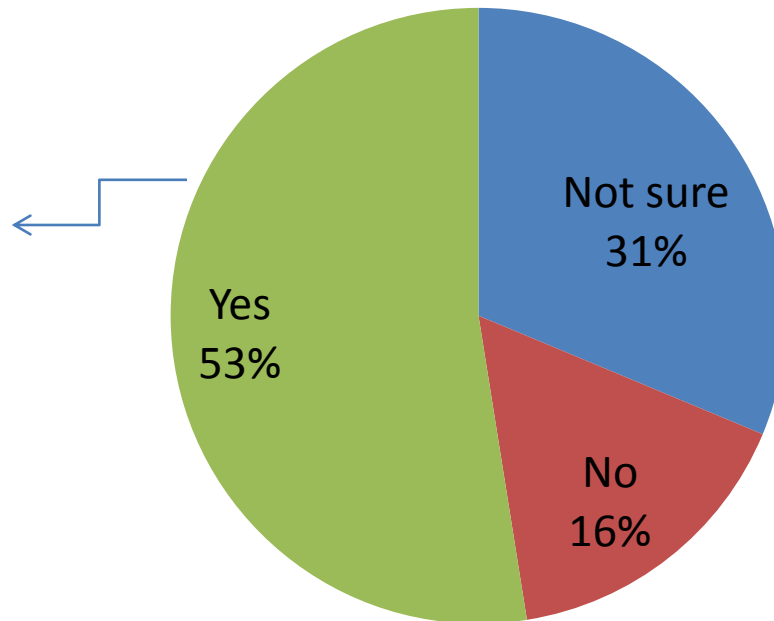
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"No standard, until a standard my bank is not interested in a VISA, MC or others proprietary solution. Any support of NFC must support two brands even doing a tap and go."

Over 50% of 179 respondents see a need to integrate U.S. EMV migration and NFC-enabled mobile payment plans

Need to integrate U.S. EMV migration with NFC migration?

This is a lower percentage though than for those who plan to participate in NFC-mobile payments per prior slide.



Selected comments on integration of EMV migration with NFC/Mobile Payments

“These efforts are different enough to require separate plans.”

“NFC as a 'conduit' for EMV transactions in the transportation and parking industries is a must.”

“Requiring contactless just to get NFC acceptance isn't a good idea and a waste of money because NFC doesn't seem to be taking off. If people wanted to use it, they'd ask for it. You can't change consumer behavior that easily.”

“I believe these should be completely separate. Let's do EMV first and worry about NFC later. EMV is a big enough chunk to bite off without adding NFC, where the specs are not clearly defined, and there's a limited number of devices in the marketplace today.”

“Is US AID going to have a Contactless and NFC Roadmap? Merchant investment should be on the basis of long term payment strategy/support (including NFC)”

“The move to EMV is not a move that will produce the desired benefits of using an EMV standard - but rather it is the possibility of combining higher forms of technology (chip) with globally accepted and proven standards (EMV) to support new and innovative forms of payment initiation and authentication.”

“POS updates and rollouts are very painful and time consuming, I'd rather rollout once rather than twice.”

Section IV Survey Questions

Q. 16 What are the TOP TWO reasons your organization believes the U.S. should migrate to EMV? Select up to two.

Available responses:	a. Will reduce POS (or card	f. Will increase trust and customer retention
	b. Will reduce online (or card	g. Will provide a foundation for innovation in payments
	c. Will reduce counterfeit fraud	h. Will provide no benefit to my organization
	d. Will reduce lost/stolen/not received fraud	i. Other
	e. Will provide global interoperability/increase acceptance	

Q. 17 What benefits does your organization believe U.S. migration to EMV will provide to CARDHOLDERS in the U.S.? Select all that apply.

Available responses:	a. Increased convenience at the POS	e. Increased global interoperability/increased acceptance
	b. Increased convenience at the ATM	f. No benefit
	c. Increased convenience online	g. Not sure
	d. Reduced counterfeit fraud	h. Other

Q. 18 What concerns does your organization have with the U.S. migration to EMV for impact on CARDHOLDERS in the U.S.? Select all that apply.

Available responses:	a. Reduced convenience	d. No concern
	b. Reduced speed of transaction at the POS	e. Not sure
	c. Confusion at payment and/or ATM terminals	f. Other

Section IV Survey Questions

Q. 19 What benefits does your organization believe U.S. migration to EMV will provide to MERCHANTS in the U.S.? Select all that apply.

Available responses:	a. Reduced POS fraud	f. Reduced processing costs
	b. Reduced online fraud	g. Reduced PCI compliance costs
	c. Increased sales volume from foreign card transactions	h. No benefit
	d. Increased flexibility	i. Not sure
	e. Reduced speed of transaction at POS from contactless transactions	j. Other

Q. 20 What concerns does your organization have with the U.S. migration to EMV for impact on MERCHANTS in the U.S.? Select all that apply:

Available responses:	a. Reduced quality of consumer experience (e.g., reduced transaction speed, reduced ease of use)	f. Increased processing costs
	b. Migration of fraud to other channels	g. Durbin compliance
	c. Increased cost of training staff	h. No concern
	d. Increased speed of transaction at POS	i. Not sure
	e. Increased terminalization costs	j. Other

Q. 21 What concerns does your organization have with the U.S. migration to EMV for impact on ISSUERS in the U.S.? Select all that apply.

Available responses:	a. Reduced quality of consumer experience (e.g., reduced transaction speed, reduced ease of use)	f. Compliance with Durbin Amendment requirement to allow routing of debit transactions through different networks
	b. No reduction in fraud	g. No concern
	c. Increased cost of training staff	h. Not sure
	d. Increased payment terminalization costs	i. Other
	e. Increased processing costs	

Section IV Survey Questions

Q. 22 Please select the TOP THREE concerns that your organization has with U.S. migration to EMV. [No “Select up to three”?]

Available responses:	a. Ability to meet Payment Network timelines	f. Not enough information to implement
	b. Cost to organization	g. Consumer experience/confusion
	c. EMV specifications	h. No incentives
	d. Lack of industry coordination	i. No business case
	e. Durbin compliance	j. Other

There may be consensus on reasons to migrate to EMV, there are also several concerns that need addressing to realize benefits

Top two reasons to migrate

- Provide global interoperability/
increase acceptance
- Reduce counterfeit fraud

Top three concerns with migration

- Cost to organization
- Lack of industry coordination
- Durbin compliance

“The US must do this for global interoperability, but the pace and decision to do it needs to slow down to do it right.”

*

“EMV reduces counterfeit card that is all. It does nothing else. It certainly doesn't improve innovation, it costs all stakeholders money, and there are many better alternatives to reduce fraud in the U.S. without EMV.”

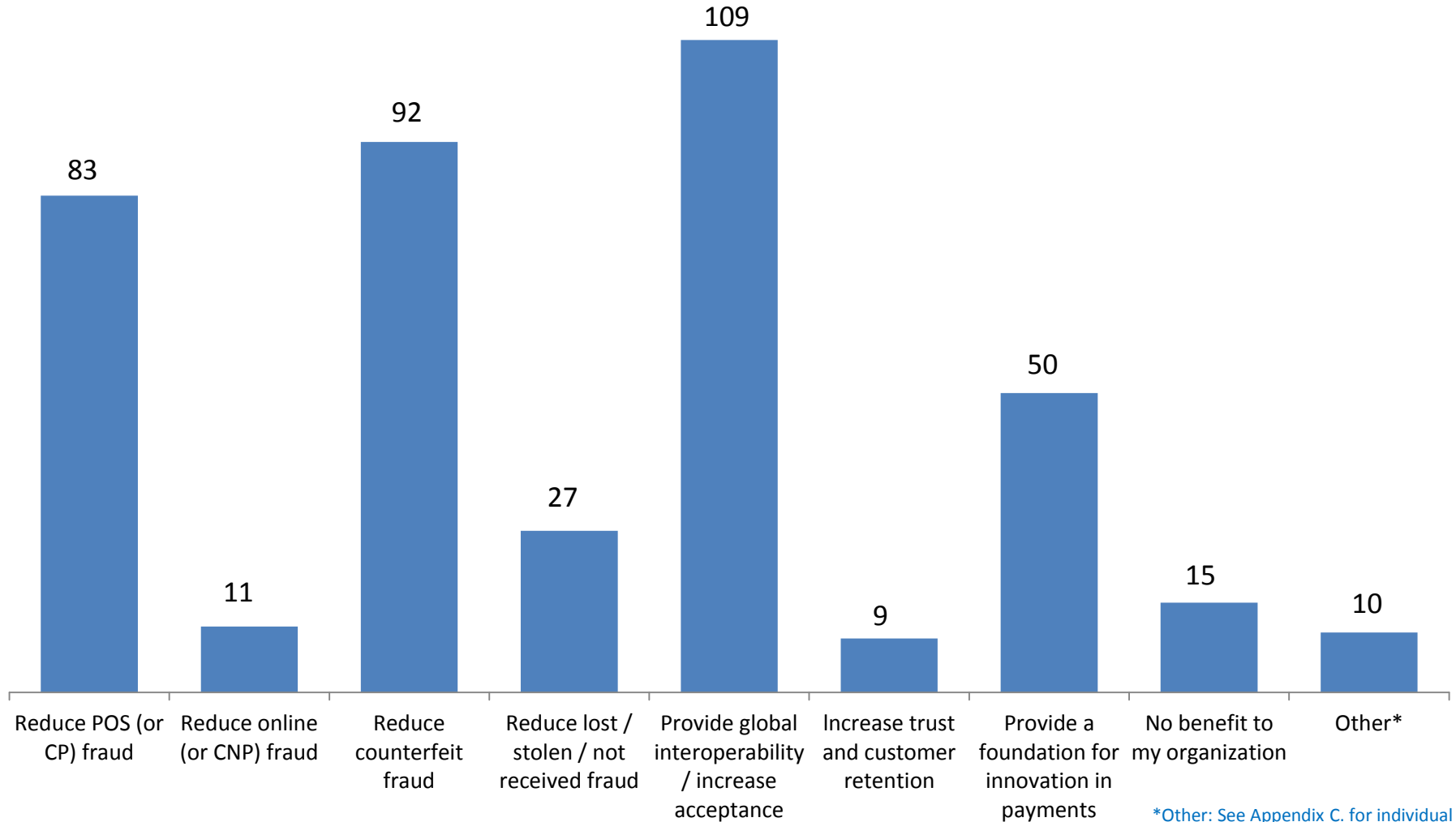
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“Responses are specific to global payments vs. US specific....no benefit to any stakeholder specific to the US.”

*

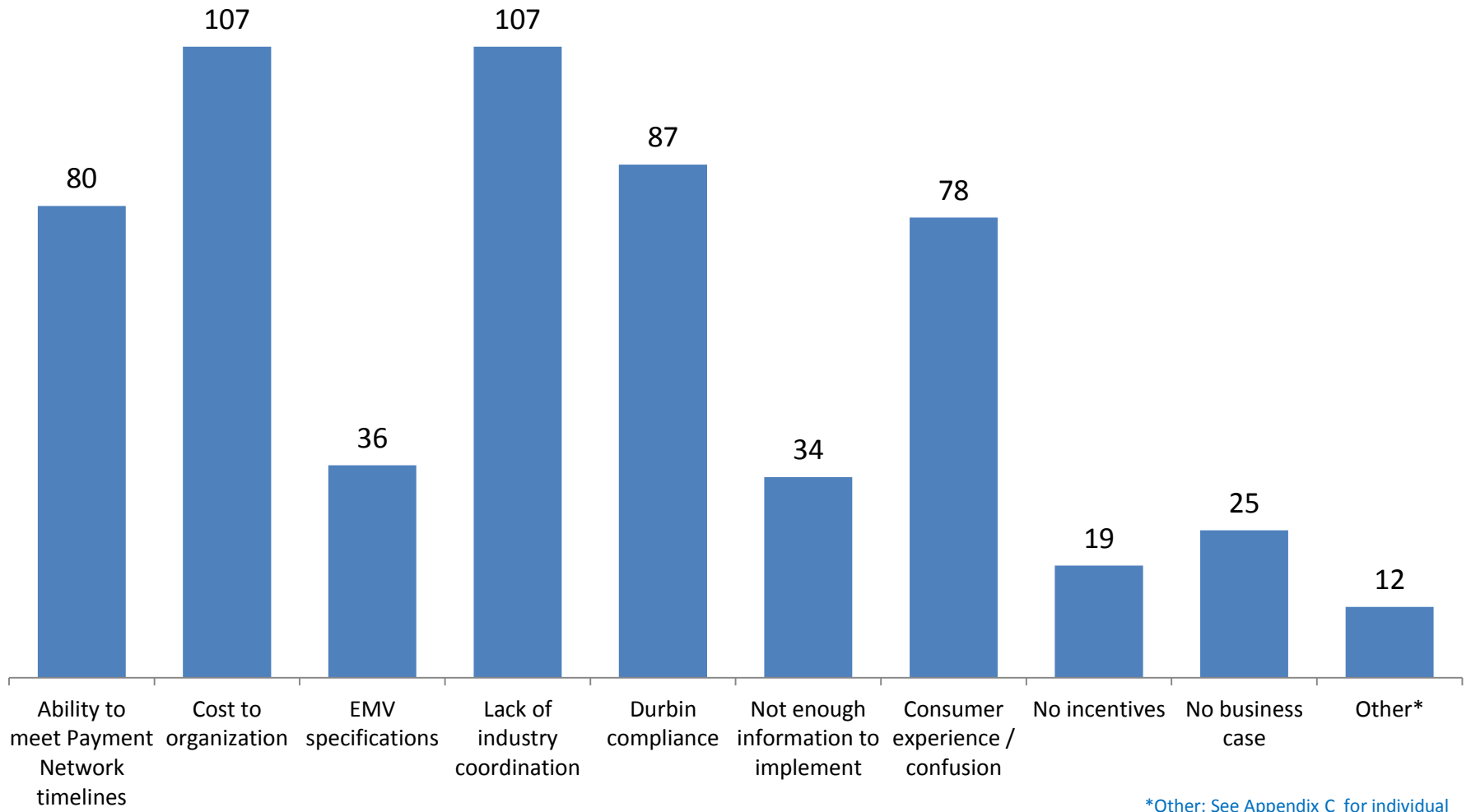
“EMV specifications really do not work as efficiently in the US market, given regulation, consumer habits, online environment”

Reasons for EMV Migration in the U.S.



*Other: See Appendix C. for individual stakeholder responses..

Concerns with EMV Migration in the U.S.



*Other: See Appendix C for individual stakeholder responses..

All Stakeholders

Top benefits to Cardholders

- Reduce counterfeit fraud
- Increased global interoperability/
increased acceptance
- 16 said “No benefit” (4% of 191 respondents)
- 55% of Issuers selected “reduced counterfeit fraud” as top benefit

Top concerns for impact on Cardholders

- Confusion at payment and/or ATM terminals
- Reduced speed of transaction at the POS
- Reduced convenience
- 26 said “No concern” (8% of 192 respondents)
- 52% of Issuers selected “Confusion...at terminals” as top concern

“Fantastic new payment services and lower rejection rates at the POS, if the solution is correctly designed to make use of the EMV parameters.”

*

“Eventual movement towards mobile payment which will benefit consumers with the right value proposition.”

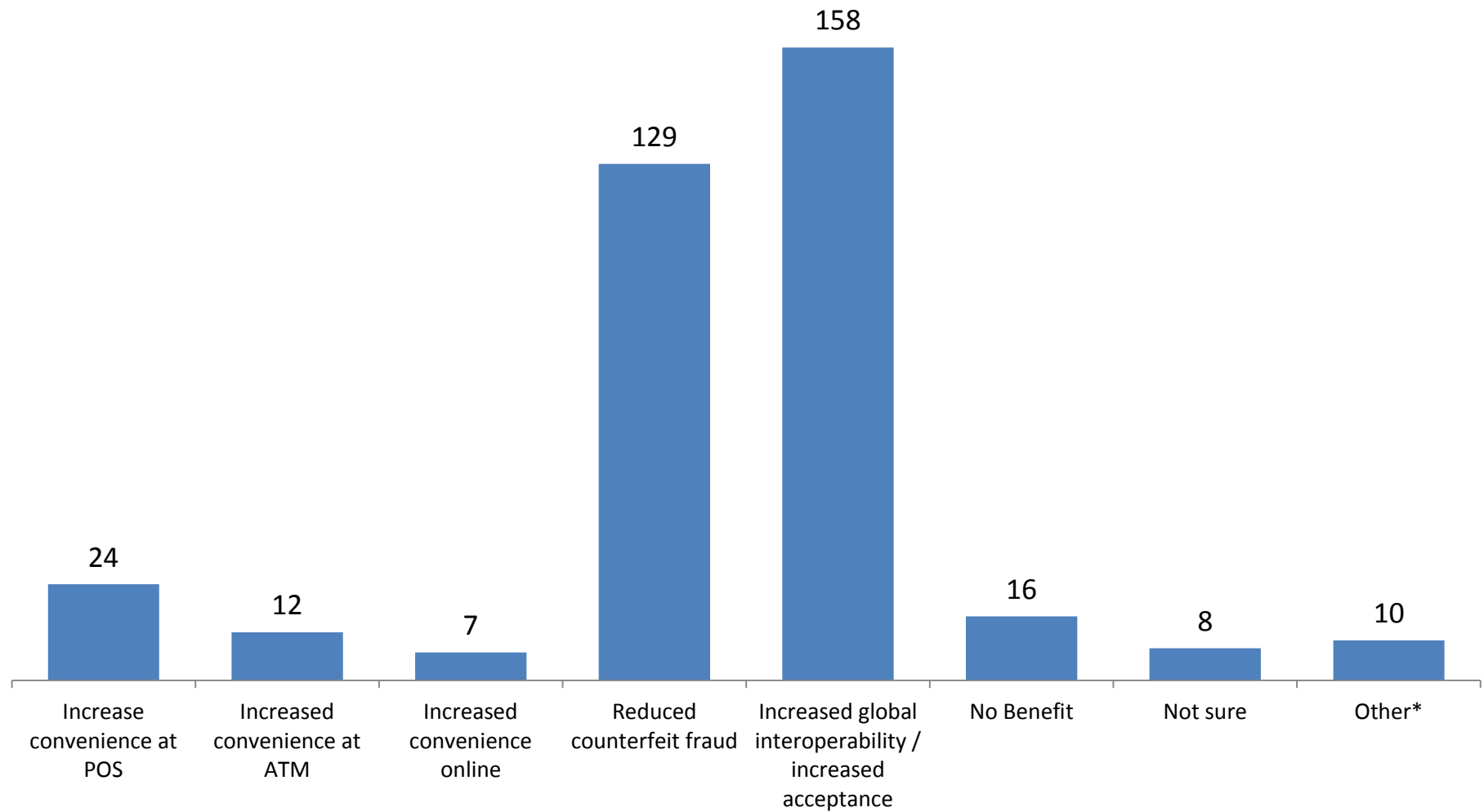
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“It will give them a sense of security, albeit it potentially false.”

*

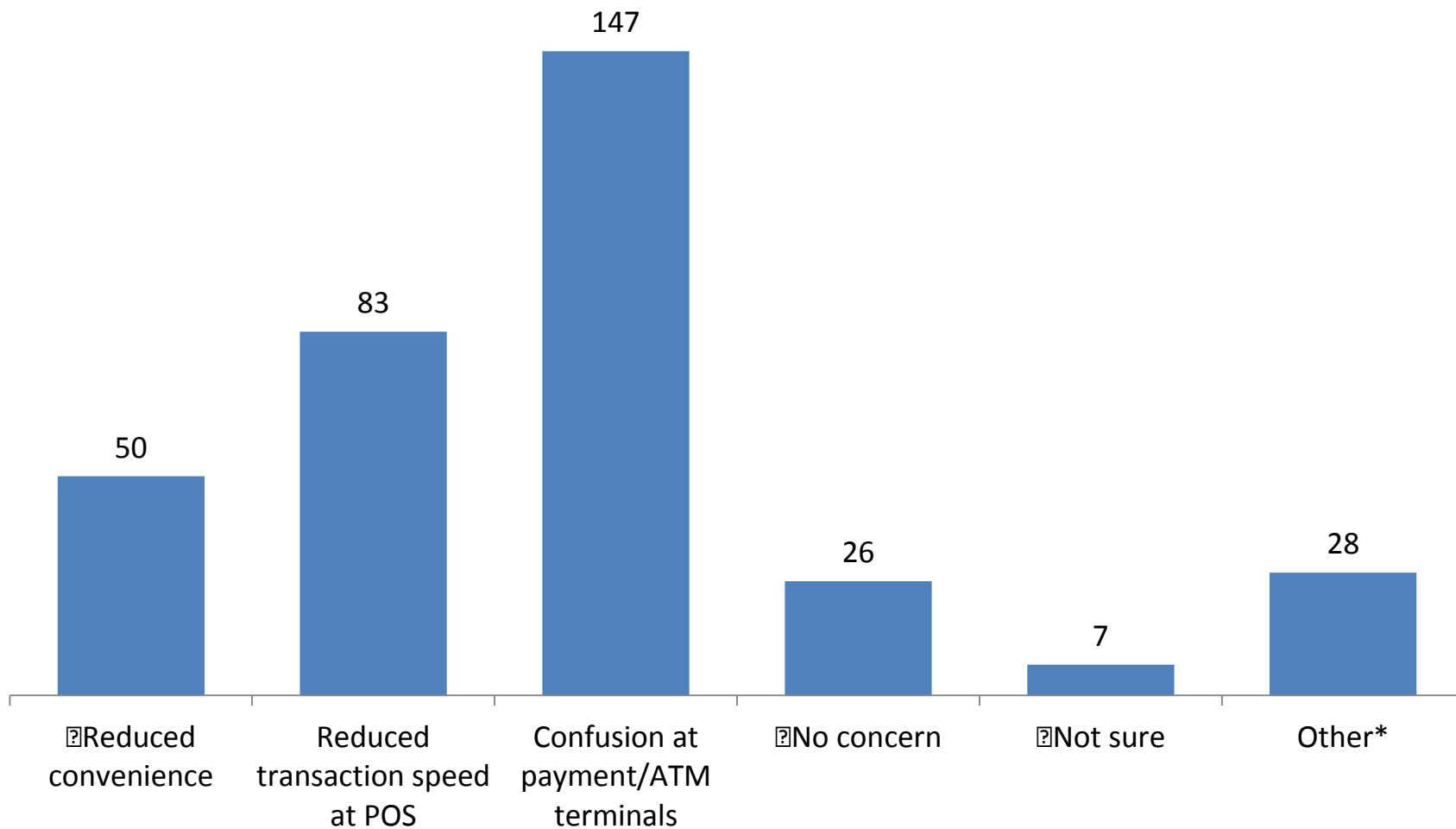
“Communications and messaging to both the front line Merchant staff and consumers is critical to ensure success. Lack of education for the cardholders could lead to much confusion at the POS. Something needs to be done to motivate the consumer to change behavior. The transactions will take longer if the consumer swipes (MAG stripe) first and then has to insert card into reader.”

Benefits to CARDHOLDERS with U.S. EMV Migration



*Other: See Appendix C for individual stakeholder responses..

Concerns for Impact on CARDHOLDERS of U.S. EMV Migration



*Other: See Appendix C for individual stakeholder responses..

Top benefits to Merchants

- Reduced POS fraud
- Reduced PCI compliance costs
- 16 said “No benefit” (4% of 192 respondents)

Top concerns for impact on Merchants

- Increased terminalization costs
- Increased cost of training staff
- Reduced quality of consumer experience
- 11 said “No concern” (8% of 189 respondents)

“Will form a basis for mobile payments innovation which may help them boost / sustain sales with help of mobile-payments / mobile-marketing technology company and help them stand up against online only stores.”

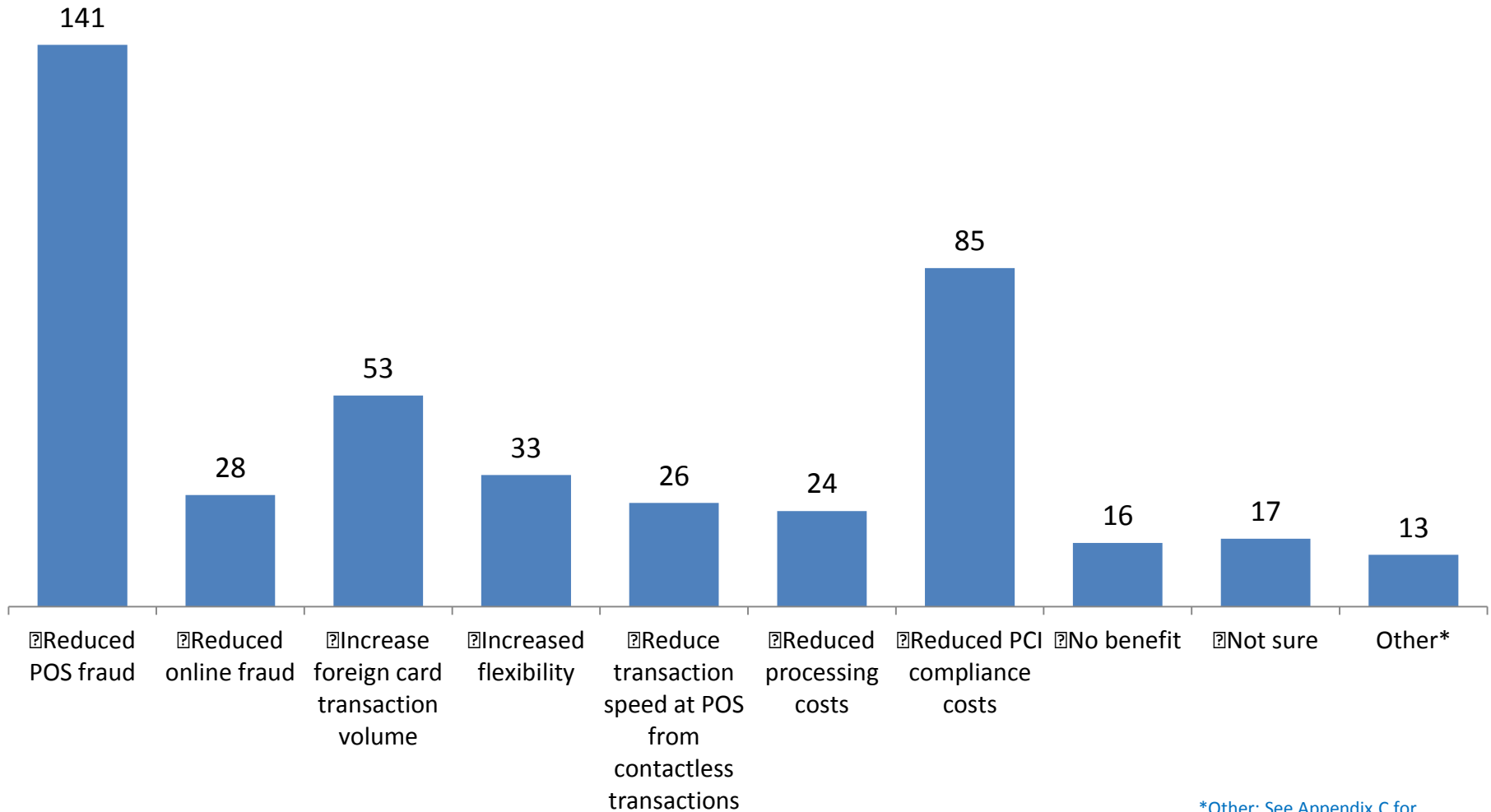
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““Increased flexibility” - possibly from Offline PIN for credit cards, but not expected for Db or Prepaid cards. We wish - "reduced processing costs". The brands should establish a clear path to reduced interchange that would result from implementing EMV acceptance and processing EMV transactions.”

*

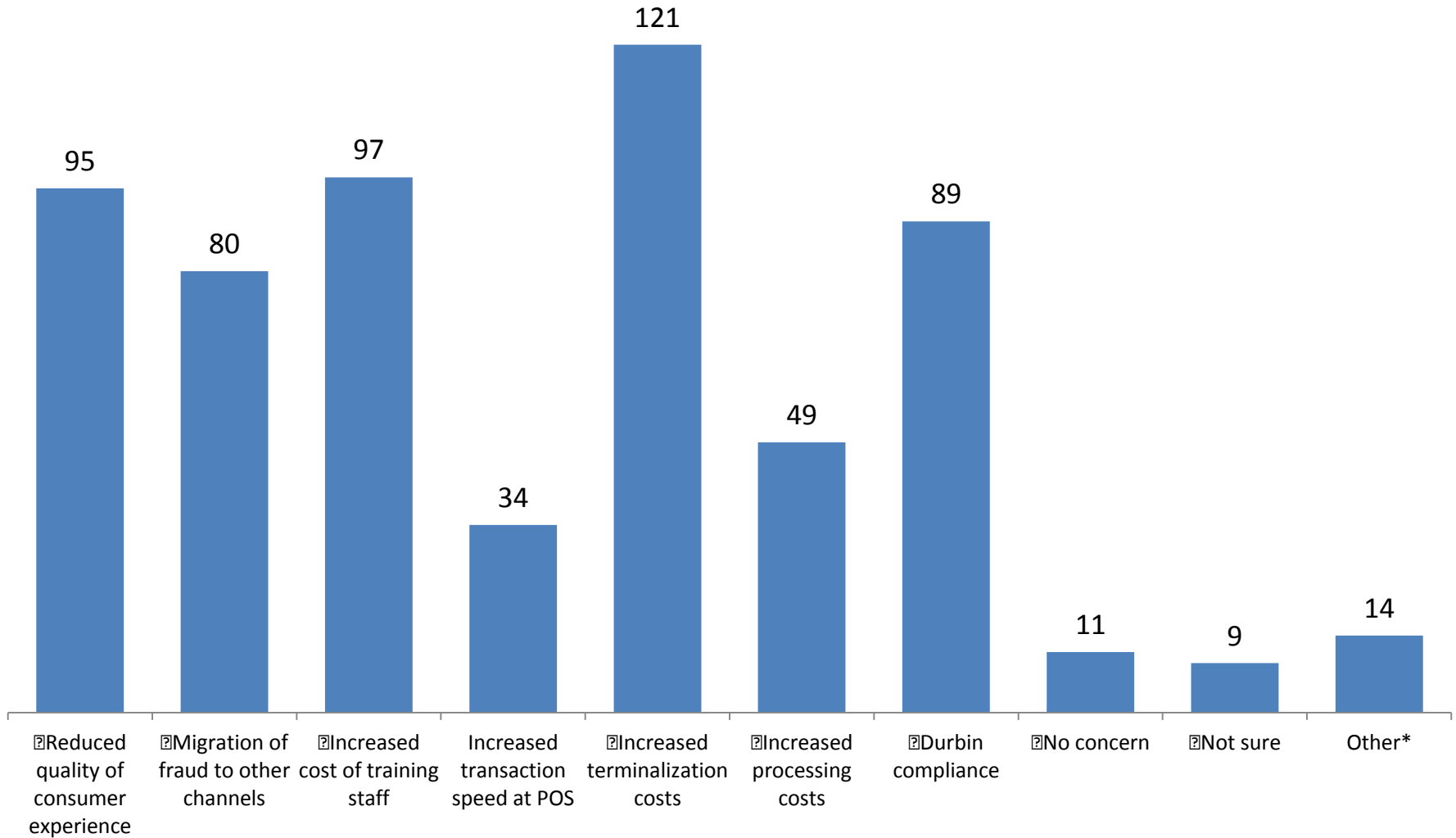
“Unless cardholder verification is included, it appears that only the issuing banks truly benefit.”

Benefits to MERCHANTS with U.S. EMV Migration



*Other: See Appendix C for individual stakeholder responses..

Concerns for Impact on MERCHANTS of U.S. EMV Migration



*Other: See Appendix C for individual stakeholder responses..

There are a variety of concerns for the impact of EMV on Issuers led by Durbin Compliance, Cost and Consumer Experience.

Concerns for IMPACT ON ISSUERS	
a. Reduced quality of consumer experience	69
b. No reduction in fraud	25
c. Increased cost of training staff	71
d. Increased payment terminalization costs	35
e. Increased processing costs	77
f. Compliance with Durbin Amendment for routing	119
g. No concern	16
h. Not sure	16
i. Other	20

“Issuers will follow the UK example and deploy the lowest cost EMV compliant cards. In the process they will miss out on the full set of features and benefits offered by EMV, through the correct implementation of the relevant EMV parameters and have to re-issue their card set when the market requires new features, e.g. the recent re-issuance of DDA cards in the UK.”

*

“EMV benefits the four signature brands. My bank issues the top two brands today and the benefit is to them. It has no benefit to the issuer. The current signature brands do not care about the impact to my bank and EMV is an attempt to completely control how consumers access funds.”

Section V Survey Questions

Q. 23 Where does your organization look to get assistance with preparing your organizational strategy for U.S. migration to EMV? Select all that apply.

Available responses:	a. Designated dedicated expert employee	f. Independent EMV expert
	b. Designated consultant	g. Internet
	c. Service provider	h. Seminar
	d. EMV Migration Forum	i. Other
	e. Industry association	

Q. 24 If you selected "service provider" or "industry association" in Question 23, please identify the organization type you would use to get assistance.

Available responses:	Open-ended response
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Q. 25 Do you think it would be beneficial to the employees within your organization to have an internal education program about the U.S. migration to EMV and the company's plans with respect to EMV?

Available responses:	a. Yes, and we already have one	c. No, we do not need one
	b. Yes, but we don't have one yet	d. Not sure

Q. 26 If you selected "b" or "d" for Question 25: What type of education do you think would benefit the employees within your organization in preparing for the U.S. migration to EMV? Select all that apply.

Available responses:	a. Basic, e.g., What is EMV? Where is EMV implemented already?	e. Marketing, e.g., How do I communicate with my customers/clients?
	b. Business, e.g., Why is the U.S. migrating to EMV?	f. Not applicable, I did not select response "b" or "d" for Question 25.
	c. Internal, e.g., What is my company's plan for U.S. migration to EMV?	g. Other
	d. Technical, e.g., What are the EMV specifications and how are they applied?	

Section V Survey Questions

Q. 27 What type of educational materials and resources would be most helpful to the employees within your organization to learn about U.S. migration to EMV? Select all that apply.

Available responses:	a. Literature	e. Consultants
	b. Websites	f. Train
	c. Webinars	g. Industry association
	d. Conferences/seminars	h. Other

Q. 28 How would you define your organization’s external customers/clients? Select all that apply.

Available responses: [List of stakeholder types]

Q. 29 If you selected Issuer in Question 28, please specify the type of payment card issued.

Available responses: [Choice of Credit, Debit and/or Prepaid]

Q. 30 How familiar do you think your external customers/clients are with EMV and how EMV will impact them?

Available responses:	a. Very familiar	d. Level of familiarity varies widely across customers/clients
	b. Somewhat familiar	e. Not sure
	c. Not at all familiar	

Section V Survey Questions

Q. 31 The EMV Migration Forum believes that every stakeholder – consumer, merchant, issuer, government entity, payment processor, payment network – in the payment transaction chain is equally important and each requires some level of education for the successful adoption of EMV and chip technology in the U.S. All of this education should not be the burden of just one organization, but thought needs to be put into who should be educating whom. Who do you think should be responsible for educating your organization’s customers/clients in preparation for U.S. migration to EMV?

Available responses:	a. My organization should educate its customers/clients	e. Industry organizations
	b. External customer/client should be responsible for own EMV education	f. An external EMV industry expert (not associated with my organization)
	c. Payment networks	g. Not applicable
	d. Issuers	

Q. 32 Does your organization have a dedicated EMV expert who is expected to provide assistance to the organization’s external customers?

Available responses:	a. Yes	c. No, we don’t need one
	b. No, but we will hire one	d. Not sure

Q. 33 What sources has your organization utilized to gather information on EMV? Select all that apply.

Available responses:	a. EMV Migration Forum	e. Other websites
	b. EMV	f. Other organizations
	c. Smart Card Alliance	g. None
	d. EMVCo website	

Q. 34 If you selected other websites or other organizations in Question 33, please specify the websites and organizations that you have used as sources.

Available responses:	Open-ended response
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Section V Survey Questions

Q. 35 How should educational materials be provided to cardholders/consumers? Select all that apply.

Available responses:	a. Display instructions on POS terminals (either as part of customer messaging or on the device elsewhere)	c. Mailings from issuers
	b. Display instructions next to POS terminals	d. Other

Q. 37 Who do you think should be responsible for training retail merchant staff in use of EMV-enabled POS terminals? Select all that apply

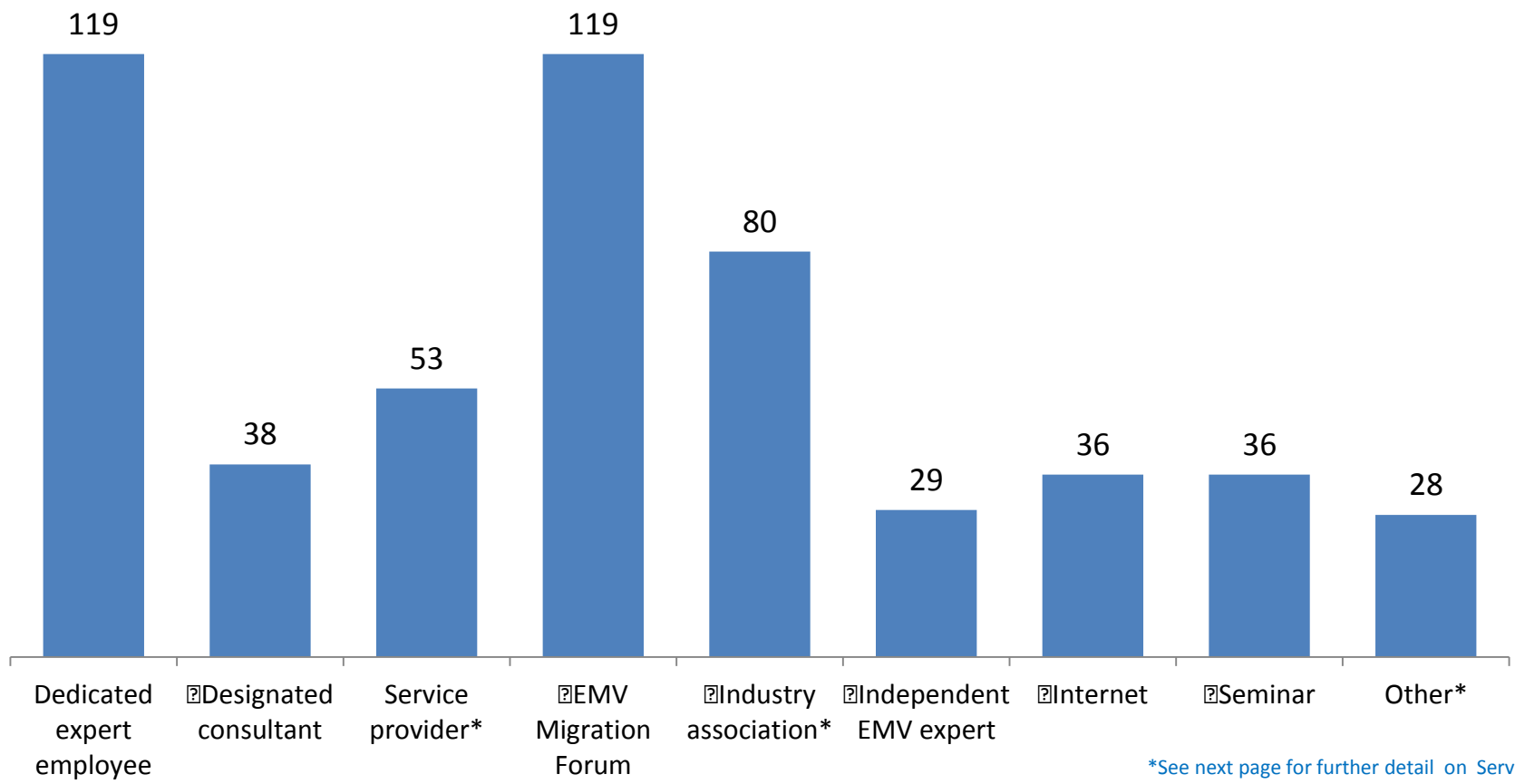
	a. Device manufacturer	c. Acquirer
	b. Retail merchant	d. Other

There's an industry-wide need for information and education

- Many organizations are relying on the EMF for EMV information and education
- Most organizations indicate that employee training is important, but almost 40% of them have no internal education program in place
- External customers and clients are mainly perceived as having little or not familiarity with EMV and its impact
- The importance of customer education is recognized
- Many are in favor of a mass media campaign to educate cardholders

Most stakeholders are relying on their service providers and/or a dedicated expert employee for assistance with EMV strategy

Assistance with EMV Strategy



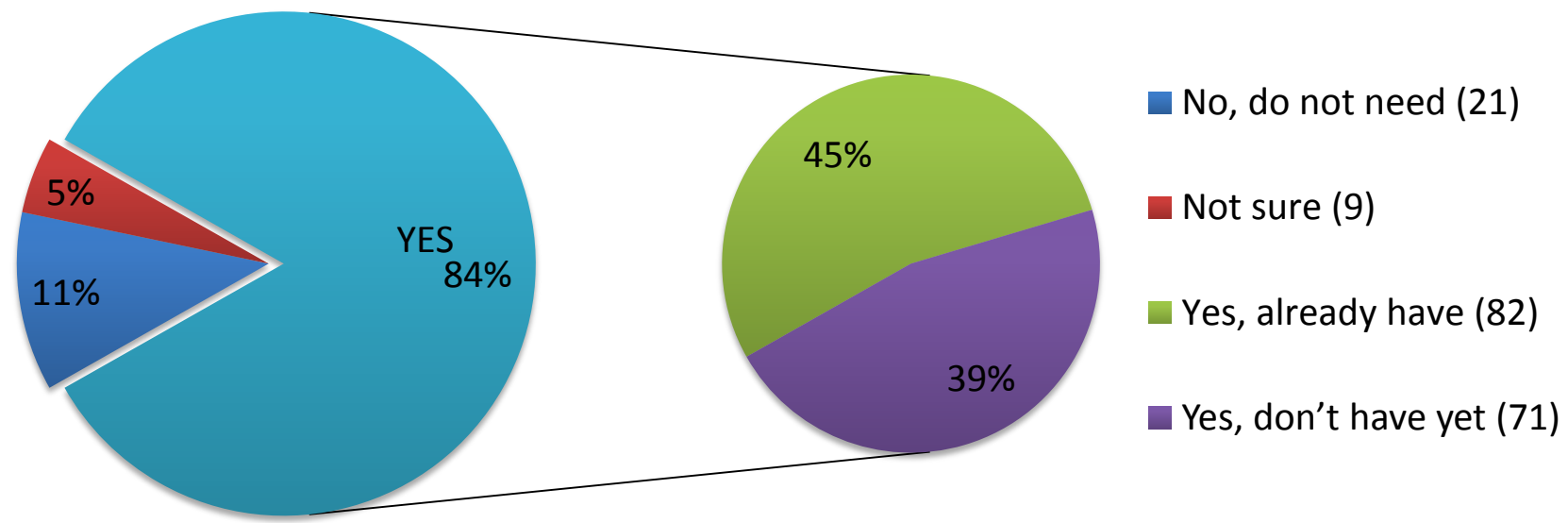
*See next page for further detail on Service provider, Industry association and Other

“Service provider”, “Industry association” organization types and “Other” sources cited as providers of assistance with EMV Strategy

- Acquirers
- Canada
- Chip card manufacturers
- Consultants
- European associates
- Hardware and Software Vendors
- Industry organizations (e.g., ABA, ATMIA, EMF, ETA, MAG, , SCA, SRPC, National ATM Council, EMVCo)
- Internal subject matter experts
- Networks
- Other merchants
- Payment Networks (e.g., American Express, Discover, MasterCard, Visa)
- Processors
- Technology standards organizations
- Test tool providers

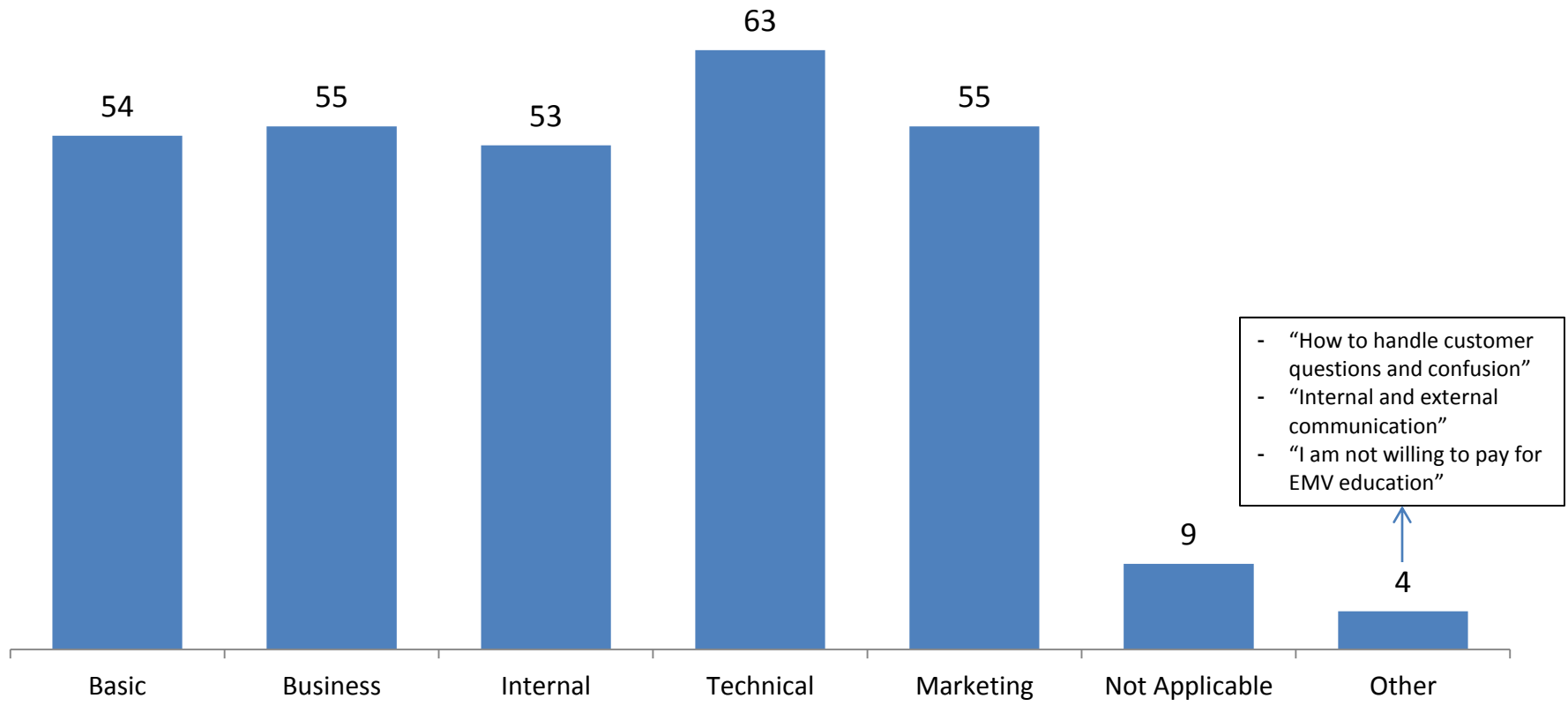
84% of respondents said internal education is important, of which almost 40% of those do not have an employee education plan in place

Employee Education Program in place?



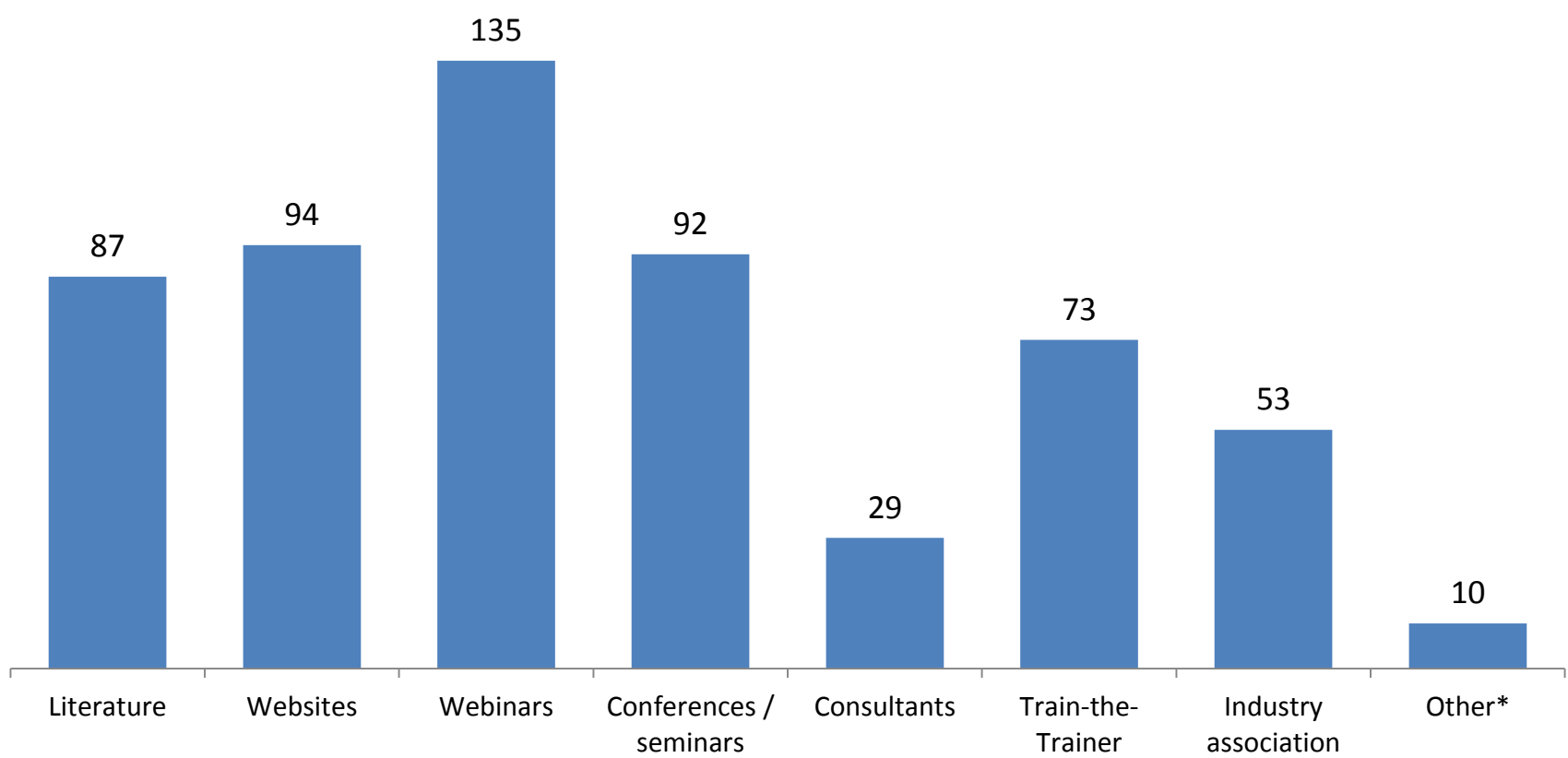
A significant majority of stakeholders seeking employee education want a program that covers all aspects of EMV

Type of education that would benefit employees in preparing for EMV



For employee education, Stakeholders find webinars most helpful, along with conferences/seminars as delivery channels

Most helpful educational materials/resources for employees



*See next page for further detail on Other

“Other” educational materials/resources that Stakeholders cited as helpful

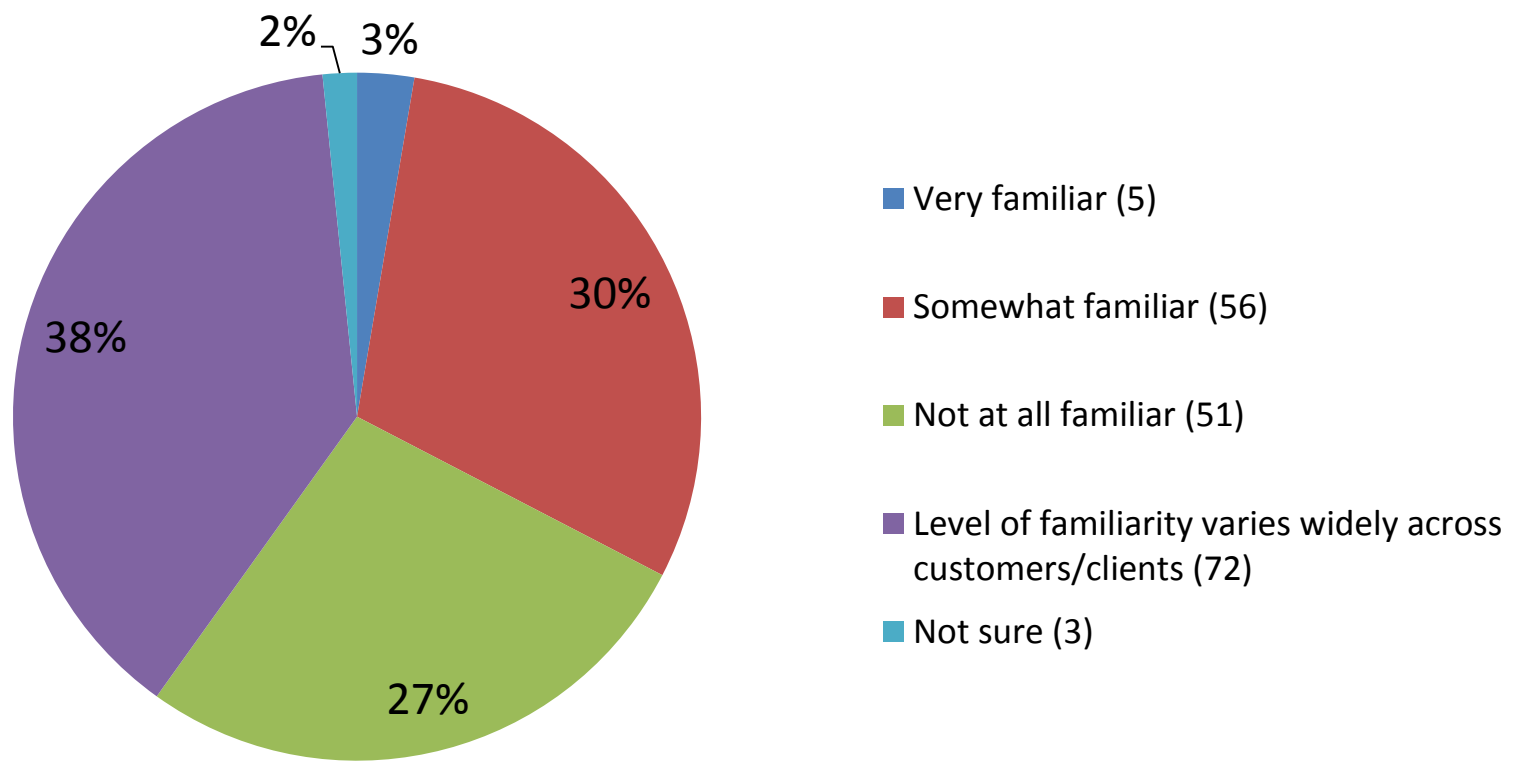
- Smart Card Alliance
- Interaction with industry experts, European adopters and known SMEs
- Educational CD
- My organization can provide customized material
- One-on-one discussions
- “Hands-on dedicated to the specific nuances of individual organizations, particularly for networks and large issuers”
- Mandatory online training tool with required compliance
- Computer based training (CBT)
- “Prepared PPT presentations that can be offered/viewed on demand, or instructor-led training”
- “We simply need the specs and someone to make a decision on a unified version/standard”

Stakeholders' Customers and Clients are as varied as the survey respondents!

Customer /Client Type	Number of respondents w/this customer type	Customer /Client Type	Number of respondents w/this customer type
Merchants	100	Card manufacturers	43
Issuers*	98	Device (ATM/POS) manufacturers	40
Consumers or cardholders	81	Integrators	39
Merchant Acquirers	70	VARs	1
Payment Processors	63	Transit agencies	1
ISOs	63	Franchisors	1
Payment Networks	61	Other	5**
ATM Owners	51	Total # of respondents	183
Regional Networks	49		

* Clients identified as "Issuers" were further identified as ATM Owner, Card Manufacturer, Consultant, HW/SW Vendor, Issuer, Payment Network and Payment Processor. They issue Credit, Debit and/or Prepaid cards.
 ** "Other" responses: (i) Transit Agencies -- clients in the consulting field; (ii) Anyone trying to achieve a multi-functional card where we are intimate with the other functions on the card; (iii) VARs; (iv) Franchisor organization with multiple franchisees that are independent business owners that require education and from a brand standpoint the franchisor needs to ensure franchisee education is adequate; (v) Processors.

57% of respondents think their customers/clients are only “somewhat” or “not at all” familiar with EMV, while another 38% think familiarity varies widely across their customer base.



Most Stakeholders think their own organization should provide their own customers/clients with education on EMV

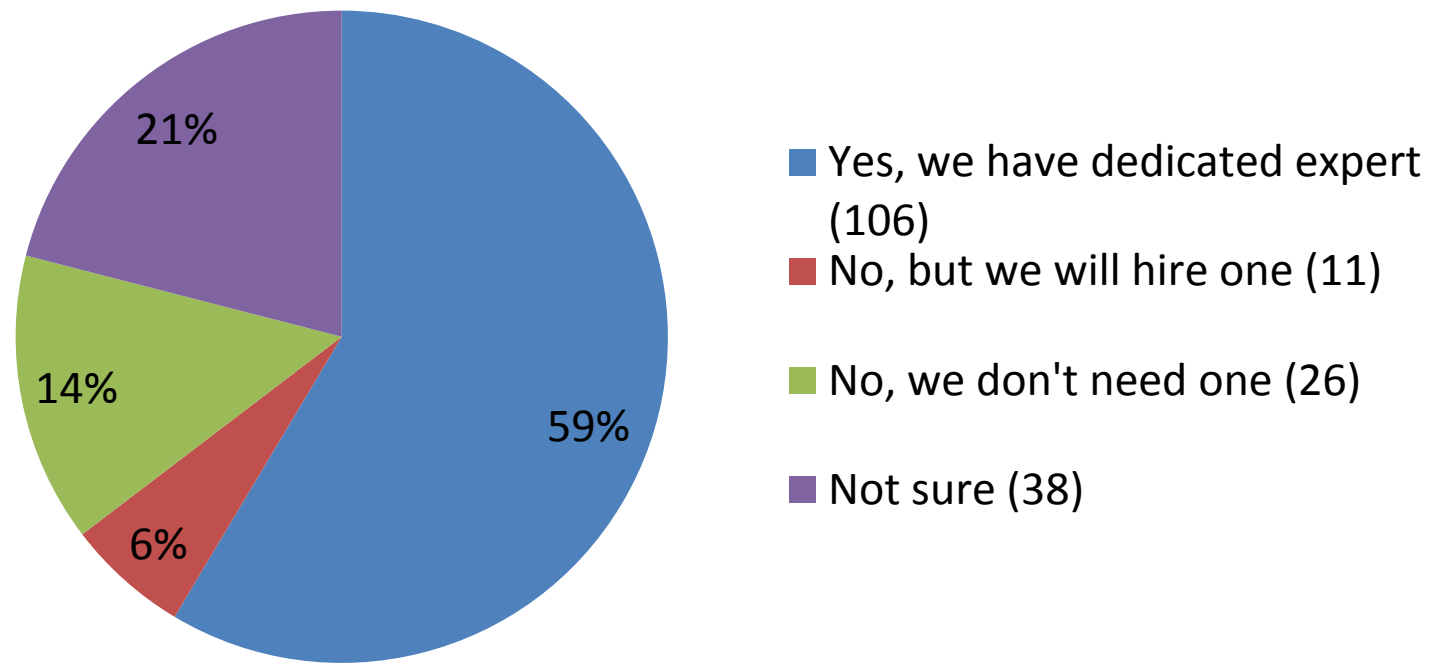
Responsibility for educating your customers/clients in preparation for U.S. migration to EMV

My organization should educate its customers/clients	97
External customer/client should be responsible for own EMV education	19
Payment networks	31
Issuers	17
Industry organizations	15
An external EMV industry expert (not associated with my organization)	2
Not applicable	3

Merchants comprise 76% of this response.

65% of respondents believe that they need a dedicated EMV expert to assist external customers.

Dedicated EMV Expert to Assist External Customers



There is significant reliance on the EMF and SCA as sources of information on EMV

Sources utilized to gather EMV information	
EMV Migration Forum	148
EMV-Connection.com	69
Smart Card Alliance	128
EMVCo website	145
Other websites*	63
Other organizations*	89
None	6

*Other websites and organizations cited include:

- Payment association websites (over 60 x)
- Acquirer, Processor and Issuer websites
- Industry organization web sites (MAG, ETA, SRPC, NACS, NATMC, etc.)
- Hardware vendor web sites (chip suppliers, card and terminal manufacturers, ICMA)
- Industry publications and their web sites (white papers, Mercator, bankrate.com, pymnts.com, finextra.com, Greensheet.com, assorted EMV specific blogs, Retail Payments Risk Forum)
- Software, tools, and service provider web sites
- Non-U.S. sources – UK Payments Administration, European Payments Council, Interact, ACT Canada
- European divisions in company
- Forums for technical discussions, ISO, CIR Technology Working Group, www.scribd.com, www.openscdp.org/scripts/tutorial/emv
- Federal Reserve papers, research
- Miscellaneous web sites (Wikipedia.org, eurosmart.com)

Stakeholders believe that Issuer mailings and the terminals themselves are critical channels for consumer education

How educational materials should be provided to cardholders/consumers:	
Display instructions on POS terminals (either as part of customer messaging or on the device elsewhere)	125
Display instructions next to POS terminals	89
Mailings from issuers	139
Other*	34

* Other channels for consumer education cited:

- Mass media campaigns (TV, internet, billboards, YouTube videos, public service announcements, ads) (~20x)
- Information in card mailer and/or on new chip card
- Issuer web sites
- Merchants working with issuers and store clerks to educate and assist customers
- “Nationwide campaign as was done in the UK”
- “Mimic today’s experience where and when possible”
- “Consumers should have to educate themselves on how to make a payment”
- “Simulator terminals at branch locations where consumers can get assistance on how to use their new card”

Stakeholders believe that retail merchant staff training should be primarily provided by the retail merchant with device manufacturers and acquirers playing a key role as well

Who should be responsible for training retail merchant staff in use of EMV-enabled POS terminals

Device manufacturer	66
Retail merchant	150
Acquirer	78
Other*	7

* "Other" responses included Merchant, Merchant Acquirer, VAR, and Issuer

"In a large merchant environment, they should train their own staff; for the small Mom & Pop type merchants, the acquirer/processor should provide the training"
 *

"Depends on size of merchant and acquirer/processor relationship/responsibilities"
 *

"if the issuer does a good job, the merchant should not need to train"
 *

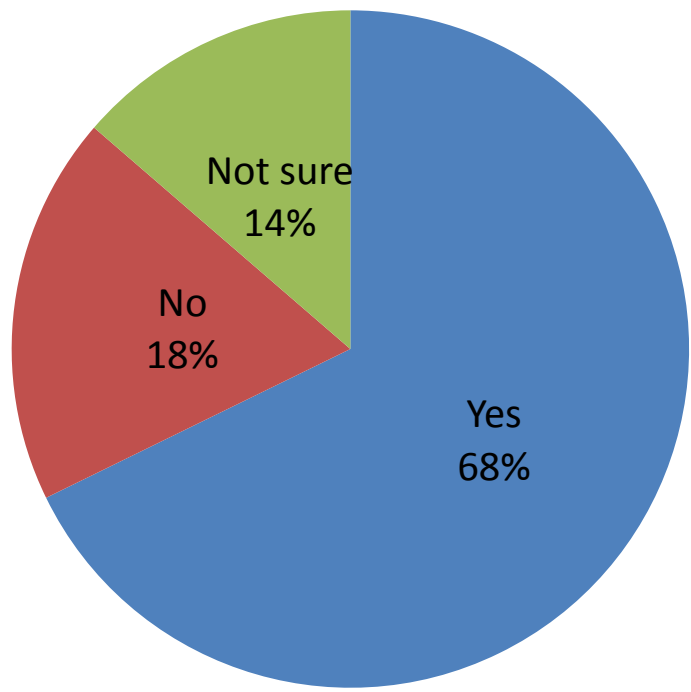
"I don't train them today" (payment processor)

Section VI Survey Questions

Q. 36 Do you believe an EMV acceptance symbol or brand mark at payment points (including on POS terminals, ATMs, kiosks or vending machines and in stores) that accept EMV device transactions would be helpful to customers and retail staff?

Available responses:	a. Yes	
	b. No	
	c. Not sure	

A significant majority of 68% believe a symbol or brand mark at the POS/ATM would be helpful.



“A 'branding' effort would greatly help the public understand, identify, and grasp the scope of the EMV implementation. Consider the success of universal branding such as ADA, ATM, P (for parking) efforts.”

Symbol/brand mark question drew wide ranging comments

- **Definitely need one**
 - Where EMV accepted
 - Instructing cardholder
- **What it should be or be like**
 - Picture, decal, sticker
 - Use existing symbol
 - A lot about “insert vs. swipe” (little mention of tap/wave)
- **What success requires**
 - When to use
 - What to accompany it with
- **Definitely don't need one**
 - Clutter
 - Not useful
 - Could be counterproductive

*“A lot of hardware today have an integrated chip card reader, which may or may not be active/enabled. Although most screens will prompt to **swipe/insert** card, it would be quicker if there was a symbol the cardholder could view to know they should **insert / tap** their card before attempting to swipe.”*

“It would only be useful if people knew what the symbol meant. The UK had a 'chip and PIN' symbol that was useful, but they also had a very successful nationwide education/marketing program, so most people knew what the symbol meant.”

“The contact chip plate is enough of a mark.”

“Too much clutter -- adds to consumer confusion. It may be a reason for customer to Stay away! Keep it simple.”

Section VII Survey Questions

Q. 39 Would your organization have interest in participating with other industry players in a first phase of EMV deployment in the U.S. in a “test city” to enable configurations and the customer experience to be refined before full EMV migration?

Available responses:	a. Very Interested	
	b. Mildly interested	
	c. Not interested	

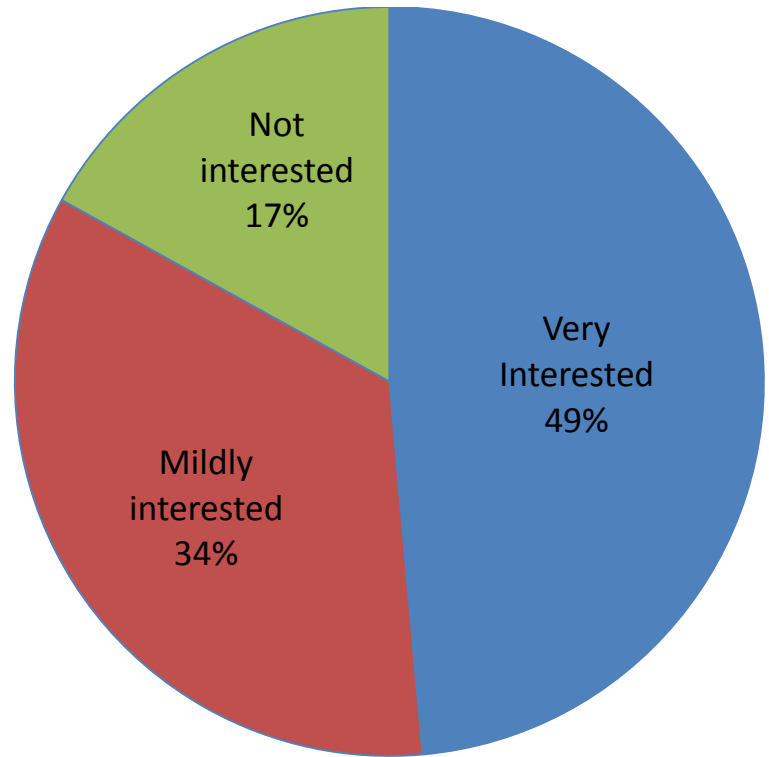
Q. 40 What type of participation do you think your organization would want in the “test city” deployment? Select all that apply.

Available responses:	a. Planning	f. Supply other resources
	b. Testing	g. Funding for deployment role
	c. Deployment devices	h. Evaluation
	d. Deployment site	i. Governance
	e. Support staff	

A sizable proportion of stakeholders - over 80% - appears to see value in Phase 1 participation

Organizational interest in participation in a first phase of EMV deployment in the U.S.

- Within each stakeholder group, half or more are interested in Phase 1 participation.
- All 14 stakeholder groups are represented in the responses to Q39.



Respondents could potentially support all requirements for a successful first phase deployment

Type of participation in “test city” deployment	Response %
a. Planning	64%
b. Testing	76%
c. Deployment devices	32%
d. Deployment site	21%
e. Support staff	31%
f. Supply other resources	20%
g. Funding for deployment role	7%
h. Evaluation	52%
i. Governance	21%
Total respondents: 140	

Section VIII Survey Question

Q. 43. Do you have any feedback or comments for the EMV Migration Forum to consider in aligning industry efforts for EMV migration to the U.S.?

Available responses: Open-ended response

Recommendations to the EMV Migration Forum

The following are general recommendations that have been gleaned from the survey responses and comments:

1. Better align stakeholders across the value chain through improved access to relevant information.

EMF should develop and post on the EMV-connection website a set of FAQ's and a broader piece on the case for change. The latter can be done either through developing a white paper and/or linking to others' already existing. These efforts should address:

- What the differences are among mandates, planned liability shift and waivers in the context of the Payment Networks' Roadmaps
- Perception by those stakeholder groups who see no clear business case for EMV
- Perception of EMV as outdated technology
- Perception there are more efficient means to combat fraud
- Rationale for investment in Contact technology
- Concerns for consumer experience
- Concern with having to invest twice in terminal HW/SW to support NFC-enabled mobile payments

Recommendations (continued)

2. Develop a strategy and plan for providing education programs and educational resources.
 - a. Identify which products, services and delivery channels will have the most impact.
 - b. This plan should include Forum-sponsored education events and resources (e.g., webinar, EMV-connection web site) and promotion of other events and resources provided by members and other organizations.
 - c. Assess the availability and quality of existing educational material, push out what it can through the EMV-Connection website and initiate activities to fill the information gaps.
 - d. A lot of material and expertise is available through vendors, many of whom are EMF members. The Forum should address what role vendor material and expertise can play to support its mission while recognizing that vendors' material and expertise are core to their business (the "vendor's conundrum": how much to give away to help the industry move forward versus charging for resources and services).
 - e. Many legitimate concerns raised by stakeholders can be alleviated with data, statistics and information. The Forum needs to collect and provide organized access to statistics and information, including access to such data from other places outside the U.S. that have implemented EMV and find ways to draw on them to address U.S. stakeholders' concerns. For example, a concern with speed of transaction at the POS was mentioned by survey respondents. This could be addressed through making available technical data, consumer research, and merchant reaction from areas with existing EMV deployment.

The Communications and Education Committee has agreed to address this recommendation through a new project.

Recommendations (continued)

3. Link Forum members to resources that can help them with development of their own organizations' EMV business case and EMV roadmap.

A significant portion of stakeholders have not yet prepared business cases for EMV or their own roadmaps, critical tools to support organizational decision-making. Several respondents indicated their organizations had prepared business cases and/or roadmaps. The Forum could support stakeholders' needs in this area by:

- Posting links on EMV-connection website to templates provided by the Payment Networks and to the FAQ's (from Recommendation 1 above).
- Collecting and making available online best practices and samples from business cases and roadmaps that EMF members' are willing to share
- Developing and posting on EMV-connection a list of factors that need to be considered in quantifying the Fraud element by stakeholder group (illustrating how "\$1 in fraud costs results in \$2.70 in consequential costs.")
- Facilitating the collection and availability of fraud data, especially counterfeit-related data
- Providing training for stakeholders on how to prepare a company roadmap and business case

Recommendations (continued)

4. Determine need for EMV acceptance symbol or brand mark

The Forum should take the lead to seek consensus on need for a symbol or brand mark (or dispense with idea) to support communications and messaging to both cardholders and front line merchant staff, and consider whether a symbol might help facilitate US coordination, and enable better cardholder communications and education.

The Communications and Education Working Committee has agreed to address this through a new project that will cover Messaging Guidelines for Migration Phases

5. Identify and share best practices to avoid customer confusion at the POS throughout the migration period.

“Communications and messaging to both the front line Merchant staff and consumers is critical to ensure success.”

The Communications and Education Working Committee has agreed to address this through the already-existing Communication Channels & Best Practices Project.

6. Level-set EMF resources and efforts and work towards an overall Forum strategy

The Forum has a critical role to play to help create informed stakeholders and help the industry obtain an evening of buy-in across the industry. Given the reliance of the payments

Recommendations (continued)

6. Level-set EMF resources and efforts and work towards an overall Forum strategy. (continued)
- industry and stakeholders on EMF to provide information and education, the Forum needs to:
- Identify follow up actions required on Survey Report Recommendations. Understanding that the survey was conducted four months ago from the time of this report, level set what was found, what provides directional information to act on, and what the the Forum should do with it.
 - Assess its current resources and efforts, and determine if they are in line with industry expectations for providing information and education and planned new initiatives
 - Consider if facilitating and/or leading a mass media campaign geared towards cardholders at the appropriate time during the migration should and can be part of the overall strategy. Given time and expense involved in this type of campaign, this recommendation should be addressed in the near term.