MasterCard is Committed to Helping Secure the Payment System

For more than 40 years, MasterCard Worldwide has played a leading role in payment card security. To help support commerce and protect stakeholders from fraud, the company has pioneered innovative technologies and solutions, defined industry standards and practices, and fostered collaboration among global businesses and industry professionals. MasterCard is committed to driving the next generation of payment card data protections by spearheading broad industry initiatives and delivering solutions that target customer needs.
Compared to any other time in its history, the payment card industry faces an increasing variety of security challenges as the transaction environment grows in size and complexity. With more stakeholders, payment channels, and people driving the use of payment cards, the need to enhance the integrity of an increasingly dynamic system while ensuring global acceptance is more important than ever.

On a global level, fraud continues to migrate from more secure to less secure regions and channels. This obvious shift is accelerated by an increasingly adept and organized criminal community that seeks to exploit security vulnerabilities and commit fraud. Criminals are targeting not just unmonitored, stand-alone, point-of-interaction devices, but also launching sophisticated attacks on the private networks of well-known entities, such as major data processors and top-tier merchants. All of these factors can lead to fraud attacks that can cause an erosion in confidence and global acceptance as financial institutions seeking to avoid risk may move to block transactions at a country or regional level.
MasterCard’s Holistic Fraud Management Strategy

Every year, MasterCard processes billions of transactions in close collaboration with multiple stakeholders. This gives MasterCard a unique view across the entire payment system. Based on that perspective, MasterCard’s fundamental data security position is that addressing the current global fraud challenge requires a holistic strategy that relies on the participation of everyone—financial institutions, service providers, merchants, law enforcement and cardholders. MasterCard works in partnership with many of these participants to develop and advance new solutions, standards, and policies to protect payment card data and enable a secure payment system. As a result of that macro-level approach, MasterCard’s fraud prevention and mitigation strategy spans four broad areas:

- Initiatives MasterCard champions at an industry level to create and maintain uniform data protection around the globe;
- Expert resources MasterCard offers its customers to ensure they have the critical information needed to initiate comprehensive fraud prevention strategies and tactics for their unique organizational needs;
- Advanced fraud management solutions that help financial institutions and merchants achieve fraud and risk management objectives; and
- Comprehensive enterprise-wide information security programs designed to protect the integrity of MasterCard’s systems and global network.

Industry-Level Data Protection Initiatives

As an industry leader, MasterCard is committed to making the future of payment transactions safer and more secure for everyone. From its unique vantage point within the payment card value chain, MasterCard is able to assess and balance the needs of various stakeholders to determine how to reduce fraud without sacrificing acceptance or overburdening one specific stakeholder. MasterCard’s key areas of industry-level focus include:

- Supporting effective implementation of strong authentication technology around the world,
- Developing industry standards for the electronic payment system,
- Collaborating on strategic data security initiatives with industry stakeholders through global and regional fraud advisory councils;
- Providing data security thought leadership and best practices; and
- Working to ensure effective payment card data integrity safeguards are established and enforced.
ENABLING STRONG AUTHENTICATION

MasterCard plays a leading role in the development and adoption of multiple authentication technologies that address the unique needs of different markets and payment channels. Strong authentication is critical to protecting cardholders from fraud, and effective authentication strategies balance the need for maintaining a positive cardholder experience with fraud risk. MasterCard understands this complex balance and how to work with customers to ensure that interoperability, ease of use, and security requirements are all successfully integrated in a comprehensive authentication strategy.

EMV

In its role as a founder and early proponent of EMV technology, MasterCard’s strategy to fight card fraud in many regions around the world relies heavily on enabling chip-based payments. MasterCard has been a primary driver behind the impressive strides that EMV technology has made in addressing fraud in regions that have moved or are in the process of moving to chip-based payments. EMV has delivered on its promise to reduce counterfeit and lost & stolen fraud, as well as support new data security efforts. EMV also has provided the marketplace with increased operational efficiencies, improved offline risk management, and a host of enhanced value-added solutions that go beyond simply making transactions more secure.

SECURE ONLINE TRANSACTIONS USING THE MASTERCARD SECURECODE PLATFORM

To address the e-commerce fraud challenge, MasterCard offers its flexible SecureCode platform to enable strong authentication of online transactions. MasterCard is taking further action to ensure accelerated global deployment of SecureCode-based authentication by working directly with issuers, acquirers and merchants to provide a safe and efficient online shopping environment for all consumers.

For customers that prefer to take advantage of the benefits of a fully-hosted SecureCode capability MasterCard offers its Online Authentication Service, delivering robust online authentication capabilities while reducing the burden of managing an in-house platform. The MasterCard SecureCode platform is also enabling new approaches to securing e-commerce transactions, such as risk-based authentication wherein high-risk transactions undergo strong cardholder authentication while other lower-risk transactions are completed with little or no additional authentication, thereby ensuring a smooth and efficient online shopping experience. In addition, as e-commerce has evolved, so too has SecureCode, which offers dynamic password generation via CAP readers and SMS to mobile.
PAYMENT CARD INDUSTRY DATA SECURITY STANDARD

Protecting payment card data along all points in its journey remains one of the strongest ways to prevent data compromises that can lead to fraud. Therefore, MasterCard supports, encourages, and also mandates Payment Card Industry Data Security Standard (PCI DSS) compliance through both its representation within the PCI Security Standards Council and its own PCI DSS compliance program.

The council was formed by MasterCard and other payment brands to help facilitate the broad adoption of consistent data security measures on a global basis. The council continually reviews and analyzes multifaceted data protection requirements for security management, policies, procedures, network architecture, software design and other critical protective measures affecting payment card data. Along with its wide-ranging representation on various council working groups and committees to help enhance policies, standards, and educational efforts; MasterCard also drives PCI DSS compliance and adoption—via its own Site Data Protection and PCI 360 programs—among its customers’ key clients. These MasterCard programs have been recognized time and time again as two of the premier data security support efforts in the industry.

BRIDGING THE PUBLIC AND PRIVATE SECTORS

Throughout the world, government agencies, central banking authorities and industry regulators are rightly engaged in protecting the well being of the payment systems that support global commerce. MasterCard is committed to partnering with regional governments and cooperating with authorities when appropriate to ensure the integrity of the payment system. MasterCard also is subject to laws and regulations that affect the payment industry in the many countries in which its cards are used, and therefore maintains a global public policy team with resources deployed in key markets around the world. For example, MasterCard is fully committed to working with the Single Euro Payment Area to enhance the security of the payment environment. MasterCard also supports region-specific legislation aimed at strengthening consumer protections, preventing fraudulent activities, apprehending offenders and generally mitigating losses for the entire payment industry.
Customer-Level Fraud Management Initiatives

Taking a holistic approach to fraud prevention means going beyond broad industry-based efforts and focusing on the complex and unique challenges that each MasterCard issuer and acquirer faces in the particular regions they serve. Therefore, MasterCard encourages our financial partners to leverage their existing relationship with us and work in collaboration with MasterCard’s team of experts to develop fraud prevention strategies that incorporate our unique knowledge of the fraud landscape.

PROFESSIONAL FRAUD PREVENTION CONSULTANCY SERVICES

MasterCard is proud to offer unparalleled expert counsel to help customers implement customized fraud prevention strategies and products tailored for the unique markets and stakeholders they serve. As a starting point to creating a consistent and efficient security and fraud management strategy, banks first need to understand the basics of fraud and identify key trends. Then, they need to make an honest assessment of their fraud exposure. Finally, financial institutions ultimately need to define strategic action plans and initiatives to address specific vulnerabilities. To support banks in building and implementing these plans, MasterCard has a team of dedicated security and risk professionals and additional consultancy services to help assess each of our customers’ specific needs and their own distinct issues.

ACCOUNT DATA COMPROMISE EVENT INVESTIGATION AND RECOVERY

By leveraging MasterCard’s SAFE (System to Avoid Fraud Effectively) Database, MasterCard’s Fraud Investigations Team continually reviews reported fraud data to identify accounts that may be potentially compromised and at risk to determine if they are part of a breach event.

• Advanced Notification: Whenever possible, MasterCard provides customers with a variety of advanced notifications based on its own data analysis of at-risk accounts. These offerings provide issuers with advanced notice of a potential situation that may be contributing to higher than normal rates of fraud.
• **Forensic Review:** The MasterCard Fraud Investigations Team reviews independent data breach forensic reports and evidence submitted by certified forensic investigation firms to understand the mode and scope of the event and to determine if card reimbursement and fraud recovery options will be available to issuing customers affected by a confirmed compromise event.

• **Automated Reimbursement:** If it is determined that reimbursement of ADC related operational and fraud costs are justified, MasterCard provides an automated cost recovery process. Issuers are automatically reimbursed for a portion of the operational costs and fraud attributed to a particular compromise, thereby effectively providing timely reimbursement without the burden of filing claims.

• **Law Enforcement Engagement:** The MasterCard Fraud Investigations Team engages with law enforcement agencies around the world to support investigations of payment card fraud and illegal use of the payment system. MasterCard has supported the investigatory efforts of the Federal Bureau of Investigation, the United States Secret Service, the Federal Trade Commission, the National and International Centers for Missing and Exploited Children, Interpol, and the Serious Organized Crime Agency.

**PCI DATA SECURITY STANDARD COMPLIANCE SUPPORT**

As mentioned previously, MasterCard is committed to helping drive the PCI Security Standards Council’s overarching efforts to develop comprehensive data protection standards for all system participants globally. In addition to MasterCard’s support of the Council, MasterCard also works directly with our customers to help ensure that they are both aware of compliance requirements and are equipped with information to help their stakeholders achieve ongoing PCI DSS compliance. Regardless of the card technology and cardholder verification method, protecting primary account numbers and other transaction data is a fundamental industry requirement. The PCI standard is the only global standard designed to achieve that goal.

• **Site Data Protection Program:** The MasterCard Site Data Protection (SDP) Program is designed to help acquiring customers, merchants and service providers—Third Party Processors (TPPs) and Data Storage Entities (DSEs)—proactively protect themselves and the overall payment system against the threat of data compromises. The focus of the SDP Program is to ensure that merchants and service providers are securely storing MasterCard account data in accordance with the PCI DSS.

• **PCI 360:** The MasterCard PCI 360 initiative is an education program designed to provide a comprehensive understanding of the PCI DSS through a series of industry webinars that highlight the specific needs of acquiring banks, processors and their merchants. MasterCard works with leading security experts to develop a wide variety of training modules to provide a clear picture on the many different requirements comprising the PCI DSS and how to achieve ongoing compliance.
ACADEMY OF RISK MANAGEMENT

The MasterCard Academy of Risk Management (ARM) is a leading source of education and training resources for today's payment card fraud and risk professionals. Through its global conferences, courses, online resources, and customizable training sessions; MasterCard provides the latest insights, data, and best practices to help risk professionals prevent and manage fraud. More than a thousand data security professionals from hundreds of financial institutions around the world attend ARM events every year to ensure they are aware of and thoroughly understand the most recent data security strategies and tactics available.

REAL-TIME FRAUD KNOWLEDGE SHARING

In its role as a primary resource to support the integrity of the payment system, MasterCard provides its customers and their clients with a wealth of data security information via the password-protected MasterCard OnLine Web site, MasterCardWorldwide.com, and within various bulletins, manuals, and updates distributed directly to customers.


- **MasterCard Alerts**: Published on an as-needed basis, these notifications provide customers that may be impacted by a possible account data compromise event with background information and their own account numbers that MasterCard has deemed could be potentially at risk for fraud.

- **Global Security Bulletin**: The monthly publication serves as the primary source of updated security information for our customers’ data security personnel.

- **MasterCard Alerts Reporting Form**: This resource allows customers to submit information and accounts to MasterCard concerning potential account data compromise events. The accounts submitted are analyzed by MasterCard to determine fraud levels, at-risk time frames, and identify other accounts that may be subject to the potential compromise.

- **MasterCard Alerts Reading Room**: Customers can find a host of fraud prevention best practice overviews on global and region-specific topics ranging from skimming prevention techniques to payment terminal compromise mitigation strategies.

- **Portfolio Analytics**: This offering provides MasterCard customers with a comprehensive, web-based business intelligence portal that hosts a variety of reports, analysis, and valuable transaction information.
The following resources are available on MasterCardSecurity.com (along with PCI 360 and Site Data Protection Program details).

- **Merchant Point of Sale Terminal Security Program:** This program provides a list of MasterCard-approved Internet Protocol-enabled POS devices to help ensure the necessary level of protection for transaction and cardholder data at merchants that use equipment supporting the TCP/IP protocol suite.

- **Merchant Fraud Prevention Training:** This online training tool provides merchants with comprehensive easy to follow training for their in-store staff to help them identify and prevent fraudulent transactions at the point-of-sale.

- **Cardholder Fraud Prevention Education:** MasterCard offers a range of tips specifically for cardholders to help them keep their account data secure and to be able to identify and avoid common scams.

MasterCard Fraud Management Solutions, Products, and Services

MasterCard’s Fraud Management Solutions suite of cutting-edge products can help customers dramatically enhance their current fraud mitigation technological resources in a number of ways. MasterCard Fraud Management Solutions offerings address the fraud management continuum—consisting of prevention, detection, and recovery—in a way that allows for integration and customization of products and services based on the needs of individual customers.

**EXPERT MONITORING SOLUTIONS**

Expert Monitoring Solutions is a transaction risk-modeling, scoring and rule-based technology platform that offers fraud alerts and event management combined with data mining and information reporting capabilities. Expert Monitoring Solutions helps reduce fraud for organizations of any size and delivers fewer false positives than industry standards. Clients can opt to have the solution installed on their system or hosted by MasterCard.

- **Expert Monitoring with Real-Time Fraud Scoring Service:** MasterCard provides issuing customers with a real-time predictive fraud score on transactions at the time of the authorization request. The score indicates the measure of likelihood that the transaction contained in the authorization request is fraudulent or high risk. Unsurpassed in the industry, MasterCard’s fraud scoring service delivers increased fraud detection rates and fewer false positives.

- **Expert Monitoring Compromised Account Service:** As a complement to EMS with Real-Time Fraud Scoring, the MasterCard Compromised Account Service can notify issuing customers via a stand-in message when a primary account number used in a transaction was put at risk due to a suspected or confirmed account data compromise event. Issuers can integrate this real-time data into their existing fraud monitoring process and make decisions based on an account’s possible exposure to fraudulent activity as a result of a data compromise event.
Online Fraud Monitor for Debit Transactions: This offering includes a risk-scoring model that uses predictive analytics to instantly detect potential PIN-based debit fraud during the authorization process at a point-of-sale (POS) terminal or ATM. Online Fraud Monitor evaluates each authorization request, so customers can decide to approve or deny a transaction. When Online Fraud Monitor identifies suspicious transactions, an alert is created and delivered to a customer representative from MasterCard’s Expert Monitoring System via MasterCard OnLine. This rapid notification provides customers with the ability to analyze emerging trends and begin working cases as they arise.

The suite of MasterCard core services directly aimed at mitigating fraud and reducing issuer and acquirer losses can be briefly summarized as follows:

- MasterCard’s System to Avoid Fraud Effectively (SAFE): Is a centralized database to warehouse confirmed fraudulent transactions related to MasterCard credit and debit card transactions.
- Global Merchant Audit Program (GMAP): This program identifies merchants that are in violation of excessive fraud thresholds and have an unusually high fraud-to-sales volume ratio.
- Excessive Chargeback Program (ECP): Uses data from SAFE to monitor excessive chargebacks and fraud at all merchant locations.
- Common Point of Purchase (CPP): Uses data from SAFE to help identify merchant locations at which account data may have been compromised and subsequently used to effect fraudulent transactions at other points of interaction.
- Acquirer Fraud and Chargeback Liability Program: This program identifies members that fail to control adequately the ratio either of fraud volume or of chargeback count to sales, or both, for the MasterCard merchant portfolios.
- Fraud Management Program: MasterCard will strategically assess a customer’s or its service provider’s current capability to manage, anticipate, and protect against inherent internal and external risk across both issuing and acquiring portfolios. This comprehensive review also determines the effectiveness of existing fraud loss controls and other risk reduction measures in addition to providing critical insights on world and market best practice regarding fraud loss control standards. The two-day review is consultation-orientated, and is conducted onsite. Customers will receive a detailed gap
analysis report containing recommendations and benefits of critical findings based on the review. If required, the report will be supplemented by an action plan to guide in the implementation of the recommendations.

- **Fraud Reporter:** This reporting tool enables both issuers and acquirers to run standard online SAFE reports. Reports contain up-to-the-second data and can be generated immediately or on a schedule established by the user.

- **Compass Report:** In order to assist MasterCard members in mitigating fraud losses, MasterCard produces Compass; a quarterly publication presenting comprehensive fraud trends across a broad range of key fraud indicators.

### MasterCard Product Integration

Integrated within MasterCard’s fraud prevention solution set are additional fraud mitigation solutions that provide added value to the MasterCard relationship through enhanced processing functionality.

#### iNCONTROL

MasterCard inControl is an innovative platform that offers an array of advanced authorization, transaction routing and alert controls designed to enable commercial as well as consumer issuers to more quickly and cost-efficiently introduce products that give cardholders enhanced control over how and where their card is used. The inControl platform allows issuers to leverage both “off-the-shelf” solutions as well as create customized offerings depending on the needs of their customers.

#### MEMBER ALERT TO CONTROL HIGH RISK MERCHANTS (MATCH) PROGRAM

The MasterCard MATCH program is mandated for most acquirers that conduct merchant acquiring activity. This continually-updated, member-reporting database allows acquirers to access hundreds of thousands of merchants in order to identify potential high-risk merchants before entering into merchant agreements. This database lists merchants terminated by acquires for risk-related reasons, e.g., fraud, excessive chargebacks, money laundering violations, merchant agreement violations, etc.

#### BIN BLOCKING SERVICES

Issuers and issuer processors often lack robust blocking capabilities in their host and backup processing systems to prevent attacks against BINs. As a best practice, MasterCard has developed a set of blocking services geared to preventing fraud at every point in the transaction and BIN lifecycle.
Preserving the Integrity of the Payment System
Now and Into the Future

MasterCard is committed to protecting the integrity of the payment card industry and serving as a primary resource to help our customers around the world manage their ever-evolving fraud challenges. As part of that support, MasterCard will continue to offer a comprehensive set of fraud management resources, including dedicated risk professionals, innovative solutions, standards development, and consultative services to support our industry partners. The payments landscape is ever-changing with advancements in e-commerce, mobile payments, and other cutting-edge data technologies occurring at an unprecedented pace. Therefore, MasterCard will continue to promote and support a holistic fraud prevention approach that ensures cardholders continue to enjoy the ease of use and convenience they expect, while also maintaining their faith that their transactions are safe and secure.

Contact Information
For more information on MasterCard Fraud Management programs and services please visit www.mastercard.com/us/company/en/whatwedo/security_fraud_management.html or email: datasecurity@mastercard.com

MasterCard Worldwide is at the heart of commerce. Our understanding of how and why commerce is conducted allows us to create more advanced methods of payment that fuel economic connections and drive real business value.

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