

RISK MANAGEMENT

A Handbook dedicated for iPay88 Merchant



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CHAPTER I: INTRODUCTION

Overview

Charge-Back is the major challenge to all online merchants which caused online revenues lost over the past few years. This hand book is written to assist online merchant to minimize Charge-Back, based on the experience and findings.

Definition of Charge-Back

A Charge-back occurs when a buyer asks their credit card company to remove a charge from their credit card statement. The credit card company will ask the buyer to provide an explanation about why they are disputing the charge.

Two common reasons for Charge-back are:

- A buyer's credit card number is stolen and used fraudulently
- A buyer makes a purchase, but believes that the online merchant failed to fulfill their side of the agreement (e.g. did not ship the item, shipped an item that was very different from the online merchant's description, or the item was damaged when the buyer received it).

Loss Caused by Charge-Back

When the Charge-Back filed successfully against the merchant, the merchant needs to refund (the charge-back amount only) to the credit card holder. But, the product or service was delivered successfully to the consumer without get paid.

How to Know a Charge-Back Has Been Filed

When Mobile88 is notified that a buyer has filed a Charge-Back against the merchant, Mobile88 contacts the merchant as soon as possible via email or phone call.

Certain laws and credit card issuer policies usually allow buyers to file Charge-backs weeks or sometimes months after the initial transaction occur. If a buyer waits to file a Charge-back, the merchant may encounter a temporary hold on funds in their iPay88 account for a transaction that occurred weeks or months ago.

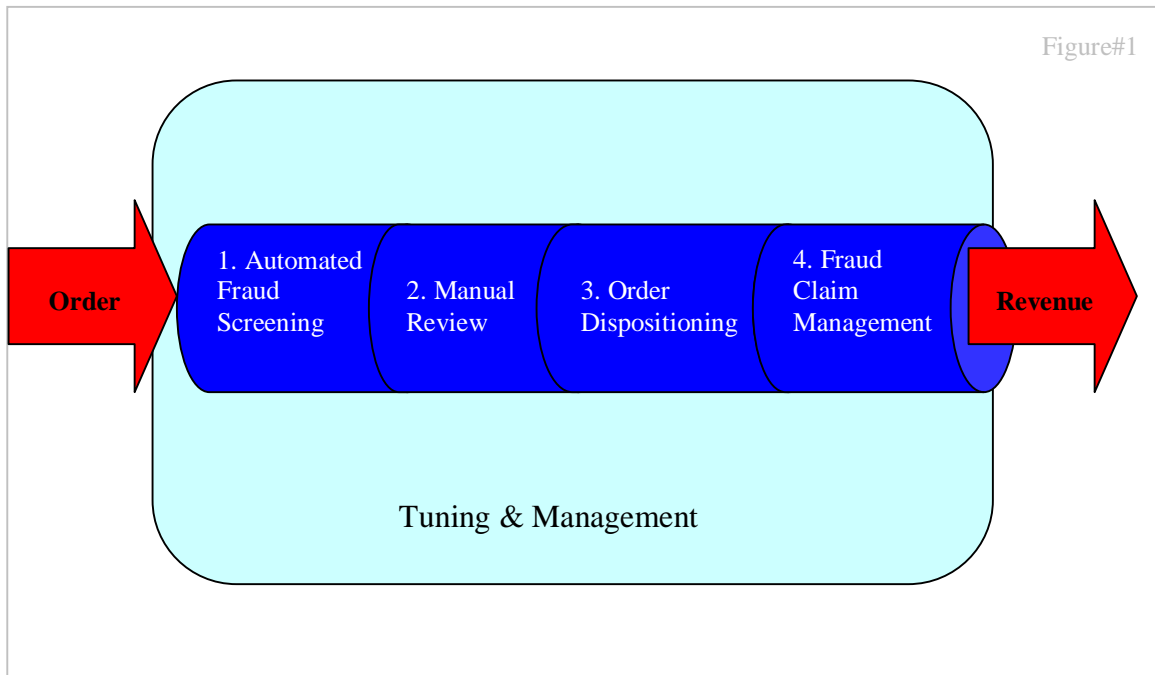
Risk Management Pipeline

Online payment fraud impacts profits from online sales in multiple ways. Besides direct revenue losses plus cost of stolen

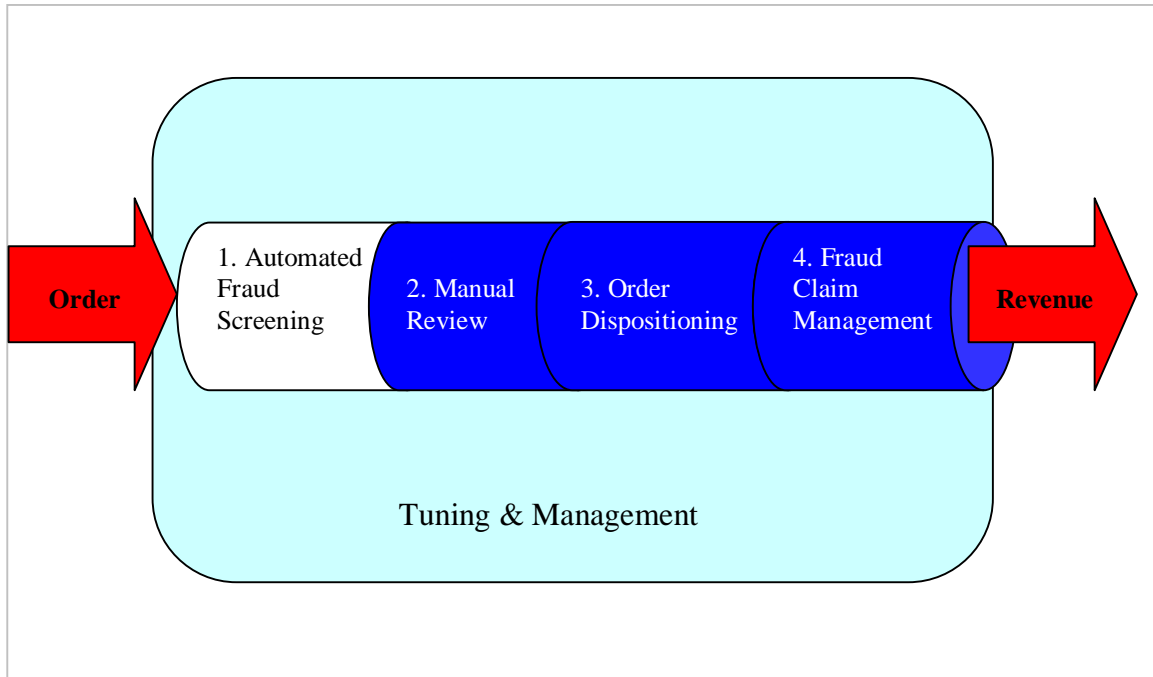


goods/services, there are the additional cost of delivery / fulfillment costs, Charge-Back penalty fee (if any) and administration of fraud claims.

The Risk Management Pipeline (See Figure#1) details key practices at each point to provide you with benchmarks and hopefully, insight.



CHAPTER II: AUTOMATED FRAUD SCREENING



Introduction

When the order received, the credit card payment transaction will be processed under iPay88 Credit Card Fraud Detection System. The fraud detection system is a service that automated with IP tracking technology (geo-location service provider) to reduce and prevent fraud for online merchants tremendously. By requesting several inputs, Fraud Detection will return fraud analysis results together with fraud score in real-time. This service can be used as an application to verify other processes where geographical information is available. The tools are not geared

towards verifying the authenticity of the credit card details used for the purchase, but rather, identifying if the purchaser is the legitimate card holder.

Key features include:

- Pinpoints the exact location of customers, with country, state, city, latitude and longitude and Internet Service Providers using IP address
- Verify whether the online buyer is behind anonymous proxy servers



- Verify whether the online buyer is using free anonymous email address
- Verify whether the online buyer is using a known mail drop or postal box
- Match between credit card Bank Identification Number (BIN) data and user-entered information
- Etc.

Please login iPay88 Online Report's All Transaction Report. (See Figure#2)

You are advisable to be more cautious when dealing with the transaction with high fraud score (>50%) and should implement customer verification on such transaction. The system just provides the fraud alert and it is ultimately up to you to decide accept or reject the transaction. The transaction with high fraud score

Figure#2

No	Date	Merchant RefNo	Payment Method	Amount	ProdDesc	UserName UserEmail UserContact	Remark	TransId AuthCode Credit Card	Status	ErrDesc	Fraud Score
1	28-3-2008 1:55:05 PM	P007105	CC	397.9	Sensored	Sensored		T0007541500 T25808 542124xxxxxxxx9855	Success		32%

Fraud Score

Fraud Score is directly proportional to the risk of the input values associated with each transaction, such as IP address, email address and billing address and so on. The higher the scores, the higher the risk of fraudulent transactions. The key factor to an accurate score is the IP address where the transaction originated from.

will be highlighted in RED (See Figure#3)

To view the detail of the fraud detection result, please click the fraud score (i.e. Click 32%) and you will see as shown in Figure#4.

Note:

The system provides and calculates the fraud score typically based on the data given. There is never a 100% guarantee that a low score is valid or that a high score will be fraudulent.

How to Check

Figure#3

3	25-6-2008 11:26:14 AM	113	INV00003077-2202	CC	320	Hotel China Town Inn Standard Ensuite 29/06/2008-03/07/2008 1 unit	YEUNG MEI HAR sy73@yahoo.com 0168811937	T0010376200 000875 496623xxxxxxxx9406	Success		32%
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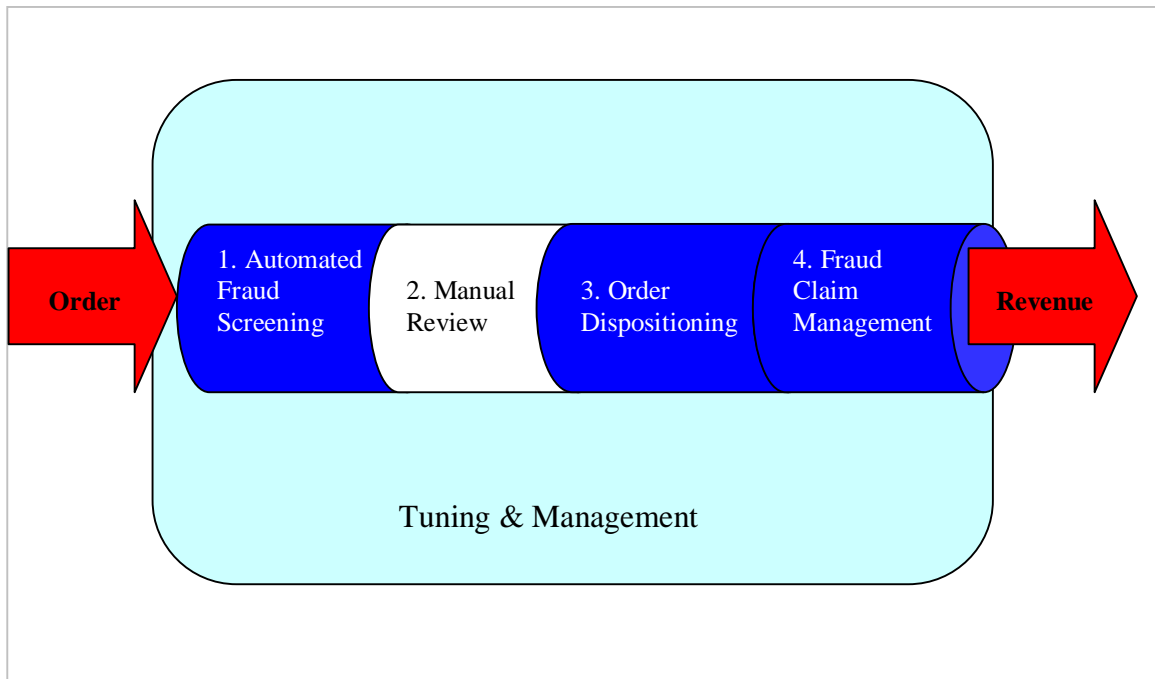


Figure#4

Result	
CLINE IP:	60.54.106.247
IP TO CITY:	SEREMBAN
IP TO COUNTRY:	MY
IP TO REGION:	NEGERI SEMBILAN
IP TO ISP:	TELEKOM MALAYSIA BERHAD
IP TO LATITUDE:	2.717
IP TO LONGITUDE:	101.933
HIGH RISK COUNTRY:	NO
BIN BANK NAME:	MALAYAN BANKING BERHAD
BIN COUNTRY:	MY
ANONYMOUS PROXY:	NO
FREE MAIL:	YES
FRAUD SCORE:	32
MESSAGE:	

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CHAPTER III: MANUAL REVIEW



Introduction

The second stage of Risk Management is Manual Order Review. Orders which do not pass the automated fraud screening stage typically enter a manual review queue. During this stage, additional information is collected about the order to determine if it should be accepted or rejected due to excessive fraud risk. Some fraudulent transactions may pass through the automated fraud screening successfully. Therefore, the merchant is advisable to do manual review on every order. But, the total number of orders that must be reviewed increases in step with the total increase of online sales.

The 3 common techniques of manual review are Customer Behavior Analysis, IP Geolocation Analysis and Customer Verification.

Customer Behavior Analysis

Analyzing your customer buying behavior and website traffic for fraud analysis in order to profile how fraudsters navigate a website as compare to valid customers. The following are some of samples of potential fraud pattern:

- Buy in large quantity / amount at the first time



- Using same card number with different usernames to attempt payment processing
- Using many card numbers to attempt payment processing
- Have a record to use Pick Up Card or Stolen Card
- A visitor to an online store and went to checkout in just a few seconds
- Orders from your non-targeted market (i.e. You are targeting Malaysia market only but suddenly receive order from other country)
- Orders from high risk countries such as Yugoslavia, Nigeria, Romania, Pakistan, Indonesia, Macedonia, Bulgaria, Ukraine, Lebanon and Lithuania.

Note:

International Order Risk is 2 ½ Times higher than Domestic Orders.

IP Geolocation Analysis

IP Geolocation can help you to identify your customers' geographical location such as country, region, city, latitude and longitude using a proprietary IP address lookup database and technology without invading Internet user's privacy.

The IP Geolocation information provided by iPay88 Fraud Detection system can assist you in the following analysis:

Figure#5

Result	
CLINE IP:	60.48.102.204
IP TO CITY:	KUALA LUMPUR
IP TO COUNTRY:	MY
IP TO REGION:	WILAYAH PERSEKUTUAN
IP TO ISP:	TELEKOM MALAYSIA BERHAD
IP TO LATITUDE:	3.167
IP TO LONGITUDE:	101.7
HIGH RISK COUNTRY:	NO
BIN BANK NAME:	HSBC BANK MALAYSIA BERHAD
BIN COUNTRY:	MY
ANONYMOUS PROXY:	NO
FREE MAIL:	NO
FRAUD SCORE:	0
MESSAGE:	

(A) Matching Between Customer Location and Billing Address

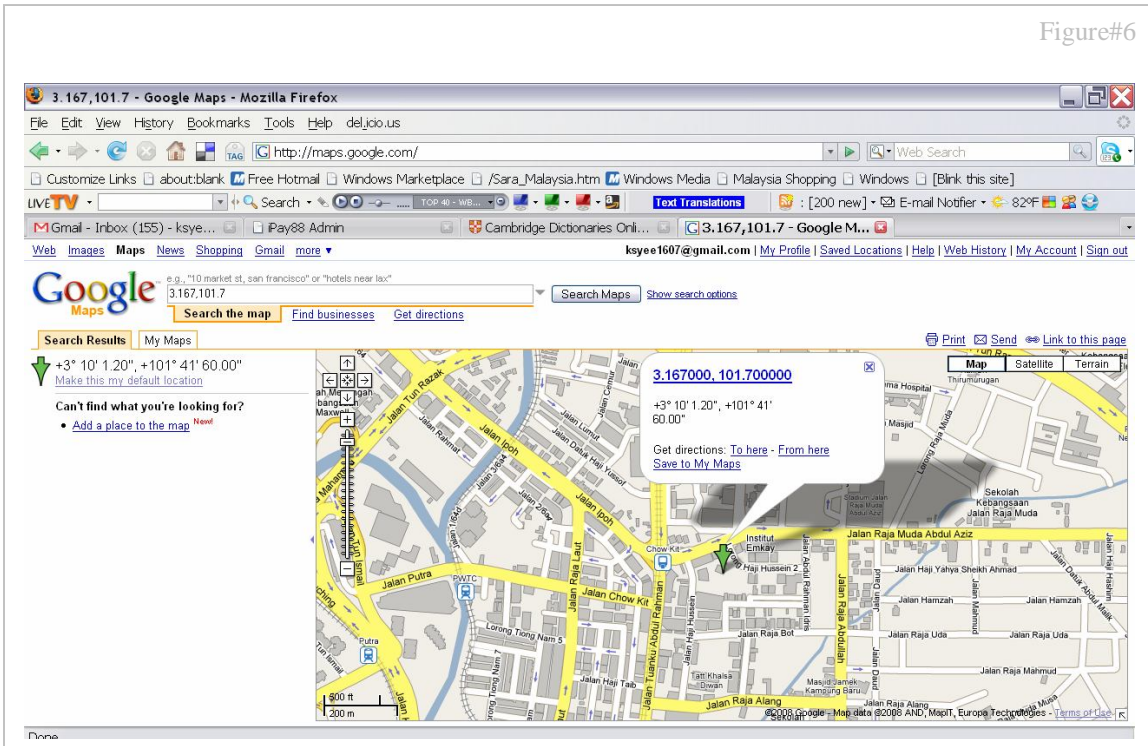
With the given latitude and longitude (see Figure#5), you can check the customer location by searching the location via Google Map at <http://maps.google.com>.

Example:

Enter 3.167, 101.7 at "Search Map" Column and click [Search Map] button. The result will be shown as Figure#6.

The map searching result (the Green Arrow) shows that the customer is around Chow Kit areas, Kuala Lumpur, Malaysia. Therefore, you can use this information to match with the given billing address by the customer.

Figure#6



If not match (i.e. billing address is Pulau Tikus, Pulau Pinang), the potential of fraud for the particular transaction. But sometimes it may caused by the customer purchase during traveling or purchase in their office or purchase for their love one. Customer Verification is required here.

Note:

In most of the cases only an Internet Service Provider’s address (the nearest Internet Hub used) is returned so the ultimate geographic location of the device remains unknown. Fraudster may also employ anonymizers / proxy servers to hide their true IP address and location.

Knowledgebase:

An anonymous proxy server (sometimes called a web proxy) generally attempts to anonymize web surfing.

(B) Matching Between BIN Country and IP to City

Example 1:

IP TO COUNTRY: MY
 BIN COUNTRY: MY
 Result: Matched
 Conclusion: Low Risk



Result	
CLINE IP:	60.48.102.204
IP TO CITY:	KUALA LUMPUR
IP TO COUNTRY:	MY
IP TO REGION:	WILAYAH PERSEKUTUAN
IP TO ISP:	TELEKOM MALAYSIA BERHAD
IP TO LATITUDE:	3.167
IP TO LONGITUDE:	101.7
HIGH RISK COUNTRY:	NO
BIN BANK NAME:	HSBC BANK MALAYSIA BERHAD
BIN COUNTRY:	MY
ANONYMOUS PROXY:	NO
FREE MAIL:	NO
FRAUD SCORE:	0
MESSAGE:	

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card belongs to as well as which bank issued it.

Customer Verification

Customer verification is a process where online buyers are asked some questions to detect the potential fraud. First, please match Card Holder Name with Username of your customer. If doesn't match, then the risk is very high. Online merchant is advisable to contact online buyer (especially new customer) via phone call (land line number preferable). If the given number cannot be contacted (i.e. the number was terminated OR no such phone number), the chances of fraud payment is very high.

Example 2:

IP TO COUNTRY: MY
 BIN COUNTRY: US
 Result: Not Matched
 Conclusion: High Risk
 Potential Reason: An American working in Malaysia

Result	
CLINE IP:	60.52.190.225
IP TO CITY:	KUALA LUMPUR
IP TO COUNTRY:	MY
IP TO REGION:	WILAYAH PERSEKUTUAN
IP TO ISP:	TELEKOM MALAYSIA BERHAD
IP TO LATITUDE:	3.167
IP TO LONGITUDE:	101.7
HIGH RISK COUNTRY:	NO
BIN BANK NAME:	BANK OF AMERICA, N.A.
BIN COUNTRY:	US
ANONYMOUS PROXY:	NO
FREE MAIL:	YES
FRAUD SCORE:	32
MESSAGE:	

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Question online buyer on BIN BANK NAME and BIN COUNTRY can help in most of the cases. If they:

- (a) Cannot answer you, then they are not holding the card
- (b) Refuse to answer, then they are not genuine customer
- (c) Answer wrongly, then they are not holding the card

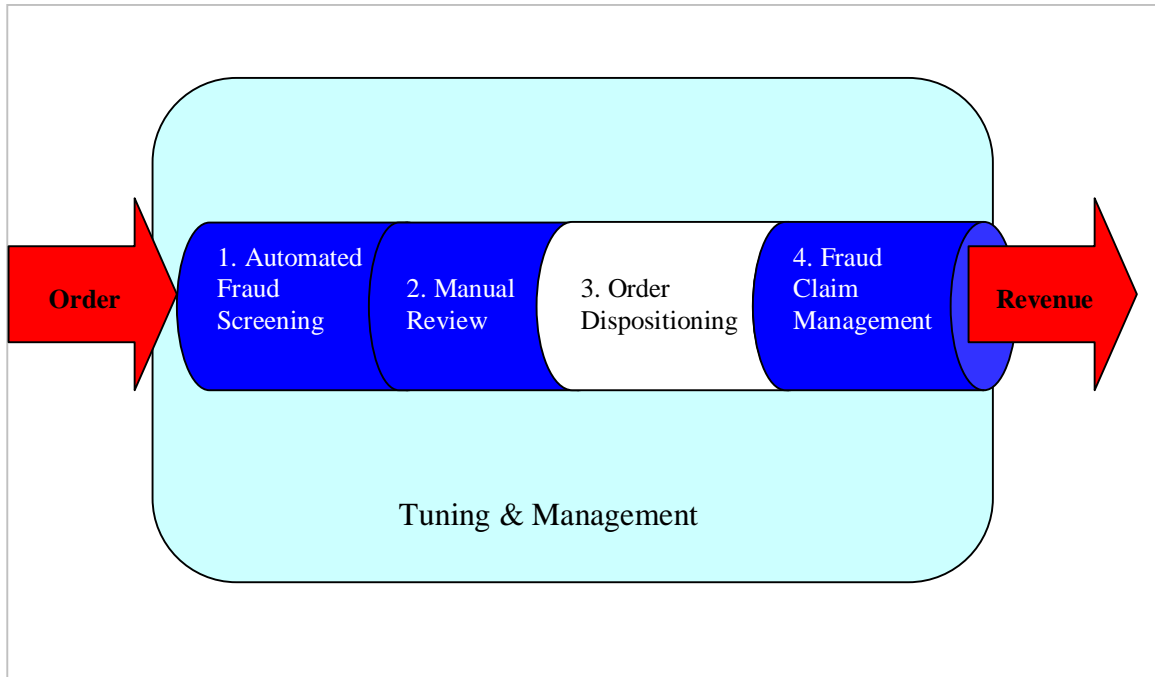
Knowledgebase:

BIN refers to Bank Identification Numbers. It is the first six digits of a credit card, debit card, charge card, etc. Basically the first part shows the location and the second identifies the bank itself. In sort, these digits identify which network the

Advice:

Merchant to clear order in manual review within 1-2 working days.

CHAPTER IV: ORDER DISPOSITIONING

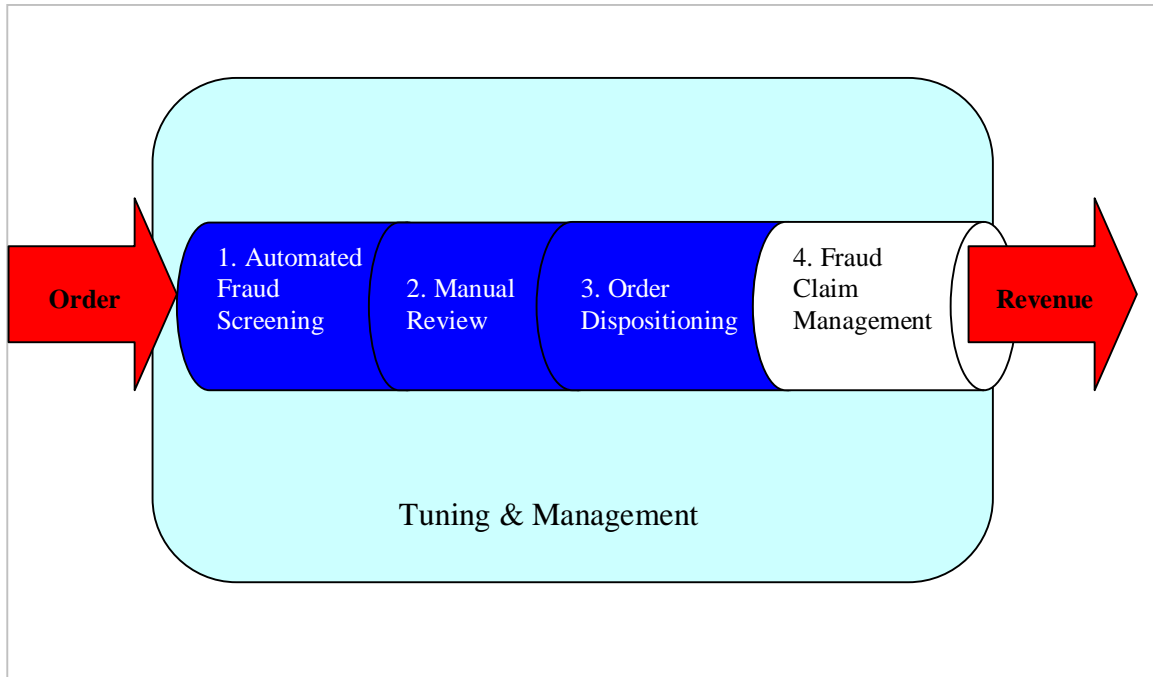


After the order went through the first and second stage, is time for merchant to decide whether **Accept** or **Reject** the order based on the result received and information collected. Merchant should allow online buyer to take not more than 3 working days to response during Customer Verification process. No response from buyer after 3 working days is considered fraudulent order and merchant should reject that order.

Note:

If you still not comfortable with particular online transaction, you may request iPay88 Support Team to seek help from bank to verify card holder on the purchase. Due to this verification involves few external parties which are out of iPay88 control, the verification result may not be received immediately, sometimes will take more than 7 days or totally no reply from Card Issuer, especially Card Issuer from other countries.

CHAPTER V: FRAUD CLAIM MANAGEMENT



Introduction

When a Charge-back occurs, the money that is subject to the Charge-Back is deducted from Mobile88's bank account. In turn, Mobile88 places a temporary hold on the same amount in the merchant's iPay88 balance (i.e., the funds related to the transaction are frozen).

The merchant and Mobile88 can work together to investigate the Charge-Back with the buyer's credit card company. While the Charge-back is being investigated, Mobile88 will debit the merchant for the amount in question. If the investigation is resolved in favor of the

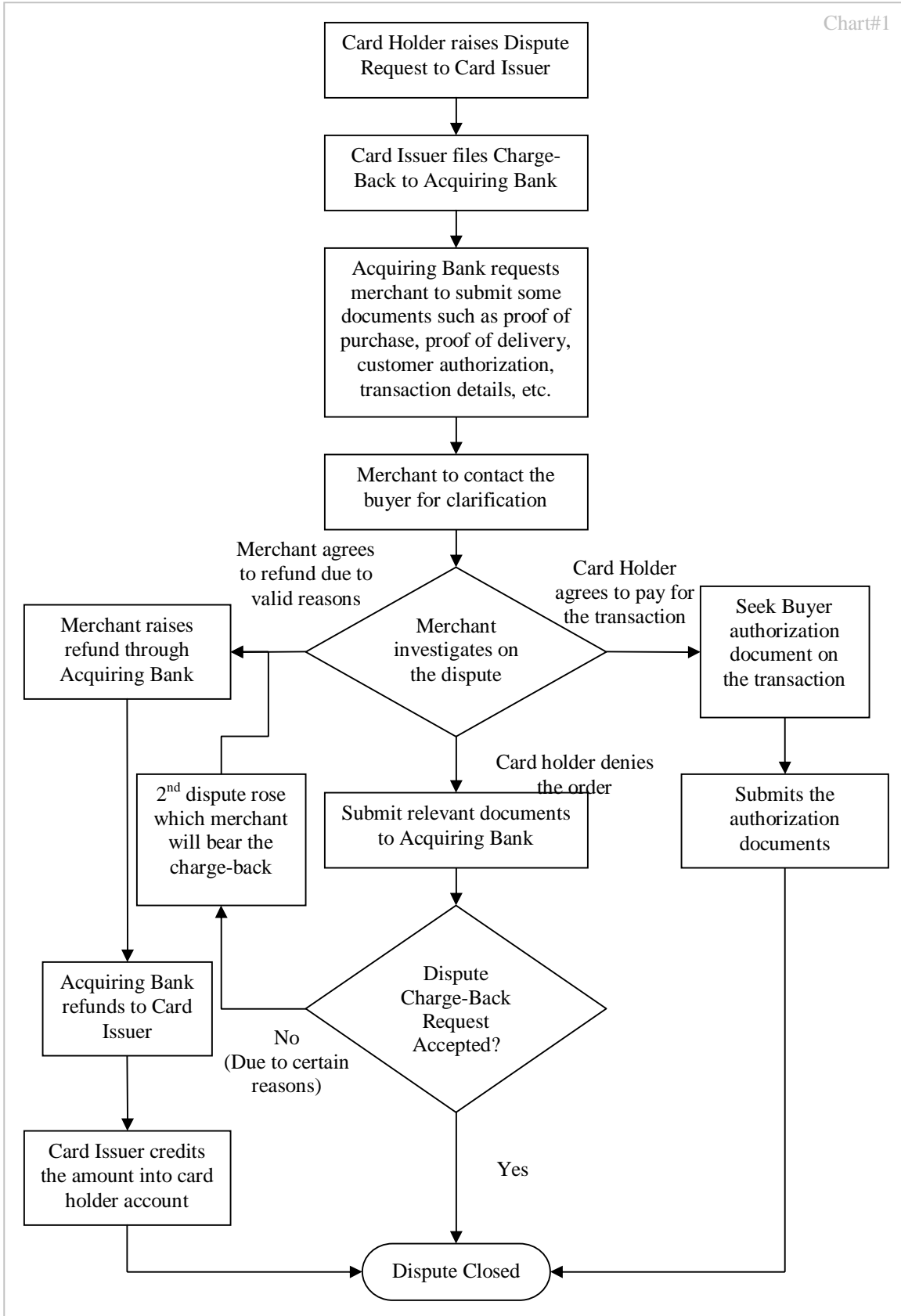
merchant with the credit card company, the credit card company will reimburse Mobile88 for the Charge-back and Mobile88 will transfer the recovered funds back to the merchant. Depending on the credit card company involved, the process may take up to 75 calendar days. In a dispute over a Charge-back, the decision is ultimately made by the credit card company and Mobile88 cannot control the outcome.

The Process of Charge-Back Handling

See Chart#1.



Chart#1





How the Investigation Work

Merchant can provide iPay88 with evidence to dispute the Charge-back through fax or email. Mobile88 uses this evidence plus any evidence Mobile88 may already have to investigate the Charge-Back with the buyer's credit card company. Because of deadlines imposed by the credit card companies, merchant must respond quickly (usually within three calendar days) once they are notified of a Charge-back. Response deadlines can be found in the email Mobile88 sends to the merchant when notifying them of a Charge-back.

Mobile88 reserves the right not to dispute a Charge-back even if the merchant has provided some evidence, particularly if Mobile88 believes the dispute is not likely to be successful.

Information Required to a Dispute Charge-Back

The merchant should provide the following information to Mobile88 to increase the chances of winning a Charge-back:

- Proof of postage or delivery, such as online tracking numbers
- Copies of the original item description or auction description, including any photos

- Proof that the buyer was already refunded
- Proof that the buyer was provided with a replacement product
- Correspondence with the buyer or feedback from the buyer
- Any agreements signed or accepted by the buyer at time of purchase
- Any returns policy that was communicated to the buyer

Some Best Practices For Avoiding Charge-Back

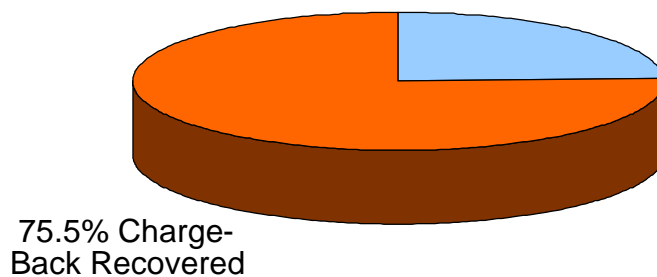
- Follow the Seller Protection Policy guidelines by retaining proof of postage that can be tracked online and delivering to the buyer's address listed on the Transaction Details page.
- Describe the item that you are selling in as much detail as possible and as accurately as possible. Include pictures, measurements (if applicable) and other relevant specifics.
- Make every effort to know your customer and to respond promptly to any customer service requests.
- Keep as much information as you can about the transaction and your



customer, including any emails or other correspondence.

- Publish your return policy in your auction listings or on your website. Also include your policy in email correspondence with your customer. Please note that certain laws and credit card issuer policies provide that buyers may have Charge-back rights for merchandise that is not delivered or is defective, even if your policy indicates that all sales are final and that you do not allow returns.

Three Out of Four Charge-Back Can Be Recovered





CHAPTER VI: TUNING & MANAGEMENT

The business manager should review the Risk Management Pipeline flow from time to time. A good review of the flow can assist the manager to modify the decision rules to tailor the rules to new products and adapt to new fraud trends as they are encountered. Thus, the manager can improve their methods of identifying riskier orders and make the process of manual review more efficient. Besides, along the review process the manager will learn how to prioritize their time in manual review process, such as spending more time trying to verify a few orders that look highly suspicious and spending less time on the remaining orders.

On other hand, the manager should tailor the manual review process to the growth of online sales. For the foreseeable future, the manager may need to take at least one of the following actions:

1. Divert more staff time to the order review process;
2. Increase Staffing levels;
3. Allow more time to process orders and ship good ones.

to face the manual order review challenge.

-----END-----

APPENDIX

Country Code

Country	Code	Continent
Afghanistan	AF	Asia
Albania	AL	Europe
Algeria	DZ	Africa
American Samoa	AS	Oceania / Australia
Andorra	AD	Europe
Angola	AO	Africa
Antarctica	AQ	Oceania / Australia
Argentina	AR	Latin American / Caribbean
Armenia	AM	Asia
Australia	AU	Oceania / Australia
Austria	AT	European Union
Azerbaijan	AZ	Asia
Bahrain	BH	Middle East
Bangladesh	BD	Asia
Belarus	BY	Europe
Belgium	BE	European Union
Benin	BJ	Africa
Bermuda (UK)	BM	North America
Bhutan	BT	Asia
Bolivia	BO	Latin American / Caribbean
Bosnia-Herzegovina	BA	Europe
Botswana	BW	Africa
Brazil	BR	Latin American / Caribbean
Brunei Darussalam	BN	Asia
Bulgaria	BG	European Union
Burkina Faso	BF	Africa
Burundi	BI	Africa
Cambodia	KH	Asia
Cameroon	CM	Africa
Canada	CA	North America
Cape Verde	CV	Africa
Central African Rep.	CF	Africa
Chad	TD	Africa
Chile	CL	Latin American / Caribbean
China	CN	Asia
Christmas Island (AU)	CX	Oceania / Australia
Cocos (Keeling) Islands (AU)	CC	Oceania / Australia
Colombia	CO	Latin American / Caribbean
Comoros	KM	Africa
Congo	CG	Africa



Country	Code	Continent
Congo, Dem. Rep.	CD	Africa
Cook Islands	CK	Oceania / Australia
Costa Rica	CR	Latin American / Caribbean
Cote d'Ivoire	CI	Africa
Croatia	HR	Europe
Cuba	CU	Latin American / Caribbean
Cyprus	CY	European Union
Czech Republic	CZ	European Union
Denmark	DK	European Union
Djibouti	DJ	Africa
Dominican Republic	DO	Latin American / Caribbean
East Timor	TP	Asia
Ecuador	EC	Latin American / Caribbean
Egypt	EG	Africa
El Salvador	SV	Latin American / Caribbean
Equatorial Guinea	GQ	Africa
Eritrea	ER	Africa
Estonia	EE	European Union
Ethiopia	ET	Africa
Faroe Islands (DK)	FO	Europe
Fiji	FJ	Oceania / Australia
Finland	FI	European Union
France	FR	European Union
French Polynesia	PF	Oceania / Australia
Gabon	GA	Africa
Gambia	GM	Africa
Georgia	GE	Asia
Germany	DE	European Union
Ghana	GH	Africa
Gibraltar (UK)	GI	Europe
Greece	GR	European Union
Greenland (DK)	GL	North America
Guam	GU	Oceania / Australia
Guatemala	GT	Latin American / Caribbean
Guernsey & Alderney (UK)	GG	Europe
Guinea	GN	Africa
Guinea-Bissau	GW	Africa
Honduras	HN	Latin American / Caribbean
Hong Kong	HK	Asia
Hungary	HU	European Union
Iceland	IS	Europe
India	IN	Asia
Indonesia	ID	Asia
Iran	IR	Middle East
Iraq	IQ	Middle East
Ireland	IE	European Union



Country	Code	Continent
Israel	IL	Middle East
Italy	IT	European Union
Japan	JP	Asia
Jersey (UK)	JE	Europe
Jordan	JO	Middle East
Kazakhstan	KZ	Asia
Kenya	KE	Africa
Kiribati	KI	Oceania / Australia
Kuwait	KW	Middle East
Kyrgyzstan	KG	Asia
Laos	LA	Asia
Latvia	LV	European Union
Lebanon	LB	Middle East
Lesotho	LS	Africa
Liberia	LR	Africa
Libya	LY	Africa
Liechtenstein	LI	Europe
Lithuania	LT	European Union
Luxembourg	LU	European Union
Macao	MO	Asia
Macedonia (FYR)	MK	Europe
Madagascar	MG	Africa
Malawi	MW	Africa
Malaysia	MY	Asia
Maldives	MV	Asia
Mali	ML	Africa
Malta	MT	European Union
Man, Isle of (UK)	IM	Europe
Marshall Islands	MH	Oceania / Australia
Mauritania	MR	Africa
Mauritius	MU	Africa
Mayotte (FR)	YT	Africa
Mexico	MX	Latin American / Caribbean
Micronesia (Federated States)	FM	Oceania / Australia
Moldova	MD	Europe
Monaco	MC	Europe
Mongolia	MN	Asia
Montenegro	ME	Europe
Morocco	MA	Africa
Mozambique	MZ	Africa
Myanmar	MM	Asia
Namibia	NA	Africa
Nauru	NR	Oceania / Australia
Nepal	NP	Asia
Netherlands	NL	European Union
New Caledonia (FR)	NC	Oceania / Australia



Country	Code	Continent
New Zealand	NZ	Oceania / Australia
Nicaragua	NI	Latin American / Caribbean
Niger	NE	Africa
Nigeria	NG	Africa
Niue	NU	Oceania / Australia
Norfolk Island (AU)	NF	Oceania / Australia
North Korea	KP	Asia
Northern Marianas Islands (US)	MP	Oceania / Australia
Norway	NO	Europe
Oman	OM	Middle East
Pakistan	PK	Asia
Palau	PW	Oceania / Australia
Palestine (West Bk.)	PS	Middle East
Panama	PA	Latin American / Caribbean
Papua New Guinea	PG	Oceania / Australia
Paraguay	PY	Latin American / Caribbean
Peru	PE	Latin American / Caribbean
Philippines	PH	Asia
Pitcairn Islands (UK)	PN	Oceania / Australia
Poland	PL	European Union
Portugal	PT	European Union
Puerto Rico	PR	Latin American / Caribbean
Qatar	QA	Middle East
Reunion (FR)	RE	Africa
Romania	RO	European Union
Russia	RU	Europe
Rwanda	RW	Africa
Saint Helena (UK)	SH	Africa
Samoa	WS	Oceania / Australia
San Marino	SM	Europe
Sao Tome & Principe	ST	Africa
Saudi Arabia	SA	Middle East
Senegal	SN	Africa
Serbia	RS	Europe
Seychelles	SC	Africa
Sierra Leone	SL	Africa
Singapore	SG	Asia
Slovakia	SK	European Union
Slovenia	SI	European Union
Smaller Territories (4)	-	Oceania / Australia
Solomon Islands	SB	Oceania / Australia
Somalia	SO	Africa
South Africa	ZA	Africa
South Korea	KR	Asia
Spain	ES	European Union
Sri Lanka	LK	Asia



Country	Code	Continent
St. Pierre & Miquelon (FR)	PM	North America
Sudan	SD	Africa
Svalbard & Jan Mayen Islands (NO)	SJ	Europe
Swaziland	SZ	Africa
Sweden	SE	European Union
Switzerland	CH	Europe
Syria	SY	Middle East
Taiwan	TW	Asia
Tajikistan	TJ	Asia
Tanzania	TZ	Africa
Terres Australes	-	Oceania / Australia
Thailand	TH	Asia
Togo	TG	Africa
Tokelau	TK	Oceania / Australia
Tonga	TO	Oceania / Australia
Tunisia	TN	Africa
Turkey	TR	Europe
Turkmenistan	TM	Asia
Tuvalu	TV	Oceania / Australia
Uganda	UG	Africa
Ukraine	UA	Europe
United Arab Emirates	AE	Middle East
United Kingdom	UK	European Union
United States	US	North America
Uruguay	UY	Latin American / Caribbean
Uzbekistan	UZ	Asia
Vanuatu	VU	Oceania / Australia
Vatican City State	VA	Europe
Venezuela	VE	Latin American / Caribbean
Vietnam	VN	Asia
Wallis & Futuna Islands (FR)	WF	Oceania / Australia
Western Sahara	EH	Africa
Yemen	YE	Middle East
Zambia	ZM	Africa
Zimbabwe	ZW	Africa