



Cards and e-commerce payments in Macedonia

*Ohrid
June 2012*

Payment cards in Macedonia

- All 16 banks work with payment cards, from which 15 are members of international card schemes (Visa/MasterCard/American Express): 12 MC members, 12 Visa members, 9 MC and Visa members and 1 American Card member. There is Diners club servicing Diners cards.
- There are private banking cards which mutual acceptance between the banks is regulated with an agreement. 7 banks are issuers of these cards, 12 are acquirers.
- Card processors services are used by all 16 banks, while 2 have their own in-house processing solutions. Processors that service domestic banks are: Casys, FirstData Slovakia, FirstData Hellas, Quipy Germany and Bankart Slovenia.
- In-house card personalization bureaus have 3 banks, while others are serviced by personalization bureaus of Casys, FirstData Hellas, Oberthur, Procredit corporate perso bureau.

Incentives

So far

- Salaries schemes connected with payment cards of the public administration
- Canceling guaranteed cheques
- Introduction of transactional accounts
- Pension payments through transactional accounts
- Membership of banks in international card schemes
- Implementing contemporary technologies in banking system









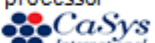

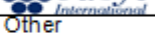






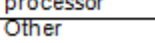

Future

- Domestic national net settlement within payment card transactions
- Implementing value added services (new card products, additional functions of the terminals, new payment channels)
- Increasing points of acceptance of the cards by installing new terminals
- Paying with cards for state and local government services

Payment cards in Macedonia

- Almost full EMV acquiring
- Almost full EMV issuing
- 20 % credit cards, 76 % debit cards, 4 % cash cards
- Installments
- Cobranding cards with loyalty features (offline points collecting and awarding on monthly level)
- ATM advertisement
- ATM: balance inquiry, PIN change, bill payments, top up, credit payments, transfers
- SMS notifications
- E-commerce, 3D secure supported
- Low level of frauds
- MasterCard settlement: IntraCountry Settlement Service, MC performs in NBRM
- Visa settlement: NNSS (National Net Settlement Service), Visa performs in Stopanska bank
- Private banking cards settlement, Casys performs in NBRM

Payment cards in Macedonia

	 issuing + ATM acquiring	 merchant acquiring	 issuing + ATM acquiring	 merchant acquiring	 e- commerce acquiring	 e- commerce acquiring	American Express	Diners	Domestic card issuing	Domestic card acquiring	Processor
Komerrijalna Bank	√	√	√	√	√	√					In-house 
Stopanska Bank	√	√	√	√	√	√				√	In-house 
NLB Tutunska Bank	√	√	√	√	√				√	√	Other processor 
Unj Bank	√	√	√	√	√	√				√	
Halk Bank	√	√	√	√	√	√				√	
TTK Bank			√						√	√	Other processor 
Stopanska Bank Bitola			√						√	√	
Postenska Bank									√	√	
Eurostandard Bank	√								√	√	
Centralna Kooperativna Bank	√	√	√						√	√	
Sparkasse Bank	√	√	√		√					√	
Capital Bank	√	√								√	
Alfa Bank			√				√				Other processor
Procredit Bank	√		√	√							Other processor
Ohridska Bank	√	√	√								Other processor
Ziraat Bank	√	√							√	√	
Diners								√			In-house

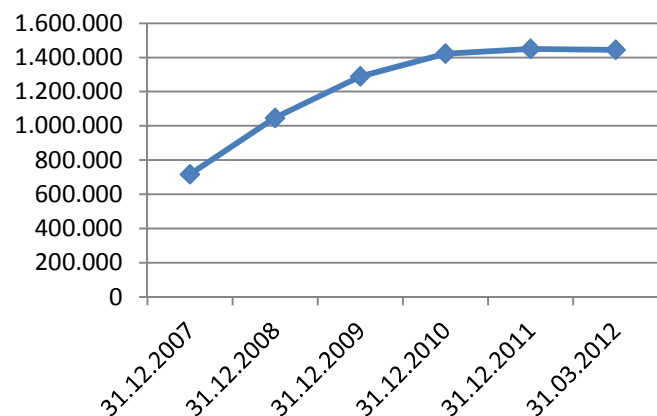
Growth of payment cards in Macedonia 2007-2011

	Cards
31.12.2007	716.611
31.12.2008	1.047.498
31.12.2009	1.289.317
31.12.2010	1.422.339
31.12.2011	1.450.345
31.03.2012	1.444.812

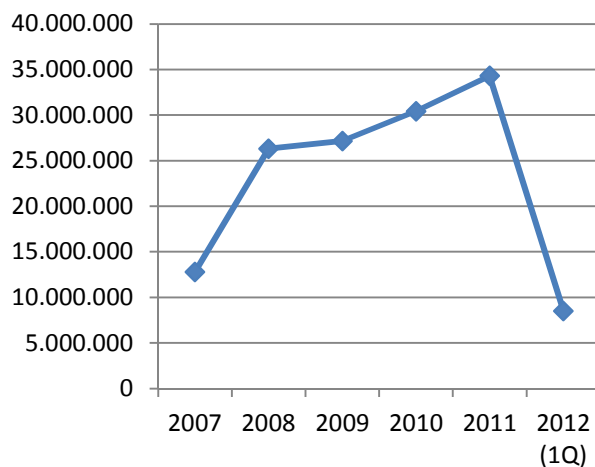
	Transactions
2007	12.786.989
2008	26.324.370
2009	27.159.368
2010	30.426.276
2011	34.309.608
2012 (1Q)	8.516.857

	Transations amount
2007	49.444.484.269
2008	113.209.652.529
2009	93.315.431.063
2010	101.425.212.201
2011	111.045.840.363
2012 (1Q)	27.005.314.648

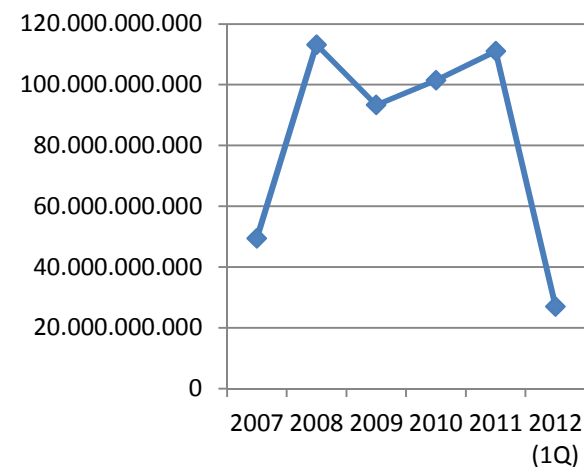
Cards



Transactions



Transations amount

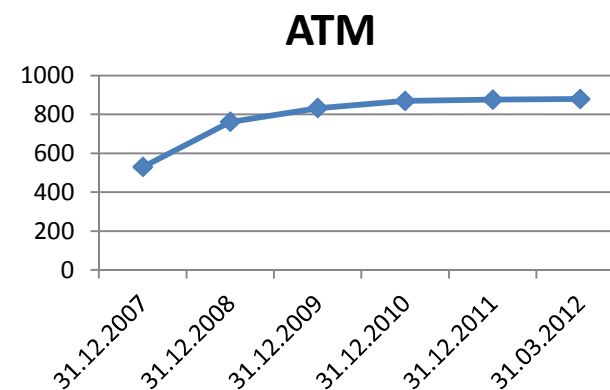
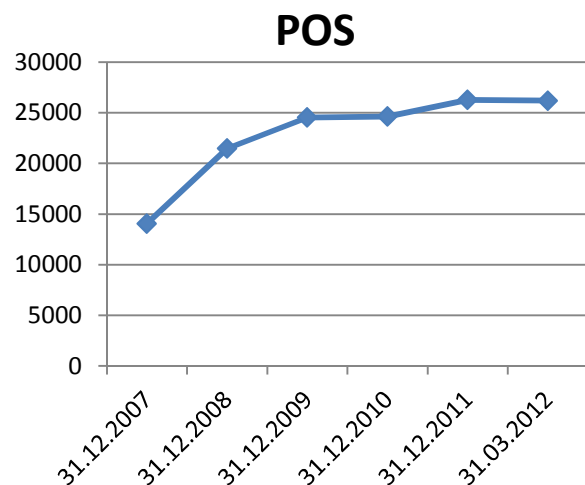
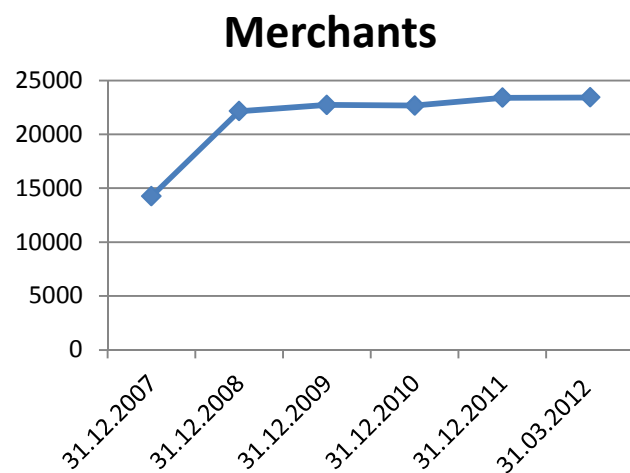


Growth of payment cards in Macedonia 2007-2011

	Merchants
31.12.2007	14243
31.12.2008	22152
31.12.2009	22724
31.12.2010	22668
31.12.2011	23392
31.03.2012	23430

	POS
31.12.2007	14056
31.12.2008	21465
31.12.2009	24538
31.12.2010	24634
31.12.2011	26266
31.03.2012	26189

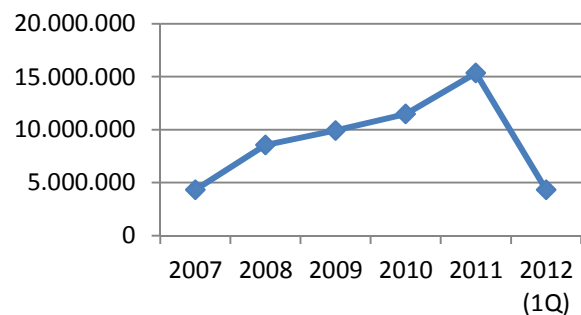
	ATM
31.12.2007	529
31.12.2008	761
31.12.2009	832
31.12.2010	869
31.12.2011	876
31.03.2012	879



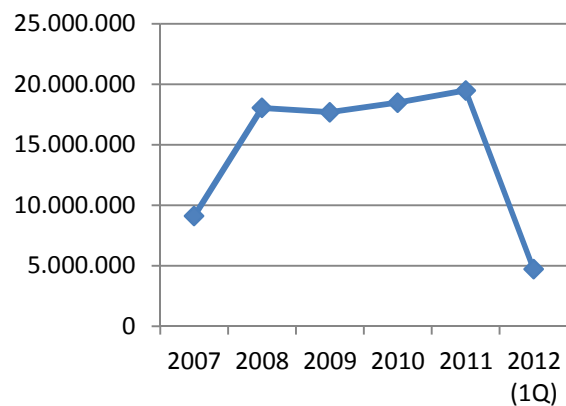
Growth of payment cards in Macedonia 2007-2011

POS transactions		ATM transactions	
2007	4.316.625	2007	9.097.454
2008	8.547.111	2008	18.046.730
2009	9.915.284	2009	17.685.225
2010	11.469.180	2010	18.482.116
2011	15.344.151	2011	19.477.888
2012 (1Q)	4.322.208	2012 (1Q)	4.732.673

POS transactions



ATM transactions



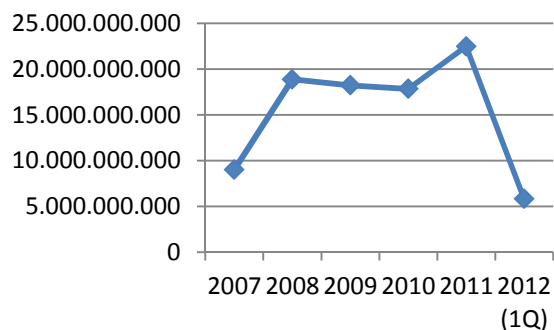
- 44% POS transactions, 2011
- 56% ATM transactions, 2011

Growth of payment cards in Macedonia 2007-2011

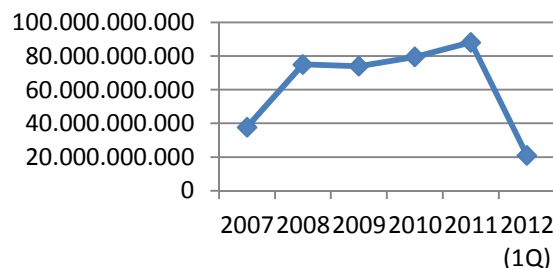
	POS transactions amount
2007	8.999.327.996
2008	18.858.943.769
2009	18.225.355.893
2010	17.838.294.571
2011	22.457.646.907
2012 (1Q)	5.812.126.291

	ATM transactions amount
2007	37.727.545.627
2008	75.033.969.072
2009	73.938.115.520
2010	79.468.028.778
2011	88.089.519.660
2012 (1Q)	20.871.593.070

POS transactions amount



ATM transactions amount



- 19% POS transactions amount in total card transaction amount , 2011
- 81% ATM transaction amount in total card transaction amount , 2011

About CaSys

- Independent card processor that offers services of e-payments with cards to banks and non-financial institutions
- 2001/2002-establishment of the company
- 2004/05-Certified MasterCard MSP and Visa TPP for operating with chip cards as well as supports domestic card schemes
- 2007-signed Multilateral agreement between banks and Casys for mutual acceptance of private banking cards
- 2008-CaSys BG is established as disaster recovery site of CaSys International which enables business continuity of services
- 2008-MasterCard SecureCode e-commerce payment gateway is certified
- 2009-Visa VerifiedByVisa e-commerce payment gateway is certified
- 2010-Certified MasterCard MSP for transactions performed by contactless cards (PayPass)
- 2011- Representative office of CaSys in Albania is opened
- 2012-Certified Visa TPP for transactions performed by contactless cards (PayWave)
- 2012-Services mobile payments (NFC)

CaSys services are used by following banks:

- NLB Tutunska Bank Skopje
- Export & Credit Bank Skopje
- Postenska Bank Skopje
- Eurostandard Bank Skopje
- Sparkasse Bank Makedonija
- Stopanska Banka Bitola
- Stopanska Banka Skopje (member of NBG Group)
- CCB Bank Skopje
- TTK Bank Skopje
- Uni Bank Skopje
- Kapital Bank Skopje
- Commercial Bank Skopje
- First Investment Bank Sofia - Bulgaria
- First Investment Bank – Albania
- CrediBul Sofia
- Diners Bulgaria
- Ziraat Bank Skopje
- ProCredit Bank Skopje



Technical Resources

Software Solutions

- ✿ ACI Base 24 for Front Office
- ✿ ACI CMS for BackOffice

Hardware Solutions

- ✿ HP/Tandem machine,
- ✿ HSM Thales,
- ✿ CIM and Matica machines for personalization, and
- ✿ P3 Thales for chip personalization

Services

- ✿ Switching, authorization and processing of transactions
- ✿ Card personalization and PIN generation
- ✿ Clearing and settlement
- ✿ Dispute transaction processing
- ✿ Key management
- ✿ Management and monitoring of ATM/POS network
- ✿ Multilanguage customer support center, 24 hours a day, 365 days a year

Certificates/roles

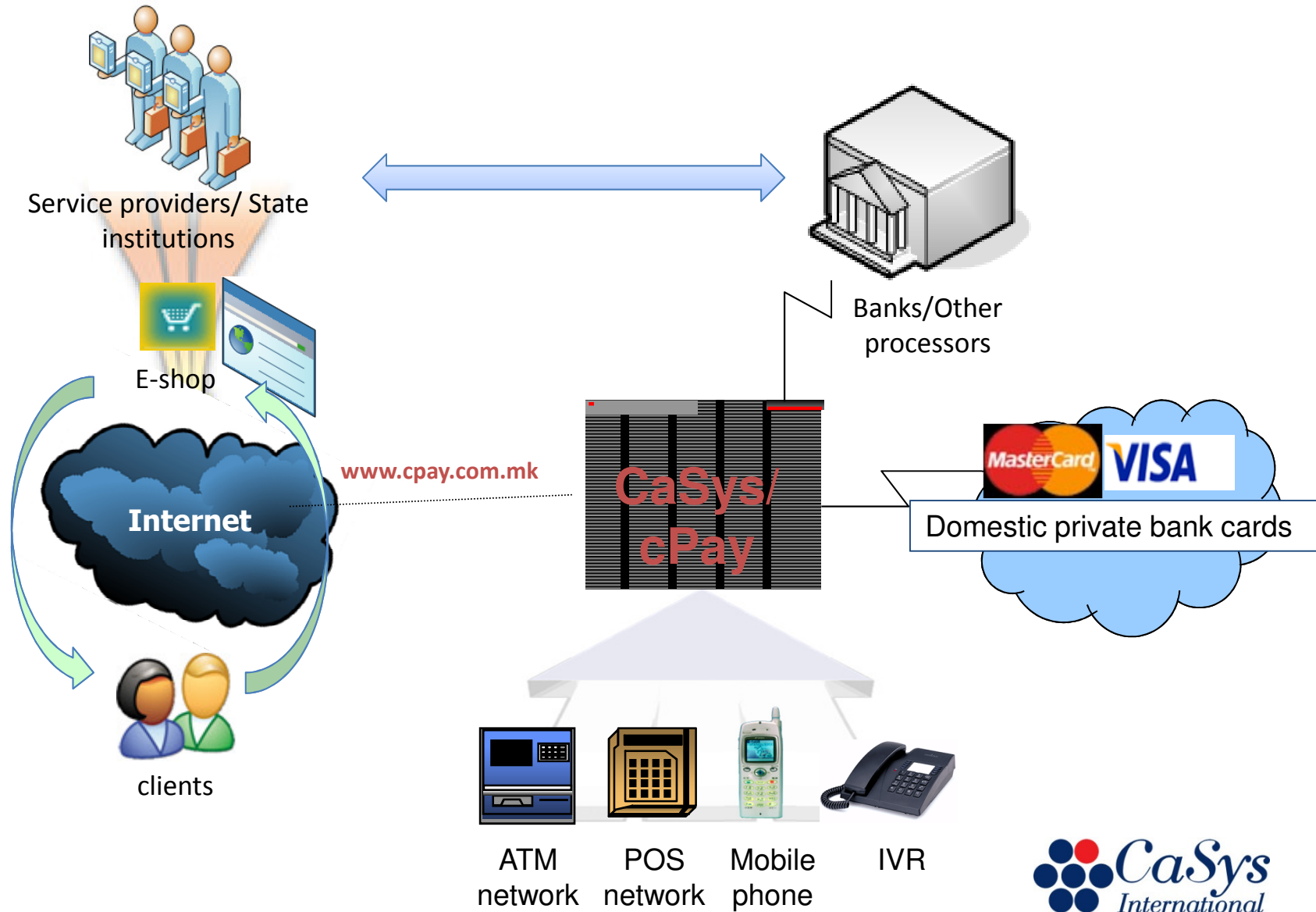
- ✿ Master Card MSP certificate
- ✿ VISA TPP certificate
- ✿ MasterCard/Visa personalization bureau
- ✿ Payment, clearing and settlement system for card payments
- ✿ PCI DSS – Payment Security System data
- ✿ ISO/IEC 27001 - Information Security Management System
- ✿ ISO/IEC 20000-1:2011 - IT Service Management processes

Exclusive services

- ✿ Internet e-commerce with payment cards – cPay payment gateway
- ✿ New payment channels: internet, SMS, IVR, ATM, POS
- ✿ Bill payments and mobile top up through the new channels
- ✿ Balance inquiry through the new channels
- ✿ PIN change on ATM
- ✿ SMS notifications
- ✿ Money transfer
- ✿ Loyalty schemes
- ✿ Installment programs
- ✿ Contactless cards
- ✿ M-banking (mobile payments)
- ✿ E-PIN delivery



CaSys / cPay payment gateway



Merchant integration with cPay

- ✿ Quick integration of the merchant web store and the cPay Payment Portal
- ✿ SSL redirection from the merchant web store to the *cPay* for the on-line buying
- ✿ The basic parameters of the SSL redirection: The identification of the merchant web store and the amount of the transaction. Transactions are processed in denars.
- ✿ Type of transactions: direct financial transaction and authorization/completion
- ✿ The client enters the card data on the secure cPay pages without disclosing the payment card data to the merchant.
- ✿ When the on-line transaction is made, the parameters of the successfulness are sent to the merchant web store.
- ✿ The sensitive information about the payment cards and the cardholders are shown masked and with restriction.

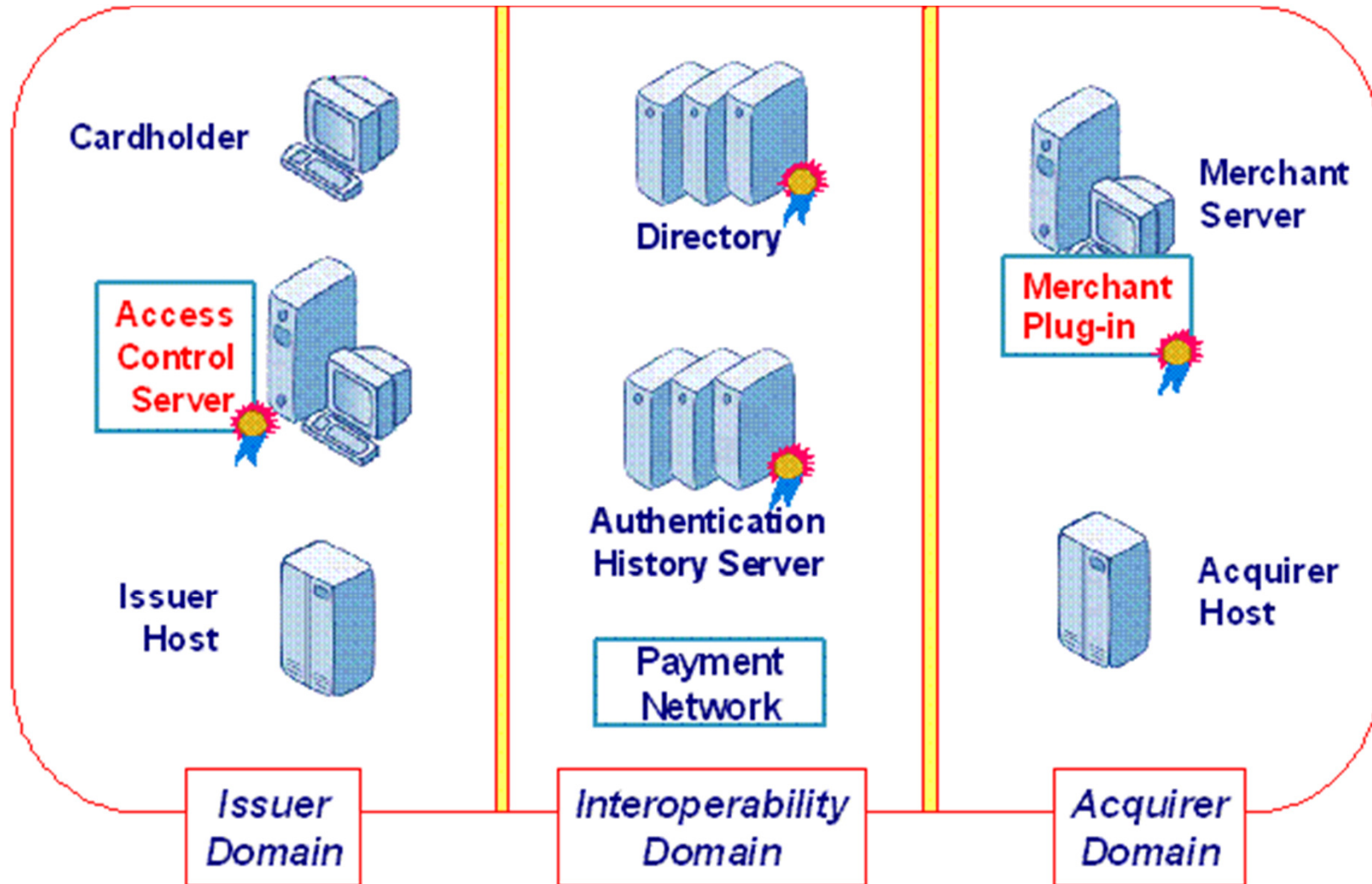
cPay web

- ✿ Client module
 - Secure and simple registration process of the client (an option)
 - Account balance of the payment card
 - On-line monitoring of all payments of the client made on cPay payment portal
- ✿ Merchant module
 - on-line monitoring of all transactions performed on the web shop of the merchant
- ✿ Bank module
 - on-line monitoring of all acquired transactions and all transactions by the cards issued by the bank on cPay web shop
 - Blocking card ranges/cards

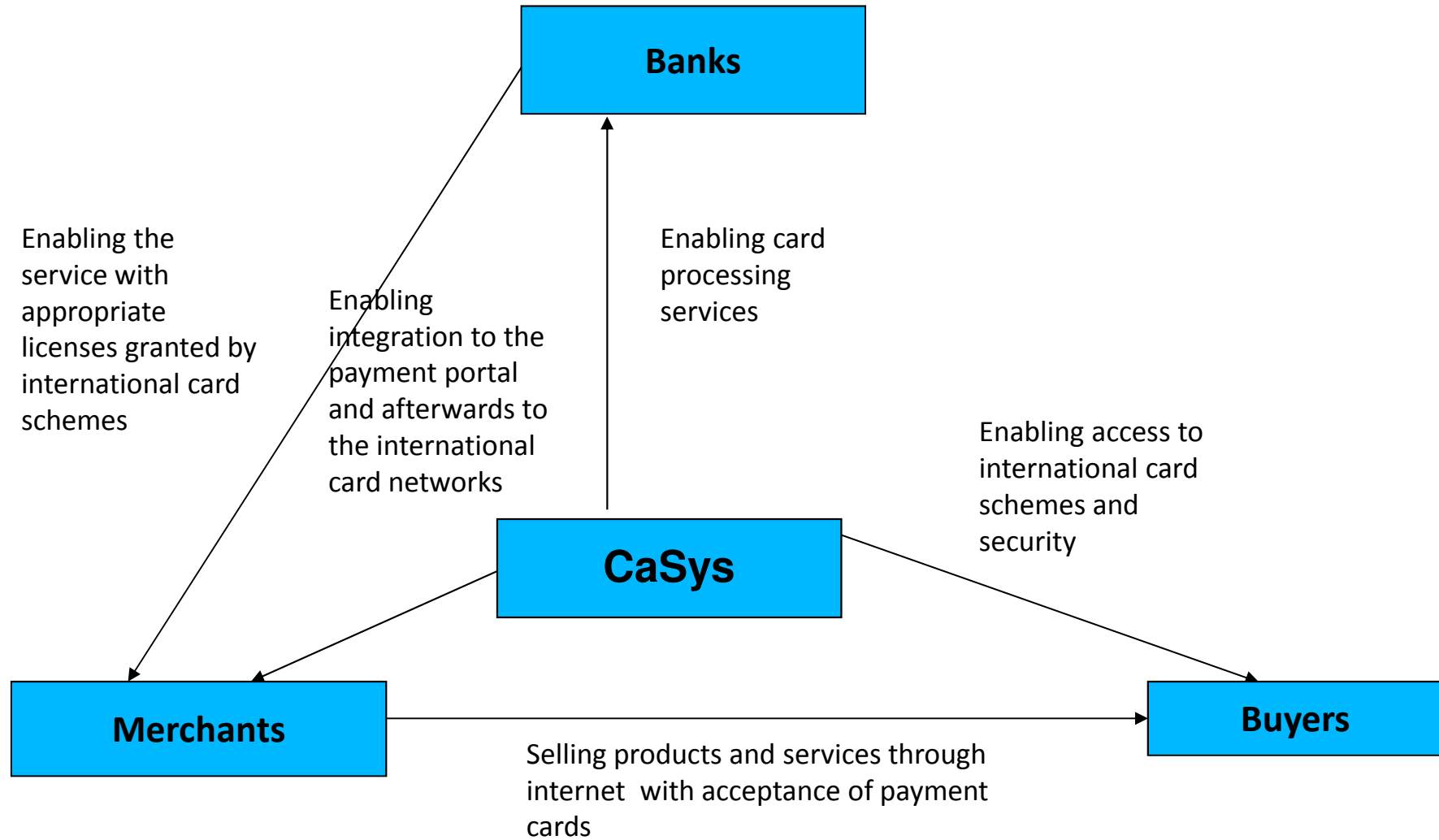
3D secure model

- ✿ 3-D secure model enables authentication of cardholder due to on-line shopping through internet
- ✿ Interoperability is established between bank issuer and bank acquirer through deployment of common protocol and interoperability service. Casys supports both 3D solutions, MasterCard SecureCode and Verified by Visa
- ✿ 3D model significantly decreases, up to 20 times, number of fraud transactions due to internet e-commerce
- ✿ How the secure code system works?
 - The cardholder is enrolled in the secure code program at the bank issuer of his payment card.
 - The cardholder has a secure code (password) that is used for authentication when shopping at the Web Site of a merchant that participates in the secure code program.
 - The bank issuer validates the secure code (password), the authentication is done and the transaction is completed and confirmed.
- ✿ The following procedure provides fully confidence towards Bank issuer and cardholder.

3D secure model



Business model



E-commerce development (cPay)

2009	
Total number of transactions	2.692
Total number of transactions with aggregate amount	1.347, 872.967,62 mkd
Merchants	36

2010	
Total number of transactions	10.939
Total number of transactions with aggregate amount	6.841, 4.730.252,83 mkd
Merchants	30 new (66 total)

2011	
Total number of transactions	97.177
Total number of transactions with aggregate amount	77.879, 61.299.054,00 mkd
Merchants	150 total

I Q 2012	
Total number of transactions	42.087
Total number of transactions with aggregate amount	34.094, 30.471.505,58 mkd
Merchants	more than 150

cPay merchants

- ✿ Utility providers
- ✿ Group discounts e-shops
- ✿ Tickets, hotels, gift shops, clothes, cosmetics, books, trainings, food, restaurants, rent-a-car
- ✿ Software, intellectual services

Advantages of e-commerce

- ✿ Unlimited market
- ✿ Selling products and services through internet, paying with payment cards through Macedonian provider
- ✿ Possibility for the bill payments – the electricity, the telephone, the water supply, the heating company, the cable TV, the mobile phone (post-paid and pre-paid), the taxes
- ✿ Acceptance of the international and the domestic cards

Thank you on the attention!

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