

ECB CONFERENCE

on E-payments in Europe

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E-payments in Europe

Oversight of payment instruments

The Banque de France's approach

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Agenda

- ◆ **Oversight Role**
 - Rationale
 - Modus Operandi
- ◆ **Means of payment in France**
- ◆ **Examples**



Oversight role : rationale

- ◆ **Maintaining public confidence in payment instruments and at the end in currency**
- ◆ **Role of payment instruments in the safe and efficient functioning of payment systems**
- ◆ **Statutory responsibility**
 - The “Everyday Security” Act
 - Article L141-4 of Financial and Monetary Code was amended as follow : « *The Banque de France shall ensure the security of means of payment, as defined in Article L311-3, ... and the suitability of the relevant standards* »
 - The Banque de France is responsible for the security of means of Payment



Oversight role : modus operandi

◆ Principles

- Transparency
- Level playing field
- Co-operation with the issuer
- Coordination with Central Banks of the Eurosystem



Oversight role : modus operandi

◆ Methodology

- Analysis the threats
- Definition of security standards
- Monitoring of compliance
- Enforcement



Means of payment in France

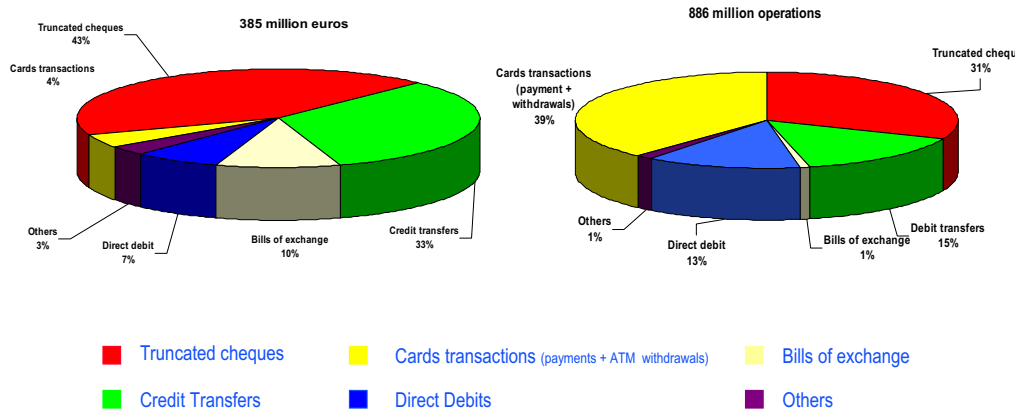
◆ Scope

- Cheques
- Bills of exchange
- Credits transfers
- Directs debits
- Card payments (CB, Amex, ...)
- Electronic purse
- Internet payment (On line communication of card number, virtual card number, P2P, virtual purse, ...)
- Mobile payment (Vocal kiosks, SMS, mobile PKI and electronic signature initiatives, ...)



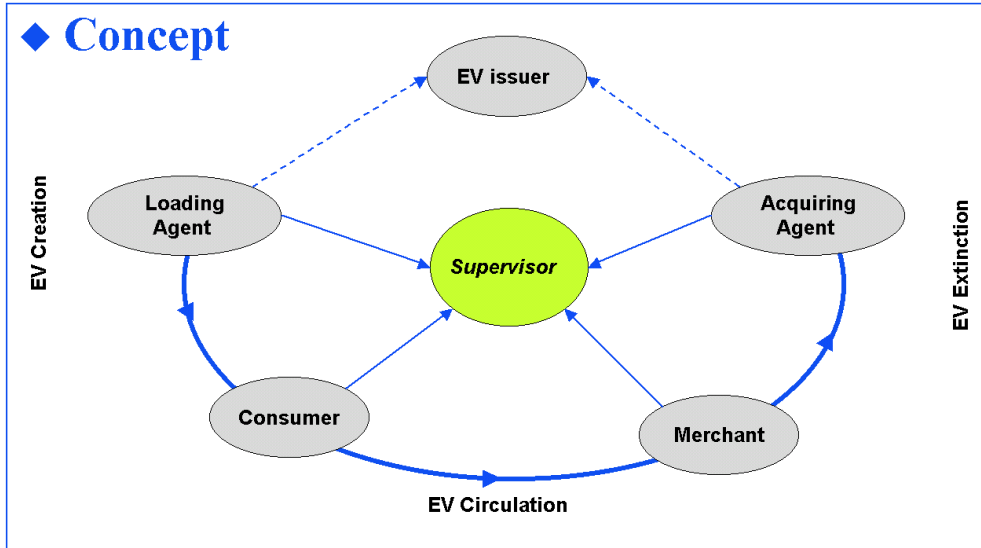
Means of payment in France

◆ Figures for September 2002

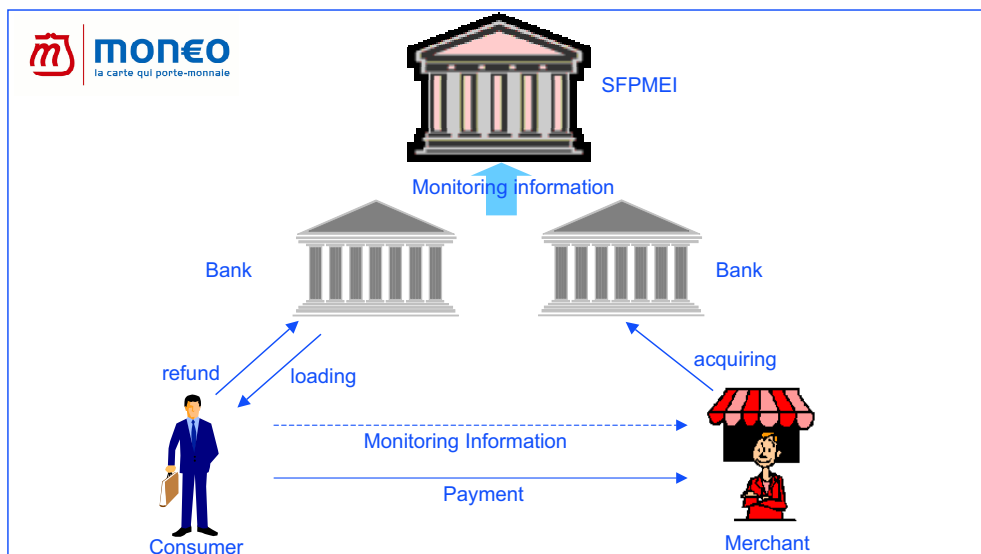


Examples : Electronic purse

◆ Concept



Electronic purse : Moneo



Electronic purse : Evaluation Process

◆ Principles

- Security requirements
 - Use of ISO/IEC 15408 (Common Criteria)
 - Drafted in a generic way (Protection Profile)
- Verification process
 - For smartcard product : IT French evaluation and certification scheme to validate the security level
 - For the system : the process is under definition



Electronic purse : Evaluation Process

◆ Current situation

- Security profiles
 - e-Purse and Purchase device PPs (for pilot and roll-out)
 - e-Purse system
- Security certification is part of SFPMEI licensing program
- All the e-purse and purchase device used in the Moneo scheme are certified (EAL4+)
- A first compliance check for the overall Moneo scheme was done by SFPMEI before roll-out



Examples : Internet Payment

◆ **Analysis conducted in the framework of the e-Economy Initiative of the French Ministry of Economy, Finance and Industry**

◆ **Objective**

- Introduce the highest possible level of technical security economically viable



Internet Payment : Fraud

◆ **Potentially high risk of fraud**

- Open network, “virtual” users, high speed with which the attacks can be propagated, ...

◆ **Major vulnerabilities**

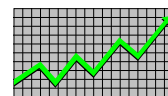
- Verification of the identity of parties involved
- Protection of customer’s personal computer

◆ **User protection et information**

- Unsuitable

◆ **Disparate level of security**

- Between no security (transmission card number) to high security level (payment using smartcard technology)



Internet Payment : recommendations

Security Profiles

- For each category of payment means
- Should take into account their nature and potential uses
- Should serve as a guide for each step of the life cycle of means of payment
- Could take different forms
- Compliance with the Common criteria standard

Security Label

- Visible and understandable by consumers
- Based on security profiles
- to be developed and awarded by trade organisations



Internet Payment : recommendations

Security verification processes

- Independent verification, recognised competence
- Review
 - Questionnaires, documentation (internal reports, audits), penetration testing
- Evaluation

Co-operation with the French evaluation and certification scheme
ISO/IEC 15408 (Common Criteria)



Internet Payment : recommendations

◆ Need for a secure dialogue

Strong and mutual Authentication

Need to avoid transmitting authentication data over the network

Use of the “challenge response” technique

Development of PKI : Set up of a “root” registration authority to verify the identity for the purpose of generating an identity certificate

Data Confidentiality

during the transactions

storage (server, PC, ...)



Data Integrity, Replay Prevention of transactions, Non repudiation of transactions



Internet Payment : recommendations

◆ Improvement of user protection

Suitability, quality and user friendliness of provided products (hardware or software)

Relevant information, easily accessible and simple

Minimum security rules to comply with

Sensitive data storage, virus protection, ...



Examples : On-line Banking

- ◆ **Definition of a protection profile for Internet Banking in co-operation with the French banks**
- ◆ **A generic description of the Internet banking system**
- ◆ **A system approach**
- ◆ **A dedicated assurance level**



Examples : Cheques

- ◆ **Exchange of truncated cheques**
- ◆ **Compliance with cheques regulation**
- ◆ **Definition of security requirements for the cheques process in cooperation with the French banks**
- ◆ **Banks are in charge of the verification process**
- ◆ **An annual evaluation report will be sent to Banque de France**



Conclusion

- ◆ **Role of Central Banks : support efforts to strengthen security to maintain consumer confidence**

